

CHAPTER V. TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

In the system of recording statistics of oversea shipping Australia is considered as a unit, and, therefore, only one entry and one clearance are counted 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 forwarded to the Commonwealth Bureau of Census and Statistics. Similar documents furnish information regarding oversea migration and interstate migration by sea. This arrangement has been in operation since the 1st July, 1924.

Since the 1st July, 1914, the Trade and Shipping of Australia has been recorded for the fiscal years ending 30th June.

In the following tables, commencing with the year 1935-36, a change has been made in the classification of sailing vessels with auxiliary engines. Particulars of these vessels, previously included in the columns headed "Steam", are now included in those headed "Sailing", as this classification is considered more correct, in view of the fact that the main method of propulsion of these vessels is sail.

§ 2. Oversea Shipping.

1. Total Movement.—The following table gives the number and net tonnage of oversea steam and sailing vessels entering Australian ports during the years 1925-26 to 1935-36:—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Net Tons.	Vessels.	Net Tons.	Vessels.	Net Tons.
1925-26	1,537	5,245,222	46	58,583	1,583	5,303,805
1926-27	1,598	5,512,840	26	46,030	1,624	5,558,870
1927-28	1,544	5,373,485	33	45,560	1,577	5,419,045
1928-29	1,564	5,521,725	18	29,858	1,582	5,551,583
1929-30	1,499	5,413,192	23	31,254	1,522	5,444,446
1930-31	1,517	5,562,230	17	19,287	1,534	5,581,517
1931-32	1,497	5,653,731	22	33,167	1,519	5,686,898
1932-33	1,531	5,891,878	23	41,446	1,554	5,933,324
1933-34	1,356	5,308,584	24	43,987	1,380	5,352,571
1934-35	1,559	5,951,226	23	43,024	1,582	5,994,250
1935-36	1,550	6,199,583	(a) 65	(a) 38,093	1,615	6,237,676

(a) See last paragraph, § 1, above.

The average tonnage per vessel entered has risen from 3,350 tons per vessel in 1925-26 to 3,862 tons in 1935-36.

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. Shipping Communication with various Countries.—Records, as they are invariably made, of the number and tonnage of vessels arriving from and departing to particular countries may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia for several countries. For

instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

OVERSEA SHIPPING, AUSTRALIA—DIRECTION.

Countries.	Cargo and Ballast.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
NET TONNAGE ENTERED.						
United Kingdom and European Countries	Cargo	1,524,673	1,549,889	1,644,837	1,698,613	1,812,263
	Ballast	503,997	946,342	485,391	376,291	281,157
New Zealand	Cargo	426,704	448,684	469,343	539,443	557,091
	Ballast	97,781	110,559	92,913	107,662	134,200
Asiatic Countries and Islands in the Pacific	Cargo	1,182,212	1,291,014	1,313,042	1,476,957	1,721,540
	Ballast	893,822	441,286	149,376	520,769	353,102
Africa	Cargo	7,836	19,129	13,394	22,533	34,983
	Ballast	226,226	144,609	143,275	143,468	172,302
North and Central America	Cargo	802,672	966,985	1,041,000	1,105,873	1,161,003
	Ballast	..	12,088	..	..	6,240
South America	Cargo	2,821	2,649	..	2,639	2,895
	Ballast	16,151	..	..	..	..
	Cargo	3,946,918	4,278,350	4,481,616	4,846,060	5,200,675
	Ballast	1,739,980	1,654,974	870,955	1,148,190	917,001
Total		5,686,898	5,933,324	5,352,571	5,994,250	6,237,676
NET TONNAGE CLEARED.						
United Kingdom and European Countries	Cargo	2,673,463	2,496,405	2,495,377	2,517,126	2,710,463
	Ballast	5,659	11,784	8,447	20,364	16,709
New Zealand	Cargo	385,088	460,037	512,190	512,487	537,350
	Ballast	66,739	93,613	40,816	28,863	73,948
Asiatic Countries and Islands in the Pacific	Cargo	1,647,769	1,657,465	1,199,738	1,653,931	1,695,483
	Ballast	249,981	440,372	440,489	422,053	526,048
Africa	Cargo	42,096	33,567	22,220	35,573	50,108
	Ballast	56	2,627	2,627	..	314
North and Central America	Cargo	488,134	542,663	536,061	615,644	591,144
	Ballast	130,270	146,511	143,268	83,355	87,944
South America	Cargo	19,631	23,272	5,077	5,398	4,710
	Ballast	..	..	..	..	3,615
	Cargo	5,256,181	5,213,409	4,770,663	5,340,159	5,508,276
	Ballast	452,705	694,907	640,647	554,635	708,608
Total		5,708,886	5,908,316	5,411,310	5,894,794	6,306,884

3. Nationality of Oversea Shipping.—The greater part of the shipping visiting Australia is of British nationality. The proportion of British tonnage increased by 1.89 per cent. during 1935-36 and was the highest recorded since 1929-30, when the percentage was 73.43. Likewise the percentage of vessels arriving with cargo was the greatest since the figure of 93.22 in 1929-30.

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.

Nationality.	Net Tonnage.				
	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
BRITISH—					
Australian	230,996	264,848	289,172	310,186	314,439
United Kingdom	3,138,330	3,218,273	2,788,464	3,137,192	3,334,332
Canadian	42,032	54,228	79,268	76,101	95,889
New Zealand	260,628	291,329	335,513	321,481	322,296
Other British	59,905	115,681	221,647	215,597	276,162
Cargo	2,680,856	2,831,878	3,032,040	3,323,552	3,732,921
Ballast	1,051,035	1,112,481	682,024	737,005	610,197
Total British	3,731,891	3,944,359	3,714,064	4,060,557	4,343,118
Per cent. on total	65.62	66.48	69.39	67.74	69.63
FOREIGN—					
Danish	46,061	107,052	75,753	48,613	54,689
Dutch	156,617	185,342	104,469	176,424	150,012
French	90,552	108,032	114,715	137,142	102,031
German	116,004	117,589	121,829	134,231	126,500
Italian	68,220	76,674	83,055	62,205	39,465
Japanese	688,712	546,088	333,109	461,400	464,311
Norwegian	395,269	394,470	335,775	426,539	462,884
Swedish	111,196	136,059	110,927	141,265	134,502
United States	205,485	245,530	247,959	240,474	233,047
Other Foreign	76,891	72,129	50,916	105,400	127,117
Cargo	1,266,062	1,446,472	1,449,576	1,522,508	1,557,754
Ballast	688,945	542,493	188,931	411,185	336,804
Total Foreign	1,955,007	1,988,965	1,638,507	1,933,693	1,894,558
Per cent. on total	34.38	33.52	30.61	32.26	30.37
Cargo	3,946,918	4,278,350	4,481,616	4,846,060	5,290,675
Per cent. on total	69.40	72.11	83.73	80.85	84.82
Ballast	1,739,980	1,654,974	870,955	1,148,190	947,001
Per cent. on total	30.60	27.89	16.27	19.15	15.18
Grand Total	5,686,898	5,933,324	5,352,571	5,994,250	6,237,676

The Australian tonnage which entered Australia from overseas during the year 1935-36 represented 5.04 per cent. of the total tonnage entered and was mainly confined to the New Zealand and Pacific Island trade.

§ 3. Shipping of Ports.

The total shipping tonnage—oversea, interstate and coastwise—which entered the more important ports of Australia during the year 1935-36, together with similar information in regard to some of the ports of New Zealand and of Great Britain for the year 1935, will be found in the next table:—

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

Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney (N.S.W.) ..	10,479,774	London ..	29,673,932
Melbourne (Vic.) ..	8,056,623	Liverpool (including Birkenhead) ..	16,640,562
Adelaide (S.A.) ..	5,061,747	Southampton ..	12,508,709
Newcastle (N.S.W.) ..	4,422,581	Tyne Ports ..	8,596,806
Brisbane (Qld.) ..	4,367,197	Cowes (including coast of Isle of Wight) ..	6,637,567
Fremantle (W.A.) ..	3,613,611	Cardiff ..	6,568,276
Townsville (Qld.) ..	1,283,983	Hull ..	6,132,946
Hobart (Tas.) ..	1,076,761	Plymouth ..	5,799,532
Geelong (Vic.) ..	1,069,530	Manchester (including Runcorn) ..	3,904,309
Kembla (N.S.W.) ..	851,609	Bristol ..	3,555,827
Whyalla (S.A.) ..	772,000	Swansea ..	3,460,582
Pirie (S.A.) ..	770,588	Dover ..	3,031,239
Burnie (Tas.) ..	663,471	Blyth ..	2,994,591
Cairns (Qld.) ..	656,478	Middlesbrough ..	2,924,602
Launceston (Tas.) ..	490,665	Harwich ..	2,850,553
Lincoln (S.A.) ..	458,142	Sunderland ..	2,626,228
Mackay (Qld.) ..	425,958	Portsmouth ..	2,408,973
Rockhampton (Qld.) ..	394,791	Newport ..	2,265,594
Devonport (Tas.) ..	374,320	SCOTLAND—	
Gladstone (Qld.) ..	374,024	Glasgow ..	5,793,015
Albany (W.A.) ..	344,732	Greenock (including Port Glasgow) ..	3,038,134
Walleroo (S.A.) ..	337,360	Leith ..	2,076,777
Thursday Island (Qld.) ..	302,268	NORTHERN IRELAND—	
NEW ZEALAND—		Belfast ..	7,161,230
Wellington ..	3,666,736		
Auckland ..	2,755,138		
Lyttleton ..	2,008,495		
Otago ..	1,021,942		

Figures relating to ports of the United Kingdom have been obtained from the British Board of Trade's Statement of Navigation and Shipping for the year 1935, and those relating to New Zealand ports from the New Zealand Statistical Report on Trade and Shipping for the same year.

§ 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 1932 to 1936, 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.

VESSELS BUILT IN AUSTRALIA.

NUMBERS AND TONNAGES.

Year.	Steam.		Motor.		Sailing.		Pontoons, Dredges, &c.		Total.						
	Tonnages.		Tonnages.		Tonnages.		Tonnages.		Tonnages.						
	No.	Gross.	Net.	No.	Gross.	Net.	No.	Gross.	Net.	No.	Gross.	Net.			
1932	10	207	140	2	15	15	..	..	..	12	222	155
1933	4	144	118	2	20	18	1	779	645	7	943	781
1934	17	506	315	4	88	87	..	..	..	21	594	402
1935	14	360	272	1	16	14	..	..	..	15	376	286
1936	2	719	192	8	401	265	..	..	..	..	..	..	10	1,120	457

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, 1936 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1936.

State or Territory.	Steam and Motor.				Sailing.				Barges, Hulks, Dredges, &c., 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 ..	43	859	309	63,075	285	9,373	209	6,849	46	12,065	892	92,221
Victoria ..	35	3,244	128	157,170	57	1,261	44	675	56	23,319	320	185,660
Queensland ..	15	2,224	27	4,651	64	2,776	89	1,222	24	3,464	219	14,337
South Australia ..	11	337	60	8,559	55	2,435	52	3,092	22	5,243	200	19,666
Western Australia ..	9	173	28	5,810	31	604	285	4,399	19	4,277	372	15,263
Tasmania ..	5	530	40	3,880	70	1,884	67	2,517	1	382	183	9,193
Northern Territory ..	..	..	..	..	4	69	15	145	..	..	19	214
Total ..	118	7,367	592	243,145	566	18,402	761	18,899	168	48,750	2,205	336,563

3. **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, 1936.

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 ..	6,891	17,182,857	355	102,602	7,246	17,285,459	23.43	26.57
Australia and New Zealand ..	523	637,504	11	4,636	534	642,140	1.73	0.99
Canada (a) ..	798	1,291,351	96	64,980	894	1,356,331	2.89	2.08
Other British ..	867	1,061,271	163	39,937	1,030	1,101,208	3.33	1.69
Total, British Empire ..	9,079	20,172,983	625	212,155	9,704	20,385,138	31.38	31.33
Belgium ..	179	388,413	..	..	179	388,413	0.58	0.60
Denmark ..	695	1,134,029	6	1,485	701	1,135,514	2.27	1.75
France ..	1,340	2,972,979	80	29,476	1,420	3,002,455	4.59	4.61
Germany ..	2,085	3,708,202	9	10,215	2,094	3,718,417	6.77	5.72
Greece ..	606	1,800,850	..	..	606	1,800,850	1.96	2.77
Holland ..	1,408	2,507,354	12	3,927	1,420	2,511,281	4.59	3.86
Italy ..	1,072	3,056,753	174	41,406	1,246	3,098,159	4.03	4.76
Japan ..	2,367	4,215,690	..	..	2,367	4,215,690	7.65	6.48
Norway ..	1,857	4,053,655	2	830	1,859	4,054,485	6.02	6.23
Spain ..	861	1,145,531	50	11,806	911	1,157,337	2.95	1.78
Sweden ..	1,244	1,506,557	15	8,360	1,259	1,514,917	4.07	2.33
United States of America (b) ..	3,120	11,986,851	456	569,712	3,576	12,556,563	11.56	19.30
Other Foreign Countries ..	3,284	5,355,038	297	769,386	3,581	5,524,424	11.58	8.48
Total, Foreign Countries ..	20,118	43,831,902	1,101	846,603	21,219	44,678,505	68.62	68.67
Grand Total ..	29,197	64,004,885	1,726	1,058,758	30,923	65,063,643	100.00	100.00

(a) Including Great Lakes shipping.

(b) Including Philippine Islands and Great Lakes shipping.

The foregoing figures have been compiled from *Lloyd's Register of Shipping*, and vessels of 100 tons or upwards only have been included.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz. :—(a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in the Commonwealth Bureau of Census and Statistics) shall show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom, *via States*, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is in the third State again recorded for the statistics of the State concerned as from United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* the States of South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEAS VESSEL ON AUSTRALIAN COAST.

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

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows :—(a) The aggregate of all ships recorded for each State as “Oversea *direct*” gives the oversea shipping for Australia as a whole. (b) The aggregate

for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State. (c) From the example given in the table it may be noticed that for every entry "Oversea via States" there is a corresponding clearance "Interstate," so that according to the purpose for which the figures are required, the movements of "oversea ships via States" can be added to the recorded interstate shipping, and thus furnish figures showing the total interstate *movement* of shipping, or a similar deduction may be made from the recorded interstate shipping to give the total movement of shipping engaged solely in interstate trade. This last calculation is not strictly accurate, as it is based on the assumption that for every arrival "Oversea via States" there is a corresponding departure "Interstate direct," which is not actually so, for all overseas vessels do not follow the same itinerary as the vessel in the table above.

2. **Vessels and Tonnage Entered.**—(*Interstate direct.*) 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 1931-32 to 1935-36. The shipping of 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.

State or Territory.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
NUMBER.					
New South Wales	1,483	1,656	1,679	1,945	1,862
Victoria	1,494	1,678	1,777	1,908	1,966
Queensland	483	485	508	587	567
South Australia	598	644	694	842	865
Western Australia	311	309	326	347	358
Tasmania	933	984	1,008	1,035	1,065
Northern Territory	19	20	23	27	22
Total	5,321	5,776	6,015	6,691	6,705

NET TONNAGE.

New South Wales	3,947,128	4,583,979	4,664,917	5,334,778	5,195,740
Victoria	3,154,197	3,594,992	3,791,069	4,062,750	4,361,171
Queensland	1,123,578	1,184,471	1,281,334	1,410,487	1,495,200
South Australia	2,176,155	2,191,498	2,335,796	2,761,195	2,898,358
Western Australia	1,643,755	1,695,267	1,763,371	1,855,563	1,916,546
Tasmania	1,094,767	1,255,877	1,282,947	1,101,544	1,335,725
Northern Territory	51,570	53,553	56,694	59,011	66,710
Total	13,191,150	14,559,637	15,176,128	16,585,328	17,179,450

3. **Oversea Vessels Moving Interstate.**—(*Oversea via States.*) To ascertain the aggregate movement of shipping between the States during the year 1935-36, 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, 1935-36.

State or Territory.	Entered.		Cleared.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales ..	531	2,691,282	568	2,924,916	1,099	5,616,198
Victoria ..	512	2,724,884	562	3,079,255	1,074	5,804,139
Queensland ..	267	1,652,002	277	1,605,834	544	3,257,836
South Australia ..	347	1,932,832	313	1,825,401	660	3,758,233
Western Australia ..	35	122,494	18	70,285	53	192,779
Tasmania ..	105	554,455	127	733,488	232	1,287,943
Northern Territory ..	..	..	..	..	..	..
Total ..	1,797	9,677,949	1,865	10,239,179	3,662	19,917,128

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 movements of vessels engaged solely in the interstate trade for Australia as a whole during the years 1931-32 to 1935-36 are shown below :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE ENTERED AND CLEARED.—AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
1931-32	3,958	5,512,175	3,999	5,557,763
1932-33	4,208	5,771,627	4,170	5,789,251
1933-34	4,380	5,927,623	4,379	6,095,043
1934-35	4,946	6,884,789	4,955	6,976,104
1935-36	4,840	6,940,271	4,846	6,943,714

The above figures are approximate only. See last paragraph § 5, I, p. 115.

5. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total interstate movement of shipping including oversea vessels moving interstate for each of the years 1931-32 to 1935-36 :—

TOTAL INTERSTATE MOVEMENT OF SHIPPING.—AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
1931-32	6,631	20,475,864	6,672	20,521,452
1932-33	7,226	22,397,933	7,188	22,415,557
1933-34	7,463	23,114,881	7,462	23,282,301
1934-35	8,279	25,369,207	8,288	25,460,522
1935-36	8,502	26,857,399	8,508	26,860,842

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during 1935-36, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1935-36.

State or Territory.	Entered.		Cleared.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
New South Wales	2,393	7,797,022	2,403	7,991,692
Victoria	2,478	7,086,055	2,515	7,209,427
Queensland	834	3,147,202	848	3,084,349
South Australia	1,212	4,831,190	1,193	4,739,716
Western Australia	393	2,039,040	330	1,847,438
Tasmania	1,170	1,890,180	1,196	1,919,312
Northern Territory	22	66,710	23	68,908
Total, Australia	8,502	26,857,399	8,508	26,860,842

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 1932 to 1936 :—

INTERSTATE AND COASTAL STEAMSHIP SERVICES.—AUSTRALIA.

Particulars.	1932.	1933.	1934.	1935.	1936.
Number of companies operating ..	31	30	31	30	29
Number of steamships ..	154	154	155	156	161
Tonnage { Gross	306,878	309,309	302,897	324,891	362,237
{ Net	171,089	172,334	168,056	180,468	202,881
Horse-power (Nominal) ..	33,340	34,514	33,510	36,037	38,133
Number of { 1st class	4,031	3,939	3,914	4,311	4,748
{ passengers for which licensed(a) { 2nd class and steerage	1,755	1,755	1,755	1,920	1,799
Complement of Crew { Masters and officers	498	512	505	513	641
{ Engineers	514	529	419	548	589
{ Crew	4,072	4,193	4,045	4,264	4,500

(a) Exclusive of purely day passenger accommodation.

§ 6. Tonnage of Cargo.

1. *Oversea and Interstate Cargo.*—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in all ports for the years 1931-32 to 1935-36. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

CARGO MOVEMENT.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1931-32 ..	2,072,334	894,380	5,951,914	726,040	3,002,327	1,007,351
1932-33 ..	2,679,800	1,217,218	5,641,926	778,579	3,819,654	1,047,054
1933-34 ..	2,606,101	1,395,291	4,260,182	738,846	4,278,159	1,201,617
1934-35 ..	2,969,914	1,722,485	5,220,757	857,976	5,244,386	1,346,422
1935-36 ..	3,531,839	1,948,508	5,214,194	893,509	5,540,938	1,502,813

(ii) *Principal Ports.* The following table shows the tonnage of Oversea and Interstate Cargo discharged and shipped at principal ports, 1935-36 :—

TONNAGE OF CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1935-36.

Port.	Discharged.			Shipped.		
	Oversea.	Interstate.	Total.	Oversea.	Interstate.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sydney	1,812,966	1,077,869	2,890,835	1,449,768	785,362	2,235,130
Newcastle	128,458	1,266,415	1,394,873	285,981	1,090,887	2,276,868
Kembla	42,494	319,736	362,230	83,523	171,879	255,402
Other .. ..	..	..	..	15,663	49,161	64,824
Total, New South Wales	1,983,918	2,664,020	4,647,938	1,834,935	2,997,289	4,832,224
Melbourne	1,613,126	2,042,293	3,655,419	999,233	881,781	1,790,814
Geelong	187,519	180,365	367,884	269,624	79,413	349,037
Other	15,127	8,736	23,863	5,599	4,007	9,606
Total, Victoria	1,815,772	2,231,394	4,047,166	1,284,256	965,201	2,149,457
Brisbane	323,142	480,733	803,875	184,807	195,382	380,189
Cairns	9,725	34,580	44,305	87,460	90,602	178,062
Townsville	53,137	58,231	111,368	110,867	74,942	185,809
Other	14,401	47,889	62,290	181,142	79,363	260,505
Total, Queensland	400,405	621,433	1,021,838	564,276	440,289	1,004,565
Adelaide	474,692	707,391	1,182,083	414,348	362,267	776,615
Pirie	135,803	184,027	319,830	415,301	135,732	551,033
Walleroo	22,179	3,930	26,109	175,932	15,385	191,317
Whyalla .. ..	..	..	..	432,498	1,288,022	1,720,520
Other	14,892	2,960	17,852	224,816	11,040	235,856
Total, South Australia	647,566	898,308	1,545,874	1,662,895	1,812,446	3,475,341
Fremantle	484,803	296,785	781,588	423,650	44,754	468,404
Bunbury	35,329	367	35,696	129,830	20,286	150,116
Geraldton	33,813	101	33,914	74,550	2	74,552
Other	3,814	10,191	14,005	46,747	15,616	62,363
Total, Western Australia	557,759	307,444	865,203	674,777	80,658	755,435
Hobart	67,594	286,711	354,305	155,169	192,490	347,659
Launceston	6,304	99,064	105,368	30,860	77,585	108,445
Devonport	205	25,015	25,220	6	324,892	324,898
Other .. ..	..	60,446	60,446	96	149,690	149,786
Total, Tasmania	74,103	471,236	545,339	186,131	744,657	930,788
Darwin (Northern Territory)	824	11,079	11,903	433	3,211	3,644
Total, AUSTRALIA	5,480,347	7,204,914	12,685,261	6,107,703	7,043,751	13,151,454

2. **Nationality.**—The following table shows the total oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1931-32 to 1935-36 :—

OVERSEA CARGO DISCHARGED AND SHIPPED.—TONS.(a)

Vessels Registered at Ports in—	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
British—					
Australia	223,841	229,930	257,497	307,440	329,208
United Kingdom	5,429,998	5,644,962	4,796,937	5,813,352	6,181,120
Canada	64,150	88,733	115,125	127,379	154,914
New Zealand	260,988	317,821	357,087	323,630	398,238
Other British	134,739	221,606	403,757	392,606	534,585
Total British	6,113,735	6,503,052	5,930,403	6,964,407	7,508,065
Per cent. on Total	63.39	63.03	65.89	64.66	65.57
Foreign—					
Denmark	137,378	296,265	184,626	154,172	160,285
France	76,666	95,977	108,736	169,802	140,435
Germany	248,983	258,915	276,821	297,020	346,544
Italy	73,962	107,503	103,921	66,319	33,520
Japan	1,161,303	1,071,568	635,142	913,552	914,856
Netherlands(b)	254,768	313,188	280,509	308,187	228,726
Norway	876,991	883,810	814,447	1,023,612	1,207,673
Sweden	313,986	418,101	325,114	408,462	390,080
United States of America	232,182	226,033	246,858	240,271	300,074
Other Foreign	154,714	143,111	93,843	225,328	266,892
Total Foreign	3,530,933	3,814,471	3,070,017	3,806,725	3,989,985
Per cent. on Total	36.61	36.97	34.11	35.34	34.43
Grand Total	9,644,668	10,317,523	9,000,420	10,771,132	11,588,050

(a) Tons weight and tons measurement combined.

(b) Includes Netherlands East Indies.

NOTE.—A summary of particulars relating to Shipping and Cargo for the year 1936-37 will be found in the Appendix to this volume.

§ 7. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No. 14, published by this Bureau, contained 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 were 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, 1937, show that the rate for general merchandise from Australia to United Kingdom and Continent was 63s. per ton weight or measurement, while the rates for wheat and wool (greasy) were respectively 42s. 6d. per ton weight and 1½d. per lb. plus 5 per cent., less 10 per cent. The charter rates for wheat ranged between 37s. 6d. and 43s. per ton.

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, 1937, was included in the Transport and Communication Bulletin No. 27, 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 who are found at fault. Particulars of shipping casualties reported on or near the coast during the year 1936 are shown in the Transport and Communication Bulletin No. 27. This information also was 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).

(ii) *Amending Acts.* Under an amendment of the Principal Act made by the Navigation Act 1926 permission may be granted by the Governor-General in Council to unlicensed British ships to engage in the carriage of passengers between any Commonwealth ports where injury is being done to the tourist traffic. By Order in Council under this provision, British vessels of not less than 10,000 tons gross register and of a speed of not less than 15 knots (reduced in December, 1928, to 14 knots) were granted permission—as exempt from the coasting trade provisions of the Act—to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney and Melbourne during certain specified periods in the tourist seasons.

The principal Act was further amended by the Navigation (Maritime Conventions) Act 1934 to implement, and to enable the Commonwealth Government to ratify, a number of International Maritime Conventions, the principal of which were the International Convention for the Safety of Life at Sea, 1929, and the International Convention Respecting Load Lines, 1930.

By the Navigation Act of 1935 Section 7 of the Principal Act was amended to permit British ships of not less than 10,000 tons gross tonnage and a sea speed of not less than 14 knots to carry passengers between ports in Australia not connected by rail without being deemed to engage in the coasting trade within the meaning of the Navigation Act, subject to the condition that such carriage of passengers is without break of journey, transhipment or second call at any intermediate port. Section 231 of the Principal Act was also amended by the Act of 1935 to make provision for the carriage of wireless telegraphy installation by the smaller cargo steamships engaged in interstate trade. Provision has also been made in some States for the carriage of wireless equipment on intra-state vessels.

In an effort to protect the interests of British shipping in the Pacific against subsidized foreign competition the New Zealand Government recently introduced a measure prohibiting foreign vessels from embarking passengers or cargo in a New Zealand port for any destination in Australia. On 3rd December, 1936, the British Shipping Protection Bill, designed to implement the New Zealand legislation, was introduced into the Australian Senate. After the speech on the second reading, the debate was adjourned until the session of Parliament in 1937. In view of later developments, however, it is possible that it will not be necessary to pass this legislation, as discussions at the second meeting of the Pacific sub-committee of the committee on shipping questions, held in London on the 26th May, 1937, seemed to indicate a reconciliation of the view-points of the interested nations.

7. **Ports and Harbours.**—A report in two volumes on "Transport in Australia", with special reference to Ports and Harbours facilities, was submitted to the Commonwealth Government by Sir George Buchanan, and published as two Parliamentary Papers (No. 86 printed 14th March, 1927, and No. 108 printed 9th May, 1927).

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 railways owned by the different States are referred to throughout as "State" and those owned by the Commonwealth as "Federal" railways.

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 Railway Commissioners, has been made during recent years.

In an endeavour to adhere more closely to the figures used by the Railways Commissioners in relation to their financial operations and to obtain greater uniformity in the presentation of the particulars of the various systems, certain changes have been made in the compilation of Railways Statistics for the year 1935-36. The figures relating to this year will not, therefore, in all cases, be entirely comparable with those of previous years, although generally the differences occasioned are relatively small.

3. **Railway Communication in Australia.**—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. Further information regarding railway communication in Australia and proposals for unification of gauge in the various systems are given in Year Book No. 22, pp. 259 to 261.

4. **Grafton-South Brisbane (Uniform Gauge) Line.**—The line from Grafton (New South Wales) to Brisbane (Queensland) which was opened for traffic on 27th September, 1930, was constructed to overcome the break of gauge between Sydney and Brisbane, and is the first step towards uniform gauge railway communication between the capitals of the mainland States. It was constructed under agreement between the Commonwealth and the States of New South Wales and Queensland, and is of 4 ft. 8½ in. gauge. The work consisted of regrading and relaying the existing New South Wales line between Grafton and Kyogle and the construction of a new line 94.82 miles in length from Kyogle (New South Wales) to South Brisbane (Queensland). Under the agreement, the Commonwealth in the first instance provided the cost of the work, of which one-fifth was deemed to have been on behalf of the Commonwealth, and four-fifths on behalf of the five mainland States of the Commonwealth collectively on a population basis. The agreement also provides that if in any financial year the earnings from the line exceed the working expenses, the excess shall be applied in paying to the Commonwealth the interest on the money provided by it on behalf of the States and the Commonwealth. The order in which such excess shall be applied is laid down in the agreement, and provides that the interest on the quotas of Victoria, South Australia and Western Australia shall be paid first, then the interest on the quotas of Queensland and New South Wales, and lastly the interest on the quota of the Commonwealth. Any balance remaining after payment of interest will be returned to Queensland and New South Wales. The States of Victoria, South Australia and Western Australia did not enter into the agreement, and the quotas of these States were assumed by the Commonwealth. To 30th June, 1936, the capital cost of construction and equipment was £4,362,500, the interest charge for the year 1935-36 being £218,125. During the same period, the working of the line, which is the responsibility of the New South Wales and Queensland Railways Commissioners, resulted in a loss of £5,665 being shown on the New South Wales section and a profit of £9,778 on the Queensland section. In addition, the following amounts were paid as interest:—New South Wales £72,179, and Queensland £27,029, the remainder, £118,917, being borne by the Commonwealth. Figures relating to the operation, etc., of the line are incorporated as far as possible with those for New South Wales and Queensland in the tables in Section 3, State Railways.

5. **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.

The subjoined table shows the route mileage of Federal, State and private lines open for general traffic (exclusive of sidings and cross-overs) in each State for each of the years 1931-32 to 1935-36. The railway mileage given for each State includes both Federal, State and private railways in that State.

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN.

State or Territory.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales	6,208.30	6,246.61	6,246.53	6,246.53	6,204.64
Victoria	4,745.71	4,745.71	4,745.71	4,745.71	4,745.71
Queensland	6,823.31	6,836.41	6,836.55	6,836.54	6,812.80
South Australia	3,775.81	3,775.81	3,775.81	3,775.90	3,775.90
Western Australia	4,966.06	5,068.72	5,090.87	5,089.50	5,089.33
Tasmania	786.45	786.45	786.45	776.46	776.46
Federal Capital Territory	4.94	4.94	4.94	4.94	4.94
Northern Territory	489.73	489.73	489.73	489.73	489.73
Australia	27,800.31	27,954.38	27,976.59	27,965.31	27,899.51

In previous issues of the Year Book particulars of mileage open 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, and (b) the length of private lines available for general use by the public. The mileages specified in the case of Government and private lines are to the 30th June, 1936:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1935-36.

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.
	State.	Federal.		
	Miles.	Miles.	Miles.	Miles.
New South Wales	6,124.19	..	80.45	6,204.64
Victoria	4,720.77	..	24.94	4,745.71
Queensland	6,566.65	..	246.15	6,812.80
South Australia	2,529.35	1,196.04	50.51	3,775.90
Western Australia	4,358.34	453.99	277.00	5,089.33
Tasmania	644.89	..	131.57	776.46
Federal Capital Territory .. ..	..	4.94	..	4.94
Northern Territory .. ..	..	489.73	..	489.73
Australia	24,944.19	2,144.70	810.62	27,899.51

6. *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 at the 30th June, 1936:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1935-1936.

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	2.33	2.57	6.95	6.43	11.30	3.38	0.51	92.18	4.12
Per 1,000 sq. miles of Territory	20.05	54.00	10.16	9.93	5.21	29.62	5.26	0.94	9.38

7. Classification of Lines according to Gauge, 1935-36.—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; and (iii) Private railways open to the public for general traffic. Particulars of Government railways are up to the 30th June, 1936, and of private railways open for general traffic to the 31st December, 1936, as nearly as possible.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1935-36.

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. 0 in.	

FEDERAL RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia	597.86	598.18	..	..	..	1,196.04
Western Australia	453.99	..	..	..	..	453.99
Federal Capital Territory	4.94	..	..	..	..	4.94
Northern Territory	489.73	..	..	..	489.73
Total	1,056.79	1,087.91	..	..	..	2,144.70

STATE RAILWAYS.

New South Wales .. ..	..	6,124.19	..	..	..	..	6,124.19
Victoria	4,599.00	..	..	121.77	..	..	4,720.77
Queensland .. ..	..	68.82	6,467.57	..	..	30.26	6,566.65
South Australia	1,451.24	..	1,078.11	..	..	..	2,529.35
Western Australia .. ..	..	..	4,358.34	..	..	..	4,358.34
Tasmania .. ..	..	..	633.56	..	..	11.33	644.89
Total	6,050.24	6,193.01	12,537.58	..	121.77	41.59	24,944.19

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales .. ..	..	43.72	36.73	..	..	..	80.45
Victoria	13.94	..	..	11.00	..	..	24.94
Queensland .. ..	..	..	99.50	..	..	146.65	246.15
South Australia .. ..	..	..	50.51	..	..	..	50.51
Western Australia .. ..	..	..	277.00	..	..	..	277.00
Tasmania .. ..	..	..	125.07	..	..	6.50	131.57
Total	13.94	43.72	588.81	11.00	..	153.15	810.62

ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales .. ..	..	6,167.91	36.73	..	..	..	6,204.64
Victoria	4,612.94	..	..	11.00	121.77	..	4,745.71
Queensland .. ..	..	68.82	6,567.07	..	..	176.91	6,812.80
South Australia	1,451.24	597.86	1,726.80	..	..	..	3,775.90
Western Australia .. ..	..	453.99	4,635.34	..	..	..	5,089.33
Tasmania .. ..	..	..	758.63	..	..	17.83	776.46
Federal Capital Territory .. ..	..	4.94	..	..	..	..	4.94
Northern Territory .. ..	..	..	489.73	..	..	..	489.73
GRAND TOTAL	6,064.18	7,293.52	14,214.30	11.00	121.77	194.74	27,899.51

8. **Summary of Operations, 1935-36.**—In the following table a summary is given of the working of all railways open for general traffic in Australia during the year ended 30th June, 1936:—

RAILWAYS.—FEDERAL, STATE AND PRIVATE.—SUMMARY, 1935-36.

Particulars.	Federal Railways.	State Railways.	Private Railways.	Total for Australia.
Mileage open (route) 30th June, 1936 Miles	2,144.70	24,944.19	810.62	27,899.51
Capital cost (e) £	15,899,638	322,041,276	(a) 5,033,916	342,974,830
Cost per mile £	7,413	12,910	6,210	12,293
Gross revenue £	387,709	40,913,840	(b) 688,834	41,990,383
Gross revenue per train mile d.	159.86	140.89	132.65	140.90
Working Expenses (e) £	387,457	29,380,414	(b) 406,496	30,174,367
Working Expenses per train mile d.	159.76	101.17	78.28	101.25
Net Revenue £	252	11,533,426	(b) 282,338	11,816,016
Net Revenue per train mile d.	0.10	39.72	54.37	39.65
Train miles run Miles	582,073	69,693,767	1,246,278	71,522,118
Passengers carried No.	96,502	368,099,743	1,288,881	369,485,126
Tons of goods, etc., carried Tons	101,379	31,047,873	3,646,657	34,795,909
Average number of employees No.	(d) 1,417	(d) 98,731	(b) (c) 1,108	101,256
Average wage £	209	230	226	230

(a) Exclusive of the capital cost of 158.93 miles of private lines for which information is not available.
 (b) Incomplete. (c) Employees at 31st December, 1936. (d) Exclusive of Construction Branch.
 (e) See § 1, paragraph 2, page 121.

9. **Track Mileage—Government Railways.**—The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1933 to 1936, classified according to gauge, together with the percentages on the total:—

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

Gauge.	At 30th June—							
	1933.		1934.		1935.		1936.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	7,859.71	24.70	7,855.07	24.65	7,825.11	24.56	7,825.79	24.58
4 ft. 8½ in. ..	9,317.75	29.28	9,324.67	29.26	9,331.02	29.29	9,336.67	29.33
3 ft. 6 in. ..	14,478.76	45.50	14,528.97	45.58	14,543.16	45.64	14,507.74	45.57
2 ft. 6 in. ..	131.87	0.42	131.91	0.41	131.91	0.41	131.88	0.42
2 ft. 0 in. ..	33.00	0.10	33.00	0.10	33.00	0.10	33.00	0.10
Total ..	31,821.09	100.00	31,873.62	100.00	31,864.20	100.00	31,835.08	100.00

(a) Exclusive of Tasmania, particulars of which are not available.

§ 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 built in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. An extension of the transcontinental line

from Port Augusta to Port Pirie was completed in July, 1937. The North Australia Railway has, since its acquisition by the Commonwealth, been extended twice, first to Emungalan and then to Birdum. The Central Australia Railway has also been extended from Oodnadatta to Alice Springs. In 1917 the Commonwealth Railways Act was passed by which all the Federal railways were vested in the Commonwealth Railways Commissioner.

2. **Northern Territory Railways.**—(i) *North Australia Railway (Darwin to Birdum).*—Provision was made in the Northern Territory Acceptance Act of 1910 for the construction of a line to and from South Australia. The first step was the extension of the existing line—Darwin to Pine Creek—as far as Katherine River, which was completed in 1917. After enquiry the Parliamentary Standing Committee on Public Works recommended a further extension to Daly Waters to form portion of an eventual line through Newcastle Waters to Camooweal in Queensland. The construction of the line from Katherine River to Daly Waters, a distance of 160 miles, was commenced by day labour in 1927. A section as far as Mataranka was opened for public traffic on 1st July, 1928, but owing to the curtailment of loan moneys the line was not taken beyond Birdum, 316 miles from Darwin, although construction had been commenced on the Birdum to Daly Waters section. The Mataranka to Birdum section was opened on 4th September, 1929.

(ii) *Central Australia Railway (Port Augusta to Alice Springs).*—The extension of the southern portion of the North-South line was authorized by the Railways (South Australia) Agreement Act 1926, which ratified the agreement between the Commonwealth and South Australian Governments for the construction of a 3 ft. 6 in. gauge line from Oodnadatta to Alice Springs. The estimated cost, exclusive of rolling stock, of the proposed extension, which comprises 293 miles, was £1,700,000. The first section 21½ miles from Oodnadatta was completed on the 29th August, 1927. The section from Oodnadatta to Rumbalara (169 miles 67 chains) was opened for public traffic on the 23rd December, 1928, and the remaining portion from Rumbalara to Alice Springs was completed and opened for public traffic on the 2nd August, 1929.

3. **Federal Capital Territory Railway (Queanbeyan to Canberra).**—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and, when completed, was taken over by the Chief Commissioner of Railways for that State, who worked the line for the Commonwealth Government until 1st July, 1928, on which date the management was taken over by the Commonwealth Railways Commissioner. The line was opened for traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, and is 4.94 miles in length.

4. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—A preliminary survey of a railway line connecting Western Australia with the Eastern States was commenced in 1908 and completed in March, 1909. The estimated cost of construction and equipment of the line on the basis of a 4 ft. 8½ in. gauge from Port Augusta in South Australia to Kalgoorlie in the Western Australian goldfields—a distance of 1,063 miles—was £4,045,000. The construction of the line was commenced at Port Augusta in September, 1912, and operations began at the other end from Kalgoorlie in February, 1913. The line was completed on 17th October, 1917, and five days later the first through train left Port Augusta with an official party on board for Kalgoorlie. Owing to deviations from the original route the length of the line was reduced from 1,063.39 miles to 1,051.85 miles—a saving of 11.54 miles. More detailed reference to the construction of the line and a description of the country through which it passes is given in Official Year Book No. 11, pp. 662 and 1213.

On the 29th November, 1935, the Commonwealth and the State of South Australia entered into an agreement to extend the Trans-Australian line by the construction of a 4 ft. 8½ in. gauge railway from Port Augusta to Solomontown, a suburb of Port Pirie, in the State of South Australia, the work to be undertaken by the Commonwealth at a maximum cost of £625,000 inclusive of rolling stock. The State of South Australia agreed to construct a railway of 5 ft. 3 in. gauge from Red Hill to Port Pirie to meet the Commonwealth line at Solomontown.

These lines, which have been completed and were opened for traffic on 26th July, 1937, will reduce the distance and travelling time between Port Augusta and Adelaide and eliminate one break of gauge.

5. **Lines Open, Under Construction and Surveyed.**—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1936, together with the lines under construction and those which have been surveyed only :—

RAILWAYS, FEDERAL, 30th JUNE, 1936.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian Railway—Port Augusta (South Australia) to Kalgoorlie (Western Australia)	1,051.85
Central Australia Railway—Port Augusta (South Australia) to Alice Springs (Central Australia)	771.41
Federal Territory Railway—Queanbeyan (New South Wales) to Canberra (Federal Capital Territory)	4.94
North Australia Railway—Darwin to Birdum (Northern Territory)	316.50
Total opened for traffic	2,144.70
UNDER CONSTRUCTION.	
Trans-Australian Railway—Port Augusta to Port Pirie (South Australia)	56.25
North Australia Railway—Birdum to Daly Waters (Northern Territory) (a)	43.50
Total under construction	99.75
(a) Construction suspended in September, 1929.	
SURVEYED.	
Kingoonya to Boorthanna (South Australia)	176.44
Canberra to Jervis Bay (Federal Capital Territory)	140.22
Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales)	11.67
Daly Waters (Northern Territory) to Alice Springs (South Australia)	559.50
Port Augusta to Crystal Brook (South Australia)	69.25
Total surveyed	957.08

In addition, the following trial surveys were undertaken on behalf of the North Australia Commission, viz. :—

(1) From the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola; (2) from Borroloola to near Anthony's Lagoon; (3) from Daly Waters to a point on the Queensland Border about 44 miles south of Camooweal; and (4) from a point on the Daly Waters—Queensland Border survey 45 miles south of Daly Waters and near Newcastle Waters to the border of Western Australia.

6. **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 1932 to 1936 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
MILES OPEN FOR TRAFFIC.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1932	1,052	771	5	317	2,145
1933	1,052	771	5	317	2,145
1934	1,052	771	5	317	2,145
1935	1,052	771	5	317	2,145
1936	1,052	771	5	317	2,145
AVERAGE MILES WORKED.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1932	1,052	771	5	317	2,145
1933	1,052	771	5	317	2,145
1934	1,052	771	5	317	2,145
1935	1,052	771	5	317	2,145
1936	1,052	771	5	317	2,145
TRAIN MILES RUN.(a)					
1932	319,747	154,529	6,865	35,819	516,960
1933	324,173	182,414	6,850	33,809	547,246
1934	328,477	178,916	6,885	36,340	550,618
1935	335,198	158,356	6,885	35,677	536,116
1936	334,601	209,266	6,895	31,311	582,073

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

7. **Cost of Construction and Equipment.**—In the following table particulars are given of the cost of construction and equipment of the undermentioned railways for each of the years 1932 to 1936:—

RAILWAYS, FEDERAL.—CAPITAL COST.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.(a)	North Australia.	
TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.					
	£	£	£	£	£
1932	7,879,397	4,769,938	84,429	2,755,700	15,489,464
1933	7,928,876	4,773,301	84,429	2,758,139	15,544,745
1934	7,987,216	4,777,273	84,493	2,758,139	15,607,126
1935	8,045,841	4,782,077	84,592	2,759,772	15,672,282
1936 (b) ..	8,251,150	4,787,882	85,325	2,775,281	15,899,638
COST PER MILE OPEN.					
1932	7,490	6,187	17,091	8,693	7,221
1933	7,538	6,188	17,091	8,714	7,248
1934	7,593	6,193	17,104	8,714	7,277
1935	7,649	6,199	17,124	8,720	7,307
1936	7,884	6,207	17,272	8,769	7,413

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

(b) See § 1 paragraph 2, p. 121.

The sum of £1,837,386, of which £113,829 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1936.

8. *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 1932 to 1936 inclusive:—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
TOTAL GROSS REVENUE.					
	£	£	£	£	£
1932	173,402	79,400	3,810	23,495	280,107
1933	188,168	93,359	4,313	22,612	308,452
1934	206,205	90,566	5,277	27,907	329,955
1935	217,758	83,522	6,132	38,273	345,685
1936	246,653	100,981	6,413	33,662	387,709
GROSS REVENUE PER AVERAGE MILE WORKED.					
	£	£	£	£	£
1932	165	103	771	74	131
1933	179	121	873	71	144
1934	196	117	1,068	88	154
1935	207	108	1,241	121	161
1936	234	131	1,298	106	181
GROSS REVENUE PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1932	130.15	123.32	133.20	157.42	130.04
1933	139.31	122.83	151.11	160.51	135.27
1934	150.66	121.49	183.95	184.31	143.82
1935	155.91	126.58	213.75	257.46	154.75
1936	176.92	115.81	223.22	258.02	159.86

(ii) *Classification and Percentages.* During the year 1935-36 receipts from coaching traffic and goods and live stock represented 49 per cent. and 31 per cent. respectively of the total gross revenue of the Trans-Australian line, similar percentages for the remaining lines being:—Central Australia line 15 per cent. and 81 per cent., Federal Capital Territory line 45 per cent. and 52 per cent., and North Australia line 9 per cent. and 32 per cent. coaching and goods and live stock revenue respectively.

The miscellaneous receipts for the year 1935-36 include an amount of £20,355, revenue from dining cars and refreshment services on the Trans-Australian and Central Australia Railways. A sum of £20,251 was received from this source during the previous year.

Owing chiefly to improvements in goods and live stock traffic, revenue in respect of all except the North Australia Railway showed increases as compared with the previous year. The decrease in the revenue of the latter was chiefly due to a falling off in mining activities and to a reduction in freight rates. There has been a steady increase in the revenues of the Trans-Australian and Federal Capital Territory Railways over the past five years.

9. *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 1932 to 1936.

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

RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
TOTAL WORKING EXPENSES.					
	£	£	£	£	£
1932	197,147	111,555	5,012	44,088	357,802
1933	197,363	106,875	4,720	38,843	347,801
1934	218,506	113,050	4,919	39,693	376,168
1935	197,871	133,896	5,917	41,984	379,668
1936	201,421	138,419	5,983	41,534	387,457
PERCENTAGE OF WORKING EXPENSES ON REVENUE.					
	%	%	%	%	%
1932	113.69	140.49	131.55	187.65	127.74
1933	104.90	114.48	109.43	171.79	112.76
1934	105.97	124.83	93.22	142.23	114.01
1935	90.87	160.31	96.49	109.70	109.83
1936	81.66	137.07	93.29	123.68	99.94

Compared with results for the previous year, the percentage of working expenses on revenue shows decreases in respect of all systems, except the North Australia Railway, and even with the latter the actual expenses were lower than during the previous year.

(ii) *Averages.* The next table gives the working expenses per average mile worked and per train-mile run for each railway for the years 1932 to 1936 :—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
WORKING EXPENSES PER AVERAGE MILE WORKED.					
	£	£	£	£	£
1932	187	145	1,015	139	167
1933	188	139	956	123	162
1934	208	147	996	125	175
1935	188	173	1,198	133	177
1936	191	179	1,211	132	181
WORKING EXPENSES PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1932	147.98	173.26	175.21	295.40	166.11
1933	146.11	140.61	165.37	275.73	152.53
1934	159.65	151.65	171.47	262.14	163.96
1935	141.67	202.93	206.26	282.42	169.96
1936	144.47	158.75	208.26	319.13	159.76

(iii) *Classification and Percentages.* Of the total working expenses of the Federal Railways during the year 1935-36, maintenance expenses represented 38 per cent., locomotive, carriage and wagon charges 38 per cent., and traffic expenses 15 per cent. Details for each line were as follows:—Trans-Australian line 27 per cent., 46 per cent. and 15 per cent.; Central Australia line 53 per cent., 31 per cent., and 11 per cent.; Federal Capital Territory line 31 per cent., 28 per cent. and 35 per cent.; and North Australia line 39 per cent., 26 per cent. and 28 per cent. respectively.

10. *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 1932 to 1936:—

RAILWAYS, FEDERAL.—TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
PASSENGER JOURNEYS.					
	No.	No.	No.	No.	No.
1932	15,875	25,683	29,417	3,101	74,076
1933	19,642	28,380	30,533	2,784	81,339
1934	19,218	28,493	37,335	3,178	88,224
1935	22,530	32,768	38,963	3,697	97,958
1936	22,843	31,669	39,023	2,967	96,502
TONNAGE OF GOODS AND LIVE STOCK CARRIED.					
	Tons.	Tons.	Tons.	Tons.	Tons.
1932	21,316	65,538	7,807	3,939	97,700
1933	19,754	71,710	10,502	3,435	105,401
1934	21,598	47,100	15,930	3,688	88,316
1935	19,073	43,668	18,008	6,459	87,208
1936	30,757	45,475	20,141	5,006	101,397

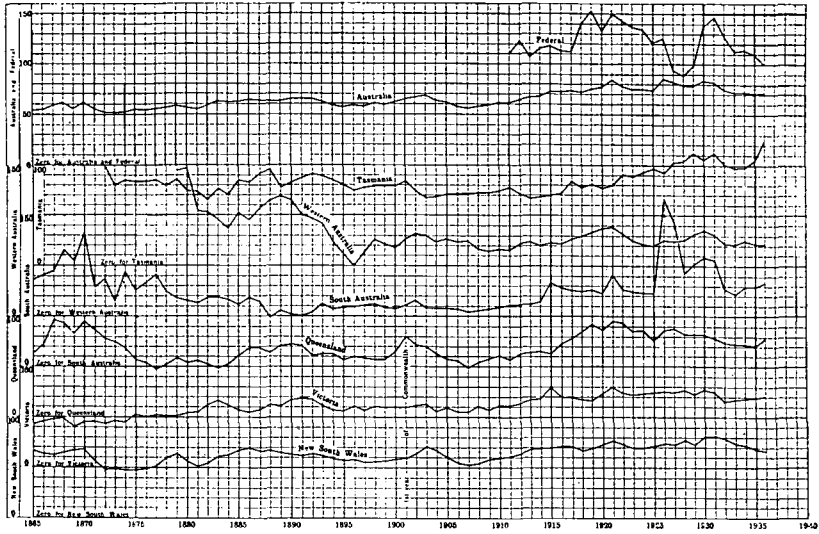
(ii) *Passenger-Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1935-36:—

RAILWAYS, FEDERAL.—"PASSENGER-MILES" SUMMARY, 1935-36.

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.	£	Mile.	d.	£ s. d.		
Trans-Australian ..	229,724	22,843	20,356	89,782	89	891	1.06	3 18 7	19,353
Central Australia ..	22,611	31,669	2,077	10,942	92	66	1.26	0 6 11	2,693
Federal Capital Territory ..	5,444	39,023	193	1,529	35	5	1.90	0 0 9	39,085
North Australia ..	8,747	2,967	326	2,524	37	110	1.86	0 17 0	1,030

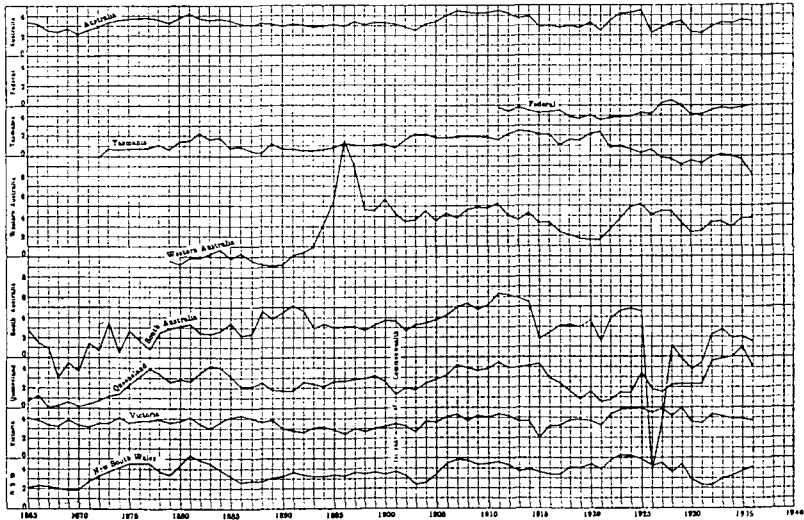
(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1935-36:—

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1936.



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.

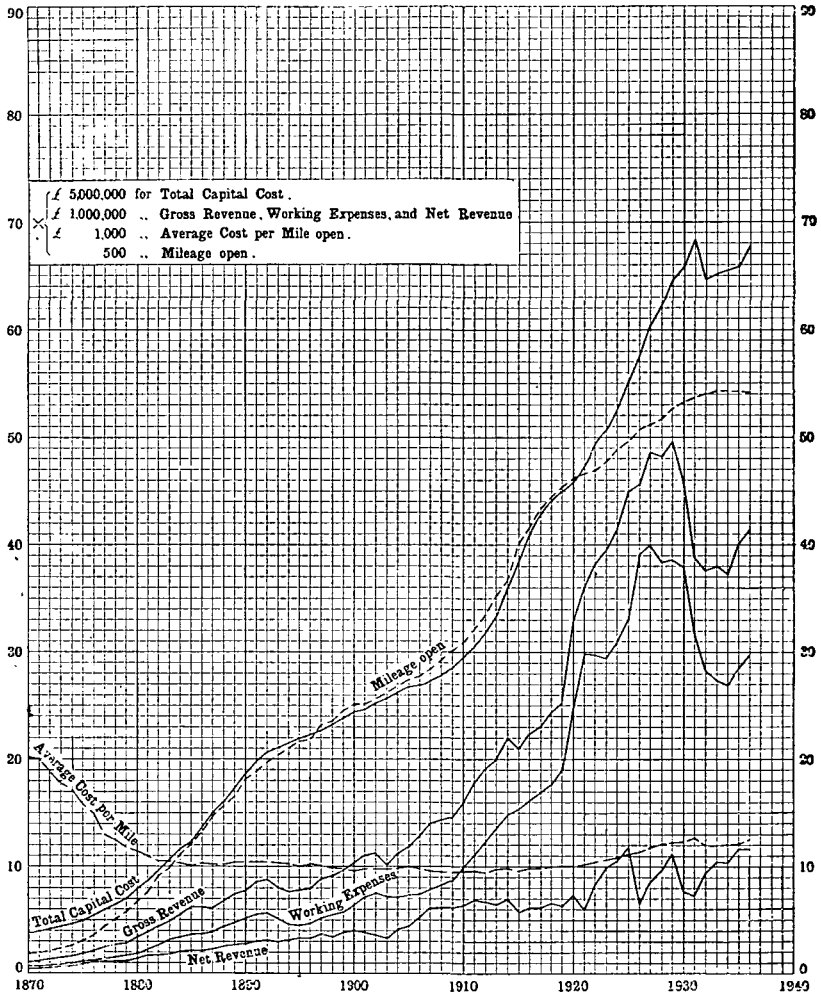
PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1936.



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.

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

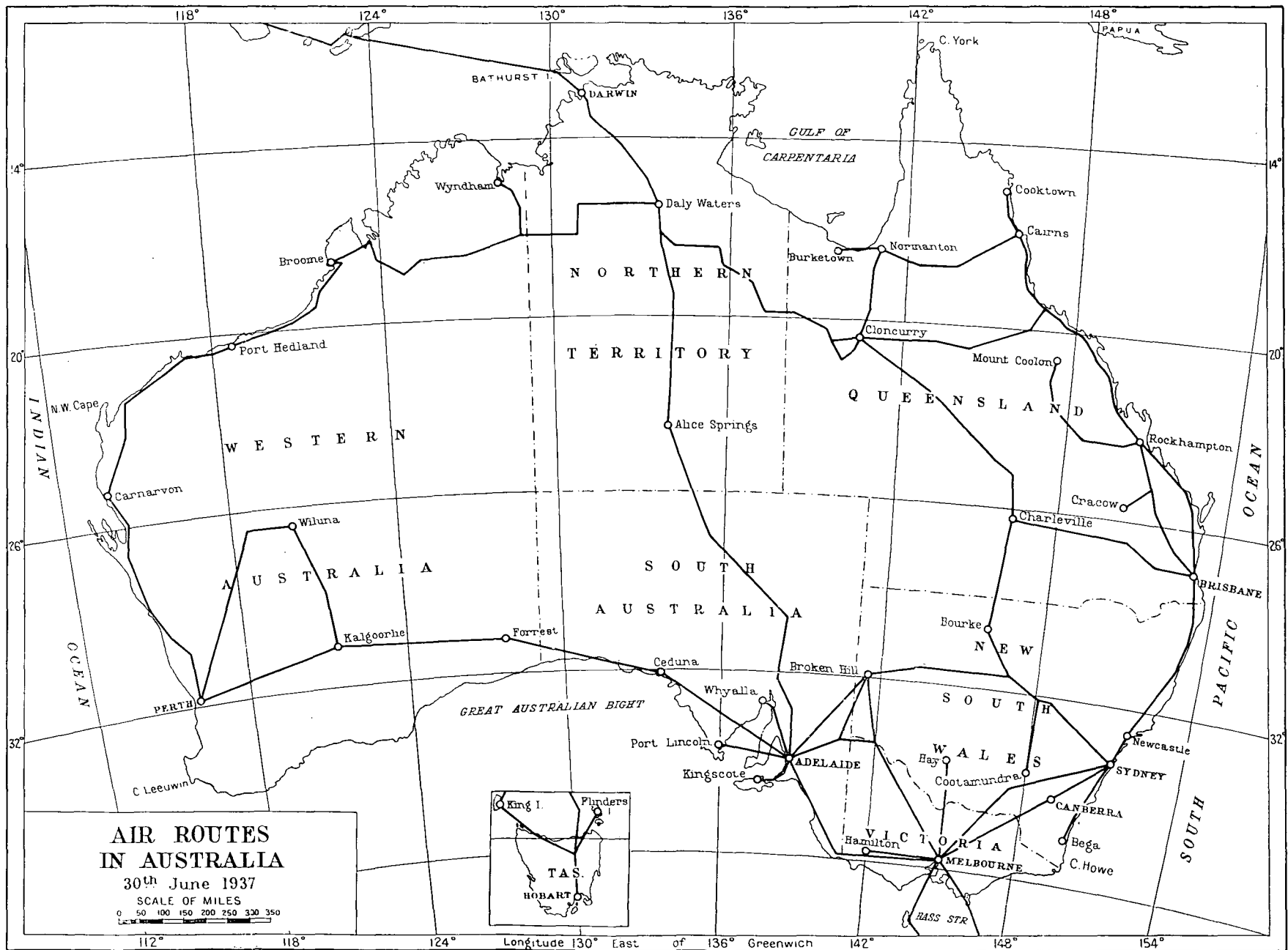
FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1930.



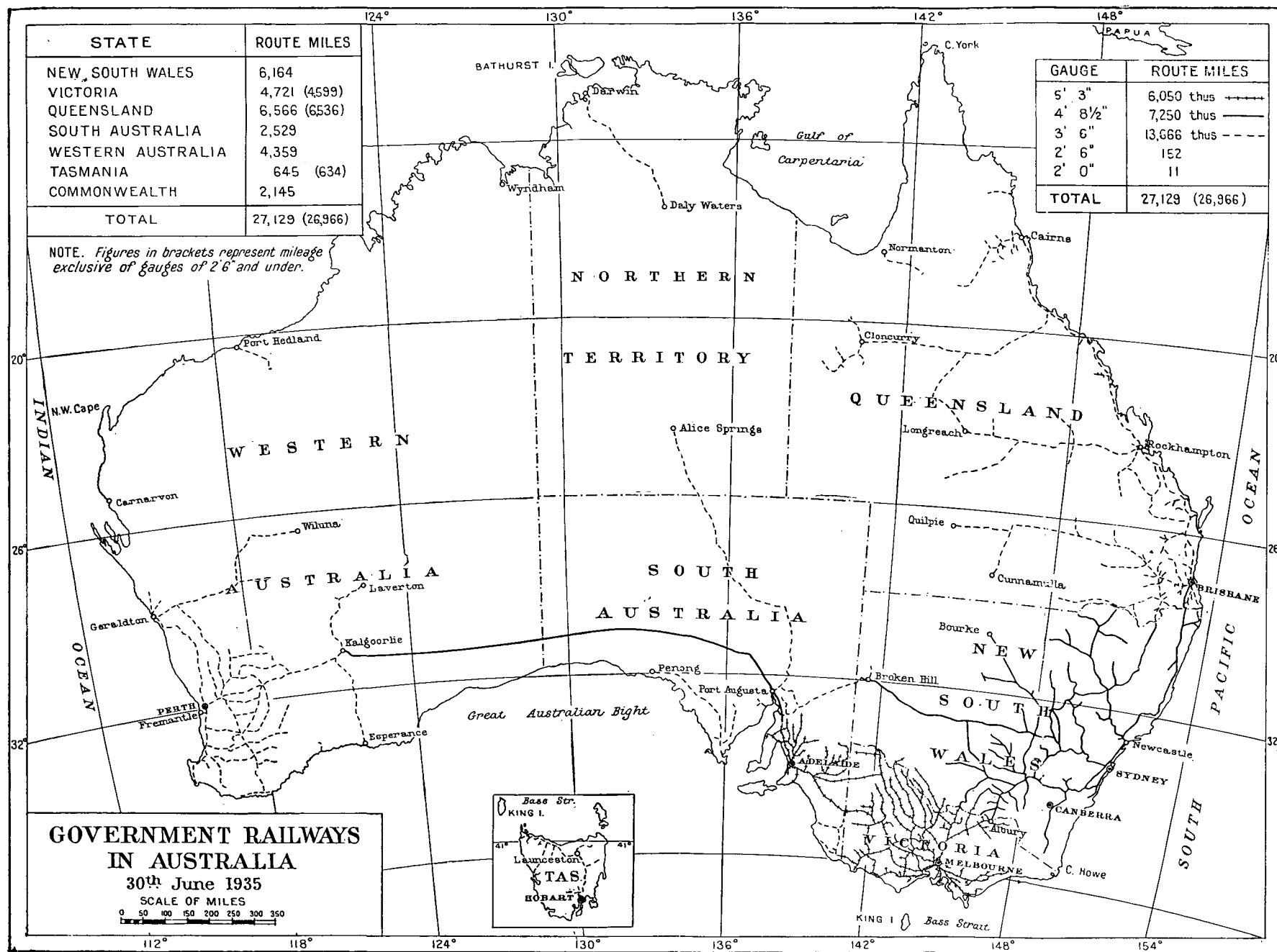
EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

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.



Drawn by the Property and Survey Branch, Department of the Interior, Canberra.



Drawn by the Property and Survey Branch, Department of the Interior, Canberra.

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1935-36.

Railway.	Goods Train Mileage.	Total Tons Carried.	Total "Ton-Miles."	Goods Earnings.	Average Freight-paying Load per Train.	Average Haul per ton.	Earnings per "Ton-Mile."	Density of Traffic per Average Mile Worked.
					Tons.	Miles.			d.
Trans-Australian ..	104,877	30,757	'000 omitted.	77,305	123.12	420	1.44	12,276
Central Australia ..	186,655	45,475	12,912	81,381	59.78	245	1.75	14,464
Federal Capital Territory ..	1,451	20,141	101	3,309	69.40	5	7.89	20,386
North Australia ..	22,564	5,006	550	10,796	24.37	110	4.71	1,738

11. Rolling Stock.—The following table shows the numbers of rolling stock in use during the years 1932 to 1936. Further details may be found on page 21 of Transport and Communication Bulletin No. 27.

RAILWAYS, FEDERAL.—ROLLING STOCK.

Railway.	At 30th June—														
	1932.			1933.			1934.			1935.			1936.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
Trans-Australian ..	68	54	728	68	54	728	68	54	728	68	54	728	68	54	728
Central Australia ..	24	20	313	24	19	313	24	19	313	24	19	313	24	20	312
North Australia ..	13	13	314	13	14	314	13	14	314	13	14	314	13	14	314
Total ..	105	87	1,355	105	87	1,355	105	87	1,355	105	87	1,355	105	88	1,354

New South Wales Government Railway stock is used on the Federal Capital Territory line.

12. Employees.—(i) General. The following table shows the number of employees on the Federal railways at 30th June in each year from 1932 to 1936 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES.

Railway.	At 30th June—									
	1932.		1933.		1934.		1935.		1936.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
Trans-Australian	No. 102	(a) 556	No. 99	(a) 718	No. 99	(a) 696	No. 101	(a) 1,017	(c) 107	(a) 869
Central Australia	55	275	53	(b) 297	53	(b) 311	49	385	48	365
Federal Capital Territory ..	4	5	4	5	4	7	4	7	4	8
North Australia ..	14	82	15	88	15	95	13	109	12	101
Total ..	175	918	171	1,108	171	1,109	167	1,518	171	1,343

(a) Includes those engaged on construction work, 1932, 15; 1933, 157; 1934, 91; 1935, 63; and 1936, 161. (b) Includes 6 on construction work in 1933 and 4 in 1934. (c) Includes 10 on construction work.

(ii) *Average Employed throughout Year.* The average number of employees throughout the year 1935-36 was 171 salaried staff and 1,320 wages staff (of whom five of the former and 69 of the latter were on construction work).

13. *Accidents.*—The following table shows the number of persons killed and injured in accidents in each of the years 1932 to 1936 :—

RAILWAYS, FEDERAL.—ACCIDENTS.

Railway.	Year ended 30th June—									
	1932.		1933.		1934.		1935.		1936.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Trans-Australian	..	3	..	2	1	4	1	5	..	14
Central Australia	..	1	..	4	..	8	..	5	..	7
Federal Capital Territory	..	1	..	..	..	1	..	..	..	..
North Australia..	..	1	..	..	..	..	1	6	..	2
Total	..	6	..	6	1	13	2	16	..	23

Further details are available on page 24 of Transport and Communication Bulletin No. 27.

§ 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, 1932 to 1936.*—The following table shows the length of State railways open for traffic on the 30th June in the years 1932 to 1936 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC.

Year ended 30th June—		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1932	..	6,126	4,721	6,558	2,529	4,235	645	24,814
1933	..	6,164	4,721	6,566	2,529	4,338	645	24,963
1934	..	6,164	4,721	6,566	2,529	4,360	645	24,985
1935	..	6,164	4,721	6,566	2,529	4,359	645	24,984
1936	..	6,124	4,721	6,567	2,529	4,358	645	24,944

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1936 accompanies this chapter.

The appended statement shows the actual mileage opened or closed for traffic in the year 1936, also the annual average increase or decrease in mileage opened since 1926 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED OR CLOSED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened or closed during 1935-36 (a) ..	-39.64	..	..	..	-0.17	..	-39.81
Average annual mileage increase or decrease for 10 years to 30th June, 1936 (a) ..	38.24	9.35	32.66	3.02	49.40	-2.80	129.87

(a) Minus sign (-) denotes mileage closed.

No new mileage was opened for traffic during 1935-36. The dismantling of the Tarrawingee Tramway in New South Wales and minor adjustments to lines in that State and in Western Australia were responsible for the decreases shown in the above table.

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, 1936, is given in the Transport and Communication Bulletin No. 27 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 1932 to 1936 inclusive :—

RAILWAYS, STATE.—MILEAGE WORKED AND TRAIN-MILES RUN.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AVERAGE MILEAGE WORKED.							
1932 ..	6,050	4,720	6,550	2,529	4,214	645	24,708
1933 ..	6,159	4,721	6,565	2,529	4,278	645	24,897
1934 ..	6,164	4,721	6,567	2,529	4,351	645	24,977
1935 ..	6,164	4,721	6,567	2,529	4,359	645	24,985
1936 ..	6,124	4,721	6,567	2,529	4,353	645	24,944
TRAIN-MILES RUN.(a)							
1932 ..	25,848,580	15,363,776	10,964,819	4,914,265	5,093,179	1,130,122	63,314,741
1933 ..	25,562,220	15,321,398	10,826,016	4,909,588	5,282,989	1,107,800	63,010,011
1934 ..	25,173,199	15,311,461	11,139,229	4,930,271	5,389,931	1,134,129	63,078,220
1935 ..	26,275,459	15,536,111	12,958,956	5,080,319	5,868,396	1,230,034	66,949,275
1936 ..	27,701,005	16,390,943	12,385,742	5,462,146	6,094,910	(b) 1,659,021	69,693,767

(a) Traffic Train-Miles (exclusive of "Assistant" and "Light" mileages). (b) Includes steam and petrol rail car mileages previously excluded.

5. **Lines under Construction, and Lines Authorized, 1936.**—(i) *General.* The following statement gives particulars at the 30th June, 1936, 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, 1936.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction ..	153.31	(b) 38.00	(c)	27.75	..	..	219.06
Mileage authorized but not commenced ..	219.76	39.50	1,130.00	26.25	399.23	..	1,814.74

(a) Exclusive of 127 miles on which work has been suspended. (b) Exclusive of 65.75 miles on which work has been suspended. (c) 186 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland in the form of light railways as settlement increases, and 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.* In addition to that shown under (b) below, preliminary construction work has been commenced on the Sandy Hollow to Maryvale (approximately 147 miles) and Sutherland to Cronulla (6.31 miles) railways in New South Wales. Work was suspended in 1930 on the Guyra to Dorrigo (89 miles) and Casino to Bonalbo (38 miles) lines.

(b) *Victoria.* In this State 35.50 miles of 5 ft. 3 in. gauge lines have been partially constructed, from Nowingi to Millewa South, work thereon being temporarily suspended. Under the provisions of the Border Railways Act 1922 (Vic. 3194) the following lines are under construction in New South Wales territory, viz. :—Euston to Lette (30.25 miles); and Yarrawonga to Oaklands (38 miles). Work has also been suspended on the former line while traffic on the latter is being conducted by the Constructing Authority pending the transfer to the Railways Commissioners. On completion, these lines, which are 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, 1936, no railway construction work was in progress. The following lines are partially constructed, but work thereon is temporarily suspended :—Goondoon to Kalliwa Creek (18 miles); Yataka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Rannes to Monto (63 miles); and Winton to 37-Mile (37 miles); a total of 186 miles.

(d) *South Australia.* The construction of a line of 5 ft. 3 in. gauge, 27.75 miles in length, between Redhill and Port Pirie, to connect with the 4 ft. 8½ in. gauge line being constructed by the Commonwealth Authorities between Port Augusta and Port Pirie, has been commenced. For further particulars, see § 2, paragraph 4, pages 125-6.

(e) *Other States.* At 30th June, 1936, no railway construction work was in progress in Western Australia and Tasmania.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1936, the following lines had been authorized for construction but not commenced :—Gilgandra to Collie (21.54 miles); Jerilderie towards Deniliquin (25.00 miles); Rand to Bull Plain (27.55 miles); Canowindra to Gregra (33.87 miles); St. Leonards to Eastwood (9.07 miles); Inverell to Ashford (32 miles); Bungendore to Captain's Flat (21.18 miles); Gwabegar to Burren Junction (36.25 miles); Eastern Suburbs to Bondi (7.75 miles); and Western Suburbs to Western Road (5.55 miles); a total distance of 219.76 miles.

(b) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1936 :—5 ft. 3 in. gauge : La La Siding to Big Pat's Creek (2.50 miles); Casterton to Nangeela (9 miles); and Orbost to Brodrigg (6 miles). Under the Border Railways Act 1922, the following line has been authorized for construction in New South Wales Territory :—Mildura to Gol Gol (22 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 :—Texas to Silverspur (9 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 Pearamon towards Boongee (11 miles).

(d) *South Australia.* Parliament has authorized the construction of a line on the 3 ft. 6 in. gauge from Kielpa to Mangalo Hall (26.25 miles). The survey has been completed, but the work cannot be started without a special resolution of both Houses of Parliament.

(e) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1936:—Yarramony to Merredin (85 miles); Brookton to Dale River (28 miles); Boyup Brook to Cranbrook (95.23 miles); Manjimup to Mount Barker (107 miles); Leighton to Robb's Jetty (4.62 miles); Southern Cross—Southwards (27.38 miles); Yuna to Dartmoor (52 miles); a total distance of 399.23 miles. The surveys have been completed in respect of all the above lines, except the Manjimup to Mount Barker and the Leighton to Robb's Jetty lines.

(f) *Tasmania.* There were no new railways authorized at 30th June, 1936.

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, 1936, amounted to £322,041,276, representing an average cost of £47.53 per head of population. If the cost of railways owned by the Commonwealth Government is included, the total capital cost (£337,940,914) is equivalent to an amount of £49.88 per head of the population of the Commonwealth, while the total mileage open (27,088.89 miles) per 1,000 of population is 4.00. 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, 1936.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.(e)	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population.
	Miles.	£	£	£	Miles.
New South Wales (a) ..	(b)6,124.19	(d)143,843,072	(d) 23,488	53.77	2.29
Victoria ..	4,720.77	76,534,378	16,212	41.44	2.56
Queensland ..	(b)6,566.65	(d) 36,264,700	(d) 5,523	36.97	6.69
South Australia (a) ..	2,529.35	29,066,465	11,492	49.05	4.27
Western Australia (a) ..	4,358.34	25,297,832	5,804	56.19	9.68
Tasmania ..	644.89	6,672,329	10,346	29.07	2.81
All States ..	24,944.19	(c)322,041,276	(c) 12,910	47.53	3.68

(a) Exclusive of Federal railways.
 gauge line—New South Wales 26 miles, Queensland 68.82 miles (see par. 4, page 121).
 Grafton-South Brisbane line, £1,362,500.

(b) Includes portion of Grafton-South Brisbane uniform
 gauge line. (c) Includes
 Grafton-South Brisbane line. (e) See
 § 1, paragraph 2, p. 121.

Excluding Queensland, the lowest average cost (£5,804) per mile open is in Western Australia, and the highest (£23,488) in New South Wales, as compared with an average of £12,910 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 gold-field contracts.

In Queensland a reduction of £28,000,000 in the capital cost of the railways was effected by The Railway (Capital Indebtedness) Reduction Act of 1931, it being considered inequitable to burden the Department with interest charges on capital expended on railways for the purpose of developing the State.

The large increases in the capital cost of the New South Wales railways during the last few years are mainly attributable to the electrification of suburban lines and the construction of the underground city railway.

In the table above, the figures relating to cost of construction and equipment do not include particulars of charges for works in course of construction, surveys, discounts and flotation charges on loans allocated to the railways, etc. This will explain the differences between the amounts shown therein for the various States and those shown in the several Railway Reports.

(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 1932 to 1936 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST.

Year ended 30th June—	N.S.W. £	Victoria. £	Q'land. £	S. Aust. £	W. Aust. £	Tasmania. £	All States. £
TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.							
1932 ..	137,792,319a	74,415,458	633,884,190a	27,202,936	23,648,654	6,561,429	6307,875,986
1933 ..	138,921,968a	74,706,736	34,098,724b	27,167,930	24,159,782	6,560,434	6309,986,574
1934 ..	139,058,321a	75,225,403	34,389,657a	27,176,158	24,704,212	6,561,937	6311,486,688
1935 ..	139,851,912a	75,454,243	35,010,898a	27,295,054	24,946,843	6,587,891	6313,510,841
1936(d) ..	143,843,072a	76,534,378	36,264,700a	29,066,465	25,297,832	6,672,329	6322,041,276

COST PER MILE OPEN.

1932 ..	(a) 22,493	15,763	(a) 5,167	10,756	5,584	10,173	(b) 12,407
1933 ..	(a) 20,915	15,833	(a) 5,193	10,743	5,569	10,173	(b) 12,418
1934 ..	(a) 22,560	15,935	(a) 5,237	10,745	5,666	10,175	(b) 12,467
1935 ..	(a) 22,689	15,983	(a) 5,332	10,791	5,724	10,216	(b) 12,548
1936 ..	(a) 23,488	16,212	(a) 5,523	11,492	5,804	10,346	(b) 12,910

(a) Exclusive of Grafton-South Brisbane line. (b) Includes Grafton-South Brisbane line.
 (c) The Capital Account was reduced by £28,000,000, in accordance with The Railway (Capital Indebtedness) Reduction Act of 1931. (d) See § 1, paragraph 2, p. 121.

(b) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1936 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1936.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1936 ..	666,864	5,798,006	..	..	640,020	16,935	7,121,825

(iii) *Loan Expenditure.* The subjoined table shows the total net loan expenditure on Government railways in each State for the years 1932 to 1936 :—

RAILWAYS, STATE.—NET LOAN EXPENDITURE.

Year ended 30th June—	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
1932 ..	1,052,137	..	50,275	Cr. 127,576	137,025	Cr. 15,008	1,096,853
1933 ..	214,885	..	Cr. 28,829	Cr. 101,622	180,495	Cr. 6,682	258,247
1934 ..	122,203	1,044	341,917	Cr. 79,856	316,081	Cr. 644	700,745
1935 ..	1,237,533	..	785,103	40,043	295,076	39,426	2,397,181
1936 ..	2,201,837	280,900	692,830	420,233	116,240	47,859	3,759,899

(a) Gross expenditure.

The following statement shows the total loan expenditure on railways to the 30th June, 1936:—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1936.

State.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.(c)	All States.
	£	£	£	£	£	£	£
Expenditure	61,467,166.614	47,478,077	63,471,984	34,225,173	24,767,222	7,109,190	351,070,260

(a) Gross expenditure. (b) Includes expenditure on Grafton-South Brisbane Railway. (c) Includes losses funded.

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 1932 to 1936 inclusive were as follows:—

RAILWAYS, STATE.—GROSS REVENUE.

Year ended 30th June—	N.S.W.(a)	Victoria.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL GROSS REVENUE.							
	£	£	£	£	£	£	£
1932	15,801,022	9,454,304	5,994,523	2,746,341	2,922,385	381,283	37,299,858
1933	16,205,320	9,446,121	5,992,394	2,734,083	2,932,140	381,483	37,691,541
1934	15,690,186	9,175,111	6,230,188	2,559,939	2,919,315	390,903	36,965,642
1935	16,802,699	9,421,092	7,167,073	2,658,390	3,311,839	399,764	39,760,857
1936	17,753,581	9,689,925	6,697,361	2,878,198	3,446,161	448,614	40,913,840

GROSS REVENUE PER AVERAGE MILE WORKED.

	£	£	£	£	£	£	£
1932	2,612	2,003	915	1,086	693	591	1,510
1933	2,631	2,001	913	1,081	685	592	1,514
1934	2,546	1,943	949	1,012	671	606	1,480
1935	2,726	1,996	1,092	1,051	760	620	1,591
1936	2,899	2,053	1,020	1,138	791	696	1,640

GROSS REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1932	146.71	147.69	131.21	134.12	137.71	80.97	141.39
1933	152.15	147.97	132.84	133.65	133.20	82.65	143.56
1934	149.59	143.82	134.23	124.62	129.99	82.72	140.65
1935	153.48	145.54	132.73	125.59	135.44	78.00	142.53
1936	153.82	141.88	129.78	126.46	135.70	(c) 64.90	140.89

(a) Includes £800,000, contributions from consolidated revenue towards losses on working of country developmental lines. (b) Includes contributions from consolidated revenue in respect of losses on non-paying lines, 1931-32, £139,429; 1932-33, £124,288; 1933-34, £134,424; 1934-35, £140,614, and 1935-36, £163,859. (c) See Note (b), paragraph 4, p. 137.

The amounts of revenue earned per average mile worked and per train-mile run during 1935-36 in respect of (a) passenger 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 from 1932 to 1936, 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.

Year ended 30th June—	N.S.W. £	Victoria. £	Q'land. £	S. Aust. £	W. Aust. £	Tas. £	All States. £
COACHING TRAFFIC RECEIPTS.							
1932 ..	5,606,430	3,946,053	1,762,225	631,104	649,890	132,456	12,728,158
1933 ..	5,693,953	3,968,871	1,768,247	655,799	662,444	126,273	12,875,587
1934 ..	5,555,290	3,904,663	1,872,598	646,784	688,480	128,079	12,795,894
1935 ..	5,867,820	4,087,945	1,946,526	653,610	731,449	132,566	13,419,916
1936 ..	6,186,662	4,129,493	1,974,379	686,489	741,924	141,270	13,860,217

GOODS AND LIVE STOCK TRAFFIC RECEIPTS.

1932 ..	7,853,315	4,805,738	4,008,966	1,948,293	2,106,129	234,986	20,957,427
1933 ..	8,169,056	4,773,699	4,006,279	1,924,982	2,110,065	240,978	21,225,059
1934 ..	7,802,130	4,572,038	4,146,808	1,762,809	2,059,813	248,261	20,591,949
1935 ..	8,582,612	4,555,722	4,987,309	1,853,188	2,405,046	255,428	22,639,305
1936 ..	9,154,921	4,768,127	4,481,887	2,027,287	2,526,619	294,144	23,252,985

MISCELLANEOUS RECEIPTS.

1932 ..	(a) 2,341,277	(b) 702,513	223,332	166,944	166,366	13,841	3,614,273
1933 ..	2,342,311	793,551	217,868	153,302	159,631	14,232	3,590,895
1934 ..	2,332,766	698,410	210,782	150,256	171,022	14,563	3,577,799
1935 ..	2,352,267	777,425	233,238	151,592	175,344	11,770	3,701,636
1936 ..	2,411,998	792,305	241,095	164,422	177,618	13,200	3,800,638

(a) See note (a) to Gross Revenue table on previous page.

(b) See note (b) to Gross Revenue table on previous page.

(b) *Percentages.* The following table shows for the two years 1934-35 and 1935-36 the percentage which each class of receipts bears to the total gross revenue:—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS.

State.	1934-35.			1935-36.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	34.92	51.08	14.00	34.85	51.57	13.58
Victoria ..	43.39	48.36	8.25	42.62	49.21	8.17
Queensland ..	27.16	69.59	3.25	29.48	66.92	3.60
South Australia ..	24.59	69.71	5.70	23.85	70.44	5.71
Western Australia ..	22.09	72.62	5.29	21.53	73.32	5.15
Tasmania ..	33.16	63.89	2.95	31.49	65.57	2.94
All States ..	33.75	56.94	9.31	33.88	56.83	9.29

(c) *Averages for Passenger Earnings.* The subjoined table shows the passenger earnings per average mile of line worked and per passenger-train-mile in each State for the year ended the 30th June, 1936. Further particulars of passenger-mileage will be found in sub-paragraph 14 (i) hereinafter.

RAILWAYS, STATE.—PASSENGER EARNINGS, AVERAGES, 1935-36.

State.	Number of Passenger-Train-Miles.	Number of Passenger Journeys.	Passenger Earnings.			
			Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.	Per Passenger Journey.
	No.	No.	£.	£	d.	d.
New South Wales ..	17,448,049	171,142,729	5,433,176	887	74.73	7.62
Victoria ..	11,458,026	139,539,089	3,713,411	787	77.78	6.39
Queensland (b) ..	5,430,062	25,158,926	1,469,556	226	64.95	14.02
South Australia ..	3,423,266	17,430,674	548,577	217	38.46	7.55
Western Australia ..	(a) 2,428,226	12,421,527	564,365	129	55.78	10.90
Tasmania ..	(a) 613,133	2,321,823	120,328	187	47.10	12.44
All States ..	40,800,762	368,014,768	11,849,413	476	69.70	7.73

(a) Includes "Assistant" and "Light" mileage. (b) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line.

(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, 1936, are given below. Particulars of ton-mileage will be found in sub-paragraph 14 (ii) hereinafter.

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1935-36.

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 ..	10,252,956	613,514,075	9,154,921	1,495	214.30	162.58
Victoria ..	4,932,917	6,424,094	4,768,127	1,010	231.98	178.13
Queensland (c) ..	6,847,142	4,589,267	4,411,617	679	154.63	230.71
South Australia ..	2,038,880	2,464,711	2,027,287	801	238.64	197.41
Western Australia ..	(a) 3,830,211	2,886,648	2,526,619	580	158.32	210.07
Tasmania ..	(a) 805,026	769,841	294,144	456	87.69	91.70
All States ..	28,707,132	30,648,636	23,182,715	932	193.81	181.54

(a) Includes "Assistant" and "Light" mileage. (b) Exclusive of 324,937 tons of coal on which way leave charges only were collected. (c) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line.

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 systems. When traffic is light, the percentage of working expenses is naturally greater than when 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 1932 to 1936 :—

RAILWAYS, STATE.—WORKING EXPENSES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL WORKING EXPENSES.							
	£	£	£	£	£	£	£
1932	12,532,869	6,181,490	4,429,218	2,130,395	2,123,281	386,929	27,784,182
1933	11,966,648	6,366,838	4,323,655	1,978,545	2,111,588	373,762	27,121,036
1934	11,203,520	6,241,505	4,494,314	2,028,772	2,186,506	383,383	26,540,000
1935	11,565,658	6,505,859	5,086,921	2,241,411	2,382,744	471,944	28,254,537
1936 (a) ..	11,848,070	6,856,497	5,212,926	2,413,814	2,488,117	560,990	29,380,414

PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.

	%	%	%	%	%	%	%
1932	79.32	65.38	73.89	77.57	72.65	101.48	74.49
1933	73.84	67.40	72.15	72.37	72.02	97.97	71.96
1934	71.40	68.03	72.14	79.25	74.90	98.59	71.80
1935	68.83	69.06	70.98	84.31	71.95	118.06	71.06
1936	66.74	70.76	77.84	83.87	72.20	125.05	71.81

(a) See § 1, paragraph 2, page 121.

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1936 is illustrated in the graph which accompanies this chapter.

(ii) *Averages.* The next table shows the working expenses per average mile worked and per train-mile run in each State for the years 1932 to 1936 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
WORKING EXPENSES PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1932	2,071	1,310	676	842	504	600	1,124
1933	1,943	1,349	659	782	494	580	1,089
1934	1,318	1,322	684	802	503	598	1,063
1935	1,876	1,378	775	886	547	732	1,130
1936	1,935	1,452	794	954	571	870	1,178
WORKING EXPENSES PER TRAIN-MILE RUN.							
	d.	d.	d.	d.	d.	d.	d.
1932	116.36	96.56	96.95	104.04	100.05	82.17	105.32
1933	112.35	99.73	95.85	96.72	95.93	80.97	103.30
1934	106.81	97.83	96.83	98.76	97.36	81.55	100.98
1935	105.64	100.50	94.21	105.89	97.44	92.08	101.29
1936	102.65	100.39	101.01	106.06	97.97	(a)81.15	101.17

(a) See note (b), paragraph 4, page 137.

(iii) *Distribution.* The subjoined table shows the distribution of working expenses under four chief heads of expenditure for the years 1932 to 1936 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES.

Year ended 30th June—	N.S.W. £	Victoria. £	Q'land. £	S. Aust. £	W. Aust. £	Tas. £	All States. £
MAINTENANCE.							
1932	2,346,791	1,110,987	1,221,829	335,280	470,544	102,116	5,587,547
1933	2,460,825	1,464,041	1,156,044	327,887	493,968	94,756	5,997,521
1934	2,054,375	1,564,771	1,161,699	367,776	552,907	96,441	6,397,969
1935	2,432,517	1,570,137	1,291,450	394,152	553,090	116,000	6,337,346
1936	2,161,368	1,516,786	1,344,313	444,739	568,671	122,111	6,157,988

LOCOMOTIVE, CARRIAGE AND WAGON CHARGES.

1932	5,280,630	2,260,152	1,780,463	1,102,292	978,698	168,194	11,570,429
1933	4,991,000	2,231,648	1,764,765	955,698	960,993	167,605	11,072,609
1934	4,193,295	2,156,706	1,851,705	951,529	956,702	176,541	10,286,388
1935	4,573,455	2,181,626	2,180,556	1,096,904	1,088,138	182,647	11,303,326
1936	4,842,986	2,333,626	2,205,283	1,149,710	1,140,935	214,043	11,885,683

TRAFFIC EXPENSES.

1932	3,059,815	1,690,542	1,177,336	457,706	572,101	92,275	7,049,775
1933	2,771,583	1,628,237	1,136,739	450,886	562,000	87,154	6,636,599
1934	2,612,947	1,647,482	1,210,915	457,182	577,981	90,230	6,596,737
1935	2,726,197	1,713,789	1,320,239	484,831	620,975	98,581	11,303,326
1936	2,925,093	1,797,996	1,349,604	530,897	648,242	112,386	7,364,218

OTHER CHARGES.

1932	1,845,633	1,119,809	249,590	235,117	101,938	24,344	3,576,431
1933	1,742,340	1,042,912	266,107	244,074	94,627	24,247	3,414,307
1934	1,742,903	872,546	269,995	252,285	98,916	22,261	3,258,906
1935	1,833,489	1,040,307	294,676	265,524	120,541	(a) 74,716	3,629,253
1936	1,918,623	1,208,089	313,726	288,468	131,169	(a) 112,450	3,972,525

(a) Includes £54,000, 1935, and £94,000, 1936, to replacement and depreciation fund.

9. *Salaries and Wages.*—The following table shows the total amount paid in salaries and wages in each State during the years 1932 to 1936 :—

RAILWAYS, STATE.—SALARIES AND WAGES PAID.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL SALARIES AND WAGES PAID.							
	£	£	£	£	£	£	£
1932	9,637,122	4,435,648	3,341,129	1,382,707	1,620,084	260,943	20,677,633
1933	8,462,906	4,417,160	3,244,342	1,376,676	1,675,594	249,856	19,426,534
1934	8,134,378	4,333,562	3,396,671	1,418,788	1,902,437	259,288	19,665,144
1935	8,782,701	4,698,837	3,805,286	1,492,693	2,050,615	287,853	21,117,985
1936	9,775,667	4,990,163	3,923,060	1,654,653	2,012,361	334,832	22,692,736

10. *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 1932 to 1936 :—

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

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE.							
1932	£ 3,268,153	£ 3,272,814	£ 1,565,305	£ 615,946	£ 799,104	£ — 5,646	£ 9,515,676
1933	4,238,672	3,079,283	1,668,739	755,538	820,552	7,721	10,570,505
1934	4,486,666	2,933,606	1,735,874	531,167	732,809	5,520	10,425,642
1935	5,237,041	2,915,233	2,080,152	416,979	929,095	— 72,180	11,506,320
1936	5,905,511	2,833,428	1,484,435	464,384	958,044	— 112,376	11,533,426

PERCENTAGE OF NET REVENUE ON CAPITAL COST.(a)

Year ended 30th June—	%	%	%	%	%	%	%
1932	2.37	4.40	4.62	2.26	3.37	— 0.09	3.09
1933	3.05	4.12	4.81	2.78	3.40	0.12	3.41
1934	3.23	3.90	4.99	1.95	2.97	0.08	3.35
1935	3.74	3.86	5.94	1.53	3.72	— 1.10	3.67
1936	4.11	3.70	4.09	1.60	3.79	— 1.68	3.58

(a) The cost of the Grafton-South Brisbane line is excluded from New South Wales and Queensland, but is included with "All States."

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

(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.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE PER AVERAGE MILE WORKED.							
1932	£ 540	£ 693	£ 239	£ 243	£ 190	£ — 9	£ 385
1933	688	652	254	299	192	12	425
1934	728	621	265	209	168	8	417
1935	850	618	317	165	213	— 112	461
1936	964	601	226	184	220	— 174	462

NET REVENUE PER TRAIN-MILE RUN.

Year ended 30th June—	d.	d.	d.	d.	d.	d.	d.
1932	30.34	51.12	34.26	30.08	37.65	— 1.20	36.07
1933	39.79	48.24	36.99	36.93	37.28	1.67	40.26
1934	42.78	45.99	37.40	25.86	32.63	1.17	39.67
1935	47.84	45.04	38.52	19.70	38.00	— 14.08	41.25
1936	51.17	41.49	28.77	20.40	37.73	— 16.25	39.72

(a) See note (b), paragraph 4, page 137.

11. Interest.—The amount of interest payable on expenditure from loans on the construction and equipment of the railways in each State during the five years ended 30th June, 1936, was as follows :—

RAILWAYS, STATE.—INTEREST ON RAILWAY LOAN EXPENDITURE.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AMOUNT OF INTEREST PAYABLE.							
	£	£	£	£	£	£	£
1932	26,519,217	3,641,109	21,589,643	1,217,338	989,173	263,900	214,328,560
1933	26,352,581	3,221,710	21,595,522	1,137,193	996,233	263,861	213,673,133
1934	25,971,412	3,181,736	21,565,343	1,088,627	1,008,453	246,762	213,165,484
1935	25,677,540	3,056,766	21,576,693	1,055,954	1,028,569	247,727	212,746,007
1936(b)	25,700,000	3,032,530	21,591,788	1,061,393	1,015,521	247,732	212,767,881

(a) Including interest charges on the Grafton-South Brisbane line, which for the year 1935-36 amounted to £218,125 and was contributed by New South Wales, £72,179; Queensland, £27,029; and the Commonwealth, £118,917. See § 1, paragraph 4, p. 121. (b) See § 1, paragraph 2, p. 121.

The interest payable on the cost of construction and equipment, the expenditure from consolidated revenue (£7,121,825) for that purpose being deducted, was at the rate of 4.05 per cent. in 1935-36.

Exchange on interest payments abroad is not included in the above table. This item is not charged against the railways in Queensland, Western Australia and Tasmania and the figures for these States are not available. In the remaining States the amounts apportioned since 1931-32 were as follows :—

RAILWAYS, STATE.—EXCHANGE ON OVERSEA INTEREST PAYMENTS.

Year ended 30th June—	New South Wales.	Victoria.	South Australia.
	£	£	£
1932	1,313,541	440,938	176,913
1933	1,191,937	402,705	180,826
1934	1,103,381	354,335	157,001
1935	843,012	300,302	130,649
1936	903,773	310,530	121,734

12. Profit or Loss.—The following table shows the actual profit or loss after deducting working expenses and interest and all other charges, excepting exchange payments, 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.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.							
	£	£	£	£	£	£	£
1932	2-3,251,064	368,295	24,338a	601,392	190,069	269,546	4-4,812,884
1933	2-2,113,909	142,427	73,217a	381,655	175,681	256,140	3-3,102,628
1934	1-484,746	248,130	170,531a	557,400	275,644	241,242	2-739,842
1935	440,499	141,533	503,459a	518,975	99,474	265,907	1-1,065,687
1936	205,511	199,102	107,353a	597,009	57,477	360,108	1-234,455

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

	%	%	%	%	%	%	%
1932	-2.36	-0.49	-0.07	-2.21	-0.80	-4.11	-1.56
1933	-1.52	-0.19	+0.21	-1.40	-0.73	-3.90	-1.00
1934	-1.07	-0.33	+0.53	-2.05	-1.12	-3.68	-0.88
1935	-0.31	-0.19	+1.44	-1.90	-0.40	-4.04	-0.34
1936	+0.14	-0.26	-0.30	-2.05	-0.23	-5.40	-0.38

(a) See Note (a) paragraph 11 above.

(b) See Note (a) paragraph 10 (i) on previous page.

13. *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 seaborne competition.

The following table gives particulars for the years 1932 to 1936 :—

RAILWAYS, STATE.—TRAFFIC.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
NUMBER OF PASSENGER JOURNEYS.							
1932 ..	128,359,419	125,990,585	20,761,676	15,608,245	10,394,311	1,680,897	302,795,433
1933 ..	132,367,221	130,190,013	22,216,409	16,074,221	11,732,291	1,678,483	314,758,638
1934 ..	142,520,429	131,367,215	22,877,000	16,325,004	12,103,104	1,789,329	326,982,981
1935 ..	160,211,508	139,689,012	24,328,300	16,660,213	12,876,378	2,133,541	355,898,952
1936 ..	171,142,729	139,539,089	25,243,901	17,430,674	12,421,527	2,321,823	368,999,743

PER 100 OF MEAN POPULATION.

1932 ..	4,999	6,984	2,231	2,705	2,397	744	4,630
1933 ..	5,128	7,173	2,361	2,774	2,685	736	4,775
1934 ..	5,454	7,198	2,407	2,803	2,748	781	4,924
1935 ..	6,060	7,607	2,532	2,828	2,906	931	5,310
1936 ..	6,419	7,571	2,597	2,948	2,774	1,008	5,153

PER AVERAGE MILE OF LINE WORKED.

1932 ..	21,216	26,693	3,170	6,172	2,467	2,606	12,255
1933 ..	21,574	27,577	3,384	6,355	2,742	2,603	12,643
1934 ..	23,122	27,826	3,484	6,454	2,782	2,775	13,092
1935 ..	25,992	29,589	3,705	6,587	2,954	3,308	14,245
1936 ..	27,945	29,559	3,844	6,891	2,850	3,600	14,757

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

1932 ..	10,211,322	6,186,081	3,860,668	2,419,094	2,847,568	449,039	25,973,772
1933 ..	11,147,866	6,244,346	3,685,608	2,387,817	2,840,077	510,585	26,816,299
1934 ..	11,364,235	5,858,377	4,214,382	2,141,646	2,652,247	560,611	26,791,498
1935 ..	13,018,620	6,009,961	4,879,019	2,332,581	2,903,481	678,227	29,821,889
1936 ..	13,839,012	6,424,094	4,663,567	2,464,711	2,886,648	769,841	31,047,873

PER 100 OF MEAN POPULATION.

1932 ..	398	343	415	419	657	199	397
1933 ..	430	344	392	412	650	224	407
1934 ..	435	321	443	368	602	245	403
1935 ..	492	327	508	396	655	296	445
1936 ..	519	349	480	417	645	334	460

RAILWAYS, STATE.—TRAFFIC—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
PER AVERAGE MILE OF LINE WORKED.							
1932 ..	1,688	1,311	589	956	676	696	1,051
1933 ..	1,810	1,323	561	944	664	792	1,077
1934 ..	1,844	1,241	642	847	610	869	1,073
1935 ..	2,112	1,273	743	922	666	1,052	1,194
1936 ..	2,260	1,361	710	974	662	1,194	1,245

(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 1935-36 :—

RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1935-36.

State.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	161,060,954	10,081,775	171,142,729	2,618,310	2,814,866	5,433,176
Victoria ..	134,037,069	5,502,020	139,539,089	2,304,047	1,409,364	3,713,411
Queensland ..	20,229,494	5,014,407	25,243,901	289,234	1,221,996	1,511,230
S. Australia	16,290,777	1,139,897	17,430,674	224,006	324,571	548,577
W. Australia	11,024,990	1,396,537	12,421,527	140,535	423,830	564,365
Tasmania ..	(a)	(a)	2,321,823	(a)	(a)	120,328
Total ..	342,643,284 (b)	23,134,636 (b)	368,099,743	5,576,132 (b)	6,194,627 (b)	11,891,087

(a) Not available.

(b) Incomplete, exclusive of Tasmania.

(iii) *Electrification of Suburban and Country Railways.* Reference to the electrification of the Melbourne and Sydney suburban railways will be found in Year Book No. 22, p. 285.

(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 1935-36 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1935-36.

State.	Coal and Coke.	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	6,793,697	1,269,406	1,986,624	245,820	176,181	799,698	2,657,586	13,839,012
Victoria ..	242,060	225,933	1,265,968	194,527	68,577	661,676	3,765,353	6,424,094
Queensland ..	616,732	589,820	262,715	a 745,591	64,575	354,544	2,029,590	4,663,567
South Australia	126,302	578,992	696,466	32,601	32,958	136,155	861,237	2,464,711
Western Australia	269,558	349,934	698,431	55,678	30,529	107,474	1,375,044	2,886,648
Tasmania ..	419,009	(b)	(a)49,927	20,405	4,282	24,198	252,020	769,841
All States ..	8,377,358	3,014,085	4,960,131	1,294,622	377,102	2,083,745	10,940,830	31,047,873

PERCENTAGE OF TOTAL TONNAGE CARRIED.

	%	%	%	%	%	%	%	%
New South Wales	48.44	9.17	14.36	1.78	1.27	5.78	19.20	100.00
Victoria ..	3.77	3.52	19.71	3.03	1.06	10.30	58.61	100.00
Queensland ..	13.22	12.65	5.63	16.00	1.38	7.60	43.52	100.00
South Australia	5.12	23.49	28.26	1.33	1.34	5.52	34.94	100.00
Western Australia	9.31	12.12	24.20	1.93	1.06	3.72	47.63	100.00
Tasmania ..	54.43	(b)	6.48	2.05	0.56	3.14	32.74	100.00
All States ..	26.98	9.71	15.98	4.17	1.21	6.71	35.24	100.00

(a) Includes other agricultural produce.

(b) Included with coal and coke.

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1935-36 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1935-36.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	5,732,147	3,045,195	3,036,150	1,005,654	1,691,641	185,751	14,696,538
Wheat ..	(a)	661,516	(a)	344,554	367,991	(a)	11,374,091
Wool ..	642,493	189,182	317,588	70,638	85,584	5,233	1,310,718
Live stock	1,055,511	722,533	522,111	162,429	127,746	19,693	2,610,023
Minerals—							
Coal and coke	1,371,564	78,064	269,254	31,300	155,637	(b) 32,088	1,940,916
Others	353,206	71,607	336,784	409,703	98,020	(c) 51,379	1,320,699
Total ..	9,154,921	4,768,127	4,481,887	2,027,287	2,526,619	294,141	23,252,985

(a) Included with General Merchandise.

(b) Native coal.

(c) Minerals other than native coal.

(d) Incomplete.

In New South Wales and Victoria, electric motor coaches are used for the transfer of parcels from the central stations to suburban stations, and in Victoria to convey luggage and parcels between the two main terminal stations.

14. Passenger-Mileage and Ton-Mileage.—(i) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of all States for the years 1931-32 to 1935-36.

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES."

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-Mile.	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.									
1932	17,148	128,359	1,366,764	4,943,790	80	10.64	0.86	9.24	220,768
1933	16,382	132,867	1,422,105	5,025,484	87	10.70	0.85	9.08	230,911
1934	16,326	142,520	1,543,531	4,869,235	95	10.83	0.76	8.20	250,418
1935	16,926	160,212	1,745,075	5,153,196	103	10.89	0.71	7.72	283,115
1936	17,448	171,143	1,864,368	5,433,176	107	10.89	0.70	7.62	304,427
VICTORIA.									
1932	10,534	125,991	1,053,215	3,514,104	100	8.35	0.80	6.69	223,138
1933	10,541	130,190	1,087,543	3,561,588	103	8.35	0.79	6.57	230,363
1934	10,559	131,367	1,079,981	3,502,513	102	8.22	0.78	6.40	228,761
1935	10,854	139,689	1,156,142	3,685,978	107	8.28	0.77	6.33	244,894
1936	11,458	139,539	1,180,297	3,713,411	107	8.46	0.76	6.39	250,022
QUEENSLAND. (b)									
1932	4,625	20,695	(a)	1,290,225	(a)	(a)	(a)	14.96	(a)
1933	4,658	22,147	(a)	1,301,405	(a)	(a)	(a)	14.10	(a)
1934	4,808	22,806	(a)	1,375,542	(a)	(a)	(a)	14.48	(a)
1935	5,082	24,250	(a)	1,448,924	(a)	(a)	(a)	14.34	(a)
1936	5,430	25,159	(a)	1,469,556	(a)	(a)	(a)	14.02	(a)
SOUTH AUSTRALIA.									
1932	3,140	15,608	166,407	493,933	53	10.66	0.71	7.59	65,792
1933	3,152	16,074	172,106	519,277	55	10.71	0.72	7.75	68,046
1934	3,202	16,325	175,559	516,253	55	10.75	0.71	7.59	69,411
1935	3,251	16,660	177,655	524,884	55	10.66	0.71	7.56	70,237
1936	3,423	17,431	189,061	548,577	55	10.85	0.70	7.55	74,747
WESTERN AUSTRALIA.									
1932	(c) 1,938	10,394	(a)	489,436	(a)	(a)	(a)	11.30	(a)
1933	(c) 2,181	11,732	(a)	503,177	(a)	(a)	(a)	10.29	(a)
1934	(c) 2,290	12,103	(a)	526,756	(a)	(a)	(a)	10.45	(a)
1935	(c) 2,361	12,876	(a)	563,687	(a)	(a)	(a)	10.51	(a)
1936	(c) 2,428	12,422	(a)	564,365	(a)	(a)	(a)	10.90	(a)
TASMANIA.									
1932	(c) 506	1,681	27,158	107,587	54	16.16	0.95	15.36	42,111
1933	(c) 498	1,678	26,795	104,978	54	15.09	0.94	15.01	41,549
1934	(c) 500	1,789	27,960	107,097	56	15.62	0.92	14.36	43,356
1935	(c) 554	2,134	31,094	111,578	56	14.57	0.86	12.55	48,217
1936	(c) 613	2,322	32,911	120,328	54	14.17	0.88	12.44	51,033

(a) Not available.

(b) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line.

(c) Includes "Assistant" and "Light" Mileage.

(ii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1931-32 to 1935-36:—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES."

Year ended 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.								
1932	8,700	d 10,054	1,407,451	7,853,315	162	139.99	1.33	233,030
1933	9,180	d 10,889	1,550,327	8,169,056	169	142.38	1.25	252,129
1934	8,847	d 11,066	1,410,854	7,802,130	159	127.49	1.31	228,892
1935	9,349	d 12,665	1,522,781	8,582,612	163	120.23	1.34	247,051
1936	10,253	d 13,514	1,666,603	9,154,921	163	123.32	1.32	272,134
VICTORIA.								
1932	4,830	6,186	769,228	4,805,738	181	124.34	1.49	162,972
1933	4,781	6,244	734,970	4,773,699	178	117.70	1.55	155,681
1934	4,752	5,858	693,741	4,572,038	146	118.42	1.58	146,948
1935	4,682	6,010	693,783	4,555,722	148	115.44	1.58	146,957
1936	4,933	6,424	759,037	4,768,127	154	118.15	1.51	160,787
QUEENSLAND. (b)								
1932	6,257	3,835	(e) 516,699	3,968,227	(c) 83	c139.02	(c) 1.83	(c) 79,721
1933	6,073	3,620	(e) 517,502	3,944,275	(c) 85	c147.72	(c) 1.82	(c) 79,666
1934	6,236	4,152	(e) 541,238	4,080,906	(c) 87	c130.34	(c) 1.81	(c) 83,294
1935	7,788	4,841	(e) 684,008	4,939,658	(c) 88	c141.30	(c) 1.73	(c) 105,266
1936	6,847	4,589	(e) 615,972	4,411,617	(c) 90	c134.22	(c) 1.72	(c) 94,797
SOUTH AUSTRALIA.								
1932	1,774	2,419	287,619	1,948,293	170	118.37	1.63	113,731
1933	1,758	2,388	283,565	1,924,932	161	118.76	1.63	112,114
1934	1,728	2,142	265,682	1,762,899	154	124.06	1.59	105,044
1935	1,830	2,333	281,068	1,853,188	154	120.50	1.58	111,123
1936	2,039	2,465	312,789	2,027,287	153	126.91	1.56	123,664
WESTERN AUSTRALIA.								
1932	(a) 3,266	2,848	347,492	2,106,129	119	122.03	1.45	82,461
1933	(a) 3,230	2,840	339,007	2,110,065	105	119.37	1.49	79,237
1934	(a) 3,232	2,652	317,870	2,059,813	98	119.85	1.56	73,055
1935	(a) 3,664	2,903	362,252	2,405,046	100	124.77	1.59	83,101
1936	(a) 3,830	2,887	353,011	2,526,619	92	122.29	1.72	80,997
TASMANIA.								
1932	(a) 627	(f) 427	26,690	(f) 215,180	43	62.45	1.93	41,386
1933	(a) 613	(f) 490	27,246	(f) 223,262	44	55.63	1.98	42,248
1934	(a) 637	(f) 540	27,623	(f) 230,597	43	51.17	1.98	42,833
1935	(a) 680	(f) 656	30,671	(f) 236,857	45	46.73	1.86	47,561
1936	(a) 805	(f) 746	37,837	(f) 274,541	47	50.74	1.74	58,672

(a) Includes "Assistant" and "Light" mileage. (b) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line. (c) Approximate. (d) Exclusive of coal, on which way leave charges only were collected. (e) Exclusive of Cooktown, Normanton, and Innisfail and Mourilyan tramways. (f) Exclusive of live stock.

In New South Wales the tonnages of coal on which way leave charges only have been collected were 157,110 tons (1932), 258,893 tons (1933), 297,960 tons (1934), 353,309 tons (1935) and 324,937 tons (1936).

15. **Rolling Stock.**—The following table shows the numbers of rolling stock in use during the years 1932 to 1936. Further details may be found in the Transport and Communication Bulletin No. 27.

RAILWAYS, STATE—ROLLING STOCK.

State.	At 30th June—														
	1932.			1933.			1934.			1935.			1936.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
New South Wales ..	1,432	2,713	23,852	1,432	2,710	23,705	1,432	2,676	23,498	1,493	2,657	23,457	1,378	2,704	23,340
Victoria ..	650	2,623	20,979	650	2,536	20,940	619	2,503	20,940	602	2,476	21,004	602	2,450	21,056
Queensland ..	784	1,313	19,151	776	1,339	19,068	776	1,333	18,957	734	1,356	18,774	750	1,331	18,758
South Australia ..	438	670	9,202	438	668	9,144	423	620	9,106	460	611	8,936	365	610	8,720
Western Australia ..	420	493	11,241	420	493	11,250	420	493	11,272	420	493	11,173	420	489	11,096
Tasmania ..	94	224	2,025	94	224	2,025	94	223	2,016	94	225	2,036	92	220	2,045
All States ..	3,818	8,036	86,450	3,810	7,950	86,132	3,764	7,848	85,789	3,653	7,818	85,282	3,607	7,854	84,995

16. **Employees.**—(i) *At 30th June.* The following table gives the number of railway employees in each year from 1932 to 1936 inclusive, classified according to (a) salaried staff, and (b) wages staff:—

RAILWAYS, STATE.—EMPLOYEES.(a)

State.	At 30th June—									
	1932.		1933.		1934.		1935.		1936.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	5,948	34,091	5,724	32,982	5,734	33,968	5,830	35,683	5,888	35,076
Victoria ..	3,720	17,456	3,621	18,159	3,533	17,450	3,499	18,278	3,402	19,053
Queensland ..	2,946	12,461	2,917	12,554	2,948	13,854	3,033	14,305	3,065	13,755
South Australia ..	1,137	5,736	1,148	5,784	1,173	5,563	1,213	5,962	1,280	6,490
Western Australia ..	1,204	5,671	1,178	6,135	1,205	7,154	1,249	7,064	1,277	7,062
Tasmania ..	174	1,137	166	1,133	179	1,156	171	1,296	175	1,497
All States ..	13,129	76,532	14,754	76,747	14,772	79,145	14,995	82,588	15,087	82,933

(a) Exclusive of construction staff.

In the period under review the totals of salaried and wages staffs increased from 91,681 in 1932 to 98,020 in 1936, a rise of 6.9 per cent.

(ii) *Average staff employed, 1935–36.* 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, 1935-36.

State.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales ..	5,849	35,930	2	93	5,851	36,023
Victoria ..	3,402	18,997	..	..	3,402	18,997
Queensland ..	3,063	14,063	13	256	3,076	14,319
South Australia ..	1,239	6,144	..	3	1,239	6,147
Western Australia ..	1,262	7,110	10	352	1,272	7,462
Tasmania ..	175	1,497	..	..	175	1,497
All States ..	14,990	83,741	25	704	15,015	84,445

In the State of Victoria, railway construction work is not under the control of the Railways Commissioners. This was also the case in Tasmania until 1935-36, when it was decided to establish a Railway Construction Branch.

17. Accidents.—The following 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 1932 to 1936 inclusive:—

RAILWAYS, STATE.—ACCIDENTS.

State.	In year ended 30th June—									
	1932.		1933.		1934.		1935.		1936.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	73	308	69	329	53	389	51	421	66	442
Victoria ..	56	227	52	177	49	164	41	121	46	188
Queensland ..	13	124	26	100	21	161	21	143	20	156
South Australia ..	7	104	13	127	11	127	15	119	14	143
Western Australia ..	23	266	15	236	21	327	13	611	14	383
Tasmania ..	4	16	1	10	1	20	2	22	4	17
All States ..	176	1,045	176	979	156	1,188	143	1,437	164	1,329

Further details relating to the number of passengers, employees and other persons affected by railway accidents are published on page 24 of Transport and Communication Bulletin No. 27.

18. 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 1935-36:—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL, 1935-36.

Government Railways.	Oil.						Coal.		
	Lubricating.			Fuel and Light, etc.			Tons.	Value.	Average Cost per Ton.
	Gallons.	Value.	Average Cost per Gallon.	Gallons.	Value.	Average Cost per Gallon.			
		£	s. d.		£	s. d.		£	£ s. d.
New South Wales	349,783	36,707	2 1	1,186,006	38,263	0 8	1,389,174	820,029	0 11 10
Victoria ..	171,320	15,081	1 9	1,642,606	36,886	0 8	526,349	401,519	0 15 3
Queensland ..	184,205	18,523	2 0	192,394	8,965	0 11	401,706	346,615	0 17 3
South Australia ..	89,228	9,757	2 2	990,833	45,680	0 11	164,407	199,492	1 4 3
Western Australia ..	77,937	8,298	2 2	322,873	10,624	0 8	324,001	221,031	0 13 8
Tasmania ..	35,736	3,854	2 2	89,670	4,861	1 1	55,497	56,731	1 0 5
Total States ..	908,209	92,220	2 0	4,424,582	165,279	0 9	2,861,134	2,045,417	0 14 4
Federal ..	16,737	1,657	2 0	129,643	5,023	0 9	20,643	30,733	1 9 9
Total, Australia ..	924,946	93,887	2 0	4,554,225	170,302	0 9	2,881,777	2,076,150	0 14 5

The range in the average cost per ton of coal from 11s. 10d. in New South Wales to £1 9s. 9d. 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 during 1935-36 showed a decrease of 0s. 2d. on that for 1934-35.

19. **Passenger Fares and Goods Rates.**—(i) *General.* 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 starving stock to other areas.

All the following particulars have been obtained from the latest Railway publications available relating to Passenger Fares and Coaching Rates and Goods Rates.

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

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

**GOVERNMENT RAILWAYS.—ORDINARY PASSENGER MILEAGE RATES—
SINGLE FARES.**

Government Railways.	For a Journey of—												
	50 Miles.		100 Miles.		200 Miles.		300 Miles.		400 Miles.		500 Miles.		
	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.	
New South Wales ..	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Victoria ..	9 5	6 6	19 1	13 2	35 9	24 8	51 7	35 7	66 8	46 0	75 9	52 3	52 3
Queensland ..	10 3	6 10	19 10	13 3	39 8	26 5	55 5	36 11	67 2	44 10	79 0	52 7	52 7
South Australia (a) ..	10 9	7 6	20 0	13 0	37 0	24 0	53 0	34 0	68 0	42 0	82 0	50 0	50 0
Western Australia ..	..	6 8	..	13 3	..	26 6	..	39 9	..	53 0	..	..	..
Tasmania ..	8 4	5 3	16 8	10 5	33 4	20 10	50 0	33 3	66 8	41 8	83 4	52 1	52 1
Average ..	9 7	6 7	18 9	12 10	36 6	25 0	52 11	36 9	67 2	45 6	80 0	51 9	51 9
Average per mile ..	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
	2.30	1.58	2.25	1.54	2.19	1.50	2.12	1.47	2.02	1.37	1.92	1.24	1.24
Federal—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Trans-Australian and	9 7	6 5	19 2	12 9	38 4	25 7	57 6	38 4	70 0	46 8	81 6	54 4	54 4
Central Australia ..	11 6	7 8	22 11	15 3	45 10	30 7	68 9	45 10	..	..	..	..	..
North Australia ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Average ..	10 7	7 1	21 1	14 0	42 1	28 1	63 2	42 1	70 0	46 8	81 6	54 4	54 4
Average per mile ..	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
	2.54	1.70	2.53	1.68	2.53	1.69	2.53	1.68	2.10	1.40	1.96	1.30	1.30

(a) First class tickets are available only on certain lines connecting with the services of other States.

(iii) *Parcel Rates.* Parcels may be transmitted by passenger train at rates based upon weight and distance carried. The charges vary slightly in the different systems. In New South Wales the stamped or prepaid charges range from 5d. for a parcel not exceeding 1 lb. for any distance up to 25 miles to 18s. 8d. for a parcel weighing between 85 and 112 lb. for a distance of 500 miles. In Victoria the corresponding charges are 6d. and 19s. 9d., in Queensland 6d. and 18s. 10d., in South Australia 6d. and 17s. 4d., in Western Australia 6d. and 15s. 6d. (for a parcel between 99 and 112 lb.), in Tasmania

3d. (for a parcel not exceeding 2 lb.) and 10s. 9d. (for a distance of 350 miles), on the Trans-Australian and Central Australia Railways 6d. and 16s., and on the North Australia Railway 6d. (for a parcel not exceeding 3 lb.) and 18s. 4d. (for a distance of 400 miles).

(iv) *Goods Rates.* (a) *General.* In each Railway system there are various classes of rates charged for the conveyance of goods and merchandise. These classes are usually as follows:—Mileage rates, based on distance, irrespective of locality; District rates, applicable only between specified places; Local rates, charged on lines in respect of which it is provided that the rates charged thereon shall be as though such lines were separate from other lines; Commodity rates, applicable only in respect of specified articles; Package rates, applicable only to single packages of specified descriptions; Through rates, applicable to goods carried by rail and another method of transport or by railways controlled by several authorities; and Special rates, other than those before mentioned.

Freight itself is generally divided according to a number of different classes (e.g., in New South Wales the classes are Manure, Coal, Miscellaneous, "A," "B," "C," 1st and 2nd), but as limitations of space forbid a detailed analysis of the rate applicable to each class, the following table gives particulars of highest and lowest class freights only. Generally, the highest class freight includes expensive, bulky, or fragile articles, while the lowest class comprises many ordinary articles of merchandise, particularly those identified or connected with the primary industries.

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

**GOVERNMENT RAILWAYS.—HIGHEST AND LOWEST CLASS ORDINARY
FREIGHT MILEAGE RATES.**

Government Railways.	Charge per Ton for a Haul of—																							
	50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.	50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.												
	Highest Class Freight.						Lowest Class Freight.																	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>										
New South Wales ..	39	2	76	8	130	10	160	0	180	0	197	6	5	0	6	9	8	5	10	0	11	3	12	4
Victoria ..	33	6	65	0	122	3	167	3	205	6	244	3	3	8	5	7	8	3	11	0	12	3	13	4
Queensland ..	60	0	101	8	180	0	248	4	286	8	301	8	5	0	5	6	10	0	12	0	13	6	15	0
	(a)						(b)																	
South Australia ..	36	9	67	4	121	9	170	6	214	0	252	1	5	9	10	1	17	1	19	2	19	2	19	2
Western Australia ..	31	4	58	9	103	0	140	2	170	7	195	8	3	3	4	1	6	2	8	3	10	4	12	5
Tasmania ..	38	2	71	6	129	10	186	1	..	..	..	..	6	2	10	10	14	2	15	10	..	..	..	..
Average ..	39	10	73	6	131	3	178	9	211	4	238	3	4	10	7	2	10	8	12	9	13	4	14	5
Average per mile ..	9.56		8.82		7.88		7.15		6.34		5.48		1.16	0.86		0.64		0.51		0.40		0.35		
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Federal— Trans-Australian, Central Australia and North Aus- tralia ..	40	10	78	0	145	11	200	2	247	10	288	6	4	6	8	1	13	10	16	7	18	10	21	1
Average per mile ..	9.80		9.36		8.76		8.01		7.44		6.92		1.08	0.97		0.83		0.66		0.57		0.51		

(a) Maximum rate on highest class goods sent to the Western lines from Brisbane, Rockhampton or Townsville up to 500 miles is 236s. 8d. per ton. (b) Rates from stations south of Yandaran and Monto to stations north and west of Rockhampton, and *vice versa*, 291s. 8d. (400 miles) and 336s. 8d. (500 miles) per ton, provided that they are not more than the sum of the local rates to and from Rockhampton.

NOTE.—A preliminary Summary of the Operations of all Government Railways for the year 1936–37 will be found in the Appendix to this volume.

§ 4. Private Railways.

1. **Total Mileage Open, 1935-36.**—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 in this section include only lines open to the public for general passenger and goods traffic. Complete particulars of lines used for special purposes only for the year 1935-36 are not available.

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 1935-36:—

RAILWAYS, PRIVATE.—SUMMARY, 1935-36.

State.	Companies from which returns were received.	Miles Open (Route).	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles.	Passenger Journeys.	Tonnage of Goods, etc.	Number of Employees.	Rolling Stock.		
										Locos.	Coaches.	Other Vehicles.
	No.	Miles.	£	£	£	Miles.	No.	Tons.	No.	No.	No.	No.
New South Wales (b) . .	6	80.45	1,278,207	352,712	190,430	543,429	1,197,560	1,315,149	424	65	1	726
Victoria	2	24.94	81,384	9,530	9,709	25,344	9,581	37,857	19	5	4	36
Queensland (b)	12	246.15	528,979	37,015	31,611	97,346	3,953	231,568	72	17	10	451
South Australia (b) . .	1	50.51	(a)	(a)	(a)	99,813	239	1,766,409	38	7	1	235
Western Australia	1	277.00	2,246,751	161,372	74,834	276,858	27,848	116,270	291	23	23	524
Tasmania (b)	3	131.57	898,595	128,205	99,912	203,488	49,700	179,404	264	20	20	305
All States (b)	25	810.62	5,033,916	688,834	406,496	1,246,278	1,288,881	3,646,657	1,108	137	59	2,277

(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. In some cases the figures relating to tonnage of goods, etc., include particulars of coal, ores, timber, sugar cane, etc., carried for private purposes.

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 in 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 (*see above*), 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 section.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show for each State the total mileage of tramway lines open for general passenger traffic for the

year 1935-36, classified (a) according to the controlling authority, (b) according to the motive power used, and (c) according to gauge; and for Australia according to motive power for the years 1931-32 to 1935-36:—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1935-36.

Controlling Authority, Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total Australia.
ACCORDING TO CONTROLLING AUTHORITY.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Government ..	188.05	176.70	..	..	52.74	..	417.49
Municipal ..	..	..	64.83	76.11	9.98	28.43	179.35
Private ..	3.50	..	..	..	11.56	..	15.06
Total ..	191.55	176.70	64.83	76.11	74.28	28.43	611.90
ACCORDING TO MOTIVE POWER.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric ..	182.49	160.00	58.18	76.11	65.43	28.43	570.64
Steam and Petrol ..	9.06	..	6.65	..	6.34	..	22.05
Cable ..	..	16.70	..	..	..	..	16.70
Horse ..	..	..	..	..	2.51	..	2.51
Total ..	191.55	176.70	64.83	76.11	74.28	28.43	611.90
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	191.55	171.52	58.18	76.11	..	..	497.36
3 ft. 6 in. ..	..	..	6.65	..	74.28	28.43	109.36
Total ..	191.55	176.70	64.83	76.11	74.28	28.43	611.90

Further details on this subject may be obtained from page 27 of Transport and Communication Bulletin No. 27.

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA.

Nature of Motive Power.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
ACCORDING TO MOTIVE POWER.					
	Miles.	Miles.	Miles.	Miles.	Miles.
Electric ..	574.59	571.87	573.59	570.46	570.64
Steam and Petrol ..	21.97	21.97	21.81	21.81	22.05
Cable ..	24.29	24.29	24.29	24.29	16.70
Horse ..	1.50	1.50	2.51	2.51	2.51
Total ..	622.35	619.63	622.20	619.07	611.90

(iii) *Cost of Construction and Equipment.* The table hereunder shows the total cost of construction and equipment of all tramways to the 30th June, 1936, classified according to the nature of the motive power. Further details relating to controlling authorities are available on page 27 of Transport and Communication Bulletin No. 27.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1935–36.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
ACCORDING TO MOTIVE POWER.							
Electric	£ 8,752,476	£ 7,869,053	£ 2,206,232	£ 4,209,473	£ 1,748,386	£ 642,409	£ 25,428,029
Steam and							
Petrol	123,313	..	53,235	..	64,556	..	241,104
Cable ..	..	974,293	..	..	..	..	974,293
Horse ..	..	..	..	..	10,104	..	10,104
Total ..	8,875,789	8,843,346	2,259,467	4,209,473	1,823,046	642,409	26,653,530

2. *New South Wales.*—(i) *General.* With the exception of a steam tramway 3½ miles in length from Parramatta to Duck River, which is operated by Sydney Ferries Ltd., the tramways of New South Wales are the property of the Government, and are under the control of the Department of Road Transport and Tramways. In Sydney and suburbs the Government tramways are divided into six distinct systems, five of which are operated by electricity, and one, the Kogarah to Sans Souci line, by steam. The Kogarah to Sans Souci steam trams are to be replaced in the near future by trolley buses. The gauge of all lines is 4 ft. 8½ in.

(ii) *Particulars of Working.*—*Electric and Steam Tramways.* The following table gives a summary of the operations of all tramways for the years 1932 to 1936 :—

ELECTRIC AND STEAM TRAMWAYS.—NEW SOUTH WALES.—SUMMARY.

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 at end of year.
	Miles.	£	£	£	£	£	%	%	No. '000.	No.
1932 ..	197.57	8,155,204	3,306,557	3,049,267	257,290	546,626	92.22	3.15	286,504	8,417
1933 ..	197.47	8,204,065	3,268,200	2,781,968	486,232	484,057	85.12	5.93	295,783	8,033
1934 ..	194.49	8,410,978	3,239,696	2,535,038	701,658	455,086	78.25	8.38	296,639	7,922
1935 ..	191.20	8,937,416	3,323,498	2,717,383	606,115	442,905	81.76	6.78	307,616	8,112
1936 ..	191.55	8,875,789	3,390,443	2,686,295	704,148	427,919	79.23	7.93	314,065	8,224

(a) Exclusive of £189,730 for depreciation charges on electric tramways, previously included.

3. Victoria.—(i) *General.* In Melbourne, electric and cable tramway systems with route mileages of 120.41 miles and 16.70 miles respectively are worked by the Melbourne and Metropolitan Tramways Board, while two electric tramways, (a) St. Kilda to Brighton 5.18 miles and (b) Sandringham to Black Rock 2.43 miles, belong to and are operated by the Railways Commissioners. The State Electricity Commission operates 10.98 miles of electric tramways at Geelong, acquired from the Melbourne Electric Supply Company on the 1st September, 1930, and 13.14 miles of similar traction at Ballarat and 7.86 miles at Bendigo, taken over from the Electric Supply Company of Victoria on 1st July, 1934. The Melbourne cable trams are being gradually replaced by electric trams.

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 (*see Year Books No. 7 page 652, No. 9 page 679 and No. 15 page 593*).

With the exception of the St. Kilda-Brighton line, which is of 5 ft. 3 in. gauge, all the tramways of the State are of 4 ft. 8½ in. gauge.

(ii) *Particulars of Working.—Electric and Cable Tramways.* The following table gives particulars for all tramways in Victoria during each of the years 1932 to 1936 inclusive :—

ELECTRIC AND CABLE TRAMWAYS.—VICTORIA.—SUMMARY.

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 at end of year.
	Miles.	£	£	£	£	£	%	%	No. 000.	No.
1932 ..	178.67	8,644,770	2,049,698	1,327,161	722,537	326,250	64.75	8.36	175,433	4,740
1933 ..	178.67	8,600,453	2,058,241	1,285,984	772,257	325,412	62.48	8.98	176,917	4,732
1934 ..	178.77	8,562,299	2,088,716	1,306,301	782,415	300,015	62.54	9.14	179,779	4,870
1935 ..	178.40	8,444,725	2,163,738	1,341,587	822,151	283,136	62.00	9.74	186,484	4,995
1936 ..	176.70	8,843,346 ^a	2,182,952	1,326,013	856,939	277,328	60.74	9.69	186,800	5,003

(a) Including figures relating to cost of items not previously included.

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, when 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 58.18 route miles at 30th June, 1936, the gauge of the line being 4 ft. 8½ in.

In addition to the electric tramways, a steam tramway operated by the City Council is in operation at Rockhampton. The length of line is 6.65 route miles and the gauge 3 ft. 6 in.

(ii) *Particulars of Working.—Electric and Steam Tramways.* The following table gives particulars of the working of all tramways in Queensland for each year from 1932 to 1936 :—

ELECTRIC AND STEAM TRAMWAYS.—QUEENSLAND.—SUMMARY.

Year ended 31st December—	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 at end of year.
	Miles.	£	£	£	£	£	%	%	No. ,000.	No.
1932. . .	63. 51	2,195,545	688,883	481,186	207,697	106,689	69.85	9.46	69,478	1,431
1933 (a)	63. 51	2,162,631	694,611	479,426	215,185	106,651	69.02	9.95	69,646	1,359
1934 (a)	63. 51	2,115,469	700,723	501,846	198,877	106,611	71.62	9.40	71,185	1,485
1935 (a)	64. 18	2,161,118	746,543	543,571	203,972	106,533	72.81	9.39	78,264	1,735
1936 (a)	64. 83	2,259,467	784,779	587,296	197,483	106,457	74.84	8.74	83,781	1,740

(a) Year ended 30th June.

5. *South Australia.—(i) General.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to that year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1936, the Tramways Trust operated a total route mileage of 76.11 miles of 4 ft. 8½ in. gauge. This is exclusive of a motor bus route mileage of 21.69, although the remaining items in the following table relate to the operations of both trams and buses, separate figures not being available.

(ii) *Particulars of Working.—Electric Tramways.* The following table gives particulars of the working of electric tramways in Adelaide for each year from 1932 to 1936 :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY.

Year ended 31st July—	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 at end of year.
	Miles.	£	£	£	£	£	%	%	No. ,000.	No.
1932..	82.84	4,043,913	659,575	383,400	276,175	264,597	58.13	6.83	48,467	1,777
1933..	82.83	4,068,156	643,274	392,526	250,748	253,930	61.02	6.16	48,154	1,719
1934..	82.83	4,072,007	627,897	388,136	239,761	248,760	61.82	5.89	47,021	1,708
1935..	82.83	4,077,349	639,335	402,258	237,077	239,139	62.92	5.81	48,118	1,688
1936..	76.11	4,209,473	673,737	437,693	236,044	231,843	64.96	5.61	50,625	1,688

6. *Western Australia.—(i) General.* The Perth electric 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 length of line open at 30th June, 1936, was 43.89 route miles. Electric tramways with a route mileage at 31st August, 1936, of 9.98 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 1936, the length of line was 11.56 route miles. All the electric tramways of the State are of 3 ft. 6 in. gauge.

In addition to the electric tramways, there are several tramways, other than electric, with a total length of 8.85 miles of 3 ft. 6 in. gauge. The lines are under control of the Department of Works and Labour, and the total mileage of 8.85 miles is made up of several short lengths worked by steam, petrol or horses in connexion with the jetties at certain ports and providing communication between the jetties and the goods sheds or warehouses.

(ii) *Particulars of Working.—All Tramways.* The following table gives a summary for all tramways in the State for the years 1932 to 1936 :—

ELECTRIC, STEAM AND HORSE TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest. (a)	Per-centage of Working Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed at end of year.
	Miles.	£	£	£	£	£	%	%	No. ,000.	No.
1932 ..	69.03	1,793,651	359,080	288,098	70,982	55,480	80.23	3.96	36,133	761
1933 ..	68.84	1,802,831	354,321	290,448	63,873	55,426	81.97	3.54	36,329	741
1934 ..	74.17	1,818,775	354,552	297,367	57,185	56,347	83.87	3.14	36,595	773
1935 ..	74.03	1,811,856	360,490	291,966	68,524	55,261	80.99	3.78	37,108	737
1936 ..	74.28	1,823,046	362,104	293,416	63,688	54,734	82.41	3.49	38,135	753

(a) Exclusive of Kalgoorlie and Boulder electric tramways operated by a private company.

7. Tasmania.—(i) *General.* In Hobart there is a system of electric tramways consisting of 16.70 route miles of 3 ft. 6 in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates a length of 11.73 miles of 3 ft. 6 in. gauge in that City.

(ii) *Particulars of Working.—Electric Tramways.*—The following table gives a summary of the working of the two electric systems for the years 1932 to 1936 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Per-centage of Working Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed at end of year.
	Miles.	£	£	£	£	£	%	%	No. ,000.	No.
1932 ..	30.73	628,794	154,812	115,096	39,716	41,485	74.34	6.32	15,493	353
1933 ..	28.31	630,657	161,902	116,112	45,790	42,726	71.72	7.26	14,850	291
1934 ..	28.43	634,192	164,826	123,998	40,828	36,376	75.23	6.44	14,942	308
1935 ..	28.41	635,535	164,639	121,883	42,756	39,055	74.03	6.73	14,934	305
1936 ..	28.43	642,409	173,079	127,887	45,192	37,016	73.89	7.03	14,717	304

8. **Australia.**—*All Tramways—Summary 1932 to 1936.* The following table gives a summary of the working of all tramway systems in Australia for the years 1932 to 1936 :—

ALL TRAMWAYS—AUSTRALIA—SUMMARY.

Particulars.	1932.	1933.	1934.	1935.	1936.
Mileage open for traffic .. Miles	622.35	619.63	622.20	619.07	611.90
Cost of Construction and Equipment £	25,461,877	25,468,793	25,613,720	26,067,999	26,653,530
Cost per mile £	40,912	41,103	41,166	42,108	43,559
Gross Revenue £	7,218,605	7,180,549	7,176,410	7,398,243	7,567,094
Working Expenses £	5,644,208	5,346,464	5,152,686	5,418,648	5,463,600
Net Earnings £	1,574,397	1,834,085	2,023,724	1,979,595	2,103,494
Interest £	1,341,127	1,268,202	1,204,095	1,166,029	1,135,297
Percentage of Working Expenses on Gross Revenue %	78.19	74.46	71.80	73.24	72.20
Percentage of Net Earnings on Capital Cost %	6.18	7.20	7.90	7.59	7.89
Tram-miles run ,000 miles	79,963	80,910	80,757	81,084	81,481
Gross revenue per tram mile .. . d.	21.66	21.30	21.33	21.90	22.29
Working expenses per tram mile .. d.	16.94	15.86	15.31	16.04	16.09
Net earnings per tram mile d.	4.72	5.44	6.01	5.86	6.20
Passengers carried ,000	631,508	641,680	646,161	672,523	688,123
Passengers carried per tram mile .. No.	7.90	7.93	8.00	8.29	8.45
Average revenue per passenger journey d.	2.74	2.69	2.67	2.64	2.64
Persons employed at end of year .. No.	17,479	16,875	17,066	17,572	17,712

D. AVIATION.

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.

2. **Foundation of Civil Aviation Administration.**—A brief account of the foundation and objects of this Department will be found in Official Year Book No. 19, p. 299. In 1936 the organization was changed and the responsibility of regulating and controlling Civil Aviation in the Commonwealth was entrusted to a Board, consisting of four members and a secretary. The Chairman is the Controller-General of Civil Aviation, whilst the other three members are the Controller of Operations, the Controller of Ground Organization and the Finance Member. The Board has remained a branch of the Defence Department.

3. **Aerodromes and Landing Grounds.**—Landing grounds have been established over the following approved routes:—Perth to Wyndham (2,067 miles); Perth to Adelaide (1,453 miles); Adelaide to Sydney (790 miles); Sydney to Brisbane (500 miles); Brisbane to Camooweal (1,226 miles); Camooweal to Darwin (802 miles); Katherine to Ord River (375 miles); Cloncurry to Normanton (216 miles); Melbourne to Hobart, via King Island (490 miles) and via Flinders Island (436 miles); Melbourne to Hay (233 miles); Mildura to Broken Hill (189 miles); Melbourne to Charleville, via Cootamundra (900 miles).

During the year 1936-37 action has been proceeding to make suitable for night flying the air routes linking the capital cities. The first sections to be prepared will be Brisbane-Sydney-Melbourne-Adelaide. Steps are being taken to improve existing landing grounds, to prepare additional grounds, and to provide the necessary lighting facilities which include airway rotating beacons at intervals along the air routes and a complete system of illuminating and flood lighting the various landing grounds.

The Longreach-Cloncurry section of the Brisbane-Darwin air mail route has been equipped for night flying, which permits flying at night over this section of the route when necessary in order to maintain schedule. The Kalgoorlie-Cook section of the Perth-Adelaide air route is also equipped for night flying.

Up to the 30th April, 1937, 242 landing grounds had been acquired or leased and prepared by the Commonwealth Government for civil aviation purposes. In addition to landing grounds established and maintained by the Commonwealth Government, considerable activity is being displayed by local governing authorities in the establishment of public aerodromes. The Civil Aviation Board assists local authorities desirous

of establishing aerodromes by giving technical advice regarding the suitability of proposed sites and the preparation of approved areas to comply with Departmental requirements. At the 30th April, 1937, there were 202 licensed public aerodromes under the control of local authorities. The total number of recognized landing grounds in Australia and New Guinea at the 30th April, 1937, was 444.

4. **General Flying Activities, 1936.**—The mileage flown by all civil aircraft in Australia and New Guinea in 1936 was approximately 8,464,405 and there were six fatal accidents. During 1936, 1,972,616 miles were flown by the subsidized air services without injuries to passengers or crews. There was one fatal accident on other regular services which flew 2,360,254 miles.

5. **Air Services.**—(i) *General.* Since the year 1920 the grant of financial assistance for the establishment and maintenance of regular air transport services has been part of the Government's policy for the development of civil aviation in Australia.

At the 30th April, 1937, nine subsidized contractors were operating under contracts which provided that such space as is required on each trip must be reserved for mails. On letters within the Commonwealth there is an air mail fee of 3d. per $\frac{1}{2}$ ounce in addition to the ordinary postage rate, and for letters to the United Kingdom the inclusive postage is 1s. 6d. per $\frac{1}{2}$ ounce. The total route mileage of these services is 11,766 miles.

The principal service is that from Brisbane to Darwin, and thence through Netherlands East Indies to Singapore, where a junction is made with Imperial Airways Ltd., which maintains regular air communication with the United Kingdom. In consequence of the growth of passenger and mail traffic over this route the Government decided to increase the frequency of the service to twice weekly as from May, 1936, and similarly to branch lines Daly Waters-Perth and Charleville-Cootamundra. The importation of high speed modern American aircraft during the year also led to increased frequency of services between the mainland and Tasmania and to the duplication of the Adelaide-Perth service. The employment of Douglas aircraft on the latter route has enabled journeys between the two capitals to be effected comfortably in one day.

The past year has been notable for the formation and expansion of Australian National Airways Pty. Ltd., which came into being with the merging of the interests of Holyman's Airways Pty. Ltd. and Adelaide Airways Ltd., and it subsequently purchased the assets of West Australian Airways Ltd. which has operated the Perth-Adelaide service since 1929. The Company is now the largest Civil Aviation organization in the Commonwealth with a staff of some 160 persons, including 37 pilots, and 25 aircraft. It operates in all States except Queensland and maintains regular air services over approximately 5,000 miles of air routes. The Company contemplates a further extension of its activities during 1937 and has on order from America several additional Douglas aircraft.

After protracted negotiations between the United Kingdom and the Commonwealth Governments agreement has been reached in regard to the Empire Air Mail Scheme. Briefly, the scheme envisages the carriage of first class mails between Great Britain and the Dominions by large flying boats, but the Commonwealth Government has decided that only surcharged mail shall be despatched from Australia by the service. The Commonwealth Government will directly control the section from Singapore to Sydney (the Australian terminus) which will be operated by Qantas Empire Airways Ltd., under contract to the Commonwealth Government. It is expected that the Australian service will be inaugurated early in 1938 with a frequency of at least twice weekly in each direction. The probable route south from Darwin will be overland to Groote Eylandt in the Gulf of Carpentaria, thence to Karumba (near Normanton), across country to Townsville and thence along the eastern coast to Sydney. The present inclusive rate of 1s. 6d. per $\frac{1}{2}$ ounce will be reduced to 5d. per $\frac{1}{2}$ ounce for outward mail.

All pilots and mechanics employed on the regular subsidized air transport services must join the Air Force Reserve when called upon.

(ii) *Regular Air Services at 30th April, 1937.* These services are of three categories, viz. :—(a) subsidized services carrying passengers, mails and freight; (b) unsubsidized services carrying mails (under agreement with the Postmaster-General's Department), passengers and freight; and (c) unsubsidized services carrying passengers and freight.

The aggregate route mileage of all operating companies is 21,588, whilst the total distance of routes over which regular services operate is 18,858. The difference between these two totals is explained by the fact that over some routes more than one company maintains a regular service, as, for instance, along the Queensland coast. The weekly mileage of all regular services is 113,397. The air routes are shown on the map herein.

The latter figure will be considerably augmented during 1937 with the inauguration of a weekly return service between Sydney and New Guinea (which has been authorized by the Government) and by other services likely to be established. The frequencies of the following services vary from once weekly to twice daily.

(a) *Subsidized Services.*—Qantas Empire Airways Ltd.—Brisbane—Darwin—Singapore, 4,361 miles; Cloncurry—Normanton, 216 miles. MacRobertson—Miller Aviation Co. Ltd.—Perth—Daly Waters, 2,252 miles; Ord River—Wyndham, 154 miles. Butler Air Transport Co.—Cootamundra—Charleville, 629 miles. Australian National Airways Pty. Ltd.—Melbourne—Launceston (non-stop), 314 miles; Launceston—Hobart, 94 miles; Melbourne—King Island—Launceston, 396 miles; Launceston—Flinders Island, 109 miles; Perth—Adelaide, 1,453 miles. Aircrafts Pty. Ltd.—Brisbane—Cracow, 250 miles. Airlines of Australia Ltd.—Rockhampton—Mount Coolon, 330 miles. Commercial Aviation Co. Ltd.—Adelaide—Whyalla, 150 miles. Adastra Airways Ltd.—Sydney—Bega, 205 miles. Airlines (W.A.) Ltd.—Perth—Wiluna—Kalgoorlie, 813 miles.

(b) *Unsubsidized (Mail) Services.* Australian National Airways Pty. Ltd.—Melbourne—Sydney, via Canberra and via Wagga, 490 miles; Adelaide—Melbourne, 468 miles; Adelaide—Broken Hill via Renmark and Mildura, 383 miles; Adelaide—Broken Hill—Mildura—Adelaide (round trip), 638 miles; Adelaide—Cowell—Port Lincoln—Adelaide (round trip), 372 miles; Adelaide—Kangaroo Island, 95 miles. Airlines of Australia Ltd.—Sydney—Brisbane, 500 miles; Brisbane—Townsville, 711 miles. North Queensland Airways Pty. Ltd.—Townsville—Cairns—Cooktown, 290 miles; Cairns—Normanton, 350 miles. Ansett Airways Pty. Ltd.—Melbourne—Hamilton, 160 miles. Victorian & Interstate Airways Ltd.—Melbourne—Hay, 233 miles. Intercity Airways—Sydney—Broken Hill, 635 miles. Guinea Airways Ltd.—Adelaide—Darwin, 1,730 miles.

(c) *Unsubsidized Services.* Airlines of Australia Ltd.—Brisbane—Rockhampton, 325 miles; Brisbane—Toowoomba, 75 miles; Townsville—Cairns, 190 miles; Townsville—Mount Isa, 537 miles; Sydney—Newcastle, 80 miles. Aircrafts Pty. Ltd.—Brisbane—Bundaberg, 200 miles; Brisbane—Rockhampton—Monto—Brisbane, 663 miles. Qantas Empire Airways Ltd.—Longreach—Charleville, 267 miles; Longreach—Rockhampton, 470 miles.

(d) *Air Ambulance Services.* The first air ambulance service in Australia was established in 1928 when an arrangement was entered into between the Queensland and Northern Territory Aerial Services Ltd. (now Qantas Empire Airways Ltd.) and the Australian Inland Mission. The company provides the aircraft and pilot, and the mission authorities provide the doctor. The base of operations is Cloncurry whence flights are made as required into Western and Northern Queensland. The scheme has continued to prove most successful, and many instances are recorded of lives being saved by the services thus made available. A notable feature in this work is the part played by wireless communication, consequent on the introduction of pedal transceivers. The power for these small wireless units is supplied by a dynamo operated by bicycle pedals, and morse messages may be sent out by manipulating an automatic keyboard transmitter like a typewriter. Up to about 200 miles, however, telephony may be used. By this means settlers in outlying districts may call the "flying doctor" and obtain his advice or, if necessary, request the air ambulance.

The "flying doctor" scheme has been extended to Western Australia. From the Wyndham base the service is maintained by the MacRobertson—Miller Aviation Co., which employs a D.H.83 aircraft specially fitted for ambulance work. This aircraft is employed on the regular Ord River—Wyndham air service, and is available for Australian Aerial Medical Service as required. The Victorian Section of the Australian Aerial Medical Service, with the aid of a small Commonwealth monetary grant, provides

a doctor and bears the cost of flying operations in this district. A further air ambulance is also available at Port Hedland, Western Australia, under the joint management of the MacRobertson-Miller Aviation Company and the Western Australian section of the Australian Aerial Medical Service. At Kalgoorlie similar work is undertaken by a local aircraft owner.

The outback districts of North Australia also have the benefit of a "flying doctor", as the Commonwealth Medical Officer at Katherine is a licensed pilot, and, by arrangement with the Government, he uses his aeroplane to visit patients at distant isolated centres.

With the assistance of a small Governmental subsidy the Far West (New South Wales) Children's Health Scheme maintains an "Aerial Baby Health Clinic" at Bourke and surrounding district. An aeroplane is chartered from a local owner, and is used for the conveyance of the clinic's nurse who interviews mothers and gives lectures at the centres visited. To facilitate its work, the clinic (with the aid of financial assistance from the New South Wales Government) has had aerodromes prepared in the territory over which periodical flights are carried out.

The Commonwealth Government recognizes the national importance and the incalculable benefits to "outback" settlers of this form of medical aid, and has decided to make available an annual grant of £5,000 towards the maintenance and extension of air ambulance services. The allocation of this money is made upon the recommendations of a committee representing the Health, the Postmaster-General's and the Civil Aviation Administrations.

6. **Gliding.**—Activities are carried out in various centres of the Commonwealth, but the sport is confined chiefly to Perth, Queensland and Melbourne, where local bodies are assisted in their operations by a small Governmental grant.

7. **Meteorological Aids to Aviation.**—Close co-operation exists between the meteorological authorities and aviation interests, with mutual advantage. Certain of the air transport companies operating regular services compile for the meteorological authorities logs of the weather conditions along their routes. In return, aviation interests obtain from the Weather Bureau regular weather reports and forecasts for the main air routes, while special information may be had at any time on request. Civil Aviation authorities have also made available special apparatus for upper air observations, and special observation flights have been conducted over a long period by the Royal Australian Air Force at Point Cook.

A meteorological station has been erected at Darwin, and regular weather forecasts and reports are supplied to Qantas Empire Airways Ltd. and the MacRobertson-Miller Aviation Company to facilitate the operation of the air services in North Australia, and across the Timor Sea. The information supplied includes upper air observations at Darwin.

Weather reports from Darwin are transmitted by Amalgamated Wireless (A/asia.) Ltd. which maintains a continuous W/T. watch over the movements of aircraft. The meteorological office at Darwin is thus enabled to keep in touch with the aircraft crossing the Timor Sea, and furnish up to date advice of weather conditions.

In June, 1935, agreement was reached between the Commonwealth Government and the Netherlands East Indies authorities for the free interchange of weather reports for the use of air services operating between Darwin and Singapore. Reports of the weather conditions at a number of centres in Netherlands East Indies are broadcast from Koepang (Timor) at 9.30 a.m. daily, the broadcast including also particulars of upper air observations at Koepang. Similarly, reports in respect of Darwin, Daly Waters, Wyndham, Broome and Port Hedland are broadcast from Darwin at 12.30 p.m. daily.

A considerable extension of meteorological aids for aviation has been decided on. The new scheme provides for the establishment of meteorological field units at terminal aerodromes and at other selected intermediate aerodromes along the principal air routes. Meteorological officers will be in touch with the control officers at each aerodrome, who will receive and transmit weather information to the pilots in flight through radio stations

at the aerodromes. The improved arrangements are to be introduced first on air routes between Brisbane, Sydney, Melbourne and Hobart and between Melbourne and Adelaide. Subsequent extensions will include Perth and a number of tropical stations in preparation for the Empire Flying Boat Service and the Sydney-New Guinea air routes. This new meteorological organization is expected to cost about £34,000 in the first year.

8. **Wireless.**—Increasing use has been made of wireless facilities as aids to navigation in the operation of the Melbourne-Hobart and Singapore-Darwin air services, and in the northern section of the Perth-Daly Waters service. D/F. wireless stations have been established at Essendon, Western Junction and Darwin aerodromes. Continuous wireless touch is now maintained between aircraft and ground stations on the Sydney-Melbourne-Hobart air route, over the whole of the overseas air route, and also whilst aircraft are traversing the sparsely populated section of the route between Cloncurry and Darwin.

As with meteorology a comprehensive radio organization has been approved for civil aviation. Briefly, the scheme consists of the establishment of ultra short wave radio beacons and communication and direction finding stations at terminal and intermediate aerodromes along the main regular air routes. As flying conditions are probably most difficult along the Sydney-Melbourne-Launceston air route, air services between these cities will be first catered for. Subsequently, facilities will be provided for the Sydney-Brisbane and Melbourne-Adelaide routes and thereafter the organization will be extended to other air routes throughout the Commonwealth. It is anticipated that equipment for the first mentioned route will be installed and in operation during 1937.

9. **Patrol Boat, Darwin.**—A fast petrol-driven motor boat capable of a speed of 20 knots and with a range of 900 miles was purchased by the Commonwealth Government in 1936 to render aid in the event of any aircraft being forced to alight in the Timor Sea. The boat is also employed for patrol duties in North Australian waters in connexion with the administration of the Department of the Interior.

10. **Aircraft Construction.**—During the past year production of the L.J.W.7 ("Gannet") twin-engined high-wing commercial monoplane, designed and manufactured by Tugan Aircraft Ltd. of Sydney, has continued. A further batch of six of these aircraft, which will bring the total number built to twelve, has recently been laid down. Two "Gannets" have been delivered to the Royal Australian Air Force, and the regular air mail service between Sydney and Broken Hill is operated with this type.

Tugan Aircraft Ltd. has been absorbed by the newly formed Commonwealth Aircraft Corporation Pty. Ltd., but operations are being carried on at the original Mascot factory pending completion of the corporation's extensive modern factory at Fisherman's Bend, Melbourne.

A new type of light single-engined high-wing cabin monoplane has been constructed by Mr. C. A. Butler, of Cootamundra, and will shortly be flight tested. This machine has side by side seats for two, and is fitted with a Cirrus Minor engine.

The activity noted in the previous issue of this publication in connexion with the local manufacture of aircraft materials and components has increased considerably in the past twelve months.

A striking illustration of this increase is afforded by the growing number of manufacturers who have been authorized by the Civil Aviation Board for the issue of release notes, covering such of their products as are intended for incorporation in aircraft in course of construction, or undergoing repair, certifying to their compliance with approved specifications or designs. Approximately twenty firms have already been authorized for this purpose. These include firms manufacturing materials either to standard specifications or to such specifications of the manufacture as have been approved by the Civil Aviation Board, firms manufacturing components to approved drawings, and firms importing aircraft products under release notes from the manufacturer in the country of origin, for resale locally.

This system of ensuring the use of approved materials is assuming considerable importance with the rapid growth of activity in Australian aviation, and the work of administration is steadily increasing in volume.

11. Aircraft Imports.—The following table shows the number of aircraft imported into the Commonwealth and Territory of New Guinea during the past five years:—

Year.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37. (To 30th April, 1937.)
Number of aircraft imported	14	15	48	60	38

As a result of the decision of the Commonwealth Government in 1936 to permit the entry of American and other foreign aircraft 21 aircraft of foreign manufacture have been imported into Australia and the Territories, representing 13 types of aircraft ranging from light training aircraft, such as the Taylor "Cub" and Porterfield types to the large multi-engined transport aircraft represented by the Douglas D.C.2 and Lockheed Electra types.

12. Training of Air Pilots.—(i) *The Associated Aero Clubs.* These clubs provide facilities in all States for flying instruction and practice. During the year ended 30th April, 1937, 180 pupils qualified for private ("A") pilot's licences. Many graduates have completed advanced courses of training, gained their commercial ("B") licences and now own aircraft. Other pupils have qualified as instructors.

The Commonwealth Government grants assistance to the clubs by providing hangar accommodation, the free use of aerodromes, suitable club houses which are leased to the clubs, and bonuses for each pupil trained to a standard that will enable him to obtain a private ("A") pilot's licence. Bonuses are also paid to the clubs in respect of the renewal of pilots' licences of club members, and each club receives a maintenance grant and an establishment grant conditional on a prescribed number of aircraft being maintained in an airworthy condition and a prescribed amount of flying being performed each year. Included in the aircraft fleets of the several clubs are a number of D.H.60 ("Moth") machines, which were originally loaned by the Commonwealth Government but have now been handed over to the clubs.

Originally instruction was confined to the capital cities, but operations have now been extended by the clubs to a certain number of provincial centres where aircraft and instructors are made available as required.

Aviation pageants are held from time to time by the various Aero Clubs, both at their base cities and at country centres, and have had a valuable educative effect in stimulating interest in aviation.

(ii) *Other Organizations.* Flying training is also carried out intermittently by companies, clubs, or private owners at various centres throughout the Commonwealth. These do not receive Government subsidy.

During the year ended 30th April, 1937, 130 pupils graduated for "A" pilots' licences, making a total of 310 pilots from all training organizations.

13. Notable Flights.—Many notable long distance flights have been carried out by Australian pilots. Short accounts of those prior to the year under review are contained in previous issues of the Year Book. (See No. 21 and subsequent issues.)

The outstanding flight during the past year was that of Miss Jean Batten, who, in a Percival Gull aircraft, flew from England to Australia in 5 days 21 hours. This constituted a record for a solo flight between the two countries. Miss Batten subsequently flew across the Tasman Sea from Richmond, New South Wales, to New Plymouth, New Zealand in 9½ hours.

On the 6th October, 1936, a British Monospar aircraft, with a crew of four, on a return flight to England made the journey from Melbourne to Darwin in about 14 hours. The party, however, met with misadventure the following day whilst en route from Darwin to Koepang. Fortunately a forced landing was effected on a small reef in the Timor Sea, some 500 miles west of Darwin. The party was rescued by a small native sailing vessel and some 30 hours later picked up by a merchant ship bound for Durban.

14. Statistical Summary.—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st

July, 1922. The subjoined table gives a summary of operations for the years ended 30th June, 1932 to 1936:—

CIVIL AVIATION.—AUSTRALIA.—SUMMARY.

Particulars.	Year ended 30th June—				
	1932.	1933.	1934.	1935.	1936.
Registered Aircraft Owners					
(a) No.	115	115	114	123	124
Registered Aircraft (a) No.	189	197	188	208	228
Licensed Pilots—(a)					
Private .. . No.	363	370	429	569	714
Commercial .. No.	183	184	201	210	236
Licensed Navigators (a) No.	..	..	..	13	22
Licensed Aircraft Radio Telegraph Operators (a) No.	..	..	..	7	8
Licensed Aircraft Radio Telephone Operators (a) No.	..	..	..	..	7
Licensed Ground Engineers (a) No.	277	272	261	297	295
Aerodromes—(a)					
Government .. . No.	58	59	64	65	63
Public No.	96	114	126	146	171
Government Emergency Grounds .. . No.	121	119	135	138	148
Flights carried out .. . No.	96,192	85,346	89,894	114,947	129,396
Hours flown No.	31,959	31,883	35,487	45,693	62,479
Approx. Mileage .. . Miles	2,527,700	2,587,389	3,061,449	3,854,424	5,819,751
Passengers carried—					
Paying No.	56,883	58,155	54,119	45,540	60,476
Non-paying .. . No.	13,771	12,949	10,117	11,743	14,643
Total No.	70,654	71,104	64,236	57,283	75,119
Goods, weight carried (b) lb.	221,552	244,258	296,983	249,415	442,407
Mails, weight carried lb.	29,494	30,212	43,627	67,908	121,187
Accidents—					
Persons killed .. . No.	7	5	10	28	20
Persons injured .. . No.	17	6	12	10	6

(a) At 30th June. (b) Prior to 1935 stage freight has been included in some instances in South Australia and Western Australia.

Separate particulars of flying over the Darwin-Singapore Section of the Imperial Airways route, also included in the above table, are shown below:—

Period.	Number of Flights. (a)	Hours Flown.	Approximate Mileage.	Total Passengers Carried.	Weight of Goods Carried.	Weight of Mail Carried.
December, 1934, to June, 1935	61	1,186	140,706	49	lb. 1,019	lb. 24,828
Year ended June, 1936	117	2,159	290,542	177	8,564	69,436

(a) The distance between Darwin and Singapore is here regarded as a single flight.

Preliminary figures relating to the Operations of Civil Aircraft in Australia during the year 1936-37 will be found in the Appendix to this volume.

15. **New Guinea Activities.**—The discovery of gold in New Guinea in 1927 resulted in considerable aviation activity in the vicinity of the gold-fields, which, by ground route, are situated about 70 miles inland from Salamaua, on the north-east coast of the mainland of New Guinea. The value of aircraft as a means of transporting food and stores to the field and of bringing the gold to the seaboard is shown by the fact that, whereas aircraft cover the distance in less than one hour, the nature of the intervening

country is such that a journey by other means occupies more than a week. Specially constructed freight machines are employed for the transportation of dredging machinery and other heavy material to the Bulolo fields. Horses, cattle, motor cars, building material and various kinds of heavy freight are continually being carried inland from the coast in aircraft, and such activity constitutes one of the most notable feats of transport in the history of aviation. Inward mails are carried by Guinea Airways Ltd., under arrangement with the Postmaster-General's Department, from Port Moresby to Wau, Lae and Bulolo. The air mail fee is 1½d. per ounce in addition to the ordinary postage, plus 3d. per half-ounce (air mail surcharge) if an Australian air service is also used. Mails are carried by W. R. Carpenter and Co. Ltd. under arrangement with the New Guinea Administration from Salamaua to Wau and other inland mining centres. None of the air services operating in the Territory is subsidized by the Commonwealth Government, but the latter Company and the Pacific Aerial Transport Ltd. hold contracts with the New Guinea Administration for the provision of air transport for Administration passengers and goods between the coast and the gold-fields. Several new aerodromes have been prepared in the Territory and there has been an increase in aviation activities generally. The Companies and persons operating in New Guinea are:—Guinea Airways Ltd.; Holden's Air Transport Services Ltd.; Pacific Aerial Transport Ltd.; W. R. Carpenter and Co. Ltd.; Salamaua Aerial Services; Bulolo Gold Dredging Ltd.; E. J. Stephens Aviation; Lutheran Mission, Finschhafen; Catholic Mission, Alexishafen; and R. J. Parer. The subjoined table gives a summary of operations for the years ended 30th June, 1932 to 1936.

CIVIL AVIATION.—TERRITORY OF NEW GUINEA.—SUMMARY.

Particulars.	Year ended 30th June—					
	1932.	1933.	1934.	1935.	1936.	
Registered Aircraft Owners						
(a) No.	6	5	10	9	12	
Registered Aircraft (a) No.	15	19	26	25	38	
Licensed Pilots—(a)						
Private .. . No.	2	1	4	3	5	
Commercial .. No.	16	21	24	27	27	
Licensed Navigators (a) No.	..	..	..	1	1
Licensed Ground Engineers						
(a) No.	30	30	37	42	41	
Aerodromes—(a)						
Government .. No.	2	2	3	3	15	
Public No.	..	..	3	5	15
Government Emergency						
Landing Grounds No.	3	3	15	3	6	
Flights carried out	No.	4,664	7,228	9,877	14,710	21,934
Hours flown .. . No.	5,160	8,499	10,061	13,022	18,114	
Approximate mileage	Miles	424,232	680,871	811,440	1,094,308	1,486,983
Passengers carried—						
Paying No.	3,450	6,948	10,799	14,200	15,943	
Non-paying .. No.	31	93	209	203	616	
Total No.	3,481	7,041	11,008	14,403	16,559	
Goods, weight carried	lb.	9,778,072	10,982,936	14,985,723	17,447,746	21,883,413
Mails, weight carried	lb.	23,394	47,097	90,046	97,889	128,982
Accidents—						
Persons killed	No.	..	2	..	2	1
Persons injured	No.	1	3	..

(a) At 30th June.

Preliminary figures relating to the Operations of Civil Aircraft in New Guinea during the year 1936-37 will be found in the Appendix to this volume.

E. MOTOR VEHICLES.

1. **The Motor Car and Motor Industry.**—(i) *Evolution of the Motor Car.* In the issue of the Year Book for 1927 (No. 20, p. 319) a short history of the evolution of the motor car is given.

(ii) *Motor Industry.* Although motor cars are not entirely manufactured in Australia, the capital invested in assembling and body building plants is considerable. The importance of the industry is shown by the figures relating to local manufacture of motor bodies and imports of motor cars and fuel which are given in the following table for the years 1931-32 to 1935-36 :—

**MOTOR BODIES BUILT, AND BODIES, CHASSIS AND FUELS IMPORTED—
AUSTRALIA.**

Particulars.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
Motor bodies built in Australia .. No.	6,323	13,532	26,302	45,445	67,337
Motor bodies imported .. Value £	450,510	1,100,504	2,112,439	4,180,586	6,043,735
Motor bodies imported .. No.	61	108	1,116	2,215	1,699
Motor bodies imported .. Value £	7,360	12,233	86,899	179,558	149,593
Chassis imported .. No.	4,146	15,776	32,924	53,975	75,652
Chassis imported .. Value £	355,415	1,306,830	2,528,969	4,096,760	5,507,957
Fuels imported—					
Crude petroleum .. Million gallons	49	58	58	55	65
Crude petroleum .. Value £	448,651	486,302	488,341	460,781	539,693
Petroleum spirit, etc. .. Million gallons	156	181	208	212	255
Petroleum spirit, etc. .. Value £	2,622,474	3,218,209	2,852,649	2,706,474	3,792,950

The value of the tyres both locally produced and imported, for which figures are, however, not available, must also be taken into consideration, particularly as the prevailing practice is for distributors to retail cars on a five-tyre basis. Spares, batteries, accessories, etc., are additional items for which there is a wide market in Australia.

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 up to No. 25.

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. The regulation of traffic of motor vehicles has arisen from the belief that the economic waste arising from duplication of services parallel with or contiguous to existing railway and tramway systems is thus 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. In some States the various railway and tramway systems have motor services complementary to their main services. Such services are conducted in New South Wales by the Department of Road Transport and Tramways, in Victoria by the Victorian Railways Commissioners, in South Australia by the South Australian Railways Commissioners and by the Municipal Tramways Trust, Adelaide, and in Tasmania by the Municipality of Hobart. In most instances the omnibus service has been provided to meet the competition of private enterprise and to endeavour to protect the existing transport utilities provided by public bodies.

5. Motor Vehicles Registered, etc.—(i) Year 1935-36. Particulars of the registration of motor vehicles, etc., for the year 1935-36 are contained in the subjoined table:—

MOTOR VEHICLES.—SUMMARY, 1935-36.

State or Territory.	Motor Vehicles Registered. (a)					Drivers' and Riders' Licences Issued.	Gross Revenue derived from—			
	Motor Cars. (b)	Commercial Vehicles (c)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June, 1936.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.		£	£	£	£
New South Wales ..	178,402	58,895	23,048	260,345	97.7	367,710	1,908,936	188,917	86,932	2,184,785
Victoria ..	143,330	50,508	26,095	219,925	119.1	280,486	1,479,081	72,276	41,568	1,592,925
Queensland ..	67,605	32,410	8,151	108,166	110.3	135,340	628,864	52,007	46,605	727,476
South Australia ..	47,501	16,836	9,261	73,601	125.3	92,227	576,312	42,200	8,081	626,593
Western Australia ..	32,329	17,362	6,861	56,552	125.6	65,912	303,242	16,593	22,363	342,198
Tasmania ..	14,036	3,639	3,920	21,595	91.1	25,358	111,122	12,685	10,353	134,160
Northern Territory ..	354	631	40	1,025	192.9	1,933	1,245	468	..	1,713
Federal Capital Territory ..	1,275	294	88	1,657	169.4	2,277	9,086	1,176	47	10,309
Australia ..	484,832	180,567	77,467	742,866	109.6	979,343	5,017,888	386,322	215,949	5,620,159

(a) Exclusive of Trailers (10,276), Road Tractors, etc. (1,102), and Dealers' Plates (4,054). (b) Includes Taxis and Hire Cars. (c) Includes Lorries, Vans, Buses and Utility Trucks.

Particulars relating to the numbers of Motor Vehicles Registered at 30th June, 1937, will be found in the Appendix to this volume.

(ii) *Quinquennium* 1932-1936. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1931-32 to 1935-36:—

MOTOR VEHICLES.—REGISTRATIONS, ETC., AUSTRALIA.

Year.	Motor Vehicles Registered.					Drivers' and Riders' Licences Issued.	(b) Revenue derived from—			
	Motor Cars.	Commercial Vehicles.	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
							£	£	£	£
1931-32	419,970	a 96,254	71,696	587,920	89.4	754,839	3,717,707	305,175	..	4,022,882
1932-33	438,499	a 105,837	72,896	617,232	93.1	760,973	3,847,934	303,909	..	4,151,843
1933-34	455,199	a 116,341	73,104	644,644	96.6	863,982	4,154,331	341,685	107,080	4,603,096
1934-35	457,684	155,721	75,045	688,450	102.4	910,218	4,507,034	363,194	153,586	5,023,814
1935-36	484,832	180,567	77,467	742,866	109.6	979,343	5,017,888	386,322	215,949	5,620,159

(a) Incomplete, Queensland commercial vehicles included with motor cars. (b) Prior to the year 1933-34 the figures purporting to show the revenue collected were not uniform throughout the States.

(iii) *Relation to Population.* The table hereunder gives the number of vehicles (exclusive of motor cycles) registered per 1,000 of population at 30th June, in each State for each of the years 1921 and 1932 to 1936:—

MOTOR VEHICLES (EXCLUSIVE OF MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Federal Capital Territory.	Australia.
31st Dec., 1921	15	16	8	24	12	13	(a)	(a)	15
30th June, 1932	73	81	83	85	96	61	119	134	79
" 1933	77	86	86	88	92	62	131	135	82
" 1934	78	90	89	99	97	65	129	143	86
" 1935	83	97	96	98	105	70	95	148	91
" 1936	89	105	102	110	110	77	185	160	98

(a) Not available.

(iv) *Revenue per Motor Vehicle.* The following table gives the approximate average revenue per vehicle (exclusive of motor cycles) received in respect of registration and motor tax in the several States for each year from 1931-32 to 1935-36. In some States the revenue from motor tax on cycles is not separately recorded. In these cases the flat rate provided for cycles in the registration acts has been applied, and the average amounts shown must therefore be regarded as approximate only.

AVERAGE REVENUE PER VEHICLE FROM REGISTRATION FEES AND MOTOR TAX (EXCLUSIVE OF MOTOR CYCLES).

State or Territory.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	7 6 8	6 16 5	7 6 5	7 11 0	7 14 2
Victoria	6 17 5	6 17 8	7 0 2	7 3 5	7 5 11
Queensland	5 19 10	5 17 3	6 1 3	5 18 8	6 0 8
South Australia	8 16 8	8 13 1	7 19 2	8 11 11	8 8 6
Western Australia	6 3 8	6 3 4	6 4 10	5 17 5	5 16 11
Tasmania	5 14 1	5 14 3	5 14 3	5 15 0	5 14 3
Northern Territory	(a) 1 0 0	(a) 1 0 0	(a) 1 0 0	(a) 1 0 0	1 5 0
Federal Capital Territory	5 8 9	5 4 2	5 3 9	5 12 1	5 12 2
Australia	6 19 10	6 15 7	6 19 6	7 2 2	7 4 0

(a) Estimated.

6. **World Motor Vehicle Statistics, 1937.**—The result of the 1937 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were 39,821,927 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1937. This shows an increase of 6.9 per cent. on the figure for the previous year, 37,234,731, and is the highest figure yet attained.

The following table shows the numbers of motor vehicles registered in each continent at 1st January, 1937 :—

MOTOR VEHICLES—WORLD REGISTRATIONS AT 1st JANUARY, 1937.

Continent, etc.	Total Automobiles.	Motor Cars.	Motor Trucks and Buses.(a)	Motor Cycles.(a)
Africa	519,492	417,373	98,139	52,613
America (exclusive of United States of America)	2,005,521	1,586,321	419,150	20,866
United States of America	28,086,380	24,168,329	3,918,051	100,320
Asia	622,159	379,710	242,449	89,721
Europe	7,626,533	5,345,315	2,156,218	2,196,353
Oceania	961,842	724,092	237,150	100,036
Total	39,821,927	32,621,140	7,071,157	2,559,909

(a) Incomplete, except in relation to United States of America.

The next table gives particulars of the numbers of motor vehicles registered in various countries, together with their approximate populations for the purposes of comparison :—

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1937.

Country.	Approximate Population in Millions.	Motor Cars, Trucks and Buses.	Motor Cycles.
Australia	7	690,000	77,000
Argentina	12	276,403	..
Canada	11	1,221,587	10,913
France	42	2,100,000	..
Germany	65	1,243,084	1,184,081
Great Britain	47	2,128,036	479,075
India	353	166,611	13,476
Italy	43	415,000	145,000
Japanese Empire.. .. .	97	147,200	52,000
New Zealand	2	214,849	22,347
Union of South Africa	8	280,225	31,000
United States of America	126	28,086,380	100,320

The foregoing figures are in some cases approximations based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries, and in other cases are incomplete, especially in relation to motor cycles.

F. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. General.

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. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy Director, Posts and Telegraphs.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The subjoined statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) in each State and in Australia at the 30th June, 1936. 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. 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 FACILITIES.—RELATION TO AREA AND POPULATION,
AT 30th JUNE, 1936.**

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
Number of post offices (a) ..	2,472	2,537	1,216	784	597	508	8,114
Number of square miles of territory to each office in State ..	126	35	552	1,153	1,635	52	367
Number of inhabitants to each office	1,082	728	807	756	754	452	835
Number of inhabitants per 100 square miles ..	862	2,101	146	66	46	876	228

(a) Includes "Official," "Semi-Official," and "Non-Official" Offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices in each State from 1906 to 1935-36 :—

POST OFFICES—NUMBER.

State.	At 31st December—		At 30th June—							
	1906.		1916.		1926.		1935.		1936.	
	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)	Official and Semi-Official Post Offices.	Non-Official Post Offices. (a)
New South Wales	2,288		500	2,140	458	2,221	432	2,019	429	2,043
Victoria ..	2,316		293	2,366	285	2,429	273	2,263	269	2,268
Queensland ..	1,354		212	1,119	216	1,068	187	1,020	187	1,029
South Australia ..	713		147	697	148	660	144	635	143	641
Western Australia	338		154	459	139	593	125	466	126	471
Tasmania ..	392		51	427	48	475	42	466	42	466
Australia ..	7,401		1,357	7,208	1,294	7,446	1,203	6,869	1,196	6,918

(a) Includes offices previously designated as "Allowance" and "Receiving" Offices.

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

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

State.	At 31st December—		At 30th June—							
	1906.		1916.		1926.		1935.		1936.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	(a)	..	(a)	..	130	..	226	..	255	..
New South Wales	5,943	1,037	13,166	1,899	14,244	1,924	13,289	2,030	14,319	2,371
Victoria ..	4,896	919	8,840	1,152	11,226	1,156	10,545	1,017	10,906	941
Queensland ..	2,610	630	4,162	806	6,181	850	5,139	1,253	5,430	1,280
South Australia ..	1,734	255	2,816	348	4,275	424	3,393	311	3,538	363
Western Australia ..	1,941	152	2,558	284	2,986	379	2,813	385	2,959	369
Tasmania ..	811	164	1,275	224	1,615	247	1,536	218	1,480	232
Australia ..	17,935	3,157	32,817	4,713	40,657	4,980	36,941	5,214	38,887	5,556

(a) Included in Victorian Staff.

3. *Gross Revenue, Postmaster-General's Department.—Branches.* The gross revenue (actual collections) in respect of each branch of the Department during each of the last five years is shown in the table hereunder :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPARTMENT.—BRANCHES.

Branch and Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Postal Branch—	£	£	£	£	£	£	£
1931-32 ..	2,305,557	1,583,136	841,602	435,526	381,113	162,695	5,709,629
1932-33 ..	2,340,889	1,620,972	862,051	462,520	397,253	162,112	5,845,797
1933-34 ..	2,431,342	1,673,812	872,913	462,634	402,083	164,630	6,007,414
1934-35 ..	2,556,985	1,765,381	917,172	469,015	433,302	176,576	6,318,431
1935-36 ..	2,704,976	1,849,667	959,010	503,578	451,793	192,714	6,661,648
Telegraph Branch—							
1931-32 ..	373,139	242,195	194,508	136,321	103,713	36,084	1,085,960
1932-33 ..	358,214	251,097	195,328	136,145	112,154	38,885	1,091,823
1933-34 ..	378,656	263,904	202,579	131,086	120,318	40,385	1,136,928
1934-35 ..	432,771	301,896	222,010	118,533	141,403	43,773	1,260,388
1935-36 ..	442,688	321,752	224,597	112,047	144,933	43,755	1,289,772
Wireless Branch—							
1931-32 ..	63,384	65,545	12,600	16,870	5,524	4,274	168,197
1932-33 ..	79,702	77,567	15,728	22,698	8,843	5,596	210,134
1933-34 ..	127,453	118,626	28,169	36,250	17,130	9,229	336,857
1934-35 ..	133,177	110,328	29,029	36,363	10,287	9,509	338,593
1935-36 ..	141,337	117,660	35,082	39,096	11,858	10,844	365,877
Telephone Branch—							
1931-32 ..	2,089,555	1,555,437	792,607	529,790	297,713	134,263	5,399,365
1932-33 ..	2,092,461	1,595,977	787,597	534,157	301,418	134,228	5,445,838
1933-34 ..	2,202,273	1,647,403	818,981	535,158	308,490	135,662	5,647,972
1934-35 ..	2,360,656	1,749,660	884,147	502,999	328,271	141,785	6,027,518
1935-36 ..	2,582,680	1,891,547	945,920	594,140	356,107	151,344	6,521,747
All Branches—							
1931-32 ..	4,831,635	3,446,313	1,841,317	1,118,507	788,063	337,316	12,363,151
1932-33 ..	4,871,266	3,545,613	1,860,704	1,155,520	819,668	340,821	12,593,592
1933-34 ..	5,139,724	3,703,750	1,922,642	1,165,128	848,021	349,906	13,129,171
1934-35 ..	5,483,589	3,927,267	2,053,258	1,186,910	922,263	371,643	13,944,930
1935-36 ..	5,871,681	4,180,626	2,164,618	1,248,861	974,601	398,657	14,839,044
Total Revenue per head of mean population—							
1931-32 ..	1.88	1.91	1.98	1.92	1.82	1.49	1.89
1932-33 ..	1.87	1.95	1.98	1.98	1.88	1.50	1.91
1933-34 ..	1.96	2.03	2.02	1.98	1.93	1.53	1.97
1934-35 ..	2.07	2.14	2.14	2.01	2.08	1.62	2.08
1935-36 ..	2.20	2.27	2.23	2.11	2.18	1.73	2.20

Compared with the corresponding figures for the previous year, an increase of 6.4 per cent. is shown in the gross revenue earned, the increases in the several branches being as follows:—Postal 5.4 per cent., Telegraph 2.3 per cent., Wireless 8.1 per cent., and Telephone 8.2 per cent.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of actual expenditure on various items in each State during the year ended 30th June, 1936. 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, 1935-36.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£	£
Expenditure from Ordinary Votes—								
Salaries and payments in the nature of salary ..	47,458	1,832,749	1,302,031	693,774	458,967	351,824	174,420	4,861,223
General expenses ..	9,539	147,670	103,421	34,405	39,985	23,152	10,419	359,591
Stores and material ..	1,345	63,468	35,003	20,455	13,752	10,811	4,791	149,625
Mail services ..	198,039	398,598	244,544	204,350	67,273	81,039	34,725	1,228,568
Engineering services (other than New Works) ..	50,310	908,646	654,197	325,470	244,260	172,383	111,323	2,466,589
Other services ..	139,820	..	..	..	..	..	..	139,820
Total ..	446,511	3,351,131	2,339,196	1,278,454	815,237	639,209	335,678	9,205,416
Pensions and retiring allowances ..	..	33,294	32,845	..	..	23,659	..	89,798
Rent, repairs, maintenance, fittings, &c. ..	..	37,410	34,146	16,265	6,912	6,480	2,652	103,865
Proportion of audit expenses ..	..	4,005	2,767	1,458	888	672	350	10,140
Interest on transferred properties ..	..	114,328	61,362	45,575	37,523	21,869	9,924	290,581
New Works—								
Telegraph, telephone and wireless ..	..	671,720	700,253	135,124	77,784	112,150	60,126	1,757,157
New buildings, &c. ..	..	20,713	73,156	21,334	3,705	22,500	1,945	143,353
Other expenditure not allocated to States ..	2,824,078 (b)	..	..	..	..	..	..	2,824,078
Total ..	3,270,589 (c)	4,232,601	3,243,725	1,498,210	942,049	826,539	410,675	14,424,388 (r)

(a) Orient Steam Navigation Company's Overseas Mail contract and expenditure on air mail services.
 (b) Particulars of apportionment to States not available. (c) Including expenditure not apportioned to States.

(ii) *Total, 1932 to 1936.* 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, 1932 to 1936 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPARTMENT.

Expenditure.	Year ended 30th June—				
	1932.	1933.	1934.	1935.	1936.
Total	£ 12,196,307	£ 12,165,210	£ 12,288,173	£ 13,458,581	£ 14,424,388

The total expenditure increased by 7.2 per cent. during 1935-36.

5. Profit or Loss, Postmaster-General's Department.—(i) States, 1935-36. The foregoing statements of gross revenue and expenditure represent actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States after providing for working expenses, depreciation and interest charges, including exchange, during the year, were as follows :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1935-36.

Branch.	Profit or Loss.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
		£	£	£	£	£	£	£
Postal ..	{ Profit	795,681	614,232	288,401	135,742	98,605	15,724	1,948,385
	{ Loss	..	..	..	..	..	..	..
Telegraph ..	{ Profit	2,604	53,293	7,070	..	12,380	40	64,993
	{ Loss	..	..	..	10,394	..	..	..
Wireless ..	{ Profit	51,697	39,942	..	7,085	984	..	86,184
	{ Loss	..	..	1,740	..	..	11,784	..
Telephone ..	{ Profit	486,352	296,283	185,034	..	3,307	..	884,423
	{ Loss	..	..	..	34,023	..	52,530	..
All Branches	{ Profit	1,336,334	1,003,750	478,765	98,410	115,276	..	2,983,985
	{ Loss	..	..	..	..	..	48,550	..

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1935-36 closed with a surplus of £2,983,985. For the preceding year a surplus of £2,407,973 was shown.

(ii) Branches, 1932 to 1936. The following statement gives particulars of the operating results of each branch for the period 1932 to 1936 :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT—BRANCHES.

Year Ended 30th June—	Branch.									
	Postal.		Telegraph.		Wireless.		Telephone.		All Branches.	
	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.
	£	£	£	£	£	£	£	£	£	£
1932 ..	1,267,534	..	..	183,367	30,932	..	..	379,090	736,009	..
1933 ..	1,471,685	..	..	101,588	22,796	..	..	200,275	1,192,618	..
1934 ..	1,684,608	..	..	41,012	87,235	..	269,273	..	2,000,104	..
1935 ..	1,828,279	..	15,019	..	162,343	..	402,332	..	2,407,973	..
1936 ..	1,918,385	..	64,993	..	86,184	..	884,423	..	2,983,985	..

6. Capital Account.—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1936 :—

FIXED ASSETS, POSTMASTER-GENERAL'S DEPARTMENT, 30th JUNE, 1936.

Particulars.	Net Value, 1st July, 1935.	Capital Expenditure, 1935-36.	Gross Value, 30th June, 1936.	Less Deprecia- tion, &c. 1935-36. (a)	Net Value, 30th June, 1936.
	£	£	£	£	£
Telephone service plant (exclusive of Trunk lines) ..	32,963,326	1,974,139	34,937,465	624,319	34,313,146
Trunk and Telegraph service plant (Aerial Wires) ..	10,323,468	194,271	10,517,739	80,322	10,437,417
Telegraph service plant ..	642,995	24,119	667,114	7,020	660,094
Postal service plant ..	414,555	7,547	422,102	2,505	419,597
Wireless plant ..	267,050	33,485	300,535	1,511	299,024
Sites, buildings, furniture and office equipment ..	9,401,058	173,952	9,575,010	14,253	9,560,757
Miscellaneous plant ..	617,628	79,620	697,248	37,343	659,905
Total ..	54,627,080	2,487,133	57,114,213	767,273	56,346,940

(a) Includes dismantled assets, depreciation written off, and assets transferred.

During the past quinquennium the value of the fixed assets has increased by 7.6 per cent., the net value at 30th June, 1931, being £52,350,888.

§ 2. Posts.

1. Postal Matter Dealt With.—(i) *Australia*. The following table gives a summary of the postal matter dealt with in Australia during the five years 1932 to 1936. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the following table, which consequently gives the number of distinct articles handled :—

POSTAL MATTER DEALT WITH—AUSTRALIA.

Year ended 30th June—	Letters, Postcards, Letter Cards and Packets.		Newspapers.		Parcels.		Registered Articles other than 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.
1932	677,847	103,437	118,906	18,145	8,841	1,349	6,096	930
1933	699,932	105,974	118,357	17,920	8,661	1,311	6,093	923
1934	733,506	110,217	121,600	18,272	8,549	1,285	6,223	935
1935	752,112	112,215	125,088	18,663	8,456	1,262	6,576	981
1936	777,872	115,225	129,807	19,228	8,605	1,275	6,815	1,009

POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.

1932	677,847	103,437	118,906	18,145	8,841	1,349	6,096	930
1933	699,932	105,974	118,357	17,920	8,661	1,311	6,093	923
1934	733,506	110,217	121,600	18,272	8,549	1,285	6,223	935
1935	752,112	112,215	125,088	18,663	8,456	1,262	6,576	981
1936	777,872	115,225	129,807	19,228	8,605	1,275	6,815	1,009

TOTAL POSTAL MATTER DEALT WITH.

1932	731,134	111,569	139,502	21,288	9,203	1,404	6,731	1,027
1933	751,777	112,963	139,963	21,031	9,044	1,369	6,710	1,016
1934	790,166	118,731	142,040	21,343	8,942	1,344	6,870	1,032
1935	809,729	120,812	147,662	22,031	8,876	1,324	7,273	1,085
1936	835,088	123,700	151,272	22,408	9,058	1,342	7,539	1,117

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1935-36.

POSTAL MATTER DEALT WITH—STATES. 1935-36. (a)

State.	Letters, Postcards, Letter Cards and Packets.		Newspapers.		Parcels.		Registered Articles, other than 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	305,912	114,744	62,563	23,467	3,600	1,350	2,567	963
Victoria ..	226,814	123,057	26,553	14,406	1,740	944	1,874	1,017
Queensland ..	100,496	103,371	21,616	22,234	1,635	1,682	1,014	1,043
South Australia ..	56,403	95,378	7,035	11,896	813	1,375	541	915
Western Australia	52,413	117,031	6,143	13,716	685	1,530	560	1,250
Tasmania ..	35,834	155,607	5,897	25,607	132	573	259	1,125
Australia ..	777,872	115,225	129,807	19,228	8,605	1,275	6,815	1,009

OVERSEA DISPATCHED.

New South Wales	9,723	3,647	2,148	806	102	38	146	55
Victoria ..	7,680	4,167	3,166	1,718	47	25	85	46
Queensland ..	2,696	2,773	739	760	16	16	39	40
South Australia ..	2,392	4,045	357	604	8	14	19	32
Western Australia	3,287	7,339	499	1,114	11	25	26	58
Tasmania ..	2,924	12,697	220	955	3	13	3	13
Australia ..	28,702	4,252	7,129	1,056	187	28	318	47

OVERSEA RECEIVED.

New South Wales	11,103	4,165	6,967	2,613	124	47	196	74
Victoria ..	8,832	4,792	2,792	1,515	79	43	127	69
Queensland ..	1,930	1,985	1,108	1,140	21	22	24	35
South Australia ..	1,697	2,870	999	1,689	16	27	16	27
Western Australia	3,600	8,038	1,981	4,423	21	47	36	58
Tasmania ..	1,352	5,871	489	2,123	5	22	7	30
Australia ..	28,514	4,224	14,336	2,124	266	39	406	60

(a) See explanation in paragraph (1).

2. *Value—Payable Parcel 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 1932 to 1936 :—

VALUE-PAYABLE PARCEL POST.—SUMMARY.

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.
1932	280,589	37,144	182,902	25,315	80,330	714	606,994
1933	289,975	37,567	210,992	23,559	79,820	1,711	643,624
1934	305,972	40,769	204,459	21,309	79,030	1,782	653,321
1935	309,024	36,959	200,358	19,940	76,174	1,720	644,175
1936	324,800	39,700	192,539	20,340	76,946	2,023	656,348
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1932	331,328	47,481	230,761	26,931	83,973	920	721,394
1933	343,155	49,392	261,183	24,704	81,029	1,980	761,443
1934	377,752	55,325	248,002	22,502	83,524	1,970	789,955
1935	364,750	50,469	244,829	19,965	83,364	1,936	765,313
1936	389,595	55,577	236,608	22,347	81,538	2,597	788,262

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

	£	£	£	£	£	£	£
1932	36,606	4,787	23,962	3,088	9,450	90	77,983
1933	37,555	4,952	25,723	3,031	9,867	212	81,340
1934	40,356	5,460	26,947	2,827	10,452	213	86,255
1935	39,653	5,012	24,623	2,307	8,912	215	80,722
1936	43,285	5,334	24,830	2,546	8,775	242	85,012

The number and value of parcels forwarded in New South Wales and Queensland are much higher than in any of the other States, although the system has also found favour 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 also has a large area, the population of that State is, comparatively, not widely spread.

3. *Sea-borne Mail Services.*—(i) *General.* In earlier issues of this work particulars of sea-borne mail services were included, but owing to the restrictions of space the insertion of this information terminated with Year Book No. 22.

(ii) *Amount of 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, 1936 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1935-36.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£	£	£	£	£
Annual subsidy	110,000	975	4,700	5,500	55,457

4. *Total Cost of Carriage of Mails.*—During the year 1935-36 the amount paid for overseas conveyance of mails at poundage rates by non-contract vessels and on account

of other countries' services was £34,487; by inland services, £533,674; and by railway services, £413,136. The total expenditure during the financial year 1935-36 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,228,209.

5. **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 1935-36, and the methods adopted in the disposal thereof:—

DEAD LETTER OFFICES.—SUMMARY, 1935-36.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS AND LETTER-CARDS.							
Returned direct to writers or delivered	986,295	228,293	156,766	73,032	111,401	70,626	1,626,413
Destroyed in accordance with Act	67,827	43,852	14,804	9,408	4,136	3,282	143,309
Returned to other States or Countries as unclaimed	42,129	19,480	11,632	5,380	9,929	1,032	89,582
Total	1,096,251	291,625	183,202	87,820	125,466	74,940	1,859,304
PACKETS AND CIRCULARS.							
Returned direct to writers or delivered	833,708	117,044	181,135	10,623	68,626	27,564	1,238,700
Destroyed in accordance with Act	82,237	25,740	26,335	8,110	7,126	1,104	150,652
Returned to other States or Countries as unclaimed	1,927	5,121	4,419	2,021	578	3,462	17,528
Total	917,872	147,905	211,889	20,754	76,330	32,130	1,406,880
Grand Total (letters, packets, etc.)	2,014,123	439,530	395,091	108,574	201,796	107,070	3,266,184

During the year 1935-36 money and valuables to the amount of £73,619 were found in undeliverable postal articles.

6. **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) *States, 1935-36.* Particulars regarding the business transacted in each State for the year 1935-36 are given hereunder:—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1935-36.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Issued.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales	7,642,776	7,676,916	39,984	3,142,995	74,849
Victoria	3,177,822	3,447,608	17,400	2,083,199	51,336
Queensland	2,539,631	2,346,537	16,303	846,424	19,302
South Australia	902,540	901,495	5,575	479,844	11,821
Western Australia	1,463,681	1,330,753	8,968	479,896	10,901
Tasmania	576,310	556,886	3,188	188,981	4,509
Australia	16,302,760	16,260,195	91,418	7,221,339	172,718

The figures in the foregoing table relating to money orders and postal notes show an increase compared with the previous year.

(iii) *Australia, 1932 to 1936.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1931-32 to 1935-36:—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA.

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).
1932 ..	2,781	14,351	2,788	14,367	16,205	5,579	16,132	5,563
1933 ..	2,707	14,257	2,691	14,229	16,717	5,746	16,735	5,729
1934 ..	2,769	14,646	2,762	14,589	19,595	6,397	19,446	6,370
1935 ..	2,859	15,185	2,847	15,169	19,557	6,650	19,489	6,631
1936 ..	2,968	16,303	2,938	16,260	21,083	7,221	21,103	7,222

(iv) *Classification of Money Orders Issued and Paid.* (a) *Money Orders Issued.* The next table shows the number and value of money orders issued during the year 1935-36, classified according to the country where payable:—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1935-36.

Where Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
Australia ..	2,815,198	21,742	92,361	38,846	2,968,147
VALUE.					
Australia ..	£ 15,890,914	£ 62,892	£ 204,253	£ 144,701	£ 16,302,760

(b) *Money Orders Paid.* The number and value of money orders paid during the year 1935-36, classified according to the country where issued, are given hereunder:—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1935-36.

Where Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
Australia ..	2,813,123	51,622	47,200	25,667	2,937,612
VALUE.					
Australia ..	£ 15,870,512	£ 119,731	£ 188,278	£ 81,674	£ 16,260,195

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 in 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 1935-36, 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, 1935-36.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Issued in same State	7,490,138	3,948,072	1,866,782	807,367	1,093,052	445,995	15,651,406
Issued in other States	875,797	571,796	954,715	96,483	92,732	2,860,433	5,451,956
Total ..	8,365,935	4,519,868	2,821,497	903,850	1,185,784	3,306,428	21,103,362
VALUE.							
Issued in same State	£ 2,605,470	£ 1,383,811	£ 678,573	£ 289,133	£ 392,295	£ 140,614	£ 5,489,896
Issued in other States	276,900	216,059	283,890	39,203	21,516	894,048	1,731,616
Total ..	2,882,370	1,599,870	962,463	328,336	413,811	1,034,662	7,221,512

The number and value of postal notes paid in Australia during the year showed an increase of 8.3 per cent. and 8.9 per cent. respectively compared with the corresponding figures for the year 1934-35.

§ 3. Telegraphs.

1. General.—(i) *Development of System.* A review of the development of the Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15, p. 625), but limitations of space preclude the repetition of this information in the present issue. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive reorganization.

(ii) *External Circulation or Routing of Traffic.* The external circulation system of the Australian telegraph service has been considerably modified, direct communication having been established between cities and towns which formerly were served through intermediate repeating centres. The reorganization has eliminated the loss of time in transit, improved the grade of service, and led to economy as regards the labour formerly required in manual re-transmission. As a result of the reorganization there are now only five repeating centres, eighteen centres having been abolished.

(iii) *Carrier Wave System.* This system which permits a number of messages to be transmitted simultaneously over the one pair of wires is now in operation between Perth and Adelaide, Adelaide and Melbourne, Melbourne and Sydney, and Sydney and Brisbane. There are now 40,192 miles of one-way telegraph carrier channels in operation.

(iv) *Voice-Frequency System.* This system, which enables a number of telegraph channels to be superposed on a single telephone channel by employing frequencies from 420 to 2,460 cycles per second, has been introduced between Sydney and Tamworth. Between these two points 18 duo-directional channels have been provided by adopting the voice-frequency principle, equivalent to 9,360 miles of uni-directional channels. In view of the service and economic advantages of the system, extensions to other main telegraph routes are contemplated.

(v) *Direct Telegraph Communication over Great Distances.* The telegraph system in Australia provides direct communication between many places separated by great distances as indicated in the following examples:—Sydney-Perth, 2,695 miles; Perth-Wyndham, 1,933 miles; Melbourne-Brisbane, 1,246 miles; Brisbane-Cairns, 1,056 miles; Adelaide-Perth, 1,627 miles; Melbourne-Perth, 2,104 miles; Adelaide-Darwin, 1,940 miles; and Sydney-Adelaide, 1,068 miles. These direct channels provide a speedy service between the centres named, the average time involved in the transmission of a telegram being ten minutes.

(vi) *Machine Telegraphy.* In order to speed up transmission, machine printing telegraph systems have been introduced between capital cities and between important country centres. Murray multiplex machine apparatus is in operation between Sydney and Melbourne, Sydney and Brisbane, Sydney and Adelaide, Sydney and Perth, Sydney and Canberra, Sydney and Lismore, Sydney and Newcastle, Sydney and Wagga Wagga, Melbourne and Brisbane, Melbourne and Adelaide, Melbourne and Perth, Melbourne and Canberra, Adelaide and Perth, Brisbane and Rockhampton, and Brisbane and Townsville, providing telegraph outlets which permit the carriage of very heavy loads with a minimum transit time. The operation of the apparatus has been steadily improved, and the system now gives a high output. Between Melbourne and Mildura, Sydney and Tamworth, Brisbane and Toowoomba, Perth and Fremantle, and Perth and Kalgoorlie, start-stop telegraph printing systems are in operation.

(vii) *Phonogram Service.* Telephone subscribers may now telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the innovation means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the twelve months ended 30th June, 1936, was 2,391,962 or 14.2 per cent. of the total lodgments, and the popularity of this facility is growing.

(viii) *Radiograms within Australia.* On 1st May, 1929, the rates for radiograms between Flinders Island, King Island, Wave Hill, Brunette Downs and other places within the Commonwealth were reduced to 1½d. per word with a minimum charge of two shillings. Communication at these rates was extended to Lord Howe Island in August, 1929.

(ix) *Pedal Wireless Stations.* A number of privately operated pedal wireless transceiver stations have been established in the far North-West of the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. These pedal stations are sponsored by the Australian Aerial Medical Services and communicate by wireless with base stations established at Wyndham and Port Hedland. The radiogram rates of 1½d. per word with a minimum charge of two shillings apply also to pedal station telegrams.

(x) *Picturegram Service.* During the year ended 30th June, 1936, 294 picturegrams were transmitted between Sydney and Melbourne, the revenue being £637. Any kind of picture or document may be accepted for transmission, the charges varying from 30s. to 67s. 6d. according to the size of the picture or document and the grade of transmission desired.

(xi) *Overseas Phototelegram Service.* An overseas phototelegram service, "via Beam," was inaugurated in October 1934, permitting the transmission in either direction of facsimiles between Sydney or Melbourne and England, of dimensions up to a maximum of ten inches by nine inches. The charges are calculated at the rate of three shillings and three pence per square centimetre with a minimum charge of £16 5s. as for 100 square centimetres.

(xii) *Special Telegram Forms.* The use of appropriately designed telegram forms for conveying Christmas and New Year greetings continues to increase in volume and popularity. The increase since the inception of this facility in 1929 represents 118·4 per cent. :—

Year.						No. of Greeting Telegrams.
1929	..	..	..	..	..	144,102
1930	..	..	..	..	..	157,705
1931	..	..	..	..	..	184,142
1932	..	..	..	..	..	191,156
1933	..	..	..	..	..	192,363
1934	..	..	..	..	..	235,252
1935	..	..	..	..	..	291,588
1936	..	..	..	..	..	314,756

During the year 1933-34 telegram forms of special design and attractive colouring in connexion with Mothers' Day messages, Birthday greetings and Congratulatory telegrams were placed at the disposal of the public. The popularity of these facilities is indicated by the increase in the number of Mothers' Day telegrams from 16,091 in 1934 to 39,128 in 1937. No statistics are available in respect of Birthday greetings and Congratulatory messages, but it is estimated that the number of telegrams in these categories exceeds 500,000 annually. In 1936 two additional greeting facilities employing ornamental telegram stationery were introduced, one for the conveyance of social greetings and the other for use during Easter-tide. The number of Easter Greeting telegrams in 1935, prior to the introduction of the special form for the occasion, was 4,164. This figure increased to 9,867 in 1937. Extensive use is also being made of the new Social telegram service, regarding which definite statistics are not available.

(xiii) *Private Wire Teleprinter and Printergram Services.* In conformity with its policy of placing at the service of the public new developments in communication, the Department has now introduced the teleprinter service. This may be briefly defined as typewriting over electrical circuits, teleprints being similar in performance to typewriters, except that the keyboard and platen are electrically connected by means of a telegraph line.

This facility combines the speed of the telegraph and the flexibility and personal touch of the telephone with the accuracy and permanency of the printed word. It affords the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles. Communications are automatically produced at both ends exactly as sent, and information may be despatched with the utmost privacy even in exposed situations where other means are unsuitable. It affords two-way communication at speeds up to 60 words a minute.

Printergram services connecting any business premises with the local Telegraph Office for the transmission and reception of telegrams are also available. This saves time and labour, while providing a permanent record of each transaction.

Twenty-four private wire services employing 92 teleprinter units have already been installed, including a stock ticker service enabling the simultaneous communication of information from a single transmitting unit located in the Sydney Stock Exchange to each of 35 printer units installed in the offices of city stock-brokers.

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 1932 to 1936 :—

TELEGRAPHS, AUSTRALIA.—SUMMARY.

Particulars for Year ended 30th June.	1932.	1933.	1934.	1935.	1936.
Number of offices	9,160	9,162	9,199	9,255	9,252
Length of wire (miles)—					
Telegraph purposes only	58,891	55,302	54,655	54,806	56,292
Telegraph and telephone purposes ..	98,369	101,797	102,953	104,203	113,277
Length of line (miles)—					
Conductors in Morse cable	4,157	4,401	4,538	4,694	4,815
Conductors in submarine cable	4,863	4,833	4,764	4,883	5,193
Pole routes (miles)	100,507	99,951	96,395	97,694	97,850

(ii) *States.* The following table gives corresponding particulars for each State for the year 1935-36 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1936.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
Number of offices ..	3,042	2,411	1,519	818	932	530	9,252
Length of wire (miles)—							
Telegraph purposes only	16,723	7,911	15,034	6,756	9,200	668	56,292
Telegraph and telephone purposes ..	44,461	14,057	31,467	13,800	8,039	1,453	113,277
Length of line (miles)—							
Conductors in Morse cable	2,651	1,456	485	..	199	24	4,815
Conductors in submarine cable (statute miles) ..	3,760	289	317	227	193	407	5,193
Pole routes (miles) ..	32,839	19,186	15,895	14,913	11,532	3,485	97,850

A total length of 169,569 miles of wire is available for telegraph purposes, of which 113,277 miles are also used for telephone purposes. Compared with those for the previous year, the figures show an increase of 10,560 miles (6.6 per cent.) in the total length and an increase of 9,074 miles (8.7 per cent.) in the length of line used for both telegraph and telephone purposes.

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

TELEGRAMS DISPATCHED.—AUSTRALIA.

Telegrams.	Year ended 30th June—				
	1932.	1933.	1934.	1935.	1936.
Number (a) ..	12,679,951	12,778,028	13,393,627	14,617,871	15,508,698

(a) Including interstate cablegram traffic, and radiogram traffic with islands adjacent to the Commonwealth and to ships at sea.

(ii) States. The appended table shows the total number of telegrams dispatched in each State in 1935-36 according to the class of message transmitted:—

TELEGRAMS DISPATCHED(a).—STATES, 1935-36.

Class of Message Transmitted within Australia.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	No.	No.	No.	No.	No.	No.	No.
Paid and Collect—							
Ordinary ..	4,563,771	3,070,595	2,453,136	1,005,689	1,586,995	288,008	12,968,194
Urgent ..	220,644	68,437	63,987	38,269	49,432	10,652	451,421
Press ..	198,389	108,803	80,778	42,435	45,645	26,578	502,628
Lettergram ..	84,735	52,963	73,045	37,005	101,966	30,443	380,157
Radiogram ..	30,780	3,438	6,836	5,121	2,992	4,406	53,573
Total ..	5,098,319	3,304,236	2,677,782	1,128,519	1,787,030	360,087	14,355,973
Unpaid—							
Service ..	148,459	54,317	58,984	40,235	49,263	20,725	371,983
Shipping ..	24,865	74,982	15,957	3,725	10,587	5,234	135,350
Meteorological ..	201,397	86,381	92,042	115,930	118,183	31,459	645,392
Total ..	374,721	215,680	166,983	159,890	178,033	57,418	1,152,725
Grand Total ..	5,473,040	3,519,916	2,844,765	1,288,409	1,965,063	417,505	15,508,698

(a) See Note (a) above.

The figures in the foregoing table show an increase in the total volume of telegraph business of 890,827 messages (6.09 per cent.) 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 net operating results of the telegraph systems for the years 1931-32 to 1935-36 are given in earlier pages.

6. Telegraph Density.—The latest statistics available disclose that, on a population basis, Australia now occupies a pre-eminent position in the world in the use of the Telegraph Service, with an average of 2.1 messages annually per head of population. The United States of America has the second highest average of 1.3, followed by Norway and Spain with 1.0 per head of population. The following table gives the figures for the more important countries:—

TELEGRAPH DENSITY STATISTICS—CHIEF COUNTRIES.

Country.	Percentage of Telegraph to Total Wire Communication.	Telegraph Communication per Head of Population.
Australia	3.2	2.1
Austria	0.3	0.2
Belgium	2.1	0.7
Canada	0.4	0.9
Czechoslovakia	1.4	0.3
Denmark	0.3	0.5
Finland	0.3	0.2
France	3.1	0.7
Germany	0.7	0.3
Great Britain	2.5	0.9
Hungary	1.3	0.2
Japan	1.3	0.8
Netherlands	0.8	0.4
Norway	1.2	1.0
Poland	0.6	0.1
Spain	3.2	1.0
Sweden	0.4	0.6
Switzerland	0.7	0.5
Union of South Africa	2.2	0.7
United States of America	0.7	1.3

§ 4. Overseas Cable and Radio Communication.

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. **General Cable Services.**—Descriptions of the various cable services between Australia and other countries are given in Year Book No. 22, pp. 335 and 336.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 to examine the situation which had arisen as the result of the competition of the Beam Wireless with the Cable services, the Imperial and International Communications Limited was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. Further particulars in relation to wireless services will be found in par. 5 of this section and in § 6, Radio Telegraphy and Telephony.

4. **Overseas Cable and Radio Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams and radiotelegrams received from and dispatched overseas in Australia from 1933-34 to 1935-36 :—

CABLEGRAMS AND RADIOTELEGRAMS.—AUSTRALIA.

Messages.	Number Received.			Number Dispatched.			Total Number Received and Dispatched.		
	1933-34.	1934-35.	1935-36.	1933-34.	1934-35.	1935-36.	1933-34.	1934-35.	1935-36.
Number ..	608,323	625,842	639,142	656,935	684,761	693,864	1,265,258	1,310,603	1,333,006

(ii) *States.* The number of cablegrams and radiotelegrams received from and dispatched overseas in each State during the year 1935-36 is given hereunder :—

CABLEGRAMS AND RADIOTELEGRAMS.—STATES, 1935-36.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number received ..	335,051	207,995	23,767	32,022	29,930	10,377	639,142
Number dispatched	343,896	233,018	29,212	36,105	41,964	9,669	693,864
Total ..	678,947	441,013	52,979	68,127	71,894	20,046	1,333,006

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

5. **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 rates between Australia and Great Britain "Via Beam" are—Ordinary, 1s. 8d. ; deferred ordinary, 10d. ; Government, 10d.

The following are the rates at present operating in regard to traffic with the principal countries :—

CABLEGRAM AND RADIOTELEGRAM RATES, JUNE, 1936.

To—	Rate per Word and Route.	
	Via Cable.	Via Beam.
European Countries	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries	2s. 5d. to 6s. 3d.	.. .. .
Africa	1s. 8d. to 5s. 4d.	2s. 2½d. to 2s. 11d.
North America	1s. 7d. to 4s. 4d.	1s. 5½d. to 3s. 7d.
Central America	3s. 10d. to 6s. 1d.	3s. 5½d. to 4s. 10d.
West Indies	3s. 0d. to 5s. 8d.	.. .. .
South America	4s. 1d. to 7s. 5d.	3s. 9d. to 6s.

(ii) *Deferred Telegrams (via Cable or Radio)*. Under this system a reduction of 50 per cent. in the ordinary cable or radio 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 the "Daily Letter Telegram" service, has affected the ordinary business to a considerable extent. "Deferred Press" telegrams, subject to a delay of 18 hours, may be exchanged between Australia and (a) Great Britain at the rate of 4½d. per word by cable and 3d. per word via radio; (b) Canada, at 2½d. per word by cable and 2½d. per word via radio; and (c) United States of America, at 3d. to 4d. per word by cable and 3½d. to 4d. per word via radio.

(iii) *Daily Letter Telegrams*. The Daily Letter Telegram service was inaugurated in September, 1923, between Australia and Great Britain and Canada, later being extended to most countries in the British Empire and in Europe, to the United States and to certain other places. In accordance with the decision of the International Telegraph Conference which was held at Madrid in 1932, the charges on Daily Letter Telegrams have, since 1st April, 1933, been based on one-third of the tariff per word for full-rate messages, and are now subject to a minimum charge as for 25 words (in lieu of 20 as previously). These messages are delivered on the morning of the second day following that of lodgment.

(iv) *Week-end Letter Telegrams*. The Week-end Letter Telegram facility which had been in operation for a number of years between Australia and certain other countries was abolished on 1st April, 1933, in accordance with the decision of the Madrid International Telegraph Conference.

(v) *Press Telegrams*. The rate per word ordinary on press messages exchanged with Great Britain is 6d. by cable and 4d. via radio, while that on deferred press is 4½d. and 3d. respectively.

(vi) *Night Letter Telegrams*. A Night Letter Telegram service was introduced between Australia and New Zealand on 1st May, 1924, and was extended to Fiji on 1st December, 1924. As from 1st April, 1933, the minimum charge for messages has been fixed as for 25 words (in lieu of 20 as previously) in accordance with a decision of the Madrid Conference, the minimum charges being—to New Zealand, 3s. 9d. minimum, 2d. for each additional word beyond 25; Suva, 5s. 10d. minimum, 3d. for each additional word; other places in Fiji, 7s. 4d. minimum, and 4d. for each additional word beyond 25. Night Letter Telegrams are accepted at any time and are delivered by first post on the morning following receipt.

(vii) *Christmas Greeting Telegram Service*. A special Christmas and New Year greeting service is available between Australia and overseas countries during the Christmas and New Year period each year. Special low rates are charged for these telegrams, the texts of which must be purely of a greeting nature. The messages are delivered on an appropriately designed form.

(viii) *Easter Greeting Telegram Service.* A special Easter greeting service is available between Australia and the United Kingdom, including Northern Ireland, during Easter periods. Daily letter telegram rates are applicable but with the concession that the minimum number of chargeable words is reduced to ten. The texts of such telegrams are restricted to messages purely of a social or greeting character.

(ix) *Jewish New Year Greeting Telegram Service.* A special greeting telegram service has been established between Australia and certain overseas countries, including the United Kingdom, Egypt, Palestine, South Africa, United States of America and Canada for use during the Jewish New Year period. A specially reduced rate is charged for the service with a minimum of ten words. The texts of such messages must consist of greetings only and be written in plain language.

(x) *De-Luxe Telegram Service.* A de-luxe telegram service has been established between Australia and certain of the more important overseas countries whereby, on payment of an additional fee of sixpence per telegram, the message will be delivered to the addressee on an ornamental form enclosed in a decorative envelope.

§ 5. 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, 1933 to 1936.

TELEPHONE LINES.—AUSTRALIA.

Particulars.	Year ended 30th June—			
	1933.	1934.	1935.	1936.
Ordinary Lines—				
Conduits duct miles	6,454	6,733	7,128	7,771
" route miles	3,776	4,079	4,467	5,094
Conductors in aerial and underground cables loop mileage	826,788	837,094	847,393	861,437
Working conductors in cables for junction circuits, not included above loop mileage	72,713	71,592	74,849	75,094
Open conductors single wire mileage	418,053	419,015	417,640	421,075
Trunk Lines—				
Telephone trunk lines only .. miles	232,409	228,084	231,125	230,684
Telegraph and telephone purposes ..	101,797	102,953	104,203	113,277

(ii) *Comparison with Other Countries.* The gratifying rate of telephone development experienced during 1934–35 was maintained in 1935–36 when 30,945 telephones were added to the system compared with 30,975 in the preceding year. The growth has been very satisfactory since the passing of the depression period. A pleasing fact is that the improvement has not been confined to metropolitan areas, a net gain of 7,352 telephones having been recorded in the country districts during 1935–36. This represents an increase of 63 per cent on the corresponding figures for the previous year. There are 83.1 telephones per 1,000 of population and Australia occupies seventh place among countries with the greatest density of telephones. The average length of wire per telephone in Australia is 4.75 miles.

(iii) *Trunk Line System.* A nation-wide telephone service is now available in Australia, channels being provided to practically every settled area. The enormous distances involved have been so successfully bridged for telephone communication purposes by the extensive use of repeaters and modern telephone carrier systems that conversation is now practicable between Wiluna in Western Australia and Cloncurry in Queensland, a channel distance of 5,500 miles, which is probably a record in land-line telephony.

The Tasmania–Mainland telephone service, which was inaugurated on the 25th March, 1936, by means of a submarine cable across Bass Strait, is proving very popular.

The cable, which is 161 nautical miles long, is the longest and most modern of its kind in the world, and although furnished with only a single core it allows no less than five telephone and seven duplex telegraph circuits to be operated simultaneously. In addition it provides a single channel for transmitting broadcast programmes for radiation from wireless broadcasting stations in Tasmania and the Mainland.

At the 30th June, 1936, there were 75 carrier systems in service in Australia, giving a total of 131 separate speech channels with an aggregate mileage of approximately 36,200 miles.

(iv) *Automatic Exchanges.* At the 30th June, 1936, there were 101 automatic or semi-automatic exchanges in operation, providing facilities for 252,211 telephones, 245,076 of which were in the telephone networks of the six State capital cities. Of the total service in the Commonwealth 45 per cent. is connected to the automatic system.

(v) *Rural Automatic Exchanges.* Satisfactory experience has been gained with a new type of automatic unit designed specially for use in rural areas and 54 additional units of this particular type are being installed. The residents in the districts concerned will thus be afforded continuous attendance facilities in lieu of the restricted hours of service which now apply.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1934 to 1936, will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY.

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1934	1,935	1,648	962	556	642	344	6,087
	1935	1,951	1,650	979	556	639	342	6,117
	1936	1,967	1,651	995	561	647	345	6,166
No. of Telephone Offices (Including Exchanges)	1934	2,950	2,348	1,427	801	947	510	8,983
	1935	2,971	2,363	1,442	814	941	505	9,036
	1936	2,981	2,342	1,461	814	942	505	9,045
No. of lines connected ..	1934	139,485	113,983	49,009	37,713	20,832	11,599	372,621
	1935	150,257	121,631	51,448	38,652	22,129	11,908	396,025
	1936	160,323	128,313	53,784	39,911	23,020	12,310	417,661
No. of Instruments con- nected	1934	188,694	157,802	63,762	49,089	27,731	14,324	501,402
	1935	202,363	168,198	67,161	50,512	29,336	14,807	532,377
	1936	215,803	177,397	70,844	52,585	30,882	15,357	562,868
(a) No. of subscribers' instruments	1934	183,378	154,137	61,382	47,537	26,455	13,499	486,388
	1935	196,854	164,373	64,694	48,916	28,042	13,972	516,851
	1936	210,099	173,436	68,288	50,954	29,553	14,511	546,841
(b) No. of public tele- phones	1934	3,353	2,344	1,559	803	900	541	9,500
	1935	3,459	2,408	1,595	824	888	537	9,771
	1936	3,561	2,412	1,633	834	896	542	9,878
(c) No. of other local instruments	1934	1,963	1,321	821	749	376	284	5,514
	1935	2,050	1,417	872	772	406	298	5,815
	1936	2,143	1,549	923	797	433	304	6,149
Instruments per 100 of population	1934	7.17	8.62	6.66	8.34	6.27	6.28	7.51
	1935	7.62	9.15	6.98	8.56	6.58	6.47	7.92
	1936	8.06	9.60	7.23	8.88	6.85	6.67	8.31
Earnings		£	£	£	£	£	£	£
	1934	2,245,139	1,666,633	835,162	538,001	316,772	139,614	5,741,321
	1935	2,400,286	1,792,748	898,346	559,646	341,175	145,212	6,137,413
1936	2,646,392	1,940,307	965,329	598,719	377,602	160,026	6,688,875	
Working expenses ..	1934	1,409,843	1,077,961	493,682	408,115	231,433	143,922	3,764,956
	1935	1,498,516	1,171,206	522,607	433,833	236,182	162,338	4,024,712
	1936	1,592,115	1,221,796	559,845	458,337	277,188	168,181	4,277,462
Percentage of working ex- penses on earnings	1934	62.80	64.68	59.11	75.86	73.06	103.09	65.58
	1935	62.43	65.33	58.17	77.52	69.23	111.79	65.58
	1936	60.16	62.97	57.97	76.55	73.41	105.10	63.95

The number of instruments per 100 of population increased from 7.92 in 1934-35 to 8.31 in 1935-36. The actual number of instruments increased from 532,377 to 562,868, a gain of 5.73 per cent. Of the total instruments connected at 30th June, 1936, 227,707, or 40.5 per cent., were served by exchanges situated beyond the limits of the telephone networks of the six State capital cities. The metropolitan networks are limited to a radius of 15 miles from the General Post Office in Sydney and Melbourne, and 10 miles in the other State capital cities. The modern handset telephone, which was introduced by the Department some years ago, has been adopted extensively by subscribers. The number in service at the 31st December, 1936, was 103,285, which represents nearly one-fifth of the total telephones installed.

(vii) *Systems in Use.* The following table shows the percentage of automatic, common battery and magneto telephone lines at 30th June, 1934 to 1936:—

PERCENTAGE OF AUTOMATIC, COMMON BATTERY AND MAGNETO LINES.

System.	30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Automatic	1934	46.14	38.55	36.50	37.51	49.08	30.22	41.35
	1935	48.44	40.66	37.99	38.74	50.86	31.17	43.36
	1936	50.33	42.25	39.15	39.58	52.36	32.26	44.96
Common Battery	1934	2.84	19.18	..	13.90	..	17.36	8.88
	1935	2.96	18.88	..	14.10	..	17.23	8.82
	1936	3.01	18.44	..	14.22	..	17.25	8.69
Magneto	1934	51.02	42.27	63.50	48.59	50.92	52.42	49.77
	1935	48.60	40.46	62.01	47.16	49.14	51.60	47.82
	1936	46.66	39.31	60.85	46.20	47.64	50.49	46.35

(viii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban and rural telephone exchanges in the several States for the year 1935-36:—

TELEPHONE.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1935-36.

State.	Central Exchanges.		Suburban Exchanges.		Rural 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.
	No.	No.	No.	No.	No.	No.	No.	No.
New South Wales	18,054	12.19	74,745	4.44	61,117	2.30	153,916	4.50
Victoria	7,783	11.29	69,901	4.08	46,692	1.72	124,376	3.64
Queensland	7,477	10.04	13,885	3.57	30,803	2.60	52,165	3.92
South Australia ..	5,655	8.89	15,759	3.52	17,229	1.78	38,643	3.53
Western Australia ..	7,933	6.40	4,604	4.09	9,807	1.56	22,346	3.80
Tasmania	3,103	4.32	1,124	2.50	7,566	2.10	11,793	2.73
Australia	50,007	9.95	180,018	4.13	173,214	2.09	403,239	3.98

A comparison of the daily calling rates for each class of exchange shows that New South Wales registered the greatest number per line at central and suburban exchanges, and Queensland at rural exchanges. For Australia as a whole, the average number of calls per line at central exchanges was approximately two and a third times the number registered at suburban exchanges, while the average for suburban exchanges was almost double the number shown for rural exchanges.

(ix) *Trunk Line Calls and Revenue.* In the next 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 1933-34 to 1935-36:—

TELEPHONES.—TRUNK LINE CALLS AND REVENUE.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	No.	No.	No.	No.	No.	No.	No.
Total Calls for Year—							
1933-34 ..	10,713,588	8,519,955	5,684,435	3,183,224	1,653,861	1,241,947	30,997,010
1934-35 ..	11,163,557	8,987,751	6,091,847	3,369,281	1,778,511	1,313,679	32,704,626
1935-36 ..	12,440,869	9,778,457	6,526,726	3,779,254	1,990,976	1,470,956	35,987,238
Total Revenue for Year—							
1933-34 ..	£ 527,651	£ 380,004	£ 317,223	£ 149,272	£ 87,939	£ 41,667	£ 1,503,756
1934-35 ..	552,489	403,260	346,821	152,233	94,328	42,535	1,591,612
1935-36 ..	599,000	432,635	365,237	165,208	102,328	49,351	1,713,759
Average Revenue per Call—							
1933-34 ..	Pence. 11.82	Pence. 10.70	Pence. 13.40	Pence. 11.25	Pence. 12.76	Pence. 8.05	Pence. 11.64
1934-35 ..	11.88	10.76	13.60	10.84	12.73	7.77	11.68
1935-36 ..	11.65	10.62	13.43	10.49	12.33	8.06	11.43

The number of trunk line calls during 1935-36 increased by over three and a quarter millions, or by 10.03 per cent. compared with the figures for the previous year, while the average revenue per call decreased by 0.25d.

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

§ 6. Radio Telegraphy and Telephony.

1. 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. 343.

2. Wireless Licences.—Under the Wireless Telegraphy Act and Regulations, no wireless station can be installed or operated without a licence from the Postmaster-General. Licences are issued for the following :—(a) Coast Stations, which are operated at various points around the coast and in Papua and New Guinea by Amalgamated Wireless (Australasia) Ltd., under agreement with the Commonwealth; (b) Ship Stations (regulations under the Navigation Act 1935 require that all ships registered in Australia and engaged in interstate traffic shall have an efficient radio telegraph installation, which in the case of cargo vessels of less than 750 tons gross register shall include apparatus for automatically transmitting prescribed signals of distress, these vessels not being required to carry fully qualified operators; similar legislation, designed to ensure the safety of life at sea, has also been introduced by the Governments of New South Wales, Victoria and Queensland); (c) Land Stations to be operated where no telegraph or telephone facilities exist; (d) Broadcasting Stations, other than those of the National Broadcasting Service; (e) Broadcast Listeners' Receiving Sets; (f) Portable Stations on motor cars, etc.; (g) Aircraft Stations; (h) Experimental Stations; and (i) Special Stations, i.e., stations other than those named above.

The following table shows the number of each class of licence issued in each State, etc., during the year 1935-36 :—

WIRELESS LICENCES, 1935-36.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	F.C.T.	Total Aust.	Papua and New Guinea	Grand Total.
Coast	2	1	6	1	5	3	1	..	19	9	28
Ship	751	90	15	9	4	1	1	..	195	..	195
Aircraft	1	3	5	..	2	2	1	..	14	..	14
Land (b)	81	3	25	8	16	4	27	..	91	14	105
Broadcasting (a) ..	23	17	16	6	5	4	..	1	72	1	73
Broadcast Listeners' ..	314,426	263,414	83,025	87,251	49,987	24,118	84	1,305	823,616	3	823,613
Experimental	605	403	199	164	94	50	1	4	1,520	3	1,528
Portable	12	4	4	1	1	..	4	..	26	3	29
Special	32	21	4	..	3	..	..	..	60	..	60
Total Licences Issued	315,184	263,956	83,299	87,440	50,117	24,182	119	1,310	825,607	38	825,645

(a) There were also fifteen stations operated by the National Broadcasting Service, including a short-wave station (3L.R. Lyndhurst, Victoria). (b) In addition to the licensed stations there were two operated by the Postmaster-General's Department, viz., Wave Hill (N.T.) and Camoowal (Q.), and fourteen low-powered stations established by the Government of the Territory of New Guinea.

Similar particulars to the above in relation to the year 1936-37 will be found in the Appendix to this volume.

3. **Broadcasting**—(i) *The National Broadcasting Service.* The technical services for the National Service are provided by the Postmaster-General's Department, and the programmes by the Australian Broadcasting Commission, a body consisting of five members, constituted under the provisions of the Australian Broadcasting Commission Act. The fee for a broadcast listener's licence is 21s. per annum for a receiver situated approximately within 250 miles from a station of the National Service, and 15s. per annum in the territory beyond. Licences are issued free to blind persons. The Commission receives 12s. from each fee, the Department retaining the balance.

The National Broadcasting System of the Commonwealth at present comprises 21 transmitting stations, as follows:—2FC Sydney, 2BL Sydney, 2NC Newcastle, 2CO Corowa, 2NR Lawrence, 2CR Cummoek, 3LO Melbourne, 3AR Melbourne, 3GI Sale, 3WV Dooen, Short Wave station 3LR Lyndhurst, 4QG Brisbane, 4RK Rockhampton, 4QN Townsville, 5CL Adelaide, 5CK Crystal Brook, 6WF Perth, 6WA Minding, 6GF Kalgoorlie, 7ZL Hobart and 7NT Kelson. Contracts are current for the supply of two further stations for installation in Brisbane and Adelaide respectively to permit of the radiating of alternative programmes in those cities. With the exception of 3LR all transmitters operate within the frequency band of 550 to 1500 k.c.

Country regional stations normally radiate programmes from the central studio of the nearest capital city. To permit of this each such station is joined to its respective studio by a high quality programme transmission circuit, the total length of such circuits in use in the Commonwealth being 3,158 miles. A Commonwealth-wide system of network broadcasting is being more and more utilized, the total length of interstate lines in use permanently for this purpose for the National Broadcasting Service alone being 3,912 miles. As occasion demands, wide-band telephone circuits to the extent of several thousands of miles are employed to supplement this interstate network. Programme carrier channels having a 7,500 cycle band width and operating on the lower side band of a 42.5 k.c. carrier are extensively employed.

All new stations are being equipped with a tuned capacity-topped radiator of a type developed by the Department. Extensive measurements on radiators of this type that have been completed, including measurements made during flights over the radiators by aeroplane, show that they are effective in reducing indirect radiation.

Short-wave programmes radiated by overseas stations, particularly from the Empire stations at Daventry, are received regularly at the departmental high frequency receiving station at Mont Park, and are re-radiated over the National network when the subject matter is of sufficiently wide local interest.

(ii) *Commercial Broadcasting Stations.* The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 and the maximum period of a licence is three years, although they may be renewed annually at the discretion of the Postmaster-General. Licensees of these stations do not share in the listeners' licence fees, but rely for their income on revenue received from the broadcasting of advertisements and other publicity. The number of these stations in operation at 30th April, 1937, was 78, and there are several stations in prospect.

(iii) *Radio Inductive Interference.* The Postmaster-General's Department takes active measures to suppress, so far as possible, interference with broadcast reception resulting from the radiations of energy from electric machinery and appliances. During the year, the Department received 9,452 complaints of interfering noises, which, in all but a few instances, were satisfactorily disposed of.

(iv) *Prosecutions Under the Wireless Telegraphy Act.* During the year 3,473 persons were convicted for using unlicensed broadcasting receiving equipment, the total fines amounted to £6,089.

(v) *World Licence Distribution.* The following table shows the number of listeners' licences and the ratio of licences to population in the leading "radio" countries. These particulars, compiled from figures supplied by L'Union Internationale de Radiodiffusion, have been obtained from the Annual Report of the Australian Broadcasting Commission.

WORLD LICENCE DISTRIBUTION, 31st DECEMBER, 1935.

Country.	Listeners' Licences.	
	Total.	Per 100 of Population.
United States of America	22,500,000 (a)	17.79
Denmark	609,226	16.44
Great Britain	7,403,109	16.08
Sweden	834,143	13.38
New Zealand	183,830	11.77
Australia	770,152	11.43
Netherlands	946,844	11.34
Germany	7,192,952	10.76
Switzerland	418,499	10.29
Belgium	746,395	9.22
Canada	862,109 (b)	8.31 (b)
Austria	560,120	8.29
South Africa	130,000	7.51 (c)
Norway	191,378	6.67
Argentine Republic	800,000 (a)	6.56
France	2,625,677	6.26
Czechoslovakia	847,955	5.75
Hungary	352,907	4.03
Finland	144,721	3.91
Chili	150,000 (a)	3.33
Irish Free State	78,600	2.59
Japan	2,372,402 (a)	2.44
Soviet Union	2,800,000	1.67
Poland	491,823	1.46
Mexico	220,000	1.33 (c)
Spain	303,983	1.28
Italy	530,000	1.22

(a) Listeners are not licensed, and the totals shown are estimates only of the number of receiving sets in operation. (b) At 31st March, 1936. (c) Exclusive of native population.

Australia ranks sixth amongst countries of the world in relation to licences per 100 of population.

4. *Oversea Communication by Wireless.*—(i) *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. A similar service to North America was opened on 16th June, 1928. Satisfactory communication is maintained daily over a period of hours, and the services are being well patronized by the public. A comparison of the rates charged for "Beam" and Cable messages is given in § 4, Overseas Cable and Radio Communication. Particulars of international traffic via "Beam" are given in par. (iv) (a) following.

(ii) *International Wireless Telephone Service.* Overseas radio telephone services terminating in Australia continue to be well patronized, and from the establishment of the first service in April, 1930, to the 31st March, 1937, 13,154 calls were completed of which 7,564 originated in Australia. Of these calls 10,225 were connected over the Anglo-Australian service, 2,874 on the Australia–New Zealand channel and 34 were between Australia and Java. In addition 21 calls were exchanged with the new motor vessel “Awatea” which commenced trading between Australia and New Zealand in September, 1936.

The Australian telephone subscriber now has access to about 33,000,000 telephones, or approximately 93 per cent. of the world's total. The concessional tariff introduced in December, 1933, in respect of calls between Australia and Great Britain on Saturdays, has now been extended to European countries. The charge is £1 per minute, plus, in the case of countries on the Continent, a zone fee to cover the use of land lines from London.

(iii) *Wireless Communication in the Pacific.* New Zealand, the territories of New Guinea and Papua and the various small islands in the Pacific Ocean are served by a comprehensive system of wireless communication. In New Guinea and Papua, nine wireless telegraphy stations are established under an agreement between the Commonwealth and Amalgamated Wireless (Australasia) Ltd. for communication with ships at sea, and for inter-communication. Three of these stations Rabaul (New Guinea) and Port Moresby and Samarai (Papua) also have direct communication with the mainland of Australia. In addition, there are, in New Guinea, several low powered transmitters established by the New Guinea Administration for interior communication, while in both Papua and New Guinea several small stations are operated by gold exploration parties, missionary societies and others.

Direct communication by wireless telegraphy exists between Sydney and Suva (Fiji) and Noumea (New Caledonia), while Wellington (New Zealand) is linked with Sydney by wireless telephone. Other wireless telegraph stations in the Pacific include Auckland, Awarua and Chatham Islands (New Zealand), Port Vila (New Hebrides), Apia (Samoa), Tulagi and Vanikoro (Solomon Islands), Nauru (Marshall Islands), Ocean Island (Gilbert and Ellice Group), Truk and Yappu (Caroline Islands), and Guam (Marian Islands).

(iv) *Radiotelegraphic Traffic.* (a) *International.* The following statement shows particulars of international traffic “via Beam” to and from United Kingdom and other places during the year ended 30th June, 1936:—

RADIO TRAFFIC.—INTERNATIONAL, YEAR ENDED 30th JUNE, 1936.

Class of Traffic.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary (a) ..	1,567,138	693,849	2,260,987	1,215,397	273,001	1,488,398
Deferred (Ordinary) ..	987,086	438,770	1,425,856	1,003,243	133,018	1,136,261
Government (a) ..	106,811	13,323	120,134	97,768	5,334	103,102
Press (including deferred press) ..	126,787	25,173	151,960	1,392,071	84,784	1,476,855
Daily letter and greeting telegrams ..	1,939,864	866,200	2,806,064	1,326,916	301,535	1,628,451
Total ..	4,727,686	2,037,315	6,765,001	5,035,395	797,672	5,833,067

(a) Includes Code telegrams.

(b) *Coast Stations.* Particulars of the traffic handled by the several coast stations during the year 1935-36 are as follows:—

RADIO TRAFFIC.—COAST STATIONS, 1935-36.

State or Territory.	Particulars.				
	Total Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales	1,712,528	92,950	5,038	3,107	101,095
Victoria	105,898	9,417	150	1,435	11,002
Queensland	223,781	19,530	1,212	2,348	23,090
South Australia	59,235	6,220	166	334	6,720
Western Australia	152,029	11,414	1,152	2,420	14,986
Tasmania	159,747	8,983	915	1,820	11,718
Northern Territory	59,090	3,005	644	1,342	4,991
Australia	2,472,308	151,519	9,277	12,806	173,602
Papua	308,134	17,112	784	1,227	19,123
Grand Total	2,780,442	168,631	10,061	14,033	192,725

(c) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1935-36 are given in the following table:—

RADIO TRAFFIC.—ISLAND STATIONS, 1935-36.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Total.
	No.	No.	No.	No.	No.
Messages	27,336	21,796	23,270	1,888	74,290
Words	422,227	387,283	315,509	22,864	1,147,883

(v) *Proficiency Certificates.* Every station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

During the year ended 30th April, 1937, 672 Operator's Certificates of Proficiency were awarded.

The number of each class was:—Commercial—First Class, 34; Second Class, 38; Third Class, 267; Broadcast, 95; and Amateur, 238.