CHAPTER VII.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

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 the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers, and cargo. At the end of each month the information so obtained is entered on forms which are forwarded to the Commonwealth Bureau of Census and Statistics. These forms, which collectively provide a complete record of the movements of every vessel in Australian waters, furnish the material for the compilation of the Shipping and Migration Returns. The arrangement referred to has been in operation since the 1st July, 1924.

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.**—The following table gives the number and tonnage of oversea steam and sailing vessels entering Australian ports during the years 1921–22 to 1925–26 :—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA, 1921-22 TO 1925-26.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
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
1923–24	1,437	4,808,129	109	103,007	1,546	4,911,136
1924–25	1,675	5,535,871	51	60,529	1,726	5,596,400
1925–26	1,537	5,245,222	46	58,583	1,583	5,303,805

The average tonnage of vessels entered has risen from 2,910 tons per vessel in 1921–22 to 3,350 tons in 1925–26.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507.

2. **Comparison with other Countries.**—The place of Australia among various countries in regard to oversea shipping is indicated in the following table, which gives the latest available figures for total tonnage and tonnage per head of population.

OVERSEA SHIPPING.—VARIOUS COUNTRIES.

Country.	Calendar Year.	Tonnage Entered and Cleared.	
		Total. ,000 omitted.	Per Inhabitant.
Australia	1926(a)	10,679	1.78
Belgium	1925	47,150	6.04
Brazil	1924	66,375	2.17
Canada	1926	40,981(c)	4.31
France	1925	81,888(b)	2.09
Germany	1925	64,656	1.02
Great Britain	1925	169,308	3.72
India	1925	17,136	0.05
Japan	1925	86,098	1.03
Netherlands	1925	54,432	7.34
New Zealand	1925	4,262	3.04
Norway	1925	12,703	4.79
Spain	1925	52,563	2 38
Sweden	1925	26,786	4.42
Union of South Africa	1926	12,742	1.69
United States	1926	139,695(c)	1.19

(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 view of the defects in records purporting to show vessels and tonnage for particular countries (as pointed out on p. 265 of Official Year Book No. 17) it has been decided to restrict the statistics relating to the direction of shipping to and from Australia to the following tables in which countries situated on the main trade routes have been grouped. The grouping into larger geographical divisions to some extent avoids the limitations referred to, except in the case of Africa owing to its geographical situation as a place of call for vessels proceeding to or from other ports.

OVERSEA SHIPPING, AUSTRALIA.—DIRECTION, 1921-22 TO 1925-26.

Countries.	Cargo and Ballast.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
TONNAGE ENTERED.						
United Kingdom and European Countries	Cargo	1,333,469	1,926,907	1,769,446	1,797,322	1,815,268
	Ballast	204,680	72,819	23,690	166,256	21,444
New Zealand	Cargo	421,365	392,526	500,001	459,252	507,238
	Ballast	213,347	167,187	401,959	393,706	256,003
Asiatic Countries and Islands in the Pacific	Cargo	686,886	821,036	893,179	1,002,634	1,090,062
	Ballast	794,175	279,043	188,762	390,300	210,196
Africa	Cargo	36,170	32,025	25,036	26,709	23,070
	Ballast	215,841	122,660	24,015	145,216	66,494
North and Central America	Cargo	629,688	911,026	1,059,229	1,138,091	1,283,073
	Ballast	15,940	2,944	5,403	17,235	..
South America.. ..	Cargo	1,179	5,470	12,039	13,895	10,373
	Ballast	7,641	4,211	8,377	25,784	20,584
	Cargo	3,108,757	4,088,990	4,258,930	4,437,903	4,729,084
	Ballast	1,451,624	648,864	652,206	1,158,497	574,721
Total	..	4,560,381	4,737,854	4,911,136	5,596,400	5,303,805
TONNAGE CLEARED.						
United Kingdom and European Countries	Cargo	1,819,444	2,193,528	2,127,662	2,786,002	2,344,201
	Ballast	13,951	11,776	13,699	8,097	17,590
New Zealand	Cargo	542,865	518,972	792,565	768,625	678,616
	Ballast	43,140	49,097	61,943	59,349	57,710
Asiatic Countries and Islands in the Pacific	Cargo	1,116,430	922,243	1,066,807	1,033,553	1,120,019
	Ballast	27,644	100,832	193,982	224,522	273,054
Africa	Cargo	581,359	121,175	105,127	174,697	154,250
	Ballast	..	..	3,558	14,020	3,418
North and Central America	Cargo	345,817	436,800	443,864	408,476	492,088
	Ballast	3,488	35,011	75,201	58,762	162,008
South America.. ..	Cargo	26,759	89,816	118,525	64,433	58,090
	Ballast	..	23,675	8,745	3,583	3,840
	Cargo	4,432,674	4,282,534	4,654,550	5,235,786	4,847,264
	Ballast	88,223	220,391	357,128	368,333	517,620
Total	..	4,520,897	4,502,925	5,011,678	5,604,119	5,364,884

4. **Nationality of Oversea Shipping.**—(i) *General.* The greater part of the shipping visiting Australia is of British nationality, though in 1925–26 the proportion of British tonnage, 75.14 per cent., was the lowest recorded since 1920–21, in which year the percentage was 69.69 per cent.

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, 1921-22 TO 1925-26.

Nationality.	Tonnage.				
	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
BRITISH—					
Australian	589,175	645,867	486,170	424,634	381,178
United Kingdom ..	2,802,487	2,754,316	2,939,210	3,209,865	2,967,317
Canadian	88,526	110,095	95,655	70,165	68,091
New Zealand	103,471	66,521	307,928	488.481	492,255
Other British	54,464	72,438	55,302	62,772	76,226
Cargo.. ..	2,568,236	3,226,702	3,342,994	3,418,124	3,549,627
Ballast ..	1,069,887	422,535	541,271	837,793	435,440
Total British ..	3,638,123	3,649,237	3,884,265	4,255,917	3,985,067
Per cent. on total ..	79.78	77.02	79.09	76.05	75.14
FOREIGN—					
Danish	28,416	39,394	54,161	43,311	85,152
Dutch	134,662	141,264	138,716	162.385	124,824
French	69,033	114,102	84,701	104,312	109,417
German	..	44,666	44,354	81,213	76,650
Italian	105,159	50,608	61,312	115,931	62,046
Japanese	218,564	243,935	143.954	297,657	246,193
Norwegian	123,218	148,873	173,311	219,258	264,037
Swedish	65,971	82,230	90,641	86,704	96,625
United States	139,686	194,180	191,938	186,089	205,391
Other Foreign	37,549	29,365	43,783	43,623	48,403
Cargo.. ..	540,521	862,288	915,936	1,019,779	1,179,457
Ballast ..	381,737	226,329	110,935	320,704	139,281
Total Foreign ..	922,258	1,088,617	1,026,871	1,340,483	1,318,738
Per cent. on total ..	20.22	22.98	20.91	23.95	24.86
Cargo.. ..	3,108,757	4,088,990	4,258,930	4,437,903	4,729,084
Per cent. on total	68.17	86.30	86.72	79.30	89.16
Ballast ..	1,451,624	648,864	652,206	1,158.497	574,721
Per cent. on total	31.83	13.70	13.28	20.70	10.84
Grand Total ..	4,560,381	4,737,854	4,911,136	5,596,400	5,303,805

The Australian tonnage which entered Australia from overseas during the year 1925–26 represented 7.19 per cent. of the total tonnage entered. This figure was less than the average for the quinquennium, which was 10.06 per cent., the decrease being due mainly to the disposal of vessels owned by the Commonwealth Government to foreign or other Australian owners. In the latter instance, the purchasers generally are using the vessels in the interstate trade.

(ii) *Proportion of British and Foreign with Cargo.* (a) *Tonnage of Vessels.* The relative proportions of British and foreign tonnage which entered Australia with cargo during the last five years are given in the next table. These figures may be considered to indicate more accurately the proportion of the actual carrying trade done than does the total tonnage.

OVERSEA SHIPPING, AUSTRALIA.—PERCENTAGE BRITISH AND FOREIGN ENTERED WITH CARGO, 1921-22 TO 1925-26.

Nationality.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
British	82.61	78.91	78.49	77.02	75.06
Foreign	17.39	21.09	21.51	22.98	24.94
Total	100.00	100.00	100.00	100.00	100.00

During the period under review the average annual proportion of foreign tonnage entering with cargo was 21.91 per cent.

(*b*) *Tonnage of Cargo.* In Transport and Communication Bulletin, No. 18 (p. 36) published by this Bureau, a statement is given of the tonnage of oversea cargo discharged and shipped during the year 1925–26 according to the nationalities of the vessels engaged in the carrying trade.

While the tonnage of British vessels entering with cargo represented 75.06 per cent. of the total, the amount of cargo discharged from such vessels was 72.63 per cent. The foreign country which had the largest amount of shipping tonnage engaged with Australia during the year 1925–26 was Norway, its vessels contributing 4.78 per cent. of the total tonnage entered with cargo and 6.75 per cent. of the total cargo discharged and 4.91 per cent. of the cargo shipped.

(iii) *Principal Foreign Countries Engaged.* The following table shows the tonnage entered and cleared in connexion with the principal foreign countries engaged in the oversea carrying trade of Australia :—

OVERSEA SHIPPING, AUSTRALIA.—FOREIGN TONNAGE, 1925-26.

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 ..	..	4,227	..	4,344	..	..	..	8,545
France	..	..	39,395	31,879	..	..	..	4,542
Other European Countries	..	..	..	6,093	..	..	55,076	60,694
ASIATIC COUNTRIES AND ISLANDS IN THE PACIFIC—								
Netherlands East Indies	..	4,044	..	..	6,841	10,423	17,637	11,978
Japan	178,602	224,687	..	..	..	..	..	..
Straits Settlements ..	2,762	..	..	..	3,430	..	18,907	44,624
Other Asiatic Countries	5,819	12,371	..	1,109	..	7,046	30,415	..
New Zealand	..	3,075	3,202	..	..	..	..	3,379
New Caledonia ..	..	..	56,705	41,187	..	..	..	..
Other Pacific Islands ..	2,719	..	10,115	4,335	..	..	..	..
AFRICAN COUNTRIES ..	..	..	..	3,202	..	3,522	..	..
NORTH AMERICAN COUNTRIES—								
United States ..	56,291	3,793	..	..	191,591	193,822	..	..
Canada	..	..	..	..	3,529	4,913	2,789	..
SOUTH AMERICAN COUNTRIES	..	..	..	..	..	5,686	..	..
With Cargo ..	203,093	236,093	92,564	91,040	205,391	184,725	119,800	127,005
In Ballast ..	43,100	16,104	16,853	1,109	..	40,687	5,024	6,757
Total	246,193	252,197	109,417	92,149	205,391	225,412	124,824	133,762

The largest proportion 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. The bulk of the Japanese tonnage was recorded as entering from and clearing for Japan, although there was increased activity recorded in carrying cargoes from the United States of America.

(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 1921–22 to 1925–26.

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF STEAM AND SAILING VESSELS ENTERED, 1921-22 TO 1925-26.

Description and Nationality of Vessels.	1921–22.		1922–23.		1923–24.		1924–25.		1925–26.	
	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.
Steam—										
British ..	3,597,388	81	3,634,411	79	3,866,900	80	4,242,511	77	3,972,307	76
Foreign ..	869,267	19	964,610	21	941,229	20	1,293,360	23	1,272,915	24
Total Steam	4,466,655	100 (98)	4,599,021	100 (97)	4,808,129	100 (98)	5,535,871	100 (99)	5,245,222	100 (99)
Sailing—										
British ..	40,735	43	14,826	11	17,365	17	13,406	22	12,760	22
Foreign ..	52,991	57	124,007	89	85,642	83	47,123	78	45,823	78
Total Sailing	93,726	100 (2)	138,833	100 (3)	103,007	100 (2)	60,529	100 (1)	58,583	100 (1)
Steam and Sailing—										
British ..	3,638,123	80	3,649,237	77	3,884,265	79	4,255,917	76	3,985,067	75
Foreign ..	922,258	20	1,088,617	23	1,026,871	21	1,340,483	24	1,318,738	25
Total ..	4,560,381	100	4,737,854	100	4,911,136	100	5,596,400	100	5,303,805	100

As might naturally be expected there was a considerable decline in the figures for sailing tonnage during the period under review.

5. **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 1921–22 to 1925–26 :—

OVERSEA SHIPPING, AUSTRALIA.—TONNAGE IN BALLAST, 1921-22 TO 1925-26.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
			TOTAL TONNAGE.			
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
1923–24 ..	541,271	110,935	652,206	254,069	103,059	357,128
1924–25 ..	837,793	320,704	1,158,497	164,972	203,361	368,333
1925–26 ..	435,440	139,281	574,721	309,398	208,222	517,620
			PERCENTAGE.			
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
1923–24 ..	13.93	10.80	13.28	6.48	9.45	7.13
1924–25 ..	19.68	23.92	20.70	4.41	10.93	6.57
1925–26 ..	9.15	10.56	10.84	7.63	3.88	9.64

(ii) *Tonnage entered in Ballast—States.* The tonnage which entered each State in ballast during 1925–26 was as follows :—

OVERSEA TONNAGE IN BALLAST ENTERING STATES, 1925-26.

State.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Tonnage ..	265,609	33,049	18,510	118,188	125,969	8,264	5,132	574,721
Percentage on total ..	46.22	5.75	3.22	20.56	21.92	1.44	0.89	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.**—The total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1925–26, together with similar information in regard to some of the ports of New Zealand for the year 1925 and of Great Britain for the year 1925—will be found in the next table :—

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

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney	8,717,770	London	23,590,931
Melbourne	6,653,850	Liverpool (inc. Birkenhead)	15,849,019
Newcastle	4,619,103	Southampton	10,417,994
Adelaide	4,112,367	Tyne Ports	9,013,247
Brisbane	3,044,334	Cardiff	8,466,441
Fremantle	2,884,858	Hull	5,556,609
Townsville	1,050,463	Plymouth	5,287,786
Hobart	762,845	Swansea	3,714,534
Pirie	746,791	Manchester (inc. Runcorn)	3,627,716
Kembla	659,303	Newport	3,318,952
Geelong	596,787	Bristol	3,290,229
Cairns	585,952	Middlesbrough ..	2,959,626
Albany	488,651	Sunderland	2,896,548
Mackay	430,016	Grimsby (inc. Immingham)	2,619,980
Launceston	382,448	Blyth	2,142,868
Burnie	361,111	Beaumaris (inc. Holyhead)	1,988,702
Thursday Island ..	328,895	Dover	1,951,939
Bunbury	322,141	Falmouth	1,545,441
Devonport	306,622		
Wallaroo	301,399		
Rockhampton	274,220	SCOTLAND—	
Bowen	204,718	Glasgow	6,052,396
NEW ZEALAND—		Leith	2,272,112
Wellington	3,197,673		
Auckland	2,376,778		
Lyttelton	1,918,477	NORTHERN IRELAND—	
Otago	1,002,085	Belfast	4,185,556

Transport and Communication Bulletin No. 18 gives more detailed information regarding the shipping entered at Australian ports.

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1922 to 1926, 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, 1922 TO 1926.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Composite.	Total.				
1922 ..	4	..	5	..	9	8	8	..	25
1923 ..	..	..	3	1	4	8	1	2	15
1924 ..	2	..	2	..	4	12	..	..	16
1925 ..	..	..	6	..	6	6	1	..	23
1926 ..	..	..	..	..	..	5	..	..	5

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1922 ..	9,239	5,093	197	152	304	251	..	..	9,740	5,496
1923 ..	7,089	4,011	140	101	100	80	414	386	7,743	4,578
1924 ..	19,665	11,480	319	232	..	..	..	..	19,984	11,712
1925 ..	4,074	1,478	280	221	13	13	..	..	4,367	1,712
1926 ..	..	..	103	59	..	..	..	..	103	59

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, 1926 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1926.

States and Territory.	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 ..	51	1,519	431	94,367	220	2,515	232	11,129	50	12,827	984	122,357
Victoria	35	3,843	184	185,812	38	1,118	67	4,479	68	27,575	392	222,827
Queensland ..	20	2,800	59	15,497	37	490	100	1,520	32	4,405	248	24,712
South Australia ..	17	664	78	33,018	49	2,977	36	988	51	8,804	231	46,451
Western Australia	10	191	29	12,559	17	415	322	4,756	23	7,210	401	25,131
Tasmania ..	6	478	51	4,458	52	1,319	68	2,653	2	563	179	9,471
Northern Territory	..	..	..	..	1	17	22	217	..	..	23	234
Total ..	139	9,495	832	345,711	414	8,851	847	25,742	226	61,384	2,458	451,183

Particulars of the number of vessels on the registers classified according to tonnage will be found in the Transport and Communication Bulletin issued by this Bureau.

§ 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.) A detailed explanation of the methods adopted in dealing with the returns under each heading will be found on page 272 of Official Year Book No. 17, but limitation of space precludes its repetition in the present volume.

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 1921-22 to 1925-26. 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, 1921-22 TO 1925-26.

States and Territory.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
	NUMBER.				
New South Wales ..	1,748	1,848	2,071	1,902	1,759
Victoria	1,797	1,886	1,920	1,815	1,743
Queensland	459	548	519	460	452
South Australia	724	822	867	798	838
Western Australia ..	484	364	363	421	337
Tasmania	1,072	1,169	1,193	1,091	1,024
Northern Territory ..	19	18	22	24	20
Total	6,303	6,655	6,955	6,511	6,173
	TONNAGE.				
New South Wales ..	3,614,744	4,278,072	4,677,576	4,581,395	4,244,524
Victoria	3,091,313	3,581,571	3,724,273	3,593,320	3,394,123
Queensland	857,715	1,123,192	1,032,101	1,041,754	1,011,106
South Australia	1,949,071	2,453,776	2,501,928	2,348,566	2,391,535
Western Australia ..	1,817,361	1,630,730	1,668,713	1,900,077	1,648,977
Tasmania	937,296	1,023,645	1,200,569	1,098,556	1,161,672
Northern Territory ..	52,814	52,107	54,347	57,658	51,760
Total	12,320,314	14,143,093	14,859,507	14,621,326	13,903,697

3. **Oversea Vessels Moving Interstate.**—To ascertain the aggregate movement of shipping between the States during the year 1925-26, including the total interstate

movements of oversea vessels, the figures in the following table, which give the number and tonnage of vessels entered from or cleared for oversea 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, 1925-26.

States and Territory.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ..	574	2,551,883	439	2,074,141	1,013	4,626 024
Victoria	511	2,383,689	459	2,118,041	970	4,501,730
Queensland	194	1,038,702	236	1,219,540	430	2,258,242
South Australia ..	306	1,520,432	256	1,316,333	562	2,836,765
Western Australia ..	46	180,528	6	21,867	52	202,395
Tasmania	25	100,079	86	476,195	111	576,274
Northern Territory ..	..	..	1	2	1	2
Total	1,656	7,775,313	1,483	7,226,119	3,139	15,001,432

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 oversea voyage.

4. Vessels engaged Solely in Interstate Trade.—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1921–22 to 1925–26 were as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1921-22 TO 1925-26.

Year.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1921–22	4,897	6,464,999	4,885	6,335,396
1922–23	5,230	7,506,324	5,624	7,624,311
1923–24	5,565	8,228,391	5,546	8,109,094
1924–25	4,909	6,960,923	4,906	6,953,546
1925–26	4,690	6,677,578	4,628	6,622,175

5. Total Interstate Movement of Shipping.—(i) *Australia.* The appended table shows the total inward interstate movement of shipping for each of the years 1921–22 to 1925–26 :—

TOTAL INWARD INTERSTATE MOVEMENT OF SHIPPING, 1921-22 TO 1925-26.

Vessels.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
	Tons.	Tons.	Tons.	Tons.	Tons.
Oversea vessels moving interstate	11,579,340	14,214,800	14,437,674	15,856,487	15,001,432
Vessels solely interstate ..	6,464,999	7,506,324	8,228,391	6,960,923	6,677,578
Total	18,044,339	21,721,124	22,666,065	22,817,410	21,679,010

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State during 1925–26, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1925-26.

States and Territory.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	2,333	6,796,407	2,207	6,396,263
Victoria	2,254	5,777,812	2,324	6,108,079
Queensland	646	2,049,808	709	2,307,484
South Australia	1,144	3,911,967	1,159	3,997,773
Western Australia	1,070	1,342,200	303	1,497,754
Tasmania	362	1,749,056	1,042	1,257,164
Northern Territory	20	51,760	23	59,090
Total, Australia	7,829	21,679,010	7,767	21,623,607

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 1922 to 1926 :—

AUSTRALIAN INTERSTATE AND COASTAL STEAMSHIP SERVICES, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
Number of companies making returns	32	35	39	41	44
Number of steamships	195	205	207	209	216
Tonnage { Gross	357,652	384,650	382,822	384,004	375,893
Tonnage { Net	204,219	220,042	217,609	216,390	214,028
Horse-power (Nominal) ..	34,886	36,934	37,841	38,750	37,129
Number of passengers for which licensed { 1st class ..	4,647	9,184	9,538	9,110	8,686
Number of passengers for which licensed { 2nd class and steerage	5,016	4,756	4,343	4,204	3,650
Complement of Crew { Masters and officers	667	704	681	684	691
Complement of Crew { Engineers ..	607	645	631	645	642
Complement of Crew { Crew	5,175	5,614	5,336	5,190	5,102

§ 6. Tonnage of Cargo.

The table hereunder 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 1921–22 to 1925–26. Cargo which was stated in cubic feet has been converted to weight on the basis of 40 cubic feet to the ton.

AUSTRALIAN SHIPPING—CARGO MOVEMENT, 1921-22 TO 1925-26.

Year.	Oversea Cargo.		Interstate Cargo.
	Discharged.	Shipped.	Shipped.
	Tons.	Tons.	Tons.
1921-22	2,419,977	5,816,174	5,533,716
1922-23	3,718,795	4,064,196	5,137,651
1923-24	4,377,171	4,981,521	6,358,191
1924-25	4,696,112	6,498,098	6,413,975
1925-26	5,342,621	5,169,407	5,735,973

More detailed information regarding the volume of trade at each of the principal ports is contained in Transport and Communication Bulletin No. 18 issued by this Bureau.

§ 7. Commonwealth Government Shipping and Shipbuilding 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 a previous issue of this book (see Year Book Nos. 16, p. 273 and 17, p. 269).

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 each 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, was 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, office furniture and fittings at £7,500, and stores on hand £23,700, making a total of £4,749,350.

The balance-sheet of the Commonwealth Shipping Board, covering the activities of the Australian Commonwealth Line of Steamers and the Cockatoo Island Dockyard to the 31st March, 1926, shows liabilities to the total of £6,387,624 and assets £5,058,790. The operations for the three years 1923 to 1926 show an accumulated loss of £1,328,834, the loss on operations for 1925-26 being £503,077.

(ii) *Present position.* At 1st June, 1927, the only vessels owned by the Commonwealth Government Line of Steamers were as follows (net tonnage in parentheses):—*Largs Bay* (8,432), *Jervis Bay* (8,423), *Moreton Bay* (8,420), *Esperance Bay* (8,415), and *Hobson's Bay* (8,413), all one-class passenger-carrying steamers, and the freighters *Fordsdale* (5,661) and *Ferndale* (5,656); a total net tonnage of 53,420 tons.

(iii) *Future arrangements.* An investigation into the operations of the Commonwealth Shipping Board has been made by the Parliamentary Joint Committee of Public Accounts, whose report will not, however, be available for some few months.

§ 8. World's Shipping Tonnage.

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

WORLD'S SHIPPING TONNAGE, 1st July, 1926.

Nationality.	Steam and Motor.		Sailing.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage
Great Britain and Nthn. Ireland	7,964	19,263,785	405	136,012	8,369	19,399,797	26.17	31.24
Australia and New Zealand	637	799,777	22	10,335	659	810,112	2.06	1.31
Canada(a) ..	566	878,516	237	103,449	803	981,965	2.51	1.58
Other British ..	658	756,175	257	64,029	915	820,204	2.86	1.32
Total, British Empire ..	9,825	21,698,253	921	313,825	10,746	22,012,078	33.60	35.45
Belgium ..	222	503,083	3	4,390	225	507,473	0.70	0.82
Denmark ..	661	1,049,386	110	31,760	771	1,081,146	2.41	1.74
France ..	1,498	3,324,397	271	166,209	1,769	3,490,606	5.53	5.62
Germany ..	1,928	3,062,095	58	48,823	1,986	3,110,918	6.21	5.01
Greece ..	457	921,861	10	3,083	467	924,944	1.46	1.49
Holland ..	1,061	2,552,613	48	12,291	1,109	2,564,904	3.47	4.13
Italy	1,099	3,150,246	302	90,384	1,401	3,240,630	4.38	5.22
Japan ..	2,087	3,967,617	..	..	2,087	3,967,617	6.52	6.39
Norway ..	1,802	2,806,544	42	35,361	1,844	2,841,905	5.77	4.58
Spain ..	802	1,126,284	122	36,724	924	1,163,008	2.89	1.87
Sweden ..	1,205	1,294,576	175	43,513	1,380	1,338,089	4.31	2.16
United States of America(b) ..	3,213	11,472,824	885	972,888	4,098	12,445,712	12.81	20.04
Other Foreign Countries ..	2,629	3,139,632	550	264,613	3,179	3,404,245	9.94	5.48
Total, Foreign Countries ..	18,664	38,371,158	2,576	1,710,039	21,240	40,081,197	66.40	64.55
Grand Total ..	28,489	60,069,411	3,497	2,023,864	31,986	62,093,275	100.00	100.00

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

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. **New South Wales.**—The ferry services in Port Jackson are under the control of two companies, which during the year 1926 had 72 vessels in commission, 69 of which were double-ended screw steamers, the remaining three 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.

2. **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. 6 following.

3. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area, but such ferries are really substitutes for bridges and have therefore not been included in the table hereunder.

4. **Western Australia.**—The ferries plying on the Swan River during 1926 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.

5. **Tasmania.**—In and around Hobart there were in 1926, 3 ferry services, 1 being controlled by a private company which had 5 steamers in commission, 1 by the Public Works Department with 2 motor-propelled vessels, and 1 by the Railway Department with 1 steamer.

6. **Particulars of Working.**—The subjoined table shows for the year 1926, 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, 1926.

Particulars.		New South Wales.	Victoria.	Western Australia.	Tasmania.	Total.
Boats in Service—						
Steam ..	No.	69	1	2	6	78
Other ..	No.	3	..	10	2	15
Total ..	No.	72	1	12	8	93
Number of passengers which boats are licensed to carry ..	No.	47,868	342	1,759	2,006	51,975
Revenue ..	£	763,614	5,657	14,984	20,978	805,233
Working Expenses	£	693,894	8,829	13,981	17,772	734,476
Passengers carried(*b*)	No.	50,009,315	198,000	1,087,015	1,383,580	52,677,910
Mileage of Boats	miles	(*a*)	21,300	84,473	59,155	(*c*) 164,928
Accidents—						
Killed ..	No.	..	..	..	..	..
Injured ..	No.	118	..	1	..	119
Employees—						
Salaried Staff	No.	46	..	2	7	55
Wages Staff	No.	1,200	6	25	38	1,269

(*a*) Not Available. (*b*) Approximate. (*c*) Incomplete.

7. **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 was also included in 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 oversea and interstate shipments. The latest figures available, which give the rates current at 31st March, 1927, show that the rate for general merchandise from Australia to United Kingdom and Continent was 63s. 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 Director of Navigation showing the depth of water at the main ports of Australia at 1st January, 1927, has been included in the Transport and Communication Bulletin No. 18, published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate, assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the

certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1925-26 are shown in the Transport and Communication Bulletin No. 18. This information has also been furnished by the Director of Navigation.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account, in some detail, of the Commonwealth Navigation and Shipping Legislation was published in Official Year Book No. 17 (pp. 1053-5), but considerations of space preclude its repetition in this present volume.

(ii) *Amending Acts.* Under the provisions of the Navigation Act 1926 (March, 1926), permission may be granted by the Governor-General in Council in certain specified circumstances to unlicensed British ships to engage in passenger tourist traffic between any specified Commonwealth ports. Certain vessels were granted permission to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney and Melbourne during the period 6th March, 1926, to 31st May, 1926, and between the 1st January, 1927, and 31st May, 1927. This permission may be renewed from time to time as occasion demands. The Navigation Act 1925 (July, 1925), conferred authority for the suspension, for any specified time, if in the opinion of the Governor-General in Council such is expedient in the public interest, of the operation of the provisions of that part of the principal Act relating to the engagement of ships in the coasting trade by exempting under certain circumstances any ship or class of ships from compliance with any specified provision or provisions of the Act.

7. **Ports and Harbours.**—A report in two volumes on *Transport in Australia*, with special reference to Ports and Harbours facilities, has been submitted to the Commonwealth Government by Sir George Buchanan, and published as a Parliamentary Paper, but the subject-matter is too voluminous to be dealt with in this present volume.

B. RAILWAYS.

§ 1. General.

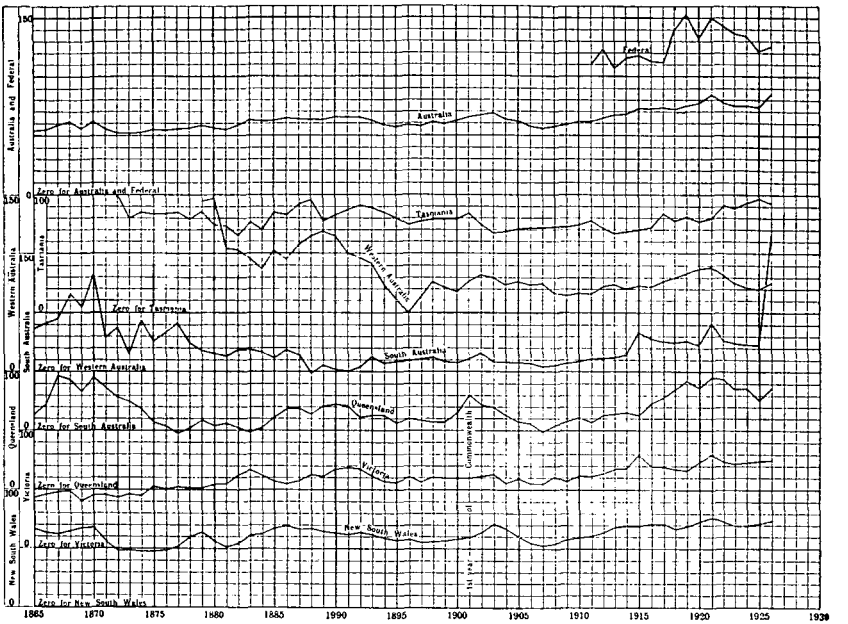
1. **Introduction.**—In the following pages statistics relating to State-owned lines are, in the main, dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as "State" and the Commonwealth railways as "Federal" railways. A summary in regard to Federal and State railways will, however, be found in § 4 following.

2. **Improvement of Railway Statistics.**—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).

Considerable 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 recent years.

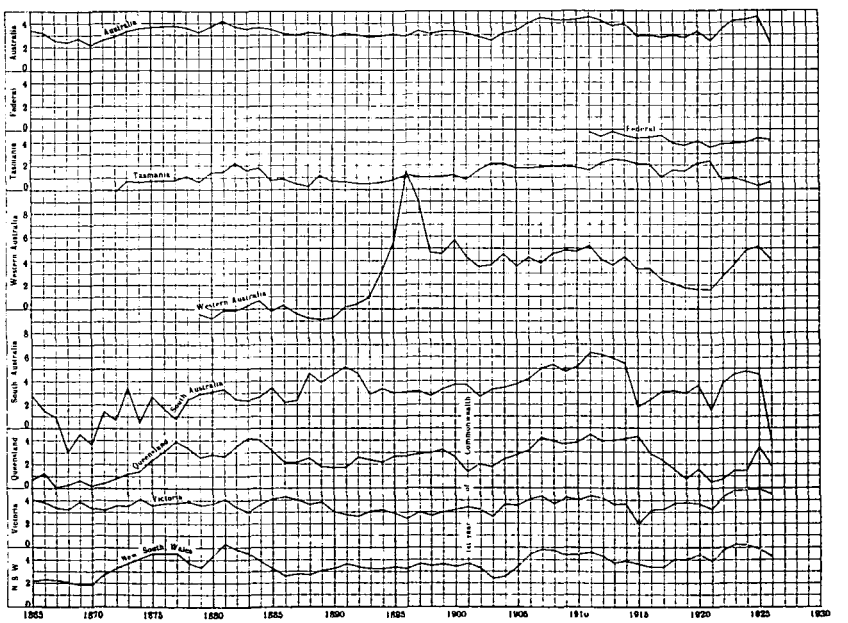
3. **Railway Communication in Australia.**—(i) *General.* An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. In the eastern, south-eastern and southern parts of Australia there is now a network of railway 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

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1926.



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, the exceptions that the zero lines for Australia and Federal are identical.

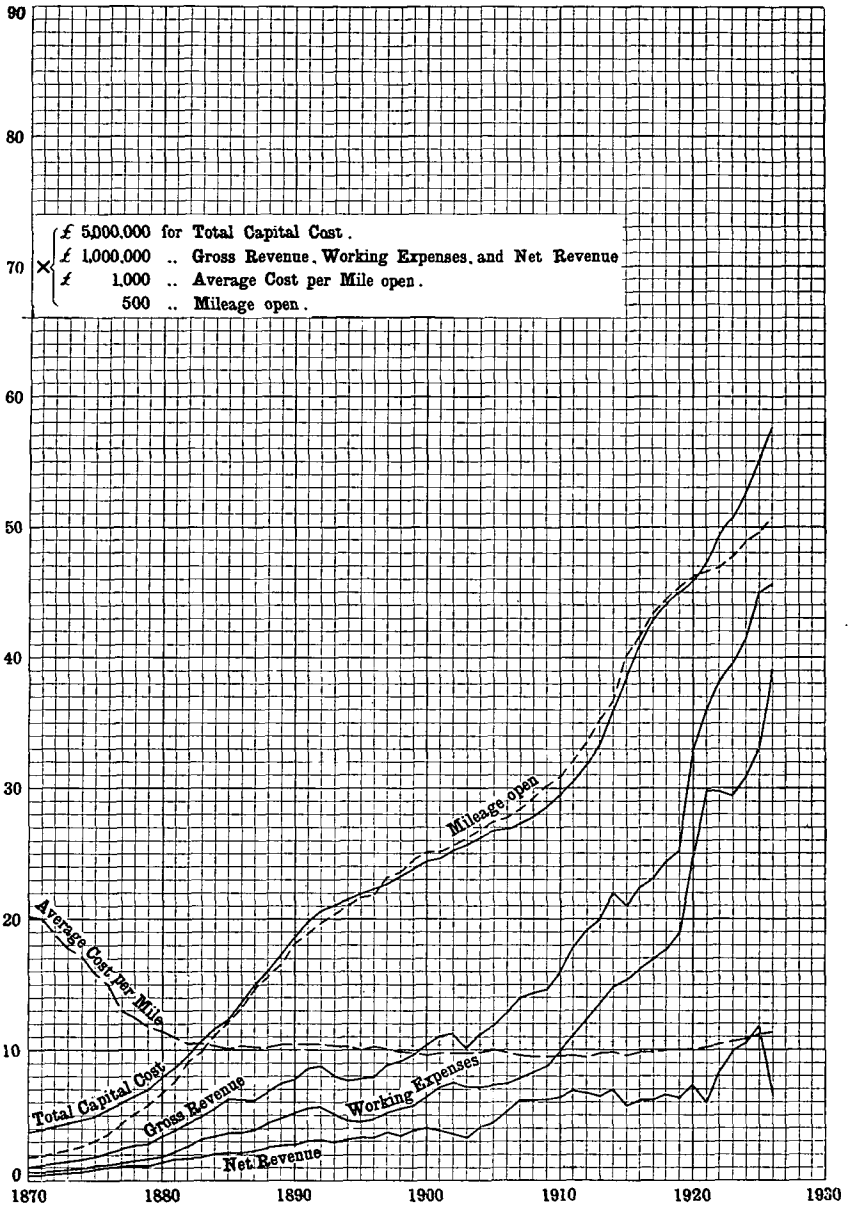
PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1926.



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.

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1926.



(See page 302.)

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 £5,000,000.

In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical side of each small square represents £1,000,000. For the curve of average cost per mile open, the vertical side of each small square represents £1,000. The mileage open is shown by a dotted curve, the vertical side of each small square representing 500 miles.

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 there were also several disconnected lines running inland from the more important ports, but during the year 1924–25 an uninterrupted service as far north as Cairns was established. 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 schedule time for the journey from Brisbane to Perth is six days one hour forty-two minutes, the time being taken over all.

The longest railway journey which can be undertaken in Australia on one continuous line of railway is from Dajarra in Queensland to Meekatharra in Western Australia, total distance of approximately 5,500 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.

Some advancement, however, has been made in this connexion by the commencement of a 4 ft. 8½ in. gauge line between Kyogle (New South Wales) and South Brisbane (Queensland), which, when completed, will establish uninterrupted standard gauge communication between Sydney and South Brisbane. The mileage involved in this project is 87.12 miles, of which 60.56 miles is in Queensland Territory. The construction of this line is under the control of a Council, consisting of the Commonwealth Railways Commissioner, the Chief Railway Commissioner for New South Wales, and the Commissioner for Railways, Queensland.

The following further proposals for modifying the disadvantages attending the multiplicity of gauges have been recommended to and accepted by Parliament by the Commonwealth Parliamentary Standing Committee on Public Works:—

(*a*) Extension of the Trans-Australian Railway from Port Augusta to Red Hill, 83 miles of 4 ft. 8½ in. gauge at the expense of the Commonwealth Government, which will at the expense of the South Australian Government lay a third rail to conform to the South Australian gauge of 5 ft. 3 in. from a point near Port Pirie to Red Hill; and

(*b*) Laying of a third rail from Red Hill to Adelaide by the South Australian Government at the expense of the Commonwealth Government to provide a railway of 4 ft. 8½ in. gauge over the existing 5 ft. 3 in. gauge line from Red Hill to Adelaide, a total distance of approximately 107 miles.

When these proposals are completed, through passengers over the Trans-Australian line will not need to change at Port Augusta and Terowie.

(iv) *Estimated Cost of Unification of Gauges.* The scheme recommended 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 a previous issue (see Year Book No. 16, p. 278).

The estimated cost of converting the whole of the lines in the States concerned was given as 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. Particulars in respect of such dimensions have been published in previous issues of this work. (See Official Year Book, No. 18, p. 274.)

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 route mileage of Federal, State, and private lines open for traffic (exclusive of sidings and cross-overs) in each State for each of the years 1921–22 to 1925–26. The railway mileage given for each State includes both Federal, State, and private railways in that State:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN, 1922 TO 1926.

State or Territory.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	5,475.44	5,689.18	5,847.13	5,986.39	6,072.46
Victoria	4,374.73	4,393.48	4,496.34	4,542.45	4,687.68
Queensland	7,063.89	7,180.10	7,341.83	7,433.46	7,576.32
South Australia	3,487.37	3,503.40	3,577.01	3,577.01	3,624.41
Western Australia ..	4,867.48	4,844.93	4,908.77	5,040.65	5,202.23
Tasmania	872.49	896.36	908.38	904.08	1,072.41
Federal Capital Territory ..	4.94	4.94	4.94	4.94	4.94
Northern Territory ..	198.68	198.68	198.68	198.68	198.68
Australia	26,345.02	26,711.07	27,283.08	27,687.66	28,439.13

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

(ii) *Government and Private Lines Separately.* The next 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 and private lines are to the 30th June, 1926 :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1925-26.

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.	Miles.	Miles.	Miles.	Miles.
New South Wales	5,741.82	..	142.03	5,883.85	188.61	6,072.46
Victoria ..	4,627.27	..	24.94	4,652.21	35.47	4,687.68
Queensland ..	6,240.04	..	302.35	6,542.39	1,033.93	7,576.32
South Australia ..	2,499.10	1,075.41	33.80	3,608.31	16.10	3,624.41
Western Australia	3,864.38	453.99	277.00	4,595.37	606.86	5,202.23
Tasmania ..	672.90	..	192.10	865.00	207.41	1,072.41
Federal Capital Territory ..	..	4.94	..	4.94	..	4.94
Northern Territory	..	198.68	..	198.68	..	198.68
Australia ..	23,645.51	1,733.02	972.25	26,350.75	2,088.38	28,439.13

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

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1926.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Fed. Cap. Ter.	Nor. Ter.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.62	2.76	8.62	6.49	13.87	5.12	0.89	52.66	4.71
Per 1,000 sq. miles or Territory ..	19.62	53.34	11.30	9.54	5.33	40.91	5.26	0.38	9.56

8. **Classification of Lines according to Gauge, 1925-26.**—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and crossovers, of (i) Federal railways, given in the State or Territory in which situated ; (ii) State 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, 1926; of private railways open for general traffic, to the 31st December, 1926, as nearly as possible ; and of private railways open for special purposes to the 30th June, 1926.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1925-26.

State or Territory in which situated.	Route mileage having a gauge of—								Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	3 ft. 0 in.	2 ft. 6 in.	2 ft. 3 in.	2 ft. 0 in.	1 ft. 8 in.	
FEDERAL RAILWAYS.									
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 ..	..	5,702.31	39.51	..	..	..	..	..	5,741.82
Victoria	4,505.50	..	..	..	121.77	..	..	..	4,627.27
Queensland ..	..	..	6,209.78	..	..	..	30.26	..	6,240.04
South Australia ..	1,237.91	..	1,261.19	..	..	..	..	..	2,499.10
Western Australia ..	..	..	3,864.35	..	..	..	..	..	3,864.35
Tasmania	..	..	648.07	..	..	..	24.83	..	672.90
Total ..	5,743.41	5,702.31	12,022.90	..	121.77	..	55.09	..	23,645.48
PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.									
New South Wales ..	..	78.97	36.73	..	..	..	26.33	..	142.03
Victoria	13.94	..	..	11.00	..	..	..	..	24.94
Queensland ..	..	..	124.10	..	7.00	..	171.25	..	302.35
South Australia ..	..	..	33.80	..	..	..	..	..	33.80
Western Australia ..	..	..	277.00	..	..	..	..	..	277.00
Tasmania	..	..	175.48	..	..	..	16.62	..	192.10
Total ..	13.94	78.97	647.11	11.00	7.00	..	214.20	..	972.22
PRIVATE RAILWAYS OPEN FOR SPECIAL PURPOSES.									
New South Wales ..	..	174.99	3.44	..	..	..	10.18	..	188.61
Victoria	18.37	..	..	4.50	..	..	12.60	..	35.47
Queensland ..	..	..	244.77	..	..	..	789.16	..	1,033.93
South Australia ..	..	..	..	..	2.00	3.75	10.35	..	16.10
Western Australia ..	..	..	557.01	..	..	..	14.00	35.85	606.86
Tasmania	..	11.25	111.78	9.47	34.03	..	40.88	..	207.41
Total ..	18.37	186.24	917.00	13.97	36.03	3.75	877.17	35.85	2,088.38
ALL RAILWAYS.									
New South Wales ..	..	5,956.27	79.68	..	..	..	36.51	..	6,072.46
Victoria	4,537.81	..	..	15.50	121.77	..	12.60	..	4,687.68
Queensland ..	..	..	6,578.65	..	7.00	..	990.67	..	7,576.32
South Australia ..	1,237.91	597.46	1,772.94	..	2.00	3.75	10.35	..	3,624.41
Western Australia ..	..	453.99	4,698.36	..	..	..	14.00	35.85	5,202.20
Tasmania	..	11.25	935.33	9.47	34.03	..	82.33	..	1,072.41
Federal Capital Territory	..	4.94	..	..	..	..	..	..	4.94
Northern Territory ..	..	..	198.68	..	..	..	..	..	198.68
GRAND TOTAL	5,775.72	7,023.91	14,263.64	24.97	164.80	3.75	1,146.46	35.85	28,439.10

§ 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 recommendations of the Parliamentary Standing Committee on Public Works in connexion with the North-South line were indicated in a previous issue of this work. (See Year Book No. 18, p. 278.)

(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 at Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,009, including the cost of a bridge over the Katherine River which was completed in May, 1926, although the first train crossed on 21st January, 1926.

3. **Port Augusta to Oodnadatta Railway.**—(i) *General.* 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 was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1926, the management devolved upon the Commonwealth Railways Commissioner.

(ii) *Extension Authorized.* The Railways (South Australia) Agreement Act 1926, assented to by the Commonwealth Parliament in February, 1926, ratified the agreement between the Commonwealth and South Australian Governments for the construction of a 3 ft. 6 in. gauge line between Port Augusta and Alice Springs. This involves the construction of an extension to Alice Springs of the existing 3 ft. 6 in. gauge line from Port Augusta to Oodnadatta. The estimated cost, exclusive of rolling stock, of the proposed extension, which comprises approximately 298 miles, is £1,700,000. One hundred and fifteen miles of the survey was completed at 30th June, 1926.

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, 1926, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1926.

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
Oodnadatta to Alice Springs	115.00
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	1,524.52

In addition, a trial survey from the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola has been completed in connexion with the possibility of developing a port at the mouth of the McArthur River.

7. **Mileage open, worked, and Train miles run.**—The next table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1922 to 1926 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1922 TO 1926.

MILES OPEN FOR TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	Miles.	Miles.	Miles.	Miles.	Miles.
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733
1926	1,051	478	5	199	1,733

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1922 TO 1926—*continued.*

Year ended 30th June—	Railway. Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	Total.
AVERAGE MILES WORKED.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1922	1,051	478	5	199	1,733
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733
1926	1,051	478	5	199	1,733
TRAIN MILES RUN.					
1922	471,061	242,751	1,263	16,078	731,153
1923	449,609	303,187	1,065	20,823	774,684
1924	453,742	293,529	4,731	18,412	770,414
1925 (*a*) ..	472,459	283,762	5,999	51,279	813,499
1926 (*a*) ..	471,322	192,773	7,123	60,641	731,859

(*a*) Traffic Train Mileage (exclusive of "Assistant" and "Light" mileages).

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 1922 to 1926:—

RAILWAYS, FEDERAL.—CAPITAL COST, 1922 TO 1926.

Year ended 30th June—	Railway. Trans-Australian.	Oodnadatta.	Federal Capital Territory. (*b*)	Northern Territory.	Total.
TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.					
	£	£	£	£	£
1922	7,213,923	*a*2,296,139	48,144	1,718,021	11,276,227
1923	7,301,433	*a*2,309,136	48,144	1,725,666	11,384,379
1924	7,379,785	*a*2,342,490	50,720	1,726,877	11,499,872
1925	7,435,771	*a*2,554,068	50,720	1,727,412	11,767,971
1926	7,515,553	2,663,099	50,974	1,736,360	11,965,986
COST PER MILE OPEN.					
1922	6,861	*a*4,804	9,746	8,647	6,507
1923	6,944	*a*4,831	9,746	8,686	6,569
1924	7,019	*a*4,901	10,267	8,692	6,636
1925	7,072	*a*5,345	10,267	8,694	6,790
1926	7,148	5,572	10,318	8,739	6,905

(*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.

The sum of £1,508,765 of which £97,200 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1926, and has been included in the total shown above.

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 1922 to 1926 inclusive:—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC., 1922 TO 1926.

Year ended 30th June—	Railway. Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	Total.
TOTAL GROSS REVENUE.					
	£	£	£	£	£
1922	206,826	99,462	1,847	14,364	322,499
1923	208,925	108,770	2,883	15,835	336,413
1924	227,420	105,124	4,080	16,802	353,426
1925	256,647	110,256	7,029	35,180	409,112
1926	276,430	82,649	11,665	41,347	412,091
GROSS REVENUE PER AVERAGE MILE WORKED.					
1922	197	208	374	72	186
1923	199	228	584	80	194
1924	216	220	826	85	204
1925	244	231	1,423	177	236
1926	263	173	2,363	208	238
GROSS REVENUE PER TRAIN-MILE RUN.					
	d.	*d.*	*d.*	*d.*	*d.*
1922	105.37	98.34	350.97	214.41	105.86
1923	111.52	86.10	649.69	182.51	104.22
1924	120.29	87.96	220.04	219.01	111.16
1925	130.37	93.25	281.20	164.65	120.69
1926	140.67	101.68	383.98	160.57	134.41

The revenue from coaching traffic and from miscellaneous receipts was considerably higher than in the previous year, but these gains were almost entirely neutralized by the decline in the revenue from goods and live stock.

(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 1922 to 1926 classified according to the three chief sources of receipts, together with their percentages on the total revenue. The totals of the three items are given in the preceding table.

RAILWAYS, FEDERAL.—RECEIPTS, VARIOUS SOURCES, 1922 TO 1926.

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.										
	£	%	£	%	£	%	£	%	£	%
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
1924 ..	144,352	63.48	17,764	16.90	754	18.48	2,778	16.53	165,648	46.87
1925 ..	157,173	61.24	18,732	16.99	2,228	31.70	3,367	9.57	181,500	44.36
1926 ..	172,371	62.35	20,418	24.72	3,144	26.95	3,852	9.31	199,785	48.48
GOODS AND LIVE STOCK RECEIPTS.										
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
1924 ..	34,486	15.16	84,278	80.17	3,326	81.52	6,141	36.55	128,231	36.29
1925 ..	53,313	20.77	88,544	80.31	4,801	68.30	19,359	55.03	166,017	40.58
1926 ..	51,370	18.59	58,479	70.74	8,521	73.05	22,886	55.36	141,256	34.28
MISCELLANEOUS RECEIPTS.										
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
1924 ..	48,582	21.36	3,082	2.93	..	..	7,883	46.92	59,547	16.84
1925 ..	46,161	17.99	2,980	2.70	..	..	12,454	35.40	61,595	15.06
1926 ..	52,689	19.06	3,752	4.54	..	..	14,609	35.33	71,050	17.24

The miscellaneous receipts for the year 1925-26 include an amount of £27,854, revenue from dining cars and refreshment services on the Trans-Australian Railway. A sum of £25,102 was received from this source during the previous year.

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 1922 to 1926.

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., 1922 TO 1926.

Year ended 30th June—	Railway. Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	Total.
TOTAL WORKING EXPENSES.					
	£	£	£	£	£
1922	255,434	177,369	1,308	26,511	460,622
1923	250,280	178,181	1,588	30,984	461,033
1924	265,121	176,711	3,268	30,077	475,177
1925	294,164	158,009	4,882	40,015	497,070
1926	282,999	187,835	6,946	43,240	521,020
PERCENTAGE OF WORKING EXPENSES ON REVENUE.					
	%	%	%	%	%
1922	123.50	178.33	70.82	184.56	150.10
1923	119.79	163.81	55.08	195.67	142.83
1924	116.58	168.10	80.10	179.01	137.04
1925	114.61	143.31	69.45	113.75	134.45
1926	102.38	227.27	59.55	104.58	126.43

The increases in working expenses during the past few years are partly ascribed to increased salaries consequent on Arbitration Court awards and the increased cost of material generally. The minimum wage payable for employees on the Trans-Australian Railway has risen from 13s. *per diem* in 1921 to 14s. 8d.

(ii) *Averages.* The next table gives the working expenses per average mile worked and per train-mile run for each railway for the years 1922 to 1926:—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES, 1922 TO 1926.

Year ended 30th June—	Railway. Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	Total.
WORKING EXPENSES PER AVERAGE MILE WORKED.					
	£	£	£	£	£
1922	243	371	265	133	266
1923	238	373	322	156	266
1924	252	370	662	151	274
1925	280	331	988	204	287
1926	269	393	1,406	218	301
WORKING EXPENSES PER TRAIN-MILE RUN.					
	d.	*d.*	*d.*	*d.*	*d.*
1922	130.14	175.36	248.55	395.73	151.20
1923	133.60	141.04	357.85	357.11	142.83
1924	140.35	147.86	176.25	392.05	149.45
1925	149.43	133.64	195.31	187.29	146.64
1926	144.01	231.09	228.64	167.92	169.94

(iii) *Classification and Percentages.* The subjoined table shows the distribution of working expenses among four chief heads of expenditure for the years 1922 to 1926, together with their percentages on the total working expenses which are given in 10 (i) hereinbefore :—

RAILWAYS, FEDERAL.—DISTRIBUTION OF WORKING EXPENSES, 1922 TO 1926.

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.									
	£	%	£	%	£	%	£	%	£	%
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
1924 ..	77,892	29.38	71,087	40.23	711	21.76	13,858	46.08	163,548	34.42
1925 ..	83,219	28.29	57,411	36.33	906	18.56	14,155	35.37	155,691	31.32
1926 ..	88,490	31.27	100,583	53.55	782	11.26	15,866	36.69	205,721	39.48
	LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.									
1922 ..	112,317	43.97	79,640	44.90	503	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
1924 ..	115,107	43.42	84,029	47.55	1,900	58.14	8,179	27.19	209,215	44.03
1925 ..	133.467	45.37	77,809	49.24	2,756	56.45	12,891	32.22	226,923	45.66
1926 ..	116,966	41.33	61,694	32.84	4,257	61.29	14,336	33.15	197,253	37.86
	TRAFFIC EXPENSES.									
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	18,583	10.43	57	3.59	6,481	20.92	62,266	13.51
1924 ..	39,936	15.06	18,533	10.49	657	20.10	7,346	24.42	66,472	13.99
1925 ..	41,164	14.00	19,316	12.23	1,220	24.09	11,186	27.95	72,886	14.66
1926 ..	40,927	14.46	19,994	10.65	1,907	27.45	11,784	27.26	74,612	14.32
	OTHER CHARGES.									
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
1924 ..	32,186	12.14	3,002	1.73	..	..	694	2.31	35,942	7.56
1925 ..	36,314	12.34	3,473	2.20	..	..	1,783	4.46	41,570	8.36
1926 ..	36,616	12.94	5,564	2.96	..	..	1,254	2.90	43,134	8.34

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 1922 to 1926 :—

RAILWAYS, FEDERAL.—TRAFFIC, 1922 TO 1926.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Oodnadatta.	Federal Capital Territory.	Northern Territory.	
	PASSENGER JOURNEYS.				
	No.	No.	No.	No.	No.
1922	28,003	64,477	..	3,343	95,823
1923	32,914	67,311	..	3,063	103,288
1924	31,805	67,657	32,616	3,511	135,589
1925	32,362	65,322	110,499	3,798	211,981
1926	34,512	65,250	138,923	5,293	243,978
	TONNAGE OF GOODS AND LIVE STOCK CARRIED.				
	tons.	tons.	tons.	tons.	tons.
1922	20,780	76,089	9,817	2,251	108,937
1923	33,252	72,392	14,702	2,954	123,300
1924	32,858	69,179	18,504	3,167	123,708
1925	42,225	63,622	25,405	15,259	146,511
1926	37,848	46,870	45,933	15,275	145,926

(ii) *Passenger-Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1925-26 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1925-26.

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 ..	372,680	34,512	29,049	138,545	78	842	1.14	4 0 3	27,627
Oodnadatta ..	46,095	65,250	2,754	15,402	60	42	1.34	0 4 9	5,761
Federal Capital Territory	2,862	138,923	497	2,575	174	4	1.24	0 0 4½	100,613
Northern Territory ..	8,306	5,293	426	3,420	51	81	1.92	0 12 11	2,146

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1925-26 :—

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1925-26.

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.	£	Tons.	Miles.	*d.*	
Trans-Australian ..	98,642	37,848	9,596	51,370	97	254	1.28	9,126
Oodnadatta ..	146,678	46,870	4,973	58,479	34	106	2.82	10,405
Federal Capital Territory	4,261	45,933	229	8,521	54	5	8.92	46,435
Northern Territory	52,335	15,275	1,660	22,886	32	109	3.31	8,356

12. Passenger Fares, Goods Rates, and Parcel Rates.—In previous issues of the Year Book particulars were included of Passenger Fares, Goods Rates (Ordinary Goods and Agricultural Produce), and Parcels Rates, but it is not proposed to republish this information herein.

13. Rolling Stock, 1926.—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, 1926.

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	68	..	68	49	..	49	734	..	734
Oodnadatta ..	..	17	17	..	12	12	..	195	195
Northern Territory ..	..	13	13	..	12	12	..	282	282
Total ..	68	30	98	49	24	73	734	477	1,211

The Federal Capital Territory Railway is worked by the New South Wales Government Railway Department, using its own rolling stock.

14. **Employees.**—(i) *General.* The following table shows the number of employees on the Federal railways at 30th June in each year from 1922 to 1926 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES, 1922 TO 1926.

Railway.	30th June—									
	1922.		1923.		1924.		1925.		1926.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trans-Australian	161	802	157	852	162	761	173	906	} 218	870
Oodnadatta ..	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)		345
Northern Territory	8	54	9	71	14	107	17	147		184
Federal Capital Territory (b) ..	..	..	..	..	..	..	..	..	..	..
Total ..	169	856	166	923	176	868	190	1,053	218	1,399

(a) Worked by South Australian Government Railways.
(b) Worked by New South Wales Government Railways.

Of the 218 salaried staff employed, 46 were engaged in the Construction Branch, but it is not possible to assign numbers to particular lines. Of the operating staffs (salaried), 133 were employed on the Trans-Australian Line, 26 on the Oodnadatta Line and 13 on the Northern Territory Line—a total of 172 persons.

(ii) *Average Employed throughout Year.* The average number of employees throughout the year 1925–26 was 208 salaried staff (45 of whom were on construction work) and 1,373 wages staff (Construction, 282).

15. **Accidents.**—(i) *Classification.* The table hereunder furnishes a classification of accidents on the Federal railways during the year 1925–26 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1925-26.

Classification.	Trans-Australian.		Oodnadatta.		Federal Capital Territory.		Northern Territory.		All Federal Railways.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	..	..	..	..	..	..	..	..	..
Accidents on line (other than train accidents)—										
Passengers	..	2	..	1	..	..	..	..	..	3
Employees	..	3	1	8	..	..	..	..	1	11
Other Persons	..	..	..	..	..	..	..	..	..	..
Shunting Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	1	..	3	..	..	..	..	..	4
Other Persons	..	..	..	..	..	..	..	..	..	..
Employees proceeding to or from duty within the Railway boundary	..	..	..	..	..	..	..	..	..	..
Persons killed or injured at crossings	..	..	..	..	..	..	..	..	..	..
Trespassers	..	..	..	..	..	..	..	..	..	..
Miscellaneous	..	..	..	6	..	..	..	..	..	6
Total	..	6	1	18	..	..	..	..	1	24

(ii) *Particulars for Quinquennium* 1922–26. The following table shows the number of accidents in each of the years 1922 to 1926 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1922 TO 1926.

Railway.	Number of Persons.									
	Killed.					Injured.				
	1922.	1923.	1924.	1925.	1926.	1922.	1923.	1924.	1925.	1926.
Trans-Australian	..	1	1	..	..	8	14	9	6	6
Oodnadatta	..	..	..	2	1	8	7	7	3	18
Federal Capital Territory	..	..	..	..	..	..	..	..	..	..
Northern Territory	..	..	1	..	..	1	1	1	4	..
Total	1	2	2	1		17	22	17	13	24

§ 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, 1922 to 1926.**—(i) *General.* The following table shows the length of State railways open for traffic on the 30th June in the years 1922 to 1926 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
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
1924	5,523	4,434	6,040	2,452	3,629	673	22,751
1925	5,656	4,483	6,114	2,452	3,733	673	23,111
1926	5,742	4,627	6,240	2,499	3,864	673	23,645

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1926 accompanies this chapter.

The appended statement shows the actual mileage opened for traffic in the year 1926, and also the annual average increase in mileage opened since 1916 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1925–26	86.07	143.65	125.62	47.40	131.69	..	534.43
Average annual mileage increase for 10 years to 30th June, 1926 ..	155.38	52.69	127.31	31.25	53.24	11.07	430.94

(ii) *New South Wales.* During the year ended 30th June, 1926, the following extensions and new lines were opened for traffic :—The Rock to Pulletop (25.74 miles); Trida to Ivanhoe (39.17 miles); Sydenham to Botany (5.35 miles); and Roslyn to Taralga (15.78 miles). Re-adjustments of actual mileage open increased the mileage by 0.03 miles, making a total increase for the year of 86.07 miles.

(iii) *Victoria.* The following lines were opened for traffic during 1925–26:—Werrimul to The Hut (15.17 miles); Kooloonong to West Narrung (6.71 miles); Melbourne Yard–New Country Lines (1.85 miles); and Moama (New South Wales) to Balranald (New South Wales) (119.92 miles); a total of 143.65 miles.

(iv) *Queensland.* During 1925–26, 125.62 miles of new lines were opened for traffic, viz.:—Tara to The Gums (17.69 miles); The Gums to Hannaford (7.43 miles); Callide to Thangool (14.90 miles); Longreach to Morella (40.43 miles); and Baralaba to Nipan (45.17 miles).

(v) *South Australia.* During the year 1925–26, 47.89 miles of new 5 ft. 3 in. gauge lines were opened for traffic, as follows:—Snowtown to Red Hill (16.56 miles); and Wanbi to Yinkanie (31.33 miles). Re-adjustments of the measurements of existing mileage reduced the total increase of mileage open by 0.49 miles, making a net increase of 47.40 miles.

(vi) *Western Australia.* The following new mileage was opened for traffic during the year:—Piawaning to Miling (26.95 miles); Esperance to Salmon Gums (66.49 miles); Lake Grace to Newdegate (38.75 miles); Gilgering Deviation (0.03 miles); while 0.53 miles were dismantled, thus making the total increase for the year 131.69 miles.

(vii) *Tasmania.* No new extensions were opened during the year. The Sorell line (Bellerive to Sorell), 14.65 miles, was closed for traffic on 1st July, 1926.

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 in the different States for the year ended 30th June, 1926, is given in the Transport and Communication Bulletin No. 18 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 1922 to 1926 inclusive:—

RAILWAYS, STATE.—MILEAGE WORKED AND MILES RUN, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AVERAGE MILEAGE WORKED.							
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
1924 ..	5,460	4,369	5,960	2,416	3,593	668	22,466
1925 ..	5,571	4,448	6,078	2,452	3,669	673	22,891
1926 ..	5,722	4,528	6,145	2,491	3,837	673	23,396
TRAIN-MILES RUN.							
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	5,792,798	4,505,299	1,434,816	60,738,597
1924 ..	23,755,897	17,244,507	11,647,077	6,791,620	4,839,285	1,416,216	65,694,602
1925 (*a*) ..	23,304,916	17,482,006	12,107,395	6,653,248	4,843,304	1,358,980	65,750,449
1926 (*a*) ..	24,624,995	17,575,547	12,866,323	6,846,149	4,862,505	1,342,475	68,117,994

(*a*) Traffic Train Miles (exclusive of "Assistant" and "Light" mileages).

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. The particulars of train-miles run given in the foregoing table are not strictly comparable over the quinquennium owing to the fact that "assistant" and "light" mileages have been excluded for the years 1924–25 and 1925–26.

5. Lines under Construction, and Lines Authorized, 1926.—(i) *General.* The following statement gives particulars up to the 30th June, 1926, 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, 1926.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction	243.64	53.50	b234.00	29.35	c111.50	..	671.99
Mileage authorized but not commenced ..	259.07	144.25	1,165.00	46.50	174.00	..	1,788.82

(a) See sub-section (b) below.
(b) Exclusive of 186 miles on which work has been suspended.
(c) Exclusive of 28 miles in abeyance.

(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 while 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 243.64 miles, consisting of the following lines:—Richmond to Kurrajong (6.89 miles); Ivanhoe to Menindie (117.44 miles); Booyong to Ballina (12.79 miles); Uranquinty towards Moon's Siding (28.33 miles); Ungarie to Naradhan (38.09 miles); Kyogle to Richmond Gap (26.66 miles); Regent's Park to Bankstown (2.35 miles); and the City and Suburban Railway (11.09 miles).

(b) *Victoria.* In this State 15.50 miles of 5 ft. 3 in. gauge lines are being constructed, viz.:—Goroke to Morea (9 miles) and Marnoo to Wallaloo (6.50 miles). The Border Railways Act 1922 (Vic. 3194) provides for the construction of 38 miles in New South Wales Territory, viz.:—Gonn Crossing to Stony Crossing. On completion this line, which is of 5 ft. 3 in. gauge, will be taken over and operated by the Victorian Railways Commissioners.

(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, 1926, the following lines, of an aggregate length of 506 miles, were under construction:—Northern Division—Mount Molloy Extension (7 miles) and Duchess to Mt. Isa (54 miles); Central Division—Barrimoon to Monto (31 miles); Callide to Monto (78 miles); Nipan to Castle Creek (14 miles); and Morella to Winton (69 miles); Southern Division—Ceratodus to Monto (34 miles); and Hannaford towards Surat (25 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); Thangool to Monto (63 miles); and Winton to 37-Mile (37 miles); a total of 186 miles.

(d) *South Australia.*—The construction of the following lines was in progress at 30th June, 1926:—5 ft. 3 in. gauge—Bumbunga to Lochiel (5.00 miles); and Paringa to Renmark (2.50 miles); 3 ft. 6 in. gauge—Kimba to Buckleboo (21.85 miles). The conversion to 5 ft. 3 in. gauge of the Western system (3 ft. 6 in. gauge), about 206 miles, is in hand, and approximately 135 miles of main track has been completed.

(e) *Western Australia.* The following lines were in course of construction by the Public Works Department on the 30th June, 1926:—Norseman to Salmon Gums (58.50 miles); Jardee to Pemberton (17 miles); and Dwarda to Narrogin (36 miles); a total of 111.50 miles. The construction of the line from Pemberton to Denmark (28 miles) was in abeyance at 30th June, 1926.

(f) *Tasmania.* At 30th June, 1926, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1926, 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); Camurra to Boggabilla (70 miles); Wyalong to Condobolin (33 miles); Moss Vale to Port Kembla (38.08 miles); Jerilderie towards Deniliquin (25.00 miles); Rand to Bull's Plains (27.55 miles); Canowindra to Gregra (33.87 miles); and Tempe to East Hills (7.72 miles); a total distance of 259.07 miles.

(*b*) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1926:—5 ft. 3 in. gauge: Kanagulk to Edenhope (37.75 miles); Mildura to Murray River (4 miles); Bowser to Peechelba (11 miles); and La La Siding to Big Pat's Creek (2.50 miles). Under the Border Railways Act 1922, the following lines have been approved for construction in New South Wales territory:—Yarrawonga (Victoria) to Oaklands (New South Wales) (37 miles); Euston (New South Wales) to Benanee and beyond (New South Wales) (30 miles); and Gol Gol Extension (22 miles); an aggregate distance of 144.25 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 (216 miles). The following lines were also authorized for construction—Inglewood to Texas and Silverspur (44 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Wandoan to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbyn to Myally Creek (50 miles); and Peeramon towards Boongee (11 miles); a total of 1,165 miles.

(*d*) *South Australia.* Parliament has authorized the construction of lines on the 5 ft. 3 in. gauge from Renmark to Barmera (20.25 miles); and on the 3 ft. 6 in. gauge from Kielpa to Mangalo Hall (26.25 miles).

(*e*) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1926:—Bridgetown–Jarnadup (Part) (22 miles); Pemberton to Denmark (63 miles); Yarramony eastwards (85 miles); and Brookton to Dale River (27 miles); a total distance of 197 miles.

(*f*) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1926.

6. **Cost of Construction and Equipment.**—(i) *General.* The total cost of construction and equipment of the State railways as distinct from those owned by the Commonwealth Government at the 30th June, 1926, amounted to £276,425,969, representing an average cost of £45.81 per head of population. If the cost of railways owned by the Commonwealth Government is included, the total capital cost (£288,391,955) is equivalent to an amount of £47.71 per head of the population of the Commonwealth, while the total mileage open (25,378.50 miles) per 1,000 of population is 4.20 miles. 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, 1926.

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 at 30th June, 1926.
	Miles.	£	£	£	Miles.
New South Wales (*a*) ..	5,741.82	103,674,668	18,056	44.73	2.48
Victoria	4,627.27	(*b*) 68,888,145	(*b*) 14,887	40.65	2.73
Queensland	6,240.04	51,555,649	8,262	58.63	7.10
South Australia (*a*) ..	2,499.10	(*c*) 25,529,866	(*c*) 10,216	45.71	4.47
Western Australia (*a*) ..	3,864.35	20,327,456	5,260	54.18	10.30
Tasmania	672.90	6,450,185	9,586	30.81	3.21
All States ..	23,645.48	276,425,969	11,690	45.81	3.91

(*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 (£5,260) per mile open is in Western Australia, and the highest (£18,056) in New South Wales, as compared with an average of £11,690 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 table above 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 differences between the amounts shown therein for Queensland, South Australia, and Western Australia, and those shown in the Railway Reports for these States.

(ii) *Capital Cost, All Lines.* (*a*) *Total.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1922 to 1926 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust. (*b*)	W. Aust.	Tasmania.	All States. (*a*, *b*)
			TOTAL COST OF LINES OPEN.				
	£	£	£	£	£	£	£
1922 ..	83,789,871	62,941,364	42,519,012	19,742,821	18,330,557	5,753,381	233,077,006
1923 ..	87,713,871	64,615,435	44,823,991	20,234,003	18,555,115	6,199,725	242,142,140
1924 ..	91,792,167	65,880,792	47,367,439	21,410,602	18,967,443	6,374,784	251,793,227
1925 ..	98,060,216	67,136,069	49,453,595	23,637,283	19,643,517	6,416,194	264,346,874
1926 ..	103,674,668	68,888,145	51,555,649	25,529,866	20,327,456	6,450,185	276,425,969
			COST PER MILE OPEN.				
1922 ..	16,378	14,560	7,332	8,376	5,181	9,035	10,707
1923 ..	16,494	14,883	7,590	8,527	5,219	9,346	10,933
1924 ..	16,621	14,856	7,842	8,733	5,227	9,474	11,067
1925 ..	17,338	14,974	8,088	9,641	5,263	9,535	11,435
1926 ..	18,056	14,887	8,262	10,216	5,260	9,586	11,690

(*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).

(*b*) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1926 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1926.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1926 ..	659,930	4,029,914	..	834,119	658,134	16,935	6,199,032

(iii) *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 1922 to 1926 :—

RAILWAYS, STATE.—LOAN EXPENDITURE, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	All States.
	£	£	£	£	£	£	£
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
1924 ..	2,914,722	1,395,282	2,318,205	779,441	561,988	250,514	8,220,152
1925 ..	4,246,963	1,483,720	1,741,805	2,151,329	534,103	28,638	10,186,558
1926 ..	6,060,259	1,489,285	2,826,188	2,764,511	642,854	17,255	13,800,352

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1926:—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1926.

State ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.a	All States.
	£	£	£	£	£	£	£
Expenditure	109,283,951	67,634,835	54,875,095	26,267,702	20,168,519	6,892,582	285,122,684

(a) Including tramways.

7. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1922 to 1926 inclusive were as follows:—

RAILWAYS, STATE.—GROSS REVENUE, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL GROSS REVENUE.							
	£	£	£	£	£	£	£
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
1924	15,616,577	11,958,635	5,714,036	3,929,428	3,227,371	585,468	41,031,515
1925	16,769,452	12,759,197	7,109,210	4,012,736	3,359,501	548,256	44,558,352
1926	16,939,032	12,671,061	7,137,090	4,237,718	3,337,292	545,191	45,167,384
GROSS REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1922	2,996	2,522	891	1,406	799	927	1,749
1923	2,929	2,630	924	1,573	821	863	1,785
1924	2,860	2,737	959	1,627	898	877	1,826
1925	3,010	2,869	1,170	1,637	916	815	1,947
1926	2,960	2,798	1,210	1,701	870	810	1,930
GROSS REVENUE PER TRAIN-MILE RUN.							
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1922	166.82	163.33	128.40	140.56	148.68	98.51	150.04
1923	168.39	166.11	119.15	153.74	155.34	95.74	154.85
1924	173.65	172.95	125.94	152.43	167.09	101.35	160.71
1925	172.70	175.16	140.92	144.75	166.47	96.82	162.64
1926	165.09	173.03	138.73	148.56	164.72	97.47	159.14

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 later.

(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 1922 to 1926, 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, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			COACHING TRAFFIC RECEIPTS.				
	£	£	£	£	£	£	£
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	2,003,282	1,270,590	972,318	262,373	16,872,654
1924 ..	6,797,888	5,914,559	2,092,693	1,286,298	996,776	253,386	17,341,600
1925 ..	6,942,093	5,981,437	2,482,026	1,317,102	971,323	221,668	17,915,649
1926 ..	7,101,229	6,070,555	2,454,689	1,277,463	969,160	206,728	18,079,824
			GOODS AND LIVE STOCK TRAFFIC RECEIPTS.				
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
1924 ..	8,096,274	5,204,526	3,487,987	2,558,706	2,050,707	318,668	21,716,868
1925 ..	9,010,929	5,775,522	4,477,985	2,607,628	2,198,322	312,706	24,383,092
1926 ..	8,941,123	5,565,451	4,817,222	2,578,700	2,174,895	320,748	24,398,139
			MISCELLANEOUS RECEIPTS.				
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
1924 ..	722,415	839,550	133,356	84,424	179,888	13,414	1,973,047
1925 ..	816,430	1,002,238	149,199	88,006	189,856	13,882	2,259,611
1926 ..	896,680	1,035,055	165,179	381,555	193,237	17,715	2,689,421

The increase in miscellaneous receipts in the State of South Australia was due to the inclusion of £225,242 on account of Border Railway adjustments with the State of Victoria, and £78,619 earned by Bookstalls and Refreshment Rooms which were operated departmentally for the first time.

(*b*) *Percentages.* The following table shows for the two years 1924–25 and 1925–26 the percentage which each class of receipts bears to the total gross revenue :—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS, 1925 AND 1926.

State.	1925.			1926.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	41.40	53.73	4.87	41.92	52.78	5.30
Victoria	46.88	45.26	7.86	47.91	43.92	8.17
Queensland	34.91	62.99	2.10	33.01	64.77	2.22
South Australia ..	32.82	64.98	2.20	30.15	60.85	9.00
Western Australia ..	28.91	65.44	5.65	29.04	65.17	5.79
Tasmania	40.43	57.04	2.53	37.92	58.83	3.25
All States ..	40.21	54.72	5.07	40.03	54.02	5.95

(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, 1926 :—

RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1926.

State.	Number of Passenger-Train-Miles.	Coaching Traffic Receipts.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
	No.	£	£	*d.*
New South Wales	14,037,710	7,101,229	1,241	121.41
Victoria	11,767,618	6,070,555	1,341	123.81
Queensland	4,237,720	2,454,689	399	139.02
South Australia	3,662,400	1,277,463	513	83.71
Western Australia	*a*2,076,691	969,160	253	112.00
Tasmania	*a*596,189	206,728	307	83.22
All States	36,378,328	18,079,824	773	119.28

(*a*) Includes " Assistant " and " Light " Mileage.

(d) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1926, are given below :—

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1926.

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 ..	10,587,285	15,032,811	8,941,123	1,563	202.66	142.75
Victoria	5,807,929	8,728,496	5,565,451	1,229	229.98	153.03
Queensland ..	8,628,603	5,106,386	4,817,222	784	133.99	226.41
South Australia ..	3,183,749	3,562,245	2,578,700	1,035	194.39	173.74
Western Australia ..	*a*2,976,239	3,237,496	2,174,895	567	175.38	161.23
Tasmania	*a*761,822	694,194	320,748	477	101.05	110.89
All States ..	31,945,627	36,361,628	24,398,139	1,043	183.30	161.04

(*a*) Includes " Assistant " and " Light " Mileage.

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 thereof on gross revenue in each State for the years 1922 to 1926 :—

RAILWAYS, STATE.—WORKING EXPENSES, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL WORKING EXPENSES.							
	£	£	£	£	£	£	£
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
1924	10,917,491	8,718,394	4,990,749	2,901,298	2,297,980	552,877	30,378,779
1925	11,939,686	9,429,728	5,425,167	2,935,755	2,355,087	531,590	32,617,013
1926	12,519,393	9,548,147	6,453,792	a7,081,130	2,509,049	504,038	38,622,149
PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.							
	%	%	%	%	%	%	%
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
1924	69.91	72.90	87.34	73.84	71.20	94.43	74.03
1925	71.20	73.90	76.31	73.16	70.10	96.96	73.20
1926	73.91	75.35	86.86	167.10	75.18	92.45	85.51

(a) See (ii) below.

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1926 is illustrated in the graph which accompanies this chapter.

(ii) *Special Expenditure.* The pronounced increase in the working expenses in South Australia is due to an amount of £3,982,314 on account of accumulated and deferred charges being debited against the revenue of the year. This expenditure has been shown in this way in deference to the wishes of the South Australian railway authorities. Eliminating this amount, the percentage of working expenses on gross revenue for that State would have been 73.12 per cent., and for all States 76.70 per cent.

(iii) *Averages.* The next table shows the working expenses per average mile worked and per train-mile run in each State for the years 1922 to 1926 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
WORKING EXPENSES PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1922	2,189	1,876	832	1,082	658	848	1,356
1923	2,049	1,896	803	1,179	622	775	1,323
1924	1,999	1,995	837	1,201	640	828	1,352
1925	2,143	2,120	893	1,197	642	799	1,425
1926	2,188	2,108	1,051	a 2,843	654	749	1,651
WORKING EXPENSES PER TRAIN-MILE RUN.							
	d	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1922	121.89	121.49	119.83	108.15	122.45	90.11	119.41
1923	117.82	119.78	103.63	115.24	117.75	86.03	114.79
1924	121.40	126.08	110.00	112.55	118.97	95.71	118.99
1925	122.96	129.45	107.54	105.90	116.70	93.87	119.05
1926	122.02	130.38	120.50	a248.24	123.84	90.11	136.08

(a) See sub-section (ii) above.

The working expenses per average mile worked for the year 1925–26 were greater than the previous year in the States of New South Wales, Queensland, and South and Western Australia, while in respect of working expenses per train-mile, New South Wales and Tasmania were the only States in which decreases were recorded.

(iv) *Distribution.* The subjoined table shows the distribution of working expenses, under four chief heads of expenditure, for the years 1922 to 1926 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
			MAINTENANCE.				
	£	£	£	£	£	£	£
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
1924	1,865,096	1,861,887	1,197,992	545,987	543,387	151,186	6,165,535
1925	2,176,435	1,963,960	1,280,190	501,800	527,493	144,612	6,594,490
1926	2,001,724	1,928,597	1,513,588	a2,407,266	596,046	134,835	8,582,056
			LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.				
1922	5,474,485	3,426,370	2,165,438	1,417,305	1,074,460	239,158	13,797,216
1923	5,247,980	3,482,711	2,120,267	1,579,432	1,042,751	228,308	13,701,449
1924	5,360,663	3,219,267	2,214,001	1,548,799	1,092,580	234,562	13,669,872
1925	5,772,631	3,501,911	2,459,370	1,560,923	1,124,157	223,302	14,642,294
1926	6,107,302	3,592,490	2,973,033	a3,611,130	1,157,230	218,326	17,659,511
			TRAFFIC EXPENSES.				
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
1924	2,939,236	3,081,776	1,487,334	738,845	599,678	122,395	8,969,264
1925	3,121,001	3,228,961	1,593,347	792,762	639,193	122,374	9,497,638
1926	3,391,092	2,701,124	1,859,375	a868,171	685,898	117,246	9,622,906
			OTHER CHARGES.				
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
1924	752,496	555,464	91,422	67,667	62,335	42,042	1,571,426
1925	869,619	734,896	92,260	80,270	64,244	41,302	1,882,591
1926	1,019,875	1,325,936	113,796	a194,563	69,875	33,631	2,757,676

(a) See sub-section (ii), page 291.

In New South Wales and Victoria the expenditure in connexion with refreshment rooms is included in " Other Charges."

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 open for traffic in each State for the years 1922 to 1926 :—

RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE THEREOF ON CAPITAL COST OF LINES OPEN, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			NET REVENUE.				
	£	£	£	£	£	£	£
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	706,138	929,375	705,037	58,067	10,135,707
1924	4,699,086	3,240,241	723,287	1,028,130	929,391	35,283	10,655,418
1925	4,829,766	3,329,469	1,684,043	1,076,981	1,004,414	16,666	11,941,339
1926	4,419,039	3,122,914	977,298	−2,843,412 a	828,243	41,153	6,545,235
			PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.				
	%	%	%	%	%	%	%
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
1924	5.12	4.92	1.53	4.80	4.90	0.51	4.23
1925	4.93	4.96	3.41	4.56	5.11	0.26	4.51
1926	4.26	4.54	1 90	a − 1.11	4.07	0.63	2.37

(a) See sub-section (ii), page 291.

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 1924–25, with a return of 4.51. The very low return for 1925–26 is due, in a large measure, to the unusual loading of the working expenses of the year in South Australia, which was alluded to in paragraph 8. But for this circumstance the percentage of net revenue on capital would have been 4.07 per cent. for South Australia and 3.81 per cent. for the average of all States. Even this larger return, however, would be insufficient to meet interest charges, 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, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Net Revenue per Average Mile Worked.							
	£	£	£	£	£	£	£
1922	807	646	59	324	141	79	393
1923	880	734	121	394	199	88	462
1924	861	742	122	426	258	49	474
1925	867	749	277	429	273	25	522
1926	772	690	159	*a* – 1,142	216	61	279
Net Revenue per Train-Mile Run.							
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1922	44.93	41.84	8.57	32.41	26.23	8.41	30.63
1923	50.57	46.33	15.52	38.50	37.59	9.71	40.05
1924	52.25	46.87	15.94	39.88	48.12	5.64	41.72
1925	49.74	45.71	33.38	38.85	49.77	2.95	43.58
1926	43.07	42.65	18.23	*a* – 99.68	40.88	7.36	23.06

(*a*) See sub-section (ii), page 291.

The net revenue per average mile worked and per train-mile run showed decreases in all States with the exception of Tasmania, where a fairly substantial increase was recorded. Here again, however, the results are prejudicially affected by the loading of the working expenses in South Australia (see page 291). But for this, the net revenue per mile worked would have been £457 in South Australia, and £450 for all States, while per train mile it would have been, respectively, 41.04d. and 38.40d.

10. Profit or Loss.—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 for the last five years :—

RAILWAYS, STATE.—PROFIT OR LOSS, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
Amount of Interest on Railway Loan Expenditure.							
	£	£	£	£	£	£	£
1922	4,217,881	2,580,001	1,924,375	905,319	756,737	228,488	10,612,801
1923	4,487,303	2,937,709	1,998,694	923,606	768,244	255,007	11,370,563
1924	4,693,417	3,001,370	2,136,187	977,376	787,221	263,157	11,858,728
1925	4,796,829	3,085,648	2,419,503	1,018,117	813,849	279,832	12,413,778
1926	5,249,710	3,077,905	2,564,181	1,195,108	860,225	283,799	13,230,928
Profit or Loss after Payment of Working Expenses, Interest, and other Charges.							
	£	£	£	£	£	£	£
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
1924	+ 5,669	+ 238,871	–1,412,900	+ 50,754	+ 142,170	– 227,874	–1,203,310
1925	+ 32,937	+ 243,821	– 735,460	+ 58,864	+ 190,565	– 263,166	– 472,439
1926	– 830,671	+ 45,009	–1,586,883	–4,038,520 *a*	– 31,982	– 242,646	–6,685,693
Percentage of Profit or Loss on Capital Cost of Construction and Equipment.							
	%	%	%	%	%	%	%
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
1924	+0.01	+0.36	–2.98	+0.24	+0.75	–3.57	–0.48
1925	+0.03	+0.36	–1 49	+0.25	+0.97	–4.10	–0.18
1926	–0.80	+0.06	–3.08	*a* –1.58	–0.16	–3.76	–2.42

– Indicates a loss. (*a*) See sub-section (ii), page 291.

Interest charges in 1925–26, viz., £13,230,928, show an increase of £2,618,127 over the amount payable in 1921–22. The interest payable on the cost of construction and equipment, exclusive of expenditure from Consolidated Revenue (£6,199,032) for that purpose, was at the rate of 4.90 per cent. in 1925–26. If the abnormal charges to working expenses in South Australia be eliminated, the loss in that State for 1925–26 would be 0.22 per cent., and for all States, 0.98 per cent.

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, with a consequent 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 1922 to 1926:—

RAILWAYS, STATE.—TRAFFIC, 1922 TO 1926.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
NUMBER OF PASSENGER JOURNEYS.							
1922 ..	121,298,861	142,456,924	27,155,606	23,316,141	17,895,509	2,757,702	334,880,743
1923 ..	123,714,639	155,957,240	28,358,170	24,475,170	17,830,292	2,884,210	353,219,721
1924 ..	128,101,184	167,861,864	29,535,981	25,177,933	18,133,168	2,950,887	371,770,017
1925 ..	128,532,038	166,444,142	29,657,832	25,647,487	17,196,672	2,656,018	370,134,189
1926 ..	130,725,581	168,054,308	28,384,302	25,343,319	16,457,719	2,455,824	371,421,053
PER 100 OF MEAN POPULATION.							
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
1924 ..	5,749	10,224	3,579	4,753	5,044	1,379	6,411
1925 ..	5,652	9,959	3,483	4,715	4,670	1,244	6,249
1926 ..	5,687	9,979	3,296	4,594	4,422	1,132	6,206
PER AVERAGE MILE OF LINE WORKED.							
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
1924 ..	23,461	38,417	4,957	10,422	5,047	4,433	16,548
1925 ..	23,071	37,424	4,879	10,461	4,687	3,947	16,170
1926 ..	22,845	37,111	4,619	10,213	4,289	3,650	15,876
TONNAGE OF GOODS AND LIVE STOCK CARRIED.							
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
1924 ..	15,693,127	8,309,543	4,273,926	3,565,307	3,023,299	703,961	35,572,163
1925 ..	16,208,476	8,959,556	5,083,658	3,611,313	3,284,915	690,561	37,838,479
1926 ..	15,032,811	8,728,496	5,106,386	3,562,245	3,237,496	694,194	36,361,628
PER 100 OF MEAN POPULATION.							
1922 ..	661	477	477	559	751	289	565
1923 ..	630	467	524	635	754	264	563
1924 ..	704	506	518	671	841	329	612
1925 ..	719	536	597	664	892	323	645
1926 ..	654	518	593	646	870	320	608
PER AVERAGE MILE OF LINE WORKED.							
1922 ..	2,796	1,751	645	1,206	720	980	1,451
1923 ..	2,656	1,743	717	1,391	739	857	1,458
1924 ..	2,874	1,902	717	1,476	842	1,059	1,583
1925 ..	2,909	2,014	836	1,473	895	1,026	1,652
1926 ..	2,627	1,928	831	1,430	844	1,032	1,554

(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 and suburban, and country traffic in each State. This is shown below for the year 1925–26 :—

RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1925-26.

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	*a*119,824,985	10,900,596	130,725,581	2,280,203	4,031,487	6,311,690
Victoria ..	*b*158,589,397	9,464,911	168,054,308	2,693,187	2,732,617	5,425,804
Queensland ..	22,170,399	6,213,903	28,384,302	404,424	1,575,062	1,979,486
S. Australia ..	*c* 23,286,514	2,056,805	25,343,319	397,091	677,991	1,075,082
W. Australia	14,217,495	2,240,224	16,457,719	254,269	535,980	790,249
Tasmania ..	(*d*)	(*d*)	2,455,824	(*d*)	(*d*)	173,488
Total	(*e*)	(*e*)	371,421,053	(*e*)	(*e*)	15,755,799

(*a*) Within 34 miles of Sydney and Newcastle, including the Richmond line. (*b*) Within 20 miles of Melbourne. (*c*) Within 25 miles of Adelaide. (*d*) Not available. (*e*) Incomplete.

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.

A more detailed analysis of the passenger traffic for the years ended 30th June, 1925 and 1926, is contained in the Transport and Communication Bulletin No. 18 issued by this Bureau.

(iii) *Electrification of Suburban and Country Railways.* Electrification of the Melbourne Suburban Railways was completed in April, 1923. The scheme comprised the electrification of 157 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. Considerable progress has been made with the electrification of the Sydney Suburban System, and on 1st March, 1926, electric trains were operating on the Illawarra line. 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 line offers prospects of financial success.

(iv) *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 1925–26 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1925-26.

State.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Hay, Straw, and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
	TONS CARRIED.							
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	7,145,225	1,858,915	1,450,813	391,877	154,946	766,557	3,264,478	15,032,811
Victoria ..	607,278	1,896,361	1,618,218	380,038	87,882	599,591	3,539,128	8,728,496
Queensland ..	717,812	446,139	1,915,762*a*	*b*	75,954	468,833	1,481,886	5,106,386
South Australia	281,456	699,465	685,608	100,936	37,236	152,959	1,604,585	3,562,245
Western Australia	209,929	523,862	674,343	100,113	16,941	98,477	1,613,831	3,237,496
Tasmania ..	290,975	*c*	71,757*a*	47,379	2,928	25,066	256,089	694,194
All States ..	9,252,675	5,424,742	6,416,501	1,020,343	375,887	2,111,483	11,759,997	36,361,628
	PERCENTAGE ON TOTAL TONNAGE CARRIED.							
	%	%	%	%	%	%	%	%
New South Wales	47.53	12.36	9.65	2.61	1.03	5.10	21.72	100.00
Victoria ..	6.96	21.73	18.54	4.35	1.01	6.87	40.54	100.00
Queensland ..	14.06	8.73	37.52*a*	*b*	1.49	9.18	29.02	100.00
South Australia	7.90	19.64	19.25	2.83	1.05	4.29	45.04	100.00
Western Australia	6.49	16.18	20.83	3.09	0.52	3.04	49.85	100.00
Tasmania ..	41.92	*c*	10.34*a*	6.82	0.42	3.61	36.89	100.00
All States ..	25.45	14.92	17.65	2.80	1.03	5.81	32.34	100.00

(*a*) Agricultural produce. (*b*) Included with agricultural produce. (*c*) Included with coal, coke, and shale.

(*b*) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1925–26 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1925-26.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	5,263,711	3,815,460	2,996,733	1,379,948	1,432,400	230,151	15,118,403
Wheat	*a*	369,007	*a*	248,555	302,945	*a*	*d*920,507
Wool	683,968	218,788	535,010	71,854	58,601	4,634	1,572,855
Live stock ..	1,366,844	636,326	859,120	192,089	147,895	21,905	3,224,179
Minerals—							
Coal, coke, and shale ..	1,190,800	150,964	248,054	183,457	112,289	*c*28,769	1,914,333
Others ..	435,800	374,906	178,305	502,797	120,765	*b*35,289	1,647,862
Total ..	8,941,123	5,565,451	4,817,222	2,578,700	2,174,895	320,748	24,398,139

(*a*) Included with General Merchandise. (*b*) Native coal. (*c*) Minerals other than native coal. (*d*) Incomplete.

In Victoria electric motor coaches are used 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.

12. **Passenger-Mileage and Ton-Mileage.**—(i) *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 1921–22 to 1925–26.

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES," 1922 TO 1926.

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.									
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
1924	12,385	128,101	1,721,161	6,076,988	139	13.44	0.85	11.39	315,216
1925	12,616	128,532	1,637,381	6,186,368	130	12.74	0.91	11.55	293,907
1926	14,038	130,726	1,675,091	6,311,690	119	12.81	0.90	11.59	292,732
Victoria.									
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
1924	11,140	167,862	1,421,771	5,330,614	128	8.47	0.90	7.62	325,391
1925	11,602	166,444	1,426,411	5,380,887	123	8.57	0.91	7.76	320,718
1926	11,768	168,054	1,460,343	5,425,804	125	8.69	0.82	7.75	322,487
South Australia.									
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
1924	2,918	25,107	290,843	1,088,046	100	11.58	0.90	10.40	120,394
1925	3,460	25,647	302,185	1,114,558	97	11.78	0.89	10.43	123,255
1926	3,662	25,343	300,950	1,075,082	82	11.87	0.86	10.18	120,836
Tasmania.									
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
1924	672	2,960	46,766	218,020	70	15.80	1.11	17.68	70,036
1925	654	2,656	45,126	187,701	69	16.99	0.99	16.96	67,061
1926	596	2,456	39,342	173,488	66	16.02	1.06	15.67	58,466

The differences in the number of passenger journeys given in this table and that in connexion with traffic in respect of the State of South Australia for the years 1922 to 1924 inclusive are 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.

(ii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1921–22 to 1925–26 in respect of all States with the exception of Queensland :—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES," 1922 TO 1926.

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.								
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
1924	11,322	15,516	1,392,390	8,096,274	163	89.74	1.37	255,005
1925	10,689	16,027	1,647,448	9,010,929	177	102.80	1.29	295,718
1926	10,587	14,809	1,509,555	8,941,123	165	101.93	1.39	263,802
VICTORIA.								
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
1924	5,939	8,310	745,301	5,204,526	154	89.69	1.68	170,588
1925	5,880	8,960	847,202	5,775,522	176	94.56	1.64	190,468
1926	5,808	8,728	776,251	5,565,451	166	88.93	1.72	171,434
SOUTH AUSTRALIA.								
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
1924	3,269	3,565	384,576	2,558,706	129	107.87	1.60	159,195
1925	3,193	*a*3,611	*a*393,649	2,607,628	134	109.00	1.59	160,559
1926	3,184	3,563	387,317	2,579,365	134	108.70	1.60	155,518
WESTERN AUSTRALIA.								
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
1924	2,916	3,023	252,796	2,050,707	100	83.62	1.95	70,364
1925	3,053	3,285	277,190	2,198,322	104	84.38	1.90	75,553
1926	2,976	3,237	272,611	2,174,895	106	84.20	1.91	71,048
TASMANIA.								
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
1924	744	685	30,019	300,156	40	43.83	2.39	44,955
1925	726	668	29,697	292,004	41	44.45	2.36	44,133
1926	762	669	32,000	298,078	42	47.82	2.23	47,556

(*a*) Based on 10 months actual and 2 months estimated.

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. Particulars for the latter State do not include live stock.

13. **Passenger Fares and Goods Rates.**—Fares and rates are changed from time to time to suit the varying necessities of the railways, and when drought conditions prevail special concessions are made in the rates for the carriage of fodder and water and for the transfer of stock to other areas.

An earlier issue of this work (No. 18, pp. 305–6) gives detailed information as at 30th June, 1924, in regard to the following rates :—(*a*) Ordinary Passenger Mileage rates ; (*b*) Highest and Lowest Class Freight rates ; (*c*) Rates for agricultural produce. Owing to limitations of space, however, it is not proposed to republish such information unless substantial alterations are made in these rates.

14. **Rolling Stock, 1926.**—The following table shows the rolling stock in use at the 30th June, 1926, classified according to gauge :—

RAILWAYS, STATE.—ROLLING STOCK, 1926.

State.	Gauge. 5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	Total.
Locomotives.						
New South Wales	..	1,402	..	..	..	1,402
Victoria ..	670	..	..	19	..	689
Queensland ..	..	..	717	..	9	726
South Australia	253	..	229	..	..	482
Western Australia	..	..	394	..	..	394
Tasmania ..	..	..	89	..	7	96
All States	923	1,402	1,429	19	16	3,789

	Coaching Stock.									
	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	With Motors.			Ordinary.	With Motors.
New South Wales	..	..	2,245	22	..	..	..	..	2,245	22
Victoria ..	2,308	414	..	..	..	..	55	..	2,363	414
Queensland ..	..	..	..	..	1,119	19	..	11	1,130	19
South Australia	480	13	..	..	219	..	..	..	699	13
Western Australia	..	..	..	..	478	3	..	..	478	3
Tasmania ..	..	..	..	..	228	8	..	6	234	8
All States ..	2,788	427	2,245	22	2,044	30	55	17	7,149	479

	Stock other than Coaching.					
New South Wales	..	23,968	..	..	..	23,968
Victoria ..	19,641	..	..	243	..	19,884
Queensland ..	..	..	17,567	..	170	17,737
South Australia	4,012	..	5,677	..	..	9,689
Western Australia	..	..	10,401	..	..	10,401
Tasmania ..	..	..	1,798	..	77	1,875
All States ..	23,653	23,968	35,443	243	247	83,554

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 now been adopted by all States.

15. **Employees.**—(*i*) *At 30th June.* The following table gives the number of railway employees in each year from 1922 to 1926 inclusive, classified according to (*a*) salaried staff, and (*b*) wages staff :—

RAILWAYS, STATE.—EMPLOYEES, 1922 TO 1926.

State.	At 30th June—									
	1922.		1923.		1924.		1925.		1926.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	5,302	36,037	5,356	34,271	5,473	36,127	5,672	36,455	5,794	38,263
Victoria	3,097	23,791	4,030	22,577	4,083	23,400	4,153	24,857	4,323	24,465
Queensland ..	3,458	14,862	3,250	17,621	3,298	16,380	3,362	16,522	3,617	18,419
South Australia ..	1,116	8,443	1,108	8,429	1,208	9,438	1,316	11,519	1,362	9,801
Western Australia	1,175	6,330	1,180	6,259	1,224	6,510	1,282	6,334	1,318	6,697
Tasmania ..	215	1,491	216	1,842	190	1,406	169	1,297	185	1,219
All States ..	14,363	90,959	15,140	90,999	15,476	93,261	15,954	96,984	16,599	98,864

In the period under review the totals of salaried and wages staffs rose from 105,322 in 1922 to 115,463 in 1926, an increase of 11 per cent.

(ii) *Average staff employed*, 1925–26. The number of employees at one point of time does not afford the best index of employment in railway work. It is considered that the following statement of the average number employed throughout the year indicates more accurately the labour requirements of the railways.

AVERAGE STAFF EMPLOYED, 1925-26.

State.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales ..	5,656	36,518	190	1,918	5,846	38,436
Victoria	4,334	24,204	..	..	4,334	24,204
Queensland	3,180	14,081	307	2,282	3,487	16,363
South Australia ..	1,312	9,970	58	2,558	1,370	12,528
Western Australia ..	1,298	6,953	..	..	1,298	6,953
Tasmania	177	1,258	..	..	177	1,258
All States ..	15,957	92,984	555	6,758	16,512	99,742

In the States of Victoria, Western Australia, and Tasmania, railway construction work is not under the control of the Railways Commissioners.

16. **Accidents.**—(i) *Classification.* The following classification of accidents which occurred through the movement of rolling stock was adopted by each State in 1925–26.

RAILWAYS, STATE.—ACCIDENTS, 1926.

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.
Train accidents—														
Passengers	5	50	3	153	..	3	..	22	..	9	..	..	8	237
Employees	..	14	..	..	1	7	..	8	1	17	..	..	2	46
Accidents on line (other than train accidents)—														
Passengers	9	137	8	186	2	24	1	81	1	49	..	..	21	477
Employees	15	122	11	89	2	24	4	87	1	139	1	29	34	490
Others	11	44	1	2	..	1	2	2	1	..	..	..	15	49
Shunting accidents—														
Passengers	..	4	..	..	..	1	..	1	..	..	..	..	..	6
Employees	6	192	7	33	7	99	1	88	..	97	1	9	22	518
Other persons	4	1	..	1	1	4	..	..	1	..	1	..	7	6
Employees proceeding to or from their duty within railway boundaries ..	..	8	2	1	..	..	..	..	..	..	..	..	2	9
Persons killed or injured at crossings	7	17	28	25	5	29	12	19	3	11	..	1	55	102
Trespassers	15	5	18	8	7	3	2	4	4	3	..	..	46	23
Miscellaneous	..	..	..	..	..	17	..	17	..	16	1	..	1	50
Total	72	594	78	498	25	212	22	329	12	341	4	39	213	2,013

(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 1922 to 1926 inclusive :—

RAILWAYS, STATE.—ACCIDENTS, 1922 TO 1926.

State.	In year ended 30th June—									
	1922.		1923.		1924.		1925.		1926.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	67	467	45	498	77	526	69	597	72	594
Victoria.. ..	58	408	51	372	51	362	47	298	78	498
Queensland ..	18	564	17	563	(a)	(a)	45	283	25	212
South Australia ..	6	192	16	262	16	211	26	203	22	329
Western Australia	15	107	14	147	16	212	16	208	12	341
Tasmania ..	2	34	1	34	5	36	2	17	4	39
All States ..	166	1,772	144	1,876	(b)165	(b)1,347	205	1,606	213	2,013

(a) Not available. (b) Incomplete.

17. **Consumption of Oil and Fuel.**—The appended table shows the quantity and value of oil and fuel consumed by the various Government Railway Departments during the year 1925–26 :—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL, 1925-26.

Government Railways.	Oil.						Coal.		
	Lubricating.			Fuel.					
	Gallons.	Value.	Average Cost per Gallon.	Gallons.	Value.	Average Cost per Gallon.	Tons.	Value.	Average Cost per Ton.
		£	s. d.			s. d.		£	£ s. d.
New South Wales	483,089	60,673	2 6.14	987,089	52,611	1 0·79	1,668,887	1,371,389	0 16 5.22
Victoria ..	176,200	22,100	2 6.10	420,700	27,320	1 3.59	745,390	973,580	1 6 1.47
Queensland ..	273,543	27,853	2 0.44	191,305	13,270	1 4.65	515,728	481,075	0 18 7.87
South Australia	a 153,890	18,403	2 4.70	b	b	b	238,487	465,437	1 19 0.39
Western Australia	53,044	5,893	2 2.66	232,622	21,028	1 9.69	269,208	264,719	0 19 8.06
Tasmania ..	26,277	4,196	3 2.32	10,344	746	1 5.31	45,314	58,415	1 5 9.39
Total States	1,166,043	139,118	2 4.63	c1,842,060	c114,975	c1 2.98	3,483,014	3,614,615	1 0 9.07
Federal ..	14,665	2,076	2 9.97	46,704	5,025	2 1.82	18,973	40,660	2 2 10.32
Grand Total, Australia ..	1,180,708	141,194	2 4.70	c1,888,764	c120,000	c1 3.25	3,501,987	3,655,275	1 0 10.51

(a) Lubricating oil used on loco. cars and wagons only.
(b) Not available.
(c) Exclusive of South Australia.

The range in the average cost per ton of coal from 16s. 5d. in New South Wales to £2 2s. 10d. per ton for coal used on the Federal Railways is attributable to the comparatively low haulage expenses incurred in the coal-producing States. The average cost of coal and oil during 1925–26 varied very little from that of 1924–25.

§ 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, 1926 :—

RAILWAYS, FEDERAL AND STATE.—SUMMARY, 1926.

Particulars.		Federal Railways.	State Railways.	Total for Australia.
Total mileage open	Miles	1,733.02	23,645.48	25,378.50
Average miles open during the year	„	1,733	23,396	25,129
Total train mileage	„	735,801	68,117,994	68,853,795
Total cost of construction of lines open	£	11,965,986	276,425,969	288,391,955
Cost per mile	£	6,905	11,690	11,364
Gross revenue	£	412,091	45,167,384	45,579,475
Working expenses	£	521,020	38,622,149	39,143,169
Percentage of working expenses on gross revenue	%	126.43	85.51	85.88
Net revenue	£	— 108,929	6,545,235	6,436,306
Interest payable	£	308,429	13,230,928	13,539,357
Number of passenger journeys	No.	243,978	371,421,053	371,665,031
Tonnage of goods and live stock carried	Tons	145,926	36,361,628	36,507,554
Number of employees at 30th June, 1926—				
Salaried	No.	172	16,599	16,771
Wages	„	1,041	98,864	99,905
Number of persons killed and injured during the year through train accidents and movement of rolling stock—				
Killed	„	1	213	214
Injured	„	24	2,013	2,037

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 1926.

2. **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 1923 to 1926 are set out in the following table, which gives also the percentages of the mileage of each guage 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, 1923 TO 1926.

Gauge.	At 30th June—							
	1923.		1924.		1925.		1926.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
Mainland—								
5 ft. 3 in.	5,375.09	23.15	5,503.37	23.12	5,552.31	22.97	5,743.41	23.25
4 ft. 8½ in.	6,334.67	27.28	6,539.68	27.46	6,672.63	27.60	6,758.70	27.36
3 ft. 6 in.	11,355.71	48.91	11,615.91	48.78	11,794.20	48.79	12,051.46	48.78
2 ft. 6 in.	121.77	0.53	121.77	0.51	121.77	0.51	121.77	0.49
2 ft. 0 in.	30.26	0.13	30.26	0.13	30.26	0.13	30.26	0.12
Total	23,217.50	100.00	23,810.99	100.00	24,171.17	100.00	24,705.60	100.00
Tasmania—								
3 ft. 6 in.	638.55	..	648.07	..	648.07	..	648.07	..
2 ft. 0 in.	24.83	..	24.83	..	24.83	..	24.83	..
Grand Total	23,880.88	..	24,483.89	..	24,844.07	..	25,378.50	..

In the four years from 1923 to 1926 the percentage of 5 ft. 3 in. gauge mileage has increased by 0.10, the 4 ft. 8½ in. by 0.08, while the 3 ft. 6 in. gauge has decreased by 0.13.

(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, 1923 to 1926, classified according to gauge, together with the percentages on the total :—

RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE (a) 1923 TO 1926.

Gauge.	At 30th June—							
	1923.		1924.		1925.		1926.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	6,930.03	25.03	7,076.24	24.76	7,167.23	24.74	7,427.27	25.05
4 ft. 8½ in. ..	8,177.04	29.54	8,424.07	29.47	8,593.18	29.66	8,710.62	29·37
3 ft. 6 in. ..	12,412.02	44.83	12,915.09	45.19	13,042.93	45.04	13,353.87	45.03
2 ft. 6 in. ..	131.54	0.48	131.54	0.46	131.54	0.45	131.56	0.44
2 ft. 0 in. ..	34.00	0.12	33.00	0.12	33.00	0.11	33.00	0.11
Total ..	27,684.63	100.00	28,579.94	100.00	28,967.88	100.00	29,656.32	100.00

(a) Exclusive of Tasmania.

3. **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, 1926, together with the percentage of the numbers for each gauge on the total for the mainland. The figures for Tasmania are shown separately.

RAILWAYS, FEDERAL AND STATE.—ROLLING STOCK, 1926.

Gauge.	Locomotives.		Coaching Stock.						Vehicles other than Coaching.	
			Ordinary.		With Motors.		Total.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Mainland—										
5 ft. 3 in. ..	923	24.35	2,788	39.89	427	90.66	3,215	43.10	23,653	28.54
4 ft. 8½ in. ..	1,470	38.77	2,294	32.83	22	4.67	2,316	31.05	24,702	29.80
3 ft. 6 in. ..	1,370	36.14	1,840	26.33	22	4.67	1,862	24.96	34,122	41.17
2 ft. 6 in. ..	19	0.50	55	0.79	..	..	55	0.74	243	0.29
2 ft. 0 in. ..	9	0.24	11	0.16	..	..	11	0.15	170	0.20
Total ..	3,791	100.00	6,988	100.00	471	100.00	7,459	100.00	82,890	100.00
Tasmania—										
3 ft. 6 in. ..	89	..	228	..	8	..	236	..	1,798	..
2 ft. 0 in. ..	7	..	6	..	..	..	6	..	77	..
Grand Total	3,887	..	7,222	..	479	..	7,701	..	84,765	..

§ 5. Private Railways.

1. **Total Mileage Open, 1925-26.**—The bulk of the private railways in Australia have been laid down for the purpose of hauling timber, firewood, 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.

The 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 1925–26. A classification of these lines according to gauge has already been given in § 1.

RAILWAYS, PRIVATE.—MILEAGE OPEN, 1925-26.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
For general traffic	142.03	24.94	302.35	33.80	277.00	192.10	972.22
For special purposes	188.61	35.47	1,033.93	16.10	606.86	207.41	2,088.38
Total ..	330.64	60.41	1,336.28	49.90	883.86	399.51	3,060.60

2. Lines Open for General Traffic.—The following statement gives a summary of the operations of private railways open for general traffic for the year 1926. More detailed information regarding these lines will be found in "Transport and Communication Bulletin No. 18," published by this Bureau.

RAILWAYS, PRIVATE.—SUMMARY, 1925-26.

State.	Companies from which returns were received.	Miles Open (Route).	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles.	Passenger Journeys.	Tonnage of Goods, etc.	No. of Employees.	Rolling Stock.		
										Locos.	Coaches.	Other Vehicles.
	No.	Miles.	£	£	£	Miles.	No.	Tons.	No.	No.	No.	No.
New South Wales ..	9	142.03	2,506,334	421,939	293,387	723,938	1,754,951	1,074,804	681	57	42	823
Victoria ..	2	24.94	87,334	16,329	11,530	26,534	36,821	65,894	24	4	4	42
Queensland	17	302.35	671,637	59,454	52,275	91,525	103,573	178,617	92	20	20	396
South Australia ..	1	33.80	*a*	*a*	*a*	67,170	1,325	571,937	43	7	3	163
Western Australia	1	277.00	2,104,308	178,168	83,021	255,827	51,109	125,138	213	21	20	400
Tasmania	6	192.10	1,267,522	109,662	89,946	177,240	49,813	159,079	243	25	20	392
All States(*b*)	36	972.22	6,637,135	785,552	530,159	1,342,234	1,997,592	2,175,469	1,296	134	109	2,216

(*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.

In § 1.7 *ante* a table is given showing comparative railway facilities in 1925–26 in Australia.

In the appended table comparative railway statistics of a like character are given for the principal countries of the world. The figures are based upon the latest accurate returns for both population and railway mileage.

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

Country.	Year.	Miles of Railway.	Miles of Railway— Per 1,000 of Population.	Miles of Railway— Per 1,000 Sq. Miles of Territory.
Europe—				
Great Britain and Ireland ..	1925	21,157	0.47	223.57
Belgium	1925	3,107	0.40	264.36
Denmark	1925	3,148	0.92	189.60
France	1924	25,808	0.66	121.36
Germany	1925	34,748	0.55	191.22
Greece	1923	1,470	0.25	29.45
Italy	1925	10,229	0.25	85.45
Netherlands	1925	2,405	0.32	182.09
Norway	1925	2,240	0.85	17.93
Portugal	1923	2,040	0.34	57.48
Spain	1925.	10,010	0.45	51.39
Sweden	1925	9,930	1.64	57.36
Switzerland	1925	3,607	0.92	226.29
Asia—				
India	1925	38,579	0.12	21.37
Japan	1925	9,974	0.12	38.26
Africa—				
Egypt	1925	3,124	0.22	8.16
Union of South Africa	1926	12,879	1.71	22.63
America, North and Central—				
Canada	1926	42,090	4.43	11.29
Mexico	1923	13,197	0.93	17.20
United States	1926	262,380	2.24	86.66
America, South—				
Argentine	1925	22,627	2.35	19.62
Brazil	1922	19,026	0.62	5.79
Chile	1925	5,437	1.37	18.74
Australasia—				
Australia	1926	28,439	4.71	9.56
New Zealand	1925	3,254	2.32	31.51

The figures show that per 1,000 of population Australia had the greatest mileage (in 1926), 4.71 miles; the next in magnitude being Canada (1926), with 4.43 miles.

The least mileage per 1,000 of population is shown in the cases of Japan and India (1925), with 0.12 mile.

With regard to the mileage per 1,000 square miles of territory, Belgium (1925) with 264.36 miles was easily first, followed by Switzerland (in 1925) with 226.29 miles, and Great Britain and Ireland (1925) 223.57 miles.

The least mileage open per 1,000 square miles is that of Brazil (in 1922) with 5.79 miles, and Egypt (1925) with 8.16 miles.

C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable extension has been made in the use 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 more properly 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 1925–26, and also in Australia as a whole for the years 1921–22 to 1925–26, 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, 1925-26.

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	182.12	99.57	..	..	34.34	..	316.03
Steam	46.43	..	..	..	18.88	..	65.31
Cable	..	38.58	..	..	..	..	38.58
Horse	..	..	..	..	1.50	..	1.50
Total ..	228.55	138.15	..	..	54.72	..	421.42
MUNICIPAL.							
Electric	..	..	52.25	73.05	8.61	26.86	160.77
Steam	..	..	6.65	..	..	..	6.65
Total ..	..	..	58.90	73.05	8.61	26.86	167.42
PRIVATE.							
Electric	..	27.60	..	..	14.66	..	42.26
Steam	3.50	..	..	..	..	..	3.50
Total ..	3.50	27.60	..	..	14.66	..	45.76
ALL CONTROLLING AUTHORITIES.							
Electric	182.12	127.17	52.25	73.05	57.61	26.86	519.06
Steam	49.93	..	6.65	..	18.88	..	75.46
Cable	..	38.58	..	..	..	..	38.58
Horse	..	..	..	..	1.50	..	1.50
Total ..	232.05	165.75	58.90	73.05	77.99	26.86	634.60
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	232.05	160.57	52.25	73.05	..	..	517.92
3 ft. 6 in. ..	..	..	6.65	..	65.49	26.86	99.00
2 ft. 0 in. ..	..	..	..	..	12.50	..	12.50
Total ..	232.05	165.75	58.90	73.05	77.99	26.86	634.60

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA, 1921-22 TO 1925-26.

Nature of Motive Power, Controlling Authority, and Gauge.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
According to Motive Power.					
	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	456.37	460.18	482.24	502.66	519.06
Steam	98.38	93.81	85.98	79.23	75.46
Cable	45.90	45.90	45.58	45.58	38.58
Horse	7.79	8.02	7.39	7.39	1.50
Total	608.44	607.91	621.19	634.86	634.60
According to Controlling Authority.					
Government	403.75	448.65	459.45	423.56	421.42
Municipal	110.57	113.25	115.73	165.54	167.42
Private	94.12	46.01	46.01	45.76	45.76
Total	608.44	607.91	621.19	634.86	634.60
According to Gauge.					
Gauge—					
5 ft. 3 in.	5.16	5.18	5.18	5.18	5.18
4 ft. 8½ in.	495.70	490.85	499.91	512.59	517.92
3 ft. 6 in.	90.67	94.50	98.72	99.71	99.00
2 ft. 0 in.	16.91	17.38	17.38	17.38	12.50
Total	608.44	607.91	621.19	634.86	634.60

The mileage of electric tramways has steadily increased during the period dealt with above, due principally to the conversion of the Newcastle steam tramways and the Melbourne cable systems to electrical traction. The decrease in the Government-controlled tramways in 1925 was in some measure due to the transfer of the Brisbane tramways from the Brisbane Tramway Trust to the Brisbane City Council.

(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, 1926, classified according to the nature of the motive power and the controlling authority.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1925-26.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Government.							
	£	£	£	£	£	£	£
Electric	10,574,708	4,333,476	..	..	949,929	..	15,858,113
Steam ..	572,815	..	..	..	85,037	..	657,852
Cable ..	..	1,946,380	..	..	..	..	1,946,380
Horse ..	..	..	..	..	9,728	..	9,728
Total ..	11,147,523	6,279,856	..	..	1,044,694	..	18,472,073
Municipal.							
Electric	..	..	2,053,318	2,997,976	157,236	542,309	5,750,839
Steam ..	..	..	53,129	..	..	..	53,129
Total ..	..	..	2,106,447	2,997,976	157,236	542,309	5,803,968

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1925–26—*continued*.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
			PRIVATE.				
	£	£	£	£	£	£	£
Electric	..	380,299	..	..	452,318	..	832,617
Steam ..	(*a*)	..	..	..	..	..	(*a*)
Total ..	(*a*)	380,299	..	..	452,318	..	(*b*)832,617
			ALL CONTROLLING AUTHORITIES.				
Electric	10,574,708	4,713,775	2,053,318	2,997,976	1,559,483	542,309	22,441,569
Steam ..	(*b*) 572,815	..	53,129	..	85,037	..	(*b*)710,981
Cable ..	..	1,946,380	..	..	..	..	1,946,380
Horse ..	..	..	..	..	9,728	..	9,728
Total ..	11,147,523 (*b*)	6,660,155	2,106,447	2,997,976	1,654,248	542,309	25,108,658 (*b*)

(*a*) Not available. (*b*) Incomplete.

2. New South Wales.—(i) *Government Tramways.* (*a*) *General.* The tramways, with some 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 seven distinct systems, five of which are operated by electricity and two by steam. The conversion of the Newcastle system from steam to electric traction has been undertaken, and at 30th June, 1926, 18.62 miles (route) were completed and opened for traffic.

(*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 1925–26 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—RETURNS FOR 1925-26.

Line.	Mileage Open for Traffic.		Total Cost of Construction and Equipment. (*a*)	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Profit or Loss.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.
	Route.	Track.								
	Miles.	Miles.	£	£	£	£	£	£	%	%
Electric	182.12	322.48	10,574'708	3,498,759	3,035,046	463,713	534,143	−70,430	86.75	4.38
Steam ..	46.43	53.27	572'815	120,737	284,950	−164,213	28,994	−193,207	236.01	28.67
Total	228.55	375.75	11,147,523	3,619,496	3,319,996	299,500	563,137	−263,637	91.73	2.69

(*a*) Exclusive of Stores Advance Account (£287,000).

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

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—CAPITAL COST, 1926.

Permanent Way.	Rolling Stock.	Power-houses, Sub-stations, and Plant.	Machinery.	Workshops.	Furniture.	Total.
£	£	£	£	£	£	£
5,706,713	2,479,102	2,472,794	231,898	254,624	2,392	11,147,523

The average cost per mile open was £24,969 for permanent way, and £23,806 for all other charges, making a total of £48,775 per route mile.

(d) *Summary, Government Tramways.*—The following table gives a summary of the operations of all Government tramways for the years 1922 to 1926:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—SUMMARY, 1922 TO 1926.

Year ended 30th June—	Mileage Open for Traffic. (Route.)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1922 ..	229.26	9,595,732*a*	3,610,135	3,015,616	594,519	467,328	83.53	6.26	330,939	9,734
1923 ..	224.90	9,975,031*a*	3,598,114	3,092,306	505,808	500,274	85.94	5.08	331,092	9,897
1924 ..	227.57	10,471,958*a*	3,633,915	3,091,531	542,384	532,187	85.07	5.18	340,803	11,264
1925 ..	228.46	10,844,454*a*	3,619,272	3,174,862	444,410	546,489	87.72	4.10	339,577	11,633
1926 ..	228.55	11,147,523*a*	3,619,496	3,319,996	299,500	563,137	91.73	2.69	339,412	11,459

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

Cost of construction and equipment to the year 1925–26 is exclusive of the amount of the Stores Advance Account (£287,000).

The net result in 1926, after providing for all working expenses and £563,137 for interest on the capital invested, was a loss of £263,637 as compared with a loss of £102,079 in the preceding year. During the year 1925–26, 339,412,000 passengers were carried, a decrease of 165,000 as compared with the previous year.

(e) *Sydney Tramways.* Official Year Book No. 15, p. 589, gave 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 1922 to 1926 inclusive.

ELECTRIC TRAMWAYS.—SYDNEY.—SUMMARY, 1922 TO 1926.

Particulars.	Year ended 30th June—				
	1922.	1923.	1924.	1925.	1926.
Mileage open for traffic—					
Route miles	158.78	158.99	160.51	161.24	161.83
Track miles	283.07	283.28	296.10	287.52	288.85
Total cost of construction and equipment .. .. £	8,343,096	8,680,161	8,955,747	9,168,939	9,473,497
Current used for traction purposes kilowatt hours	99,477,210	88,655,678	96,448,720*a*	118,031,086*a*	109,131,602*a*
Tram-miles run .. No.	27,768,543	28,562,113	30,318,516	31,238,517	31,087,894
Passengers carried .. No.	310,037,935	312,930,225	320,402,789	314,563,586	313,216,842
Gross revenue .. £	3,3.3,768	3,375,923	3,391,626	3,331,701	3,316,312
Working expenses .. £	2,700,686	2,759,914	2,781,148	2,823,510	2,878,855
Net revenue .. .. £	653,082	616,009	610,478	508,191	437,457
Percentage of working expenses on gross revenue .. %	80.53	81.75	82.00	84.75	86.81
Cars in use	1,427	1,531	1,570*a*	1,562*a*	1,567*a*
Persons employed	9,177	9,150	10,608*a*	10,255*a*	11,130*a*

(a) Includes portion of Newcastle line in process of electrification.

(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 3½ 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. 8½ in., was opened for traffic in 1883. In 1926 the number of tram-miles run was 18,200, and the number of passengers conveyed 131,785.

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 Tramways Board, to which reference will be made further on. There were also, at 30th June, 1926, 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 Railways 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.

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

(*b*) *Cable and Horse Tramways.* (1) *Services.* The complete system consists of 38.58 miles of double track of 4-ft. 8½-in. gauge connecting the City of Melbourne with the nearer suburbs. The service (horse-drawn) to Royal Park was abandoned in 1923.

(2) *Particulars of Working.* A summary for the years 1922 to 1926 is given hereunder :—

CABLE TRAMWAYS.—MELBOURNE.—SUMMARY, 1922 TO 1926.

Year ended 30th June—	Mileage Open (Route).			Mileage Run during Year.			Number of Passengers Carried.		
				Tram.			Tram.		
	Cable.	Horse.	Total.	Cable.	Horse.	Total.	Cable.	Horse.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	No.	No.	No.
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
1924 ..	45.58	(*a*)	45.58	14,713,853	3,066	14,716,919	147,750,286	50,220	147,800,506
1925 ..	45.58	(*a*)	45.58	15,285,913	..	15,285,913	148,316,398	..	148,316,398
1926 ..	38·58	(*a*)	38.58	12,393,911	..	12,393,911	127,882,115	..	127,882,115

Year ended 30th June—	Gross 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.
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
1924	1,190,594	241	1,190,835	990,196	373	990,569	83.18	3,295
1925	1,192,103	..	1,192,103	1,011,630	..	1,011,630	84.86	3,136
1926	1,048,414	..	1,048,414	847,102	..	847,102	80.79	2,520

(*a*) Line abandoned from 16th November, 1923.

The reduction in mileage open and of the operating results as compared with the previous year is due to the progress made in the scheme of conversion to electrical traction.

(c) *Electric Tramways.* (1) *Services Operated.* The system controlled by the Melbourne and Metropolitan Tramways Board at 30th June, 1926, 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.

(2) *Particulars of Working.* A summary of operations for the year 1925–26 is given hereunder :—

MELBOURNE TRAMWAYS BOARD.—ELECTRIC SERVICES.—OPERATIONS, 1922-23 TO 1925-26.

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.	Interest.	Net Profit.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	£	£
1922 ..	68.75	1,853,026	14,765,350	6,178,990	63,546,435	600,698	436,518	78,592	85,588
1923 ..	71.51	2,185,275	15,863,159	6,742,428	70,811,393	661,486	503,166	80,129	78,191
1924 ..	72.19	2,409,281	16,900,525	7,267,966	74,091,564	692,220	576,427	85,856	29,937
1925 ..	82.50	3,242,485	20,297,259	8,426,519	80,435,680	756,163	649,644	79,482	27,037
1926 ..	91.98	4,040,492	27,041,867	10,657,728	99,017,938	1,007,210	816,178	147,997	43,035

The total length of new track opened during the year was 7.98 miles; this increase combined with certain conversions from cable to electrical traction was accountable for an increased mileage of 9.48 miles route over that for 1924–25.

(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 1921–22 to 1925–26 are contained in the tables hereunder.

ELECTRIC TRAMWAY.—ST. KILDA–BRIGHTON.—1922 TO 1926.

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.	£	£	£	£
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
1924 ..	190,501	1,433,904	523,950	5,709,684	54,381	45,497	8,937	— 53
1925 ..	193,316	1,524,151	562,220	5,737,101	58,038	48,942	8,911	185
1926 ..	193,607	1,580,283	564,085	5,910,741	56,533	48,534	9,277	— 1,278

(—) Indicates loss.

ELECTRIC TRAMWAY.—SANDRINGHAM-BLACK ROCK.—1922 TO 1926.

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.	£	£	£	£
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
1924 ..	94,390	301,850	126,436	1,459,239	12,971	12,623	5,148	— 4,800
1925 ..	101,417	335,140	127,062	1,475,261	13,048	10,699	5,326	— 2,977
1926 ..	99,677	330,390	127,368	1,371,558	12,061	13,233	5,514	— 6,686

—) 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 (6.35 miles); giving a total route mileage of 27.60 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 1922 to 1926 inclusive :—

ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY, 1922 TO 1926.

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.
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
1924	107.47	3,046,443	20,390,335	9,192,409	88,902,067	844,189	709,293	353	2,729
1925	117.69	3,913,353	24,114,494	10,472,995	95,806,588	910,601	785,175	421	3,003
1926	127.17	4,716,775	31,020,604	12,709,671	114,692,993	1,159,557	960,485	492	3,607

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 until 1st December, 1925, on which date the control passed to the Brisbane City Council. Under the provisions of the Brisbane City Council Act, 1925, the Council took over the liabilities of the Tramway Trust to the extent of £2,000,000 which had been incurred in London, and assumed complete control of the system. The total length of the Brisbane tramways was 52.25 route miles at the end of the year 1925. 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 1926 was £2,053,318, the gauge of line being 4-ft. 8½-in. The following table gives a summary for the calendar years 1922 to 1926 :—

ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY, 1922 TO 1926.

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.
1922	42.60	*a*1,640,127	12,143,194	5,102,527	71,529,033	575,088	446,472	181	1,179
1923	43.06	1,431,799	11,919,254	5,211,971	74,721,594	628,841	474,202	182	1,301
1924	47.13	1,615,282	12,656,077	5,457,800	78,367,194	663,747	503,131	201	1,731
1925	50.33	1,846,029	14,800, 83	5,915,844	82,514,979	707,500	564,584	225	1,837
1926	52.25	*b*2,053,318	15,683,288	6,301,126	81,802,945	767,708	588,262	248	1,821

(*a*) To 31st December, 1921. (*b*) Includes motor omnibuses.

(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, 1926, was £53,129. During the year 1,798,258 passengers were carried, the revenue being £17,164 and working expenses £17,947. The number of the staff at end of year was 48.

(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. The total length of these lines is included in the table relating to private railways given on a preceding page.

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, 1926, the Tramways Trust operated a total route mileage of 73.05 miles of 4-ft. 8½-in. gauge. A summary for the years 1922 to 1926 is given in the subjoined table :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY, 1922 TO 1926.

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.
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	59,648,362	612,839	430,474	218	1,422
1924	73.83	2,742,985	15,705,191	6,568,985	61,737,665	638,277	463,481	231	1,583
1925	72.20	2,874,037	18,456,574	7,222,292	63,152,810	640,335	467,751	249	1,563
1926	73.05	2,997,976	19,303,228	7,393,122	66,207,356	661,058	472,412	255	1,556

(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 20.38 miles. The lines are under the control of the Department of the North-West, and the longest is that between Roebourne and Cossack, constructed on a 2-ft. gauge, with a length of 12.50 miles, and worked by steam. This line was, however, not in operation at 30th June, 1926. The remaining 7.88 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, 1926, was £94,764, the gross revenue for 1925–26 being £19,106, and the working expenses £11,912. These amounts are in some instances inclusive of revenue from jetty charges and of working expenses in connexion with such services.

(*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 years ended 30th June, 1922 to 1926 :—

ELECTRIC TRAMWAYS.—PERTH.—1921-22 TO 1925-26.

Year ended 30th June—	Mileage open for Traffic.	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.
1922 ..	26.73	779,081	6,666,050	2,644,725	25,042,689	248,463	209,104	103	645
1923 ..	30.38	850,965	7,285,200	2,770,518	25,993,983	262,689	213,928	103	551
1924 ..	34.24	879,277	8,061,920	2,989,089	27,893,315	274,583	231,895	103	529
1925 ..	34.28	899,741	8,296,746	3,040,505	28,894,525	281,612	236,008	113	566
1926 ..	34.34	949,929	8,246,630	3,010,253	29,599,785	286,707	240,953	113	536

(ii) *Private Tramways.* Electric tramways with a route mileage at 31st August, 1926, 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, of which at the end of 1926 the length of line was 14.66 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 1922 to 1926 :—

ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY, 1922 TO 1926.

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.
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
1924	57.67	1,477,033	10,117,198	3,939,689	36,484,855	360,883	301,920	160	702
1925	57.55	1,504,845	10,389,250	3,975,699	37,237,791	365,156	306,378	173	751
1926	57.61	1,559,483	10,311,919	3,940,741	37,841,434	368,290	311,772	173	709

7. **Tasmania.**—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 16.61 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 10.25 miles of 3-ft. 6-in. gauge.

The following table gives a summary of the working of the two systems for the years 1922 to 1926 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY, 1922 TO 1926.

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.
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
1924	26.64	541,941	3,439,420	1,890,882	17,683,824	192,772	144,841	82	439
1925	26.75	566,717	3,510,994	1,886,231	17,725,007	180,345	137,002	90	399
1926	26.86	542,309	3,310,493	1,776,052	16,972,174	178,191	142,141	89	385

(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 1926.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Ballarat and Bendigo, in Brisbane, in Kalgoorlie, and in Hobart are for the calendar year 1926 ; for other tramways they refer generally to the financial year 1925–26.

ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY, 1925-26.

State.	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.	Percentage of Working Expenses on Gross Revenue.	Cars, Motors and Trailers.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	%	No.	No.
N.S.W. ..	182.12	10,574,708	109,131,602	33,182,283	329,834,431	3,498,759	3,035,046	86.75	1,567	11,130
Victoria..	127.17	4,716,775	31,020,604	12,709,671	114,692,993	1,159,557	960,485	82.83	492	3,607
Q'land ..	52.25	2,053,318	15,683,288	6,301,126	81,802,945	767,708	588,262	76.63	248	1,821
S. Aust.	73.05	2,997,976	19,303,228	7,393,122	66,207,356	661,058	472,412	71.46	255	1,556
W. Aust.	57.61	1,559,483	10,311,919	3,940,741	37,841,434	368,290	311,772	84.65	173	709
Tasmania	26.86	542,309	3,310,493	1,776,052	16,972,174	178,191	142,141	75.53	89	385
All States	519.06	22,444,569	188,761,134	65,302,995	647,351,333	6,633,563	5,510,118	83.06	2,824	19,208

The percentage of working expenses on gross revenue for all electric tramways in Australia was 83.06, ranging from 71.46 in the case of South Australia to 86.75 in the case of New South Wales.

(ii) *Summary for Years 1922 to 1926.* The following table gives particulars of the operations of electric tramways in Australia for the years 1922 to 1926 :—

ELECTRIC TRAMWAYS.—AUSTRALIA.—1922 TO 1926.

Particulars.	1922.	1923.(a)	1924.	1925.	1926.
Mileage open for Traffic (Route) Miles	456.35	460.18	482.24	502.66	519.06
Total Cost of Construction and Equipment .. .. £	16,703,046	17,587,960	19,206,509	21,007,915	22,444,569
Current used for Traction Purposes .. .. Kil. hrs.	154,361,664	146,387,481	158,756,941	189,302,481	188.761,134
Tram-miles run .. .. No.	52.347.711	53,790.529	57,725,334	61,941,856	65,302,995
Passengers carried .. .. „	569,067,250	580,472,975	606,673,314	621,691,885	647,351,333
Gross Revenue .. .. £	5,703,337	5,908,303	6,123,275	6,248,686	6,633,563
Working Expenses .. .. £	4,538,415	4,675,289	4,930,302	5,170,814	5,510,118
Percentage of Working Expenses on Gross Revenue .. .. %	78.33	79.13	80.51	82.75	83.06
Cars, Motors and Trailers .. No.	2,343	2,487	2,598	2,720	2,824
Persons Employed .. .. „	14,753	15,101	17,783	17,808	19,208

(a) Includes Queensland for the year ended 31st December, 1922.

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 83.06 in 1926, after a steady increase from a minimum of 78.33 which was recorded in 1922, the average over the whole period being 81.08.

D. AIRCRAFT.

1. **Historical.**—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.**—(i) *Creation of.* A brief account of the foundation and the objects of this Department will be found in Official Year Book No. 19, page 299.

(ii) *Accidents Investigation Committee.* Under powers conferred by the *Air Navigation Act* 1920, a committee consisting of engineering and aircraft experts was appointed early in 1927 to inquire into and report upon accidents which occur to service and civil aircraft.

3. **Activities of Civil Aviation Department.**—(i) *Aerodromes and Landing Grounds.* Amongst the various activities have been the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :—(*a*) Perth to Derby (1,467 miles); (*b*) Adelaide to Sydney (790 miles); (*c*) Sydney to Brisbane (550 miles); (*d*) Brisbane to Toowoomba (75 miles); (*e*) Charleville to Camooweal (825 miles); (*f*) Cloncurry to Normanton (220 miles); (*g*) Melbourne to Hay (233 miles); (*h*) Mildura to Broken Hill (189 miles); and (*i*) Melbourne to Charleville via Cootamundra (900 miles).

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); and (*c*) Melbourne to Launceston via (1) Flinders Island and North-East coast of Tasmania (293 nautical miles), and (2) via King Island and North-West Coast (299 nautical miles).

The Royal Australian Air Force has surveyed and prepared for use a service route from Camooweal to Port Darwin, via Anthony's Lagoon, Newcastle Waters, and Katherine.

Up to the present 136 landing grounds have been acquired or leased, and prepared for civil aviation purposes. There are 11 private licensed aerodromes also in use.

(ii) *Aerial Services.* (*a*) *General.* In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war.

At 31st March, 1927, three subsidized contractors were operating under contracts which provided that up to 100 lb. of mail is to be carried free on each trip, the letters for transmission being surcharged 3d. per ½ ounce.

The various regular air services over prepared routes have completed 1,300,000 passenger-miles, and carried 10,000 paying passengers over various stages. Over 1,000,000 letters have also been carried.

All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(*b*) *Aerial Mail Services at 30th June, 1926.* The following aerial mail services were in operation at 30th June, 1926.

(i) *Perth to Derby—Western Australia.*

This service, covering a distance of 1,467 miles, is carried out by the Western Australian Airways Limited, which is subsidized by the Commonwealth Government to the extent of £25,500 (approx.) per annum for a weekly service, machines leaving Perth on Saturdays and returning on Thursdays. Landing places for mails are—Perth, Geraldton, Carnarvon, Onslow, Roebourne, Whim Creek, Port Headland, Broome, and Derby.

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 increased to about 20,000 per month.

This Company also maintains a weekly supplementary service between Geraldton and Carnarvon, but no direct subsidy is granted by the Government for this service.

(ii) *Charleville to Camooweal—Queensland.*

This service is operated by the Queensland and Northern Territory Aerial Services Limited. The route covers 825 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, Cloncurry, Mt. Isa, and Camooweal.

The original contract which provided for a weekly (return) service between Charleville and Cloncurry commenced on 2nd November, 1922, and the service was extended to Camooweal on 7th February, 1925, when the subsidy was increased to £17,000 per annum.

The service has been maintained successfully, and is greatly appreciated by residents of Western Queensland and the Northern Territory. Passenger bookings have shown a steady increase since the service was instituted.

(iii) *Adelaide, Sydney, Cootamundra and Branches, and Sydney-Brisbane Services.*

Contracts were accepted in 1921 for the maintenance of weekly return aerial services between Adelaide and Sydney, 790 miles, and Sydney and Brisbane, 550 miles, for a period of twelve months.

Owing to various causes, delays occurred in the commencement of the services, and it was not until 2nd June, 1924, that the contractors (Larkin Aircraft Supply Co.) commenced operations, which were confined to the Adelaide-Sydney section. A number of new four-seater passenger machines was placed in commission in November, 1924, and the service—once weekly in each direction—was regularly maintained until 19th July,

1925, when a further agreement was completed with the Company which, under a 3 years' contract carrying a subsidy at the rate of £29,500 per annum, began operations over the following routes on 21st July, 1925:—*Main trunk route.* Adelaide–Cootamundra, via Mildura, Hay, and Narrandera (578 miles); service once weekly in each direction; *Branch routes.* (*a*) Broken Hill–Mildura (189 miles); service, twice weekly in each direction; and (*b*) Melbourne–Hay, via Echuca (233) miles; service, twice weekly in each direction.

(iv) *Brisbane to Toowoomba—Queensland.*

A daily service is maintained between Brisbane and Toowoomba (75 miles) by the Courier Aircrafts Ltd., which however does not receive a subsidy for this service. Newspapers are carried on the outward journey to Toowoomba and passengers on the return trip.

(*c*) *Future Services.* In addition to the services referred to in a previous issue of the Year Book (No. 17, p. 333), proposals have been submitted to the Department for the operation of the following services:—(*a*) From Fremantle to Adelaide; (*b*) from Camooweal to Brunette; and (*c*) from Melbourne to Launcestion.

(i) *Cloncurry to Normanton—Queensland.*

Executive approval has been given for a service to operate from 1st July, 1927, between Cloncurry and Normanton (220 miles) linking up at the former town with the main Charleville–Camooweal service.

(ii) *Perth (Western Australia) to Adelaide (South Australia).*

Tenders have been invited for the operation of a service between Perth (Western Australia) and Adelaide (South Australia) (1,500 miles), which service will probably necessitate the introduction of regular night flying. By co-ordinating the existing railway and aerial services overseas correspondents in Sydney and Melbourne will be enabled to gain one week in the transport of their English mails.

4. **Aircraft Construction.**—(i) *Experimental Work.* An important stage in aircraft development in Australia was reached with the successful completion of the official tests of a flying boat designed by Squadron Leader E. J. Wackett, D.F.C., A.F.C., R.A.A.F. This machine, known as the "Widgeon," was ordered by the Civil Aviation Department. It embodies a number of features specially designed for local conditions, and, with the exception of the engine, was wholly built at the R.A.A.F. workshops. The maximum speed attained was 103 m.p.h. with an initial climbing rate of 510 feet per minute, while the total gross weight of machine with passengers (680 lb.) and fuel (380 lb.) was 3,960 lb. A retractable land under-carriage has been fitted to this machine, which has also passed its official tests as an "amphibian." During June, 1927, it was flown non-stop from Sydney to Melbourne (520 air miles) in 5 hours 45 minutes proving absolutely airworthy in every respect.

(ii) *Constructional activities.* Aircraft manufacture, though yet in its infancy, is making some substantial progress. Two of the subsidized aerial mail contracting companies in addition to effecting major repairs have under permit from the De Haviland Aircraft Coy. constructed some DeH. 50A machines for use on their respective routes, the engines and certain metal parts being the only accessories imported. Another company has completed contracts for the supply to the R.A.A.F. of a number of airscrews, wings, &c.

5. **Training of Air Pilots.**—(i) *Flying Training Courses.* The pre-existing practice of selecting civilian applicants for training as pilots with Civil Aviation Companies was discontinued during 1925, vacancies now occurring being reserved for members of the R.A.A.F., four of whom were selected for a special training course in 1925.

Pending absorption as pilots with Civil Aviation Companies when they receive free discharges from the R.A.A.F., successful graduates revert to their ordinary training.

(ii) *Light Plane Clubs.* The Australian Aero. Club provides facilities for flying instruction and practice at a considerably lower cost than was possible prior to the advent of the light (or low-powered) aeroplanes. Since the end of 1926 the New South Wales and Victorian Sections have carried on active training and many pupils have graduated and been granted class "A" Pilot's Licences. It is interesting to record that one female pupil has obtained her pilot's licence.

Assistance to the following extent is being provided each section by the Commonwealth Government :—(*a*) The loan of two De Haviland " Moth " aeroplanes with spare engines and parts ; (*b*) Bonus of £20 per pupil trained (*ab initio*) to a standard that will enable the pupil to obtain a " Private Pilot's " Licence ; (*c*) Free hangar accommodation and free use of aerodrome for clubs' activities ; and (*d*) Technical supervision by Departmental Resident Ground Engineer.

Similar developments have also taken place in Perth, Longreach and Brisbane, where the aerial mail contractors conduct flying schools. A Bonus of £40 per pupil trained is paid to these companies, which provide the necessary aircraft, instructors, and hangars. The extension of this scheme to other centres is under consideration.

At the end of 1926 approximately 70 valid pilot's licences had been issued, but owing to the activities of the Aero Club this number will be considerably augmented in the near future.

(iii) *Refresher Courses.* 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 Air Force Funds.

6. **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 in each State for the year ended 30th June, 1926, together with comparative figures for Australia for the year 1924–25 :—

AIRCRAFT.—SUMMARY, 1924-25 AND 1925-26.

Particulars.	State in which Aircraft Owners are Located.					Total.	
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	1925–26.	1924–25.
Companies or persons owning aircraft .. No.	4	8	5	1	4	22	23
Aeroplanes .. No.	6	25	11	1	12	55	59
Staff employed(*a*)—							
Certificated pilots No.	3	13	5	1	7	29	25
Others .. .. No.	2	17	14	..	24	57	72
Flights carried out .. No.	347	2,855	1,261	262	1,113	5,838	4,893
Hours flown ..	h. m. 200 52	h. m. 2,474 19	h. m. 1,409 04	h. m. 148 30	h. m. 2,193 50	h. m. 6,426 35	h. m. 5,302 44
Approx. mileage miles	13,742	184,965	114,530	11,086	163,280	487,603	404,420
Passengers carried—							
Paying .. .. No.	158	1,650	897	275	1,194	4,174	3,663
Non-paying .. No.	253	2,058	68	108	343	2,830	2,428
Total .. No.	411	3,708	965	383	1,537	7,004	6,091
Goods, weight carried lbs.	..	25,857	4,962	..	32,054	62,873	11,132
Mails, letters carried No.	..	10,409	21,689	..	240,609	272,707	225,128
Accidents involving—							
Injuries to personnel No.	..	..	..	..	1	1	1
Damage to aircraft No.	1	1	..	1	2	5	8
Persons killed .. No.	..	..	..	..	..	..	1
„ injured .. No.	..	..	..	..	1	1	3

(*a*) Monthly average.

The particulars shown above for Victoria include flying carried out over three States on the Adelaide–Cootamundra ; Melbourne–Hay ; and Mildura–Broken Hill routes by the subsidized company whose head-quarters are in Melbourne.

E. MOTOR VEHICLES.

1. **The Motor Car and Motor Industry.**—(i) *Evolution of the Motor Car.* Contrary to general belief on the subject, the application of mechanical power to road vehicles dates so far back as 1769, when the first successful steam-driven carriage (three wheeled) was built by the Frenchman, Cugnot. It was not, however, until 1884, when Gottlieb Daimler constructed his light internal combustion engine, that the first step in the evolution of the petrol motor to its present day efficiency may be said to have been taken, although in the meantime numerous English, American, and European inventors were experimenting with various types of vehicles with but moderate success.

So far as Australia is concerned the first efforts in the direction of producing a mechanically-propelled vehicle belong to the end of the nineteenth century. In 1897 the Thomson steam car, which was the first car to run successfully on Australian roads, was produced, although in the previous year some motor tricycles were in use in Sydney and Melbourne. The first interstate run from Bathurst (New South Wales) to Melbourne (Victoria), a distance of almost 500 miles, was covered by a Thomson car in 58 hours, a journey which has recently been accomplished in less than 12 hours.

(ii) *Motor Industry.* The demand for mechanical transport occasioned by the recent European conflict was in no small measure responsible for the extensive development of the internal combustion engine, and the keen competition among motor car manufacturers for the overseas markets has improved the quality and efficiency of their products.

Although, as yet, motor cars are not entirely manufactured in Australia, the money invested in assembling and body building plants has assumed considerable proportions during recent years, and some idea of the value of Australia as a market for the motor trade is instanced by the fact that during the year 1925–26 the value of 12,090 motor bodies imported was £1,200,000, and of the 88,591 chassis, £10,400,000. The value of the bodies built in Australia to equip the chassis for which bodies were not imported was approximately £3,750,000. During the period July, 1923, to June, 1926, the import value of chassis and bodies had practically doubled itself, notwithstanding the fact that several price reductions have taken place. The value of the tyre equipment, both locally produced and imported, for which figures are not, however, available, must also be taken into consideration, particularly as the prevailing practice is for distributors to retail cars on a five-tyre basis. Fuels imported during the year for use in motor vehicles were—Crude petroleum, 55 million gallons, valued at £670,000, and petroleum, etc., 116 million gallons, valued at £6,500,000. Spares, batteries, accessories, etc., also are additional factors contributing to the potentialities of Australia as a market.

At the 30th June, 1926, the number of motor cars per 1,000 of population was almost 65, which, however, is not as high as that recorded in New Zealand, viz., 104, so that it would appear that the saturation point has yet to be reached, and until that time, provided economic conditions maintain their stability, the marketing prospects remain at least as good as during the past decade.

The most noteworthy developments in the industry during 1925–26 were the establishment of branches of two of the strongest motor organizations in the world and the efforts made by British manufacturers to obtain a larger share of the Australian trade.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State were referred to in Official Year Book No. 16, pp. 337–340, and later issues, but limits of space preclude the repetition of this information in the present volume.

3. **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. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—Motor omnibus traffic, both in urban and provincial centres, has assumed considerable proportions during recent years, and prior to the constitution of Boards empowered to allocate routes over which omnibuses may operate, had a very marked effect on Railway and Tramway services. By regulating the licensing of motor omnibuses the economic waste arising from duplication of routes and services parallel

with or contiguous to existing railway and tramway systems is avoided. The general principle governing the allocation of routes is that omnibus services should act as feeders to existing transport utilities. Revenue from licence fees is devoted principally to the maintenance or construction of roadways to enable them to withstand the wear and tear caused by the heavy traffic. Complete statistics regarding motor omnibus operations are, however, not at present available, but some indication of the effect of unrestricted motor omnibus services would have on the railways and tramways may be obtained from the operations of some services conducted by Railway and Tramway systems as adjuncts to their main services during the year 1925–26.

MOTOR OMNIBUS TRAFFIC, 1925–26.

Particulars.	By whom Operated.			
	Victorian Railways Commissioners.	Melbourne and Metropolitan Tramways Board.	South Australian Railways Commissioners.	Municipal Tramways Trust, Adelaide.
Mileage of services .. .. No.	46	20	285	31
'Buses in operation .. .. No.	2	56	18	40
Seating capacity .. .. No.	46	1,406	614	1,400
'Bus days worked .. .. days	244	12,045	1,672	13,140
Revenue .. .. .. £	3,911	97,304	15,616	46,647
Working expenses .. .. £	3,637	112,289	14,520	53,505
'Bus miles .. .. .. miles	47,214	1,449,719	900,741	205,434
Passenger journeys .. .. No.	17,504	7,164,095	3,277,115	408,231

The services operated by the Melbourne and Metropolitan Tramways Board were necessary to provide transport facilities during the conversion of certain cable tram lines to electrical traction, but it is not the intention of the Board to institute omnibus services in a general way. In other instances the omnibus service has been provided to meet the competition of private enterprise and endeavour to protect the existing transport utility provided by public bodies.

5. **Motor Vehicles Registered, etc.**—(i) *Year 1925–26.* Particulars of the registration of motor vehicles, etc., for the year 1925–26 are contained in the subjoined table :—

MOTOR VEHICLES.—SUMMARY, 1925-26.

States and Territory.	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 ..	92,639	24,154	22,443	139,236	203,123	886,995	93,786	980,781
Victoria	83,480	19,929	(*a*)142	103,551	126,369	643,333	(*d*)	643,333
Queensland	*c*44,568	6,388	(*b*)2,337	53,293	40,940	192,839	13,755	206,594
South Australia ..	39,194	11,927	7,390	58,511	79,659	208,261	17,842	226,103
Western Australia ..	15,138	4,764	4,522	24,424	32,642	120,982	8,160	129,142
Tasmania	7,058	3,016	1,022	11,096	13,408	45,673	4,054	49,727
Northern Territory ..	122	31	36	189	170	29	42	71
Australia ..	282,199	70,209	*f* 37,892	390,300	496,311	2,098,112	137,639	2,235,751

(*a*) Motor buses. Trucks, vans, etc., included with motor cars. (*b*) Solid tyred vehicles. (*c*) Pneumatic tyred vehicles. (*d*) Included with Registrations and Motor Tax. (*e*) Exclusive of South Australia. (*f*) Incomplete.

The number of all motor vehicles per 1,000 of population shows that South Australia with 104.8 had the greatest density, followed in order of importance by Western Australia (65.1), Victoria (61.1), Queensland (60.6), New South Wales (59.9), Tasmania (53.0), and Northern Territory least with 50.1 ; the figure for the Commonwealth being 64.6.

(ii) *Quinquennium 1922–1926.* The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1921–22 to 1925–26 :—

MOTOR VEHICLES.—REGISTRATIONS, ETC., 1921-22 TO 1925-26.

Year.	Motor Vehicles Registered.				Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.		Vehicle Registration and Motor Tax.	Drivers' and Riders' Licences.	Total.
						£	£	£
1921–22	99,270	37,578	(a)	136,848	161,903	(b)	(b)	476,559
1922–23	116,658	42,649	(c)13,438	172,745	208,376	575,198	44,249	619,447
1923–24	168,568	52,717	(c)18,056	239,341	296,177	801,701	62,001	863,702
1924–25	221,441	58,079	(c)26,116	305,636	310,156	1,326,672	88,508	1,415,180
1925–26	282,199	70,209	(c)37,892	390,300	496,311	2,098,112	137,639	2,235,751

(a) Included with Motor Cars. (b) Not available. (c) Incomplete, partly included with Motor Cars.

During the period dealt with the number of motor vehicles showed an average annual increase of almost 30 % ; the greatest increase (38 %) being recorded during 1923–24. The number of vehicles per 1,000 of population increased from 24.6 to 64.6.

6. **Comparative Motor Vehicle Statistics, 1927.**—The result of the 1927 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were approximately 27,500,000 motor cars, trucks, and buses registered in the various countries of the world at 1st January, 1927.

COMPARATIVE MOTOR VEHICLE STATISTICS. 1st JANUARY, 1927.

Country.	Motor Cars, Trucks, and Buses.	Motor Cycles.
Australia	361,602	75,000
Argentine	222,610	2,971
Belgium	130,000	62,730
Brazil	110,741	3,500
Canada	820,222	7,876
Cuba	45,546	450
Denmark	63,170	19,701
France	901,000	155,000
Germany	318,800	274,600
Great Britain	984,368	498,255
India	100,000	22,000
Irish Free State	44,003	7,938
Italy	150,000	62,000
Mexico	45,134	765
Netherlands	65,000	35,200
Netherlands East Indies	48,800	9,000
New Zealand	123,334	32,054
Union of South Africa	81,000	28,500
Spain	85,000	9,000
Sweden	99,200	29,000
United States of America	22,059,910	128,622

The foregoing figures are in some cases approximately stated, being based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries. The figures for Australia are estimated at 31st December, 1926, and differ from those stated in para. 5, which are actual registrations at 30th June, 1926.

In respect of motor cars Australia now ranks fifth in importance among the countries of the world, having displaced Germany from that position during the preceding year.

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, being a responsible Minister with Cabinet rank, and 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 1922 to 1926. 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, 1921-22 TO 1925-26.

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.										
1922 ..	507,239	91,099	126,165	22,659	56,622	10,169	8,284	1,488	5,516	991
1923 ..	535,596	94,161	136,137	23,934	73,267	12,881	9,158	1,610	5,766	1,014
1924 ..	579,679	99,883	143,429	24,714	93,575	16,124	9,387	1,617	5,959	1,027
1925 ..	616,804	114,027	151,484	25,548	106,089	17,892	10,615	1,790	6,147	1,037
1926 ..	649,697	108,426	154,169	25,729	118,106	19,710	11,413	1,905	6,302	1,052
OVERSEA RECEIVED.										
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
1924 ..	34,708	5,980	13,662	2,354	4,273	736	447	77	475	82
1925 ..	40,911	6,960	14,824	2,500	5,262	887	446	75	475	80
1926 ..	42,708	7,127	16,135	2,693	6,333	1,057	454	76	518	86
OVERSEA DISPATCHED.										
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
1924 ..	29,016	5,000	5,681	979	2,283	393	190	33	341	59
1925 ..	34,328	5,790	6,839	1,153	2,617	441	169	28	388	65
1926 ..	42,440	7,083	8,290	1,383	2,964	495	212	35	415	69
TOTAL POSTAL MATTER DEALT WITH BY THE COMMONWEALTH POSTAL DEPARTMENT.										
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
1924 ..	643,403	110,863	162,772	28,047	100,131	17,253	10,024	1,727	6,775	1,168
1925 ..	692,043	126,717	173,147	29,201	113,968	19,220	11,230	1,893	7,010	1,182
1926 ..	734,845	122,636	178,594	29,805	127,403	21,262	12,079	2,016	7,235	1,207

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1925–26 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, 1925-26.

State.	Letters and Post-cards.		Newspapers.		Packets.		Parcels.	
	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 FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	277,609	120,575	64,176	27,874	55,007	23,891	5,347	2,322
Victoria ..	182,858	108,584	38,866	23,079	17,437	10,354	2,320	1,378
Queensland ..	73,993	85,920	28,128	32,662	19,412	22,541	2,043	2,372
South Australia	50,058	90,148	8,974	16,161	14,884	26,804	853	1,536
Western Australia	33,962	91,249	6,955	18,687	6,748	18,131	678	1,822
Tasmania ..	31,217	143,836	7,070	32,576	4,618	21,278	172	793
Australia ..	649,697	108,426	154,169	25,729	118,106	19,710	11,413	1,905
OVERSEA RECEIVED.								
New South Wales	14,490	6,294	5,506	2,391	2,389	1,038	184	80
Victoria ..	19,312	11,468	4,861	2,887	1,206	716	135	80
Queensland ..	2,738	3,179	2,558	2,970	805	935	43	50
South Australia	2,604	4,689	836	1,506	511	920	39	70
Western Australia	2,784	7,480	1,948	5,234	974	2,617	40	108
Tasmania ..	780	3,594	426	1,963	448	2,064	13	60
Australia ..	42,708	7,127	16,135	2,693	6,333	1,057	454	76
OVERSEA DISPATCHED.								
New South Wales	23,991	10,420	4,120	1,789	2,043	887	131	57
Victoria ..	9,661	5,737	2,826	1,678	423	251	47	28
Queensland ..	2,554	2,966	532	618	133	154	13	15
South Australia	2,422	4,362	255	459	113	203	10	18
Western Australia	2,024	5,438	318	854	54	145	9	24
Tasmania ..	1,788	8,238	239	1,101	198	912	2	9
Australia ..	42,440	7,083	8,290	1,383	2,964	495	212	35

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 1925–26. 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, at 30th JUNE, 1926.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post and receiving offices	2,679	2,714	1,284	808	732	523	8,740
Number of square miles of territory to each office in State	116	32	522	1,120	1,333	50	340
Number of inhabitants to each office	867	624	685	698	513	400	691
Number of inhabitants per 100 square miles	748	1,928	131	70	38	799	203

The foregoing table does not include "telephone" offices at which telegraph and telephone business only is transacted.

(ii) *Number of Offices.* The following table shows the number of post and receiving offices in each year from 1921–22 to 1925–26 inclusive :—

POST AND RECEIVING OFFICES AT 30th JUNE, 1922 TO 1926.

State.	At 30th June—									
	1922.		1923.		1924.		1925.		1926.	
	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.
New South Wales	2,032	556	2,040	559	2,059	584	2,063	601	2,086	593
Victoria	1,721	855	1,736	859	1,774	898	1,785	923	1,792	922
Queensland ..	665	576	678	567	694	565	743	544	756	528
South Australia ..	666	139	667	137	669	136	675	132	676	132
Western Australia	414	254	426	306	445	401	465	255	472	260
Tasmania ..	413	90	413	106	428	114	411	103	414	109
Australia ..	5,911	2,470	5,960	2,534	6,069	2,698	6,142	2,558	6,196	2,544

(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, 1922 TO 1926.

State.	At 30th June—									
	1922.		1923.		1924.		1925.		1926.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	87	..	95	..	100	..	110	..	130	..
New South Wales	12,451	2,087	13,255	1,732	13,947	1,791	14,413	1,915	14,244	1,924
Victoria	8,553	1,095	9,148	1,124	10,279	1,133	11,140	1,139	11,226	1,156
Queensland ..	4,792	766	4,978	810	6,220	819	6,322	839	6,181	850
South Australia ..	2,895	441	3,227	422	4,014	354	3,926	430	4,275	424
Western Australia	2,200	338	2,450	339	2,450	382	3,271	319	2,986	379
Tasmania ..	1,229	236	1,321	202	1,582	206	1,551	243	1,615	247
Australia ..	32,207	4,963	34,474	4,629	38,592	4,685	40,733	4,885	40,657	4,980

4. Registered Letters, Packets, etc.—Particulars regarding registered articles for the year 1925–26 are given in the table hereunder :—

REGISTERED ARTICLES POSTED AND RECEIVED, 1925-26.

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 ..	2,353	1,022	171	74	2,524	1,096	218	95
Victoria	1,715	1,018	112	67	1,827	1,085	163	97
Queensland ..	934	1,085	51	59	985	1,144	49	57
South Australia ..	542	976	30	54	572	1,030	32	58
Western Australia ..	489	1,314	47	126	536	1,440	47	126
Tasmania ..	269	1,239	4	18	273	1,258	9	42
Australia ..	6,302	1,052	415	69	6,717	1,121	518	86

5. 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 or Nauru 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, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1922 to 1926 :—

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1922 TO 1926.

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.
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
1924	165,360	6,421	225,040	2,456	63,393	292	462,962
1925	209,265	8,397	199,752	3,559	69,065	387	490,425
1926	236,900	11,508	204,819	5,033	69,970	316	528,546
VALUE COLLECTED.							
	£	£	£	£	£	£	£
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
1924	277,087	11,310	364,965	3,406	101,515	715	758,998
1925	347,902	15,440	331,280	5,728	108,193	1,055	809,598
1926	397,283	22,035	328,954	6,327	109,671	811	865,081

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1922 TO 1926—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.							
	£	£	£	£	£	£	£
1922	12,144	549	22,214	177	6,259	47	41,390
1923	18,586	667	29,602	248	7,365	52	56,520
1924	23,026	855	30,318	263	8,277	42	62,781
1925	31,324	1,138	25,908	469	8,951	53	67,843
1926	32,232	1,564	26,539	634	8,872	44	69,885

The number and value of parcels forwarded in New South Wales and Queensland are greatly in excess of the transactions of any of the other States, although the system has also found favour for several years in Western Australia. These three States have the largest areas, and consequently more people at long distances from business centres who avail themselves of the value-payable system. Although South Australia, too, has a large area the population of that State is, comparatively, not widely spread. The amount of business transacted in Victoria, South Australia, and Tasmania is comparatively light, but generally increased business has been done in recent years.

6. **Sea-borne Mail Services.**—(i) *Summary.* In earlier 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 information in respect of sea-borne mail services as at 1st April, 1927 :—

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES, 1927.

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
1. *To and from Ports in New South Wales—*			
(i) N.S. WALES—Q'LAND	Weekly	Sydney and Brisbane ..	Poundage rates
(ii) NORTHERN PORTS— (*a*) North Coast S.N. Co.	Once weekly	Sydney and Clarence River, Byron Bay, and Richmond River	,, ,,
(*b*) ,, ,,	Fortnightly	Sydney and South Solitary Island	,, ,,
(iii) SOUTH COAST PORTS— Illawarra and S. Coast S.N. Co.	Fortnightly	Sydney, Montague Island	,, ,,
2. *To and from Northern Ports of Queensland—*			
(*a*) Hayles Magnetic Island Limited	Weekly	From Cairns to Cooktown via Port Douglas	Subsidized from 6th December, 1924, for three years. Amount of subsidy, £2,678 per annum.
(*b*) 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, 1928. Amount of subsidy, £1,000
(*b*) Adelaide Steamship Co. ..	Weekly	Port Adelaide and Port Lincoln	Subsidized for three years from 1st January, 1926. Amount of subsidy, £3,000
(*c*) Adelaide Steam Tug Co. ..	As required	Port Pirie and Whyalla	Subsidized without agreement. Amount of subsidy, £120
(*d*) Coast Steamships Ltd. ..	Fortnightly	Port Adelaide to Streaky Bay	Poundage rates
(*e*) ,, ,, ,, ..	Weekly (Thursdays)	Port Adelaide to Kingscote	,, ,,
(*f*) McIlwraith, McEacharn Line	Monthly	Port Adelaide to Albany	,, ,,
4. *Western Australia—*			
(i) TO AND FROM PORTS ON N.W. COAST—			
(*a*) State Shipping 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
(*b*) ,, ,, ,,	Once each sixty days	Fremantle and Darwin	
(*c*) West Australian S.N. Co.	About fortnightly	Fremantle and Singapore, via N.W. Ports	Poundage rates
(*d*) State Shipping Service	Irregularly, during the cattle season	Fremantle, Derby, Wyndham, Java and Singapore	,, ,,
(ii) TO AND FROM PORTS ON S. COAST—			
(*a*) State Shipping Service	Fortnightly	Albany and Esperance	Subsidized by agreement for three years, dating from 1st August, 1924. 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.	Weekly	Sydney, Hobart and Wellington	Poundage rates
(*d*) Union Steamship Co. ..	,,	Sydney, Launceston, and Devonport	,, ,,
(*e*) Holyman and Sons Pty. Ltd.	,,	Melbourne—Launceston	,, ,,
(*f*) ,, ,, ,,	,,	Melbourne, Launceston*	,, ,,
(*g*) ,, ,, ,,	,,	Melbourne, Burnie, etc.	,, ,,
(*h*) Huon Channel and Peninsular Co.	Thrice a week	Hobart and Kelly's Point, via Pearson's Point	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £50 per annum
(*i*) The Commissioner, Tasmanian Government Railways	Every two weeks	Launceston and Furneaux Group of islands	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £375 per annum
(*j*) ,, ,, ,,	Fortnightly	Launceston and Currie, King Island	Subsidized by agreement dated 1st January, 1925, for three years. Amount of subsidy, £400 per annum
(*k*) Holyman and Sons Pty. Ltd.	Weekly	Burnie and Melbourne, via Fraser River, King Island	Poundage rates

* Not operative during winter months, as under that time-table the contract vessel leaves on the same day during this period.

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

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
6. *To and from Northern Territory—*			
(*a*) Burns, Philp and Co. ..	Monthly	To and from Adelaide, Melbourne, 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. *To and from New Zealand—*			
(*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. *Pacific Islands—*			
(*a*) Burns, Philp and Co. ..	Every five weeks	Sydney to Lord Howe and Norfolk Islands, New Hebrides and Santa Cruz	Subsidized by Commonwealth Government
(*b*) ,, ,, ..	Irregularly	Sydney to Nauru and *Ocean Islands, Gilbert* and Ellice Groups	,, ,,
(*c*) ,, ,, ..	Monthly	Sydney to Papua, via Brisbane	,, ,,
(*d*) ,, ,, ..	Every three weeks	Sydney to Rabaul, via Brisbane	,, ,,
(*e*) ,, ,, ..	Twice in six weeks	Sydney to Solomon Islands, via Brisbane	,, ,,
9. *New Caledonia and New Hebrides—*			
(*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. *Fiji, Friendly Islands, and Samoa—*			
(*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 ..	,, ,,
(*d*) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, and Samoa	,, ,,
11. *To Eastern Ports—*			
(*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*) Aust.-Oriental Line ..	About once a month	Melbourne and Sydney to Hong Kong, Manila, China, via Queensland Ports.	Poundage rates
(*c*) Eastern and Aus'n. Line	Monthly	Sydney to Manila, China, Japan, via Brisbane	,, ,,
(*d*) Nippon Yusen Kaisha ..	Every four weeks	Melbourne and Sydney to Manila, China, and Japan, via Queensland Ports	Postal Union rates
(*e*) Japan–Australia Line ..	Monthly	Melbourne and Sydney to Japan via Brisbane	Poundage rates
(*f*) Royal Dutch Packet S.N. Co.	Monthly	Melbourne to Java and Singapore, via Sydney and Queensland Ports	,, ,,
(*g*) Various other steamers	About monthly	Sydney or Newcastle and ports in Borneo, Java, Sumatra, Japan, and Malay Peninsula	,, ,,
(*h*) Western Australian S.N. Co.	About fortnightly	W.A. Ports, Java, and Singapore	,, ,,
(*i*) Austral East Indies Line of steamers	Monthly	Sydney, Melbourne, Adelaide, Fremantle, Java, and Singapore	,, ,,
12. *South Africa—*			
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. *To and from Europe, via Suez*—			
(*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
(*c*) Commonwealth Government Line of Steamers	About every four weeks	" " "	Poundage rates
14. *To and from Europe, via Vancouver*—			
(*a*) Canadian-Aust. Line	Irregularly	Sydney and Vancouver, B.C., via Auckland, Fiji, Honolulu	" "
15. *To and from Europe, via San Francisco*—			
(*a*) Union Steamship Company	"	Sydney, Wellington, Raratonga, Tahiti, and San Francisco	Subsidized by New Zealand Govt.. Mails from Aust. at Postal Union rates
(*b*) Oceanic Steamship Co...	"	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	Poundage rates
16. *North America*—			
(*a*) Union S.S. Co.	Every four weeks	Sydney, Wellington, Tahiti, and San Francisco	" "
(*b*) Canadian-Aust. Line ..	"	Sydney, Auckland, Fiji, Honolulu, and Vancouver	" "
(*c*) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	" "
17. *South America*—			
(*a*) Oceanic S.S. Co. / Union S.S. Co.	Thrice a month	Sydney, via San Francisco to ports in Chile, Brazil, Peru, Uruguay, and Argentine	" "
(*b*) Various other steamers	Irregularly	Via Newcastle and Sydney to various ports	" "

(ii) *Average and Fastest Time of Mails to and from London.* (*a*) *Via Suez Canal.*

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 1926–27 :—

AVERAGE AND FASTEST TIME.—MAILS VIA SUEZ CANAL, LONDON TO FREMANTLE, AND VICE VERSA DURING 1926-27.

Period.	London to Fremantle.				Fremantle to London.			
	Average Time.		Fastest Time.		Average Time.		Fastest Time.	
	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.
4.3.26 to 28.2.27	25	15	24	12¼	26	11½	25	15½

(*b*) *Via America.* The average and fastest times occupied in the conveyance of mails between London and Sydney via America during 1926 were :—

AVERAGE AND FASTEST TIME.—MAILS VIA AMERICA, DURING 1926.

Service.		Average Time.		Fastest Time.	
		Days.	Hours.	Days.	Hours.
London to Sydney	via Vancouver	(*a*)		(*a*)	
	via San Francisco (Oceanic) ..	34	—	34	—
Sydney to London	via Vancouver	35	10	31	—
	via San Francisco (Oceanic) ..	35	9	32	—

(*a*) No mails received in 1926 via Vancouver.

(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, 1926 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1925-26.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£	£	£	£	£
Annual subsidy	104,738	4,009	5,420	6,208	30,000

During the year 1925–26 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £41,997 ; by road services, £661,956 ; and by railway services, £452,021. The total expenditure in 1926 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,304,738.

7. **Transactions of the Dead Letter Offices.**—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Interstate, and International, dealt with by the Dead Letter Offices in 1925–26, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES.—SUMMARY, 1925-26.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS, AND LETTERCARDS.							
Returned direct to writers or delivered	978,058	351 775	252,284	134,469	131,174	71,082	1,918,842
Destroyed in accordance with Act ..	105,320	86,738	42,086	28,826	10 524	6,468	279,962
Returned to other States or Countries as unclaimed	54,596	35,367	23,363	8,449	15,985	2,166	139,926
Total	1,137,974	473,880	317,733	171,744	157,683	79,716	2,338.730
PACKETS AND CIRCULARS.							
Returned direct to writers or delivered	850,530	204,687	233,284	70,904	88,642	27,420	1,475,467
Destroyed in accordance with Act ..	183,627	92,789	29,939	81,561	428	900	389,244
Returned to other States or Countries as unclaimed	3,355	28,469	9,196	1,741	743	3,456	46,960
Total	1,037,512	325,945	272,419	154,206	89,813	31,776	1,911,671
Grand Total (letters, packets, etc.)	2,175,486	799,825	590,152	325,950	247,496	111,492	4,250,401

During the year 1925–26 money and valuables to the amount of £142,793 were found in undeliverable postal articles, while 25,333 postal articles were posted without address, including 345 which contained money and valuables to the extent of £2,978.

8. **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 £20, and in Mauritius £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.

(ii) *Summary for States, 1925–26.* Particulars regarding the business transacted in each State for the year 1925–26 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1925-26.

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 ..	6,973,457	7,126,214	46,922	2,058,667	39,845
Victoria	3,192,630	3,307,388	21,874	1,572,587	30,267
Queensland ..	2,672,681	2,249,866	16,845	531,675	10,263
South Australia ..	1,049,866	927,072	7,192	357,131	7,175
Western Australia ..	1,380,008	1,212,739	9,067	284,192	5,521
Tasmania	575,967	542,378	3,832	142,084	2,769
Australia ..	15,844,609	15,365,657	105,732	4,946,336	95,840

The figures in the foregoing table show a substantial increase over the corresponding particulars for the previous year.

(iii) *Summary, Australia, 1922 to 1926.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1921–22 to 1925–26 :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA, 1921-22 TO 1925-26.

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).
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
1924 ..	2,832	14,377	2,686	13,913	13,382	4,350	13,240	4,311
1925 ..	2,976	15,155	2,835	14,728	13,437	4,634	13,370	4,616
1926 ..	3,081	15,845	2,911	15,366	14,237	4,946	14,044	4,862

(iv) *Classification of Money Orders Issued and Paid.* (*a*) *Orders Issued.* The next table shows the number and value of money orders issued in each State during the year 1925–26, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1925-26.

State in which Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
	NUMBER.				
New South Wales ..	1,271,291	11,901	84,710	18,928	1,386,830
Victoria	543,740	7,217	53,628	15,256	619,841
Queensland.. ..	433,790	1,969	28,366	11,504	475,629
South Australia ..	193,816	1,096	18,430	7,683	221,025
Western Australia ..	225,561	1,004	20,681	5,108	252,354
Tasmania	115,979	1,271	6,378	1,406	125,034
Australia ..	2,784,177	24,458	212,193	59,885	3,080,713
	VALUE.				
	£	£	£	£	£
New South Wales ..	6,583,117	48,587	250,028	91,725	6,973,457
Victoria	2,936,198	27,145	154,678	74,609	3,192,630
Queensland.. ..	2,502,439	8,307	90,491	71,444	2,672,681
South Australia ..	946,935	4,998	53,277	44,656	1,049,866
Western Australia ..	1,291,004	4,674	61,104	23,226	1,380,008
Tasmania	555,376	5,727	11,556	3,308	575,967
Australia ..	14,815,069	99,438	621,134	308,968	15,844,609

(*b*) *Orders Paid.* The number and value of money orders paid in each State during the year 1925–26, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1925-26.

State in which Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
	NUMBER.				
New South Wales ..	1,264,755	37,412	17,700	27,264	1,347,131
Victoria	602,626	20,196	11,132	5,228	639,182
Queensland.. ..	394,099	2,660	5,475	3,260	405,494
South Australia ..	180,333	1,210	3,043	1,148	185,734
Western Australia ..	213,083	1,731	5,346	1,391	221,551
Tasmania	106,421	2,696	1,370	1,888	112,375
Australia ..	2,761,317	65,905	44,066	40,179	2,911,467
	VALUE.				
	£	£	£	£	£
New South Wales ..	6,833,857	145,472	87,378	59,507	7,126,214
Victoria	3,167,822	66,080	51,159	22,327	3,307,388
Queensland.. ..	2,201,555	10,377	26,019	11,915	2,249,866
South Australia ..	904,389	4,848	12,261	5,574	927,072
Western Australia ..	1,175,285	5,422	26,585	5,447	1,212,739
Tasmania	523,928	8,780	5,000	4,670	542,378
Australia ..	14,806,836	240,979	208,402	109,440	15,365,657

In the tables above, 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 Great Britain and Ireland.

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1925–26, 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, 1925-26.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	NUMBER.						
Issued in same State	4,013,956	2,935,129	1,219,526	686,918	675,462	320,660	9,851,651
Issued in other States	518,845	397,546	840,756	68,289	30,286	2,336,916	4,192,638
Total ..	4,532,801	3,332,675	2,060,282	755,207	705,748	2,657,576	14,044,289
	VALUE.						
	£	£	£	£	£	£	£
Issued in same State	1,529,254	1,049,904	426,037	224,850	246,688	102,899	3,579,632
Issued in other States	186,633	151,953	237,896	28,109	12,297	665,356	1,282,244
Total ..	1,715,887	1,201,857	663,933	252,959	258,985	768,255	4,861,876

The number and value of postal notes paid in Australia during the year showed an increase of 5 per cent. over the corresponding figures for the year 1924–25.

9. **Profit or Loss, Postmaster-General's Department.**—(i) *Revenue (a) Analysis, States, 1925–26.* The following table shows the gross revenue classified according to Branches in each State for the year 1925–26. The figures are supplied by the Treasury, and represent the actual collections for the year.

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., ANALYSIS, 1925-26.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postage	1,837,550	1,306,183	653,807	380,817	265,302	136,695	4,580,354
Money order commission ..	86,139	51,381	27,915	14,433	14,882	6,695	201,445
Poundage on postal notes							
Private boxes and bags	19,124	11,511	11,860	7,208	3,861	2,249	55,813
Miscellaneous ...	138,105	96,277	53,973	28,905	48,337	12,475	378,072
Total Postal ..	2,080,918	1,465,352	747,555	431,363	332,382	158,114	5,215,684
Telegraphs (ordinary)	530,580	327,863	255,288	200,982	123,614	52,153	1,490,480
Telegraphs (radio)	5,713	11,170	1,400	2,071	687	137	21,178
Total Telegraphs	536,293	339,033	256,688	203,053	124,301	52,290	1,511,658
Telephones ..	1,562,744	1,143,906	553,541	451,575	223,196	109,452	4,044,414
Grand Total ..	4,179,955	2,948,291	1,557,784	1,085,991	679,879	319,856	10,771,756

Increased telephone revenue (£444,550) largely contributed to the total increase of £727,270 over the revenue for 1924–25.

(*b*) *Branches, 1922 to 1926.* The gross revenue collected in respect of each Branch of the Department during each of the past five years was as stated in the table hereunder :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., 1922 TO 1926.

Year ended 30th June—	Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
	£	£	£	£
1922	5,194,523	(*a*)1,401,583	2,724,554	9,320,660
1923	5,395,829	(*b*)1,413,375	2,983,069	9,792,273
1924	5,024,816	(*c*)1,430,554	3,301,651	9,757,021
1925	4,944,546	(*d*)1,500,076	3,599,864	10,044,486
1926	5,215,684	(*e*)1,511,658	4,044,414	10,771,756

Includes radio receipts (*a*) £25,998, (*b*) £7,711, (*c*) £4,012, (*d*) £18,292, and (*e*) £21,178.

As compared with the corresponding figures for the previous year, an increase of 7.24 per cent. is shown. The figures for each Branch increased by 5.48, 0.77, and 12.35 per cent. respectively.

(ii) *Working Expenses* (*a*) *Analysis, States, 1925–26.* Particulars of the working expenses of each Branch of the Department by States during 1925–26 are shown in the following table. As in the case of Gross Revenue, the figures have been furnished by the Treasury and represent actual payments during the financial year.

WORKING EXPENSES, POSTMASTER-GENERAL'S DEPARTMENT, 1925–26.

Branch.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postal ..	1,836,149	1,252,301	654,081	385,796	327,824	180,975	4,637,126
Telegraph ..	611,252	345,381	303,742	195,504	177,838	70,988	1,704,705
Telephone ..	1,298,084	969,963	498,543	384,075	203,720	132,849	3,487,234
All Branches	3,745,485	2,567,645	1,456,366	965,375	709,382	384,812	9,829,065

The working expenses of the Postal Branch represented 47 per cent. of the total, Telegraph Branch, 17 per cent., and of the Telephone Branch, 36 per cent.

(*b*) *Branches, 1922 to 1926.* The appended table shows the working expenses of each Branch for the period 1921–22 to 1925–26.

WORKING EXPENSES, POSTMASTER-GENERAL'S DEPARTMENT, 1922 TO 1926.

Year ended 30th June—	Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
	£	£	£	£
1922	3,791,571	1,320,434	1,991,531	7,103,536
1923	3,979,020	1,389,302	2,283,542	7,651,864
1924	4,278,917	1,546,021	2,623,839	8,448,777
1925	4,488,021	1,613,695	3,128,914	9,230,630
1926	4,637,126	1,704,705	3,487,234	9,829,065

The working expenses for the Department as a whole have increased by £2,725,529 (38 per cent.) during the four years, the percentage increase in regard to each Branch being, Postal, 22 per cent. ; Telegraph, 29 per cent. ; and Telephone, 75 per cent.

(iii) *Interest Charges.—(a) States and Branches, 1925–26.* The interest payable on capital expenditure for the three Branches in each State during 1925–26 was as follows:—

INTEREST CHARGES, POSTMASTER-GENERAL'S DEPARTMENT, 1925–26.

Branch.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postal ..	49,729	35,836	14,645	12,093	13,482	3,299	129,084
Telegraph ..	57,754	34,066	42,581	23,780	24,851	4,682	187,714
Telephone ..	349,781	259,569	143,580	105,160	59,778	24,523	942,391
All Branches	457,264	329,471	200,806	141,033	98,111	32,504	1,259,189

Owing to the great expansion of the Telephone service during recent years, and the more expensive nature of equipment generally, the interest charges allocated to the Telephone Branch represented almost 75 per cent. of the total.

(*b*) *Branches, 1922 to 1926.* For the five years, 1922 to 1926, each Branch was debited with the following amounts in respect of interest on capital expenditure:—

Year ended 30th June.	Postal. Branch.	Telegraph. Branch.	Telephone. Branch.	All Branches.
	£	£	£	£
1922	104,045	125,446	473,548	703,039
1923	105,198	134,627	540,410	780,235
1924	116,534	157,029	638,109	911,672
1925	122,442	173,288	790,816	1,086,546
1926	129,084	187,714	942,391	1,259,189

The interest payable is calculated at 3½ per cent. on the value of the assets, particulars of which are contained in para. 11.

(iv) *Profit or Loss.—(a) States, 1925–26.* The operations of each Branch of the Department in the several States after providing for Working Expenses, Depreciation, and Interest Charges during the year 1925–26, showed the following results:—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1925–26.

Branch.	—	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
		£	£	£	£	£	£	£
Postal ..	Profit	157,120	143,048	62,480	20,940	..	..	319,979
	Loss	..	..	..	..	34,042	29,567	..
Telegraph ..	Profit	..	..	..	1,827	..	..	..
	Loss	119,777	33,814	72,837	..	64,943	19,088	308,632
Telephone ..	Profit	..	..	..	..	..	..	..
	Loss	63,712	49,774	73,187	30,151	33,479	46,411	296,684
All Branches	Profit	..	59,490	..	..	..	..	..
	Loss	26,369	..	83,544	7,384	132,464	95,066	285,337

The introduction of the radial charge basis for telephone trunk line calls during 1924–25 still has a marked effect on telephone revenue, the average revenue per call being 8.39d. in 1925–26 as compared with 8.60d. in 1924–25, and 9.44d. in 1923–24. The reduction in general cable rates in December, 1924, and in press cable rates in July, 1925, was also reflected in the financial results for the year. Two other factors contributing generally to the adverse balance were the Arbitration Basic Wage Award, which operated for the whole of 1925–26, and increased superannuation liability and pension payments under State Acts.

(*b*) *Branches, 1922 to 1926.* The following statement gives particulars of the operating results of each Branch for the period 1922 to 1926 :—

PROFIT OR LOSS. POSTMASTER-GENERAL'S DEPARTMENT, 1922-26.

Year Ended 30th June.	Branch— Postal.		Telegraph.		Telephone.		All Branches.	
	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.
	£	£	£	£	£	£	£	£
1922 ..	1,258,286	..	1,809	..	280,986	..	1,541,081	..
1923 ..	1,365,064	..	..	78,460	179,455	..	1,466,059	..
1924 ..	502,667	..	..	188,982	50,667	..	364,352	..
1925 ..	243,472	..	..	227,175	..	258,619	..	242,322
1926 ..	319,979	..	..	308,632	..	296,684	..	285,337

In addition to the reasons advanced in the preceding paragraph, the reduction of postal rates in October, 1923, also had its effect on the financial results.

10. **Expenditure, Postmaster-General's Department.**—(i) *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, 1926. 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, 1925-26.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Salaries and contingencies—	£	£	£	£	£	£	£	£
Salaries ..	44,993	1,901,272	1,390,080	715,124	537,021	380,463	188,290	5,157,243
Conveyance of mails	..	479,204	258,157	233,092	92,621	103,681	43,581	1,210,336
Contingencies ..	4,909	747,972	558,568	388,383	250,438	139,132	95,617	2,185,019
Ocean mails ..	104,738	..	..	..	..	..	..	104,738
Miscellaneous ..	1,759	34,581	20,639	9,446	8,528	3,859	4,246	83,058
Pensions and retiring allowances ..	..	39,486	51,621	199	..	11,212	..	102,518
Rent, repairs, maintenance ..	522	55,324	35,186	22,311	15,857	14,945	2,714	146,859
Supervision of works	..	..	..	..	..	252	448	700
Proportion of Audit Office expenses ..	..	3,846	2,813	1,438	928	622	362	10,009
New works—								
Telegraph and telephone ..	8,200	1,737,692	1,533,577	747,822	628,962	325,142	88,963	5,070,358
New buildings, etc.	..	192,967	127,685	73,383	46,703	28,594	3,503	472,835
Interest on transferred properties ..	..	80,189	42,957	31,981	137,021	16,450	7,119	315,717
Other	1,410,727	..	..	..	..	..	..	1,410,727
	(*a*)							
Total ..	1,575,848	5,272,533	4,021,283	2,223,179	1,718,079	1,024,352	434,843	16,270,117

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

The increased expenditure over that for 1924–25 on new telegraph and telephone works (£1,085,652) was the principal factor governing the total increased expenditure of £1,382,188 for the year.

(ii) *Total, 1922 to 1926.* 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, 1922 to 1926 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT., 1922 TO 1926.

Expenditure.	Year ended 30th June— 1922.	1923.	1924.	1925.	1926.
	£	£	£	£	£
Total	10,026,593	10,752,373	13,487,891	14,887,929	16,270,117

The total expenditure for 1925–26 increased by over 60 per cent. on the amount for 1921–22.

11. **Capital Account.**—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1926.

DETAILS OF FIXED ASSETS, 30th JUNE, 1926.

Particulars.	Net Value, 1st July, 1925.	Capital Expenditure, 1925–26.	Gross Value, 1st July, 1926.	Less Depreciation, &c. 1925-26. (a)	Net Value, 30th June, 1926.
	£	£	£	£	£
Telephone Lines and equipment	18,237,997	3,869,355	22,107,352	456,178	21,651,174
Telegraph Lines and Trunk Line equipment	6,958,697	1,132,066	8,090,763	92,976	7,997,787
Telegraph equipment	206,992	25,631	232,623	2,734	229,889
Postal equipment	165,123	30,475	195,598	5,703	189,895
Sites, Buildings, Furniture, and Office equipment	7,768,549	531,634	8,300,183	81,029	8,219,154
Miscellaneous	446,862	78,879	525,741	30,819	494,922
Total	33,784,220	5,668,040	39,452,260	669,439	38,782,821

(a) Includes Dismantled Assets, Depreciation written off, and Assets transferred.

During the past quinquennium the value of the fixed assets has more than doubled, the net value at 30th June, 1921, having been £19,221,175.

§ 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. The most important recent development in connexion with the Telegraph system is the application of the " Carrier-wave " system (see also § 5, Telephones). This system, with a maximum capacity of 10 duplex channels (initial equipment, 5 duplex channels), was put into operation in February, 1927, on the Melbourne–Sydney and Melbourne–Adelaide trunk line routes with one channel linked at Melbourne to provide a through carrier from Sydney to Adelaide upon which a " Creed " high speed printing telegraph is operated. A total of 5,400 channel miles (duplex) of " carrier " telegraph system is now in operation.

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 1922 to 1926 :—

TELEGRAPHS.—AUSTRALIA, SUMMARY, 30th JUNE, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
Number of offices	6,641	6,987	7,709	8,576	8,904
Length of wire (miles)—					
Telegraph purposes only	62,781	62,619	63,528	66,702	64,941
Telegraph and telephone purposes ..	84,855	91,461	105,351	126,086	137,755
Length of line (miles)—					
Conductors in Morse cable	2,139	2,139	2,201	2,399	3,684
Conductors in submarine cable ..	2,067	2,193	2,415	2,919	3,598
Pole routes (miles)	62,489	66,648	71,828	80,399	85,547

(ii) *Particulars for each State.* The following table gives corresponding particulars for each State for the year 1925–26 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of offices ..	2,894	2,300	1,426	744	990	550	8,904
Length of wire (miles)—							
Telegraph purposes only	20,480	7,901	13,899	10,755	11,128	778	64,941
Telegraph and telephone purposes	36,884	28,980	38,159	14,135	13,215	6,382	137,755
Length of line (miles)—							
Conductors in Morse cable	1,330	1,926	393	..	21	14	3,684
Conductors in submarine cable (statute miles) ..	2,650	460	38	70	3	377	3,598
Pole routes (miles) ..	31,204	15,284	13,281	10,394	11,402	3,982	85,547

A total length of 202,696 miles of wire is available for telegraph purposes, of which 137,755 miles are also used for telephone purposes, and the figures show increases of 9,908 (5 per cent.) and of 11,669 miles (9 per cent.) respectively over the corresponding mileages for the previous year.

3. **Number of Telegrams Dispatched.**—(i) *Total for Australia.* The number of telegrams dispatched to destinations within Australia in each of the last five years is given hereunder :—

TELEGRAMS DISPATCHED.—AUSTRALIA, 1922 TO 1926.

Telegrams.	Year ended 30th June—				
	1922.	1923.	1924.	1925.	1926.
Number(a)	15,796,022	15,828,629	16,699,199	17,132,145	17,637,716

(a) Including interstate cablegrams.

(ii) *Totals for each State.* The appended table shows the total number of telegrams dispatched in each State in 1925–26 according to the class of message transmitted :—

TELEGRAMS DISPATCHED.—STATES, 1925-26.

Class of Message Transmitted within the Commonwealth.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Paid and Collect—							
Ordinary ..	4,524,368	3,438,736	2,503,556	1,223,104	1,413,543	361,956	13,465,263
Urgent ..	869,362	303,725	251,581	111,146	77,870	19,135	1,632,819
Press ..	240,413	147,307	106,969	76,921	43,181	74,305	689,096
Lettergram ..	54,065	35,738	74,799	32,194	46,837	25,911	269,544
Total ..	5,688,208	3,925,506	2,936,905	1,443,365	1,581,431	481,307	16,056,722
Unpaid—							
Service ..	298,985	109,116	133,884	109,293	110,700	23,901	785,879
Shipping ..	61,620	127,745	17,994	4,507	20,004	10,265	242,135
Meteorological ..	165,557	82,439	68,237	70,078	142,377	24,292	552,980
Total ..	526,162	319,300	220,115	183,878	273,081	58,458	1,580,994
Grand Total ..	6,214,370	4,244,806	3,157,020	1,627,243	1,854,512	539,765	17,637,716

The figures in the foregoing table show an increase in the total volume of telegraph business of 505,571 messages as compared with the previous year.

4. **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.

5. **Revenue and Expenditure.**—Particulars of the revenue and expenditure of the telegraph systems for the years 1921–22 to 1925–26 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.**—These cables were opened to the public on the 1st May, 1909. 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 Banjoewanjie (two lines); Fremantle to Durban; Fremantle to Adelaide; Java to Cocos Island, which provides another route between Australia and South Africa. A cable partly owned by this Company connects 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. (A Bill, which however has not yet become law, recently introduced in the Imperial Parliament provides for an amendment to the composition of the Board by which Great Britain will have two representatives only.) The main cable route known as the "All Red" runs from Southport in Queensland to Bamfield (Vancouver Is.), thence overland to Montreal. From this point messages are transmitted across the Atlantic over the cables of the Anglo-American and Commerical Companies, or, if so desired, the Marconi Wireless System between Canada and the United Kingdom may be used for either homeward or outward messages. 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. The laying of the Sydney–Southport cable was completed on 11th July, 1923, and the Auckland–Suva cable on 12th August, 1923. The duplication of the Suva (Fiji)–Bamfield (Vancouver Island) cable was completed in November, 1926. The total cost of duplication, including the cables laid south of Fiji in 1923, approximated £2,750,000.

(ii) *Financial Summary.* The receipts for the year 1925–26 amounted to £458,758 and exceeded the ordinary working expenses (including the normal annual contribution of £30,000 to Reserve and Renewal Fund) by £149,771. After payment of the annuities of £77,545 in respect of interest and repayment of the capital of £2,000,000, and of £2,082 to the Renewal Fund in respect of loan money from that fund for the purposes of the Auckland–Sydney cable, there remained a surplus of £70,144, which was transferred to the Renewal Fund to meet the cost of duplicating the cables.

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, whence another cable, 109 miles in length, is laid to Wanganui in the North Island. A second cable between New Zealand and Australia (Auckland to Sydney) was opened for traffic on the 31st December, 1912.

6. **The New Caledonia Cable.**—This 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, but the agreement expired on 17th October, 1923, thus bringing to an end the payment by the Commonwealth Government of subsidies for cable services.

7. **Length of Cable Routes.**—The following statement shows the length of the several cable routes providing communication between Australia and Great Britain :—

LENGTH OF CABLE ROUTES.

VIA SOUTH AFRICA.	miles.	VIA VANCOUVER.	miles.
Sydney to Adelaide (land line)	960	Sydney to Southport (Q'ld.)	510
Adelaide to Perth	1,546	Southport (Q'ld.) to Norfolk Is.	837
Perth to Mauritius	4,274	Norfolk Is. to Suva	982
Mauritius to Durban	1,731	Suva to Fanning Is.	2,043
Durban to Cape Town	1,114	Fanning Is. to Bamfield	3,458
Cape Town to Madeira	5,590	Across Canada (land line)	3,400
Madeira to Port Curnow	1,344	Canada to Great Britain	3,477
Port Curnow to London (land line)	320		
Total	16,879	Total	14,707

VIA DARWIN.

	miles.
Adelaide to Darwin (land line)	2,134
Darwin to Banjoewanjie	1,444
Banjoewanjie to London	9,947
	13,525

8. **Cable Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams received and dispatched in Australia from 1923–24 to 1925–26 :—

CABLEGRAMS.—AUSTRALIA, 1923-24 TO 1925-26.

Cablegrams.	Cablegrams Received.			Cablegrams Dispatched.			Total Cablegrams Received and Dispatched.		
	1923–24.	1924–25.	1925–26.	1923–24.	1924–25.	1925–26.	1923–24.	1924–25.	1925–26.
Number	565,981	617,394	671,047	567,571	641,408	696,208	1,133,552	1,258,802	1,367,255

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1925–26 is given hereunder :—

CABLEGRAMS.—STATES, 1925-26.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number received	350,129	221,879	27,768	34,291	28,903	8,077	671,047
Number dispatched	350,146	230,408	33,170	39,655	34,086	8,743	696,208
Total	700,275	452,287	60,938	73,946	62,989	16,820	1,367,255

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

9. **Cable and Radio (Beam) Rates.**—(i) *Ordinary Messages.* From 1st February, 1927, the cable rates (per word) between Australia and Great Britain were reduced as follows :—Ordinary, 2s. 6d. to 2s.; deferred ordinary, 1s. 3d. to 1s.; and Government, 1s. 4d. to 1s. 0½d., and substantial reductions were also made on the Canadian service (via Pacific) as from the same date. The following are the rates at present operating on traffic to the principal countries :—

CABLEGRAM AND RADIOGRAM RATES, JUNE, 1927.

To—	Rate per Word and Route.		
	Via Pacific.	Via Eastern.	Via Beam.
Great Britain	2s.	2s.	1s. 8d.
European Countries ..	2s. 6d. to 4s.	2s. 6d. to 2s. 7d.	2s. to 2s. 6½d.
Asiatic Countries	6s. to 6s. 4d.	2s. 6d. to 3s. 5d.	..
Africa	..	2s. 2d. to 3s. 6d.	2s. 6d. to 2s. 10d.
North America	1s. 7d. to 2s. 8d.	2s. 4d. to 3s. 10d.	..
Central America	3s. 10d. to 5s. 11d.	4s. 5d. to 6s. 1d.	..
West Indies	3s. to 8s. 10d.	4s. to 9s. 1d.	..
South America	4s. 9d. to 8s. 6d.	4s. 9d. to 8s. 4d.	..
New Zealand	4½d.	4½d.	..

On 1st March, 1927, the extra charge on cablegrams between Tasmania and oversea countries was removed, so that charges are now uniform throughout the States.

(ii) *Deferred Cable or Radio (Beam) Messages.* Under this system a reduction of 50 per cent. in the ordinary cable or radio (Beam) charges is made under certain conditions. Any such messages which have not reached their destination within 24 hours may be transmitted in turn with full-rate messages. This service, together with "Daily Letter" and "Week-end" cable services has affected the ordinary cable business to a considerable extent. "Deferred Press" cablegrams subject to a delay of 18 hours may be exchanged between Australia and (*a*) Great Britain at the rate of 4½d. per word; (*b*) Canada, at 2½d. per word; and (*c*) United States of America, at 3d. to 4d. per word.

(iii) *Daily Letter Services.* The "Daily Letter" service was inaugurated in September, 1923, between Australia and Great Britain and Canada, and has since been extended to most countries in the British Empire and to the United States of America. "Daily Letter" messages are accepted subject to a maximum transit delay of 48 hours (including allowance for variations of times). The rates on messages (20 word minimum) to Great Britain are 9d. per word via "Pacific" or "Eastern," and 6d. per word via "Beam," while for United States of America the rate varies from 7d. to 9d. per word.

(iv) *Week-end Messages.* Week-end messages may be exchanged with certain specified countries at the rates indicated hereunder. Messages—which may be lodged at any post office—are forwarded to reach the transmitting station by post or telegraph by midnight on Saturdays and are deliverable to the addressees on Tuesday mornings. The rates per word for messages (20 word minimum) to the following countries are :—Great Britain, 7½d.; Holland, 9d.; Canada, 5¾d.; Newfoundland, 7¾d.; and Fanning Island, 6d.

(v) *Press Messages.* The rate per word on press messages exchanged with Great Britain is 6d. via cable and 4d. via Radio (Beam) service.

(vi) *Night Letter Service*—A night letter service for traffic between Australia and New Zealand was introduced on 1st May, 1924. The rate is fixed at 3s. per message of 20 words, and 2d. per word in excess of 20. On 1st December, 1924, the service was extended to take in traffic to and from Fiji at the rate of 5s. 10d. per message of 20 words, and excess words at the rate of 3½d. per word. Night letter telegrams are accepted at any time and are delivered by first post on the morning following receipt.

§ 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, 1924 to 1926 :—

TELEPHONE LINES—AUSTRALIA, 30th JUNE, 1924 TO 1926.

Particulars.		1924.	1925.	1926.
Ordinary Lines—				
Conduits	duct miles	3,447	3,748	4,519
,, ...	route miles	1,804	2,039	2,420
Conductors in aerial cables	loop mileage	32,289	29,604	11,351
Conductors in underground cables ..	,,	362,037	434,091	517,868
Conductors in cables for junction circuits	,,	54,165	62,021	80,325
Open conductors	single wire mileage	250,898	312,454	296,024
Trunk Lines—				
Telephone trunk lines only	miles	55,516	85,201	111,135
Telegraph and telephone purposes ..	,,	105,351	126,086	137,755

(ii) *Comparison with Other Countries.* Australia at present stands seventh in the list of countries having the greatest development of telephone facilities. This position may be considered satisfactory in view of the area and distribution of population, and the average length of wire required to provide a subscriber's service. The average length of wire per instrument in Australia is 3.75 miles, as compared with 2.89 miles in the United States of America; 3.02 in New Zealand, and 2.60 miles in Canada.

(iii) *Government Policy.* A vigorous policy is pursued by the Government in providing telephone facilities, with the result that the system has developed rapidly during recent years. Many of the concessions have been of such a character as to render the services unremunerative, but it is considered that they are justified from the standpoint of national development.

(iv) *Trunk Line System.* The trunk line system of the Commonwealth aims to provide satisfactory commercial conversations irrespective of distance. This design contemplates a main arterial system between Perth (Western Australia) and Cairns (Queensland), and, in conformity with the Departmental policy of utilizing the most modern improvements and devices, 26 voice repeaters to amplify the voice currents have been installed at appropriate places. Extended use is being made of high frequency carrier current systems both in telephony and telegraphy, and transmission measuring apparatus has been placed at numerous stations on trunk line routes to ensure that transmission is maintained at the proper level for commercial conversations. The total length for telephony over which this system was in operation on 30th June, 1927, was 2,500 channel miles.

(v) *Automatic Exchanges.* At 30th June, 1926, there were 29 automatic or semi-automatic exchanges in operation providing facilities for 76,974 subscribers, 75,000 of whom were in the metropolitan areas. On the same date 21 automatic exchanges, with a total capacity of over 50,000 subscribers, were in course of construction. It is proposed eventually to convert the whole of the exchanges in the metropolitan networks to machine switching.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1924 to 1926, will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY, 1924 TO 1926.

Particulars.	Year (30th June.)	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1924	1,035	1,062	499	296	216	270	3,428
	1925	1,201	1,264	618	373	315	307	4,078
	1926	1,326	1,426	743	420	404	324	4,643
No. of Telephone Offices (Including Exchanges)	1924	2,456	1,955	1,093	621	739	503	7,367
	1925	2,623	2,139	1,314	681	854	511	8,122
	1926	2,756	2,226	1,380	729	934	520	8,545
No. of lines connected ..	1924	97,310	71,352	30,619	22,582	12,929	7,809	242,601
	1925	107,497	83,640	34,560	28,968	14,667	8,784	278,116
	1926	117,249	93,215	39,382	33,547	16,398	9,415	309,206
No. of instruments connected	1924	125,995	97,528	38,318	29,573	16,410	9,696	317,520
	1925	139,557	114,169	43,073	37,057	18,633	10,753	363,242
	1926	152,969	127,000	48,729	42,580	20,819	11,519	403,616
(*a*) No. of subscribers' instruments	1924	122,216	95,418	36,815	28,700	15,661	9,175	307,985
	1925	135,527	111,786	41,371	36,118	17,992	10,124	352,918
	1926	148,681	124,682	46,928	41,558	19,906	10,816	392,571
(*b*) No. of public telephones	1924	1,945	1,640	1,035	588	475	399	6,082
	1925	2,165	1,900	1,212	629	586	403	6,985
	1926	2,379	1,914	1,302	666	841	522	7,624
(*c*) No. of other local instruments	1924	1,834	470	468	285	274	122	3,453
	1925	1,865	483	490	310	55	136	3,339
	1926	1,909	404	499	356	72	181	3,421
Instruments per 100 of population	1924	5.65	5.92	4.63	5.55	4.55	4.55	5.48
	1925	6.13	6.83	5.04	6.77	5.06	5.08	6.13
	1926	6.58	7.49	5.54	7.57	5.55	5.50	6.68
		£	£	£	£	£	£	£
Earnings	1924	1,290,972	945,409	454,750	343,846	182,153	95,485	3,312,615
	1925	1,411,341	1,055,390	494,103	396,975	202,066	101,235	3,661,110
	1926	1,584,153	1,179,788	568,936	459,084	230,019	110,961	4,132,941
Working expenses ..	1924	1,089,221	676,069	363,144	245,239	153,370	96,796	2,623,839
	1925	1,216,284	856,164	443,820	322,263	163,945	121,437	3,128,913
	1926	1,298,084	969,963	498,543	384,075	203,720	132,849	3,487,234
		%	%	%	%	%	%	%
Percentage of working expenses to earnings	1924	84.37	71.51	79.85	71.32	84.20	101.37	79.21
	1925	86.18	81.12	89.82	81.18	83.61	119.96	85.46
	1926	81.94	82.22	87.63	83.66	88.57	119.73	84.38

The number of instruments per 100 of population has increased from 5.48 in 1923–24 to 6.68 in 1925–26. The actual number of instruments has increased from 317,520 to 403,616—an increase of 27 per cent.

(vii) *Systems in Use.* The following table shows the percentage of Automatic, Common Battery, and Magneto Telephone lines at 30th June, 1924 to 1926 :—

PERCENTAGE OF AUTOMATIC, COMMON BATTERY, AND MAGNETO LINES, 1924 TO 1926.

System.	30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Automatic	1924	26.0	17.0	..	20.0	37.0	..	19.0
	1925	26.8	23.3	..	18.7	35.7	..	21.1
	1926	34.5	23.5	7.8	18.2	33.4	..	24.8
Common Battery ..	1924	10.0	33.0	26.0	32.0	9.0	53.0	22.0
	1925	8.4	28.1	24.4	29.2	7.9	50.9	19.8
	1926	6.5	25.9	15.8	25.0	7.4	48.7	16.5
Magneto	1924	64.0	50.0	74.0	48.0	54.0	47.0	59.0
	1925	64.8	48.6	75.6	52.1	56.4	49.1	59.1
	1926	59.0	50.6	76.4	56.8	59.2	51.3	58.7

(viii) *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 1925–26 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1925-26.

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	13,182	9.57	51,696	3.91	46,364	1.85	111,242	3.72
Victoria ..	10,389	9.61	41,890	3.68	35,547	1.33	87,826	3.43
Queensland ..	6,138	8.29	8,605	3.42	24,420	2.28	39,163	3.48
South Australia	8,581	7.30	9,620	3.30	13,204	1.20	31,405	3.51
Western Australia	5,051	6.32	2,917	4.12	6,615	1.48	14,583	3.68
Tasmania ..	2,489	4.48	818	2.31	5,743	1.60	9,050	2.46
Australia ..	45,830	8.35	115,546	3.73	131,893	1.69	293,269	3.54

A comparison of the daily calling rates for each class of exchange shows that Victoria registered the greatest number per line at central exchanges, Western Australia at suburban exchanges, and Queensland at country exchanges. For Australia as a whole, 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 more than double the number shown for country exchanges.

(ix) *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 1923–24 to 1925–26 :—

TELEPHONES—TRUNK LINE CALLS AND REVENUE FOR THE YEARS 1923-24 TO 1925-26.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1923–24 ..	6,748,101	4,709,531	2,938,267	1,886,706	855,106	984,523	18,122,234
1924–25 ..	7,843,286	5,639,117	3,545,610	2,448,991	1,103,644	1,094,802	21,675,450
1925–26 ..	9,278,995	6,894,247	4,273,321	3,009,375	1,365,845	1,263,448	26,085,231
Total Revenue for Year—	£	£	£	£	£	£	£
1923–24 ..	243,529	170,959	144,781	84,027	38,803	31,013	713,112
1924–25 ..	261,940	184,809	153,354	97,359	48,887	30,691	777,040
1925–26 ..	323,492	225,243	191,880	116,462	62,884	35,641	955,602
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1923–24 ..	8.66	8.71	11.83	10.68	10.88	7.56	9.44
1924–25 ..	8.01	7.86	10.38	9.54	10.63	6.73	8.60
1925–26 ..	8.37	7.84	10.77	9.29	11.95	6.77	8.39

While the number of trunk line calls recorded during 1925–26 has increased by more than 4 millions over the figures for the previous year, the average revenue per call has decreased by 0.21d. per call.

The rapid growth in connexion with subscribers' services is, however, bringing about increased trunk line traffic, and extensive works are in progress to meet the growing demand and to improve the trunk line system generally.

2. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in the tables at the end of § 1.

§ 5. Radio Telegraphy and Telephony.

1. **Radio Telegraphy and Telephony.**—(i) *General.* A statement in regard to the initial steps taken to establish radio telegraphy in Australia was given in Official Year Book No. 18, p. 243, but consideration of space precludes its repetition in the present issue.

With the exception of the war period, licences for experimental and amateur stations have been issued since 1911, with restrictions on the use of transmitting equipment. At the end of June, 1927, there were in Australia 767 such experimental stations, including 423 transmitting stations.

The regulations were amended in 1920 with a view to encouraging the erection of "land" stations by pastoralists and others in remote districts, but very few satisfactory applications were received. The Department, however, at the end of 1925 opened stations at Wave Hill and at Camooweal to collect and distribute messages from private stations that might subsequently be erected in the Northern Territory or Western Queensland. One such station has been erected at Brunette Downs.

Regulations under the Navigation Act require that all ships registered in Australia of 1,600 tons or more registered tonnage, or carrying more than 12 passengers, shall be fitted with an efficient radio telegraphy installation. At the end of June, 1927, there were 118 vessels so equipped.

Two Class "A" broadcasting stations are in operation in New South Wales and in Victoria and 1 each in the other States. Class "B" stations are in operation as follows, viz. :—New South Wales, 7 ; Victoria and South Australia, 2 each ; and Queensland 1.

On 28th January, 1927, a Royal Commission was appointed to report upon—

(1) Wireless broadcasting within the Commonwealth in all its aspects, with power to recommend any alterations deemed necessary in the policy and practices at present in force, and

(2) the development and utilization of wireless services for public requirements within the Commonwealth.

The report of this commission has not yet been presented, although the taking of evidence has been completed.

(ii) *Broadcasting.* (a) *Licences, etc.* The revised regulations issued in 1924 and amended in 1925 prescribe the licence fees to be paid by owners of receiving sets, and by experimenters. Each State was divided into three zones, and the annual fees and the distances from the capital city of the respective zones were fixed as follows :—

Class of Licence.	Zone 1. Up to 250 Miles.	Zone 2. 250 to 400 Miles.	Zone 3. Beyond 400 Miles.
	£ s. d.	£ s. d.	£ s. d.
Broadcast listeners' licences	1 7 6	1 2 6	0 17 6
,, ,, ,, (Special) ..	10 0 0	9 0 0	7 10 0
,, ,, ,, (Temporary (a))..	1 0 0	0 17 6	0 15 0
Experimental licences			
Dealers' listening licences	5 0 0	3 0 0	2 0 0

(a) Per week. Others for one year.

In addition to the licences referred to above, the regulations provide for the issue of the following licences, for which the respective fees per annum, payable in advance, are £1, viz. :—(a) Coast Station, (b) Ship Station, (c) Land Station, (d) Portable Station, and (e) Aircraft Station.

Of the revenue obtained from the licence fees the Postal Department retains 5s. for each special broadcast listener's licence; 2s. 6d. for each ordinary broadcast listener's licence; 25 per cent. for a temporary broadcast listener's licence; 25 per cent. for a dealer's listening licence; and 10s. for an experimental licence; the remainder of the revenue being available for distribution to the broadcasting company or companies in the State in which the revenue is collected. The companies must supply a satisfactory programme, use the authorized power, and provide effective transmission.

Two classes of broadcasting stations may operate, viz.:—Class "A"—in respect of which the receiving licence fees are payable, and Class "B"—in respect of which no receiving licence revenue is payable. In New South Wales and Victoria two Class "A" stations only may be licensed. The licensees of these stations receive respectively 70 per cent. and 30 per cent. of the licence fees available for distribution. In the other States one Class "A" station only may be licensed, and the whole of the "available revenue" for the particular State will be payable in respect of the station. The fees payable to the Department for Class "A" licences are £15, and for Class "B" £5, the licence being valid for a period of 5 years.

The following tables show the number of each class of licence issued in each State, etc., during the years 1925–26 and 1926–27:—

WIRELESS LICENCES, 1925-26.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	2	19
Ship	32	59	7	17	3	..	..	118	..	118
Land	..	..	..	..	..	1	1	2	2	4
Broadcasting—										
"A"	2	2	1	1	1	1	..	8	..	8
"B"	7	1	1	1	..	1	..	11	..	11
Broadcast listeners—										
Ordinary ..	36,292	63,494	8,.00	12,105	3,886	1,170	..	125,047	..	125,047
Special ..	9	49	8	174	1	1	..	242	..	242
Temporary ..	8	25	21	37	7	1	..	99	..	99
Experimental—										
Transmitting and receiving ..	124	114	37	31	26	23	..	355	2	357
Receiving only ..	185	133	40	32	24	10	..	424	6	430
Dealers' listening ..	472	797	265	315	66	77	..	1,992	..	1,992
Portable	..	..	..	..	..	..	..	..	..	..
Aircraft	..	..	..	..	..	..	..	..	..	..
Total Licences issued	37,132	64,675	8,485	12,714	4,019	1,288	2	128,315	12	128,327

WIRELESS LICENCES, 1926-27.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	2	19
Ship	32	59	7	17	3	..	..	118	..	118
Land	4	3	1	..	..	1	..	9	2	11
Broadcasting—										
"A"	2	2	1	1	1	1	..	8	..	8
"B"	7	2	1	2	..	..	..	12	..	12
Broadcast listeners—		4								
Ordinary ..	56,908	113,612	22,226	15,904	3,616	1,142	..	213,408	..	213,408
Special	46	94	13	404	4	2	..	563	..	563
Temporary ..	41	40	51	25	1	7	..	165	..	165
Experimental—										
Transmitting and receiving ..	134	134	52	49	31	23	..	423	2	425
Receiving only ..	149	116	26	25	20	8	..	344	6	350
Dealers' listening ..	860	943	295	324	47	52	..	2,521	..	2,521
Portable	5	..	..	..	..	..	..	5	..	5
Aircraft	..	..	..	..	..	..	..	..	..	..
Total Licences issued	58,189	115,006	22,678	16,752	3,728	1,239	1	217,593	12	217,605

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.

Licences for the Territory of New Guinea are issued by the Administrator at Rabaul.

(ii) (*b*) *Simultaneous Delivery.* A development of some importance was the linking-up of several radio broadcasting stations for simultaneous broadcasting, which was successfully accomplished for the first time on 20th August, 1925, to enable an address to be delivered on the War Conversion Loan then being floated.

The speech was delivered at the Central Telephone Exchange, Melbourne, and by means of the telephone trunk lines and amplifying apparatus, was distributed to the studios of broadcasting stations in Brisbane (1,243 miles), Sydney (592 miles), Melbourne, and Adelaide (485 miles). The audience was estimated at 250,000 persons, and the area covered about two million square miles.

On the occasion of the opening of Federal Parliament at Canberra on 9th May, 1927, by H.R.H. the Duke of York, the speeches and ceremonies were again similarly broadcast. Receiving sets and loud speakers were set up in schools, halls, and other public places, and voice projectors were used in some of the principal streets of capital cities.

(iii) *Beam Wireless.* The Beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (Australasia) Ltd. were completed early in 1927, and a direct beam wireless service to England was established on 8th April, 1927. Satisfactory communication is maintained daily over a period of hours, and the new service is being well patronized by the public. Preliminary tests have been made between Canada and Australia, and the early opening of this service is anticipated. A comparison of the rates charged for "Beam" and Cable messages is given in § 3, Submarine Cables.

(iv) *Radio Stations (Pacific Ocean).* 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.

(v) *Radiotelegraphic Traffic.* (*a*) *Coast Stations.* The following statement shows the traffic handled by the several coast stations during the years 1924–25 and 1925–26 :—

RADIO TRAFFIC.—COAST STATIONS, 1924-25 AND 1925-26.

State or Territory.	Particulars.				
	Total. Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales ..	288,288	23,538	566	4,313	28,417
Victoria	195,984	14,549	2	1,345	15,896
Queensland	886,988	51,526	2,501	5,101	59,128
South Australia	78,393	6,271	206	1,292	7,769
Western Australia ..	238,798	17,100	409	3,762	21,271
Tasmania	139,310	8,946	367	173	9,486
Northern Territory ..	10,978	835	7	1,611	2,453
Australia	1,838,739	122,765	4,058	17,597	144,420
Papua	328,124	16,911	756	1,174	18,841
Grand Total ..	2,166,863	139,676	4,814	18,771	163,261

(*b*) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1925–26 are given hereunder :—

RADIO TRAFFIC.—ISLAND STATIONS, 1925-26.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Service.	Total.
Messages	10,373	8,333	4,742	2,224	5,573	31,245
Words	195,030	178,127	178,193	30,410	70,407	652,167

(vi) *Proficiency Certificates.* Proficiency certificates for commercial wireless operators are issued by the Minister to individuals who pass the specified tests. Amateur operators' certificates and watchers' certificates are, in addition, issued to successful candidates at the prescribed examinations.

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 30th June, 1926, 921 first-class and 48 second-class commercial and 264 amateur proficiency certificates, in addition to 153 watchers' certificates, had been issued.

§ 6. Research Section.

The Postmaster-General's Department, in pursuance of its policy of improving and extending the system of electrical communication in Australia, has created a Research Section, whose functions are indicated hereunder :—

(i) Investigation of technical problems that arise in telephone, telegraph, and radio systems of the Department or under its control.

(ii) Supervision of the transmission design of the trunk line network of the Commonwealth, wire and radio, in order to produce a co-ordinated system wherein a subscriber at any place in the Commonwealth will be able to converse easily and clearly with a subscriber in any other place. The possible future requirements of international and inter-Empire telephony are also included in these studies.

(iii) Co-operative work with other bodies in research into the propagation of radio waves and factors influencing radio communication generally.

(iv) Supervision of the initial installations of new forms of communication apparatus, such as carrier systems, radio links in the trunk line system, special forms of telephone repeaters and the larger simultaneous broadcasting events.

The nucleus of the staff was established in 1924, and the strength at 30th June, 1927, was 11, with laboratory equipment valued at £10,000.