

CHAPTER VI.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

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

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

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

In all instances the tonnage quoted is net tonnage.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and tonnage of oversea steam and sailing vessels entering Australian ports during the years 1922–23 to 1931–32 :—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1922–23	1,341	4,599,021	148	138,833	1,489	4,737,854
1923–24	1,437	4,808,129	109	103,007	1,546	4,911,136
1924–25	1,675	5,535,871	51	60,529	1,726	5,596,400
1925–26	1,537	5,245,222	46	58,583	1,583	5,303,805
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

The average tonnage of vessels entered has risen from 3,182 tons per vessel in 1922–23 to 3,744 tons in 1931–32.

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 of the number and tonnage of vessels arriving from and departing to particular countries are 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.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
TONNAGE ENTERED.						
United Kingdom and European Countries	Cargo	1,939,468	1,759,576	2,043,137	1,632,252	1,524,673
	Ballast	3,950	35,563	19,840	248,998	503,997
New Zealand	Cargo	453,965	476,987	457,812	400,623	426,704
	Ballast	170,086	147,819	166,948	157,029	97,781
Asiatic Countries and Islands in the Pacific	Cargo	1,187,969	1,372,717	1,329,505	1,195,313	1,182,212
	Ballast	190,883	333,350	121,907	765,805	895,825
Africa	Cargo	34,325	37,453	42,304	34,543	7,836
	Ballast	55,595	75,807	52,103	261,442	226,226
North and Central America	Cargo	1,366,499	1,254,911	1,194,358	861,415	802,672
	Ballast	5,566	11,480	8,305	12,987	..
South America	Cargo	10,739	5,920	8,227	2,821	2,821
	Ballast	..	..	..	7,289	16,151
	Cargo	4,992,965	4,927,564	5,075,343	4,127,967	3,946,918
	Ballast	426,080	624,019	369,103	1,453,550	1,739,980
Total .. .. .	..	5,419,045	5,551,583	5,444,446	5,581,517	5,686,898

TONNAGE CLEARED.						
United Kingdom and European Countries	Cargo	2,416,656	2,313,817	2,247,735	2,457,125	2,673,463
	Ballast	..	..	5,537	..	5,659
New Zealand	Cargo	601,802	514,588	544,643	469,806	385,088
	Ballast	23,518	29,189	43,584	19,121	66,739
Asiatic Countries and Islands in the Pacific	Cargo	1,104,361	1,390,401	1,061,434	1,651,536	1,647,769
	Ballast	453,271	444,169	594,752	311,894	249,981
Africa	Cargo	159,238	122,965	45,114	(a)169,060	42,096
	Ballast	2,722	672	4,205	..	56
North and Central America	Cargo	474,279	536,134	633,692	450,702	488,134
	Ballast	238,166	164,290	306,629	120,786	130,270
South America	Cargo	28,643	29,356	12,356	18,643	19,631
	Ballast	3,597	..	..	..	..
	Cargo	4,784,979	4,907,261	4,544,974	5,216,872	5,256,181
	Ballast	721,274	638,320	954,707	451,801	452,705
Total .. .. .	..	5,506,253	5,545,581	5,499,681	5,668,673	5,708,886

(a) Includes 23 vessels of 71,801 tons cleared to Las Palmas and 13 vessels of 40,966 tons cleared to Port Said for orders, all of which were subsequently diverted to ports in the United Kingdom and Europe.

3. **Nationality of Oversea Shipping.**—The greater part of the shipping visiting Australia is of British nationality, though in 1931-32 the proportion of British tonnage, 65.62 per cent., was the lowest yet recorded. This does not mean an actual diminution of British tonnage in the Australian trade, but the proportion which British ships represent has been reduced mainly by an increase in the tonnage of Japanese and Norwegian vessels.

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.	Tonnage.				
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
BRITISH—					
Australian	395,680	206,188	211,890	227,550	230,996
United Kingdom	3,011,435	3,286,445	3,244,561	3,086,586	3,138,330
Canadian	72,079	77,907	57,282	38,683	42,032
New Zealand	403,176	415,517	399,209	320,822	260,628
Other British	94,863	120,580	84,928	62,398	59,905
Cargo	3,637,889	3,703,435	3,726,326	2,924,814	2,680,856
Ballast	339,344	403,202	271,544	811,225	1,051,035
Total British	3,977,233	4,106,637	3,997,870	3,736,039	3,731,891
Per cent. on total	73.39	73.97	73.43	66.94	65.62
FOREIGN—					
Danish	61,311	34,016	72,431	44,693	46,061
Dutch	130,500	147,843	154,036	147,425	156,617
French	97,596	118,842	106,939	102,641	90,552
German	157,381	137,766	105,435	114,922	116,004
Italian	76,921	54,716	63,840	68,220	68,220
Japanese	168,323	286,607	207,910	671,742	688,712
Norwegian	284,036	255,270	307,943	339,695	395,269
Swedish	106,159	92,397	86,540	114,244	111,196
United States	341,263	289,228	267,827	186,800	205,485
Other Foreign	18,322	28,261	73,675	55,096	76,891
Cargo	1,355,076	1,224,129	1,349,017	1,203,153	1,266,062
Ballast	86,736	220,817	97,559	642,325	688,945
Total Foreign	1,441,812	1,444,946	1,446,576	1,845,478	1,955,007
Per cent. on total	26.61	26.03	26.57	33.06	34.38
Cargo	4,992,965	4,927,564	5,075,343	4,127,967	3,946,918
Per cent. on total	92.14	89.76	93.22	73.96	69.40
Ballast	426,080	624,019	369,103	1,453,550	1,739,980
Per cent. on total	7.86	11.24	6.78	26.04	30.60
Grand Total	5,419,045	5,551,583	5,444,446	5,581,517	5,686,898

The Australian tonnage which entered Australia from overseas during the year 1931-32 represented 4.06 per cent. of the total tonnage entered. This figure was less than the average for the quinquennium, which was 4.63 per cent., the decrease being due mainly to the disposal of Australian-owned vessels to foreign owners or to other Australian owners and transferred to the interstate trade, and the sale effected in April, 1928, of the five Bay liners and the freighters *Fordsdale* and *Ferndale* to the White Star Line.

§ 3. Shipping of Ports.

The total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1931-32, together with similar information in regard to some of the ports of New Zealand and of Great Britain for the year 1931, will be found in the next table :—

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

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney (N.S.W.) ..	8,227,956	London ..	27,989,066
Melbourne (Vic.) ..	6,083,072	Liverpool (including	
Adelaide (S.A.) ..	3,937,915	Birkenhead) ..	15,524,453
Brisbane (Qld.) ..	3,453,826	Southampton ..	12,104,413
Fremantle (W.A.) ..	3,310,750	Tyne Ports ..	9,336,720
Newcastle (N.S.W.) ..	3,308,320	Cardiff ..	7,466,642
Townsville (Qld.) ..	1,089,976	Plymouth ..	7,264,375
Hobart (Tas.) ..	817,171	Hull ..	5,623,271
Geelong (Vic.) ..	791,693	Manchester (including	
Cairns (Qld.) ..	607,853	Runcorn) ..	3,589,959
Kembla (N.S.W.) ..	535,276	Bristol ..	3,519,309
Pirie (S.A.) ..	535,143	Swansea ..	3,323,539
Albany (W.A.) ..	382,424	Sunderland ..	3,140,152
Lincoln (S.A.) ..	370,609	Harwich ..	2,843,046
Launceston (Tas.) ..	358,382	Newport ..	2,568,655
Burnie (Tas.) ..	352,223	Middlesbrough ..	2,478,435
Wallaroo (S.A.) ..	342,123	Dover ..	2,409,614
Mackay (Qld.) ..	319,847	Grimsby (including	
Thursday Island (Qld.) ..	274,005	Immingham) ..	2,244,315
Geraldton (W.A.) ..	268,363	Blyth ..	2,185,373
Devonport (Tas.) ..	265,001	Beaumaris (including	
Rockhampton (Qld.) ..	256,288	Holyhead) ..	2,029,180
NEW ZEALAND—		SCOTLAND—	
Wellington ..	3,349,212	Glasgow ..	5,580,469
Auckland ..	2,383,549	Greenock ..	3,185,389
Lyttleton ..	1,921,564	Leith ..	2,009,596
Dunedin ..	1,000,531	NORTHERN IRELAND—	
		Belfast ..	6,409,890

§ 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 1928 to 1932, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Com- posite.	Total.				
1928 ..	2	..	..	..	2	13	5	..	20
1929	13	2	..	15
1930	11	1	..	12
1931	4	..	..	4
1932	4	2	..	6

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1928 ..	46	36	191	156	61	59	..	..	298	251
1929	360	264	17	14	..	..	377	278
1930	310	219	9	9	..	..	319	228
1931	60	43	..	..	..	..	60	43
1932	108	62	15	15	..	..	123	77

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, 1932 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1932.

States and Territory.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.		No.	Net Tons.	No.	Net Tons.
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.				
New South Wales ..	48	1,239	319	68,008	257	4,550	221	7,626	50	13,197	895	94,620
Victoria ..	42	4,176	131	139,218	53	2,587	45	795	63	28,597	334	175,373
Queensland ..	16	2,429	36	5,071	56	898	93	1,359	27	4,002	228	13,759
South Australia ..	11	337	63	12,178	56	2,782	53	3,107	21	4,714	204	23,118
Western Australia ..	9	373	27	5,803	29	567	291	4,576	21	4,370	377	15,489
Tasmania ..	5	534	49	5,293	66	1,634	64	2,419	1	382	185	10,262
Northern Territory	..	..	..	..	3	44	17	163	..	..	20	207
Total ..	131	8,888	625	235,571	520	13,062	784	20,045	183	55,262	2,243	332,828

§ 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 overseas 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 overseas countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an overseas country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom, *via* States, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is in the third State again recorded for the statistics of the State concerned as from United Kingdom *via* other States. As, however, this inward voyage will terminate at an Australian port it follows that the *clearance* from the 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 . . . . .	.. ..	.. .. Oversea <i>via</i> States
Clears Adelaide for Melbourne . . . . .	.. ..	Interstate direct
Enters Melbourne from United Kingdom <i>via</i> Adelaide . . . . .	.. ..	.. .. 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 . . . . .	.. ..	.. .. Oversea <i>via</i> States
Enters Melbourne from Sydney . . . . .	.. ..	Interstate direct
Clears Melbourne for United Kingdom <i>via</i> Adelaide . . . . .	.. ..	.. .. Oversea <i>via</i> States
Enters Adelaide from Melbourne . . . . .	.. ..	Interstate direct
Clears Adelaide for United Kingdom <i>via</i> Fremantle . . . . .	.. ..	.. .. 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.

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 1927-28 to 1931-32. 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.

States and Territory.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
NUMBER.					
New South Wales	1,856	1,723	1,588	1,564	1,483
Victoria	1,815	1,704	1,739	1,534	1,494
Queensland	463	455	490	469	483
South Australia	852	730	753	606	598
Western Australia	382	339	387	305	311
Tasmania	1,052	950	1,022	941	933
Northern Territory	29	33	26	21	19
Total	6,449	5,934	6,005	5,440	5,321
TONNAGE.					
New South Wales	4,204,347	4,103,542	4,079,399	3,996,976	3,947,128
Victoria	3,511,614	3,416,924	3,552,904	3,274,609	3,154,197
Queensland	1,074,291	1,106,905	1,164,183	1,061,560	1,123,578
South Australia	2,462,588	2,238,706	2,504,065	2,143,692	2,176,155
Western Australia	1,879,446	1,663,818	1,915,695	1,653,953	1,643,755
Tasmania	1,242,260	853,982	1,207,640	1,134,113	1,094,767
Northern Territory	61,746	59,048	64,075	62,570	51,570
Total	14,436,292	13,442,925	14,487,961	13,327,473	13,191,150

3. **Oversea Vessels Moving Interstate.**—(*Oversea via States.*) To ascertain the aggregate movement of shipping between the States during the year 1931-32, 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, 1931-32.

States and Territory.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	443	2,311,219	422	2,216,503	865	4,527,722
Victoria	370	2,012,656	372	2,030,697	742	4,043,353
Queensland	220	1,384,941	224	1,425,999	444	2,810,940
South Australia	229	1,372,743	242	1,425,943	471	2,798,686
Western Australia	16	66,023	20	79,142	36	145,165
Tasmania	29	130,786	83	500,691	112	631,477
Northern Territory	3	6,346	..	..	3	6,346
Total	1,310	7,284,714	1,363	7,678,975	2,673	14,963,689

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

4. **Vessels engaged Solely in Interstate Trade.**—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1927-28 to 1931-32 were as follow :—

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

Year.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1927-28	4,824	6,316,106	4,865	6,447,495
1928-29	4,373	5,512,897	4,383	5,611,354
1929-30	4,396	6,218,634	4,373	6,091,994
1930-31	4,054	5,761,040	4,074	5,838,626
1931-32	3,958	5,512,175	3,999	5,557,763

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 1927-28 to 1931-32 :—

TOTAL INTERSTATE MOVEMENT OF SHIPPING.—AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1927-28	8,324	23,395,355	8,365	23,526,744
1928-29	7,823	22,648,956	7,833	22,747,413
1929-30	7,851	23,616,739	7,828	23,490,099
1930-31	6,916	20,987,466	6,936	21,065,052
1931-32	6,631	20,475,864	6,672	20,521,452

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during 1931-32, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1931-32.

States and Territory.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	1,926	6,258,347	1,918	6,090,877
Victoria	1,864	5,166,853	1,913	5,413,749
Queensland	703	2,508,519	709	2,534,609
South Australia	827	3,548,898	842	3,596,375
Western Australia	327	1,709,778	295	1,592,873
Tasmania	962	1,225,553	976	1,241,701
Northern Territory	22	57,916	19	51,268
Total, Australia	6,631	20,475,864	6,672	20,521,452

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 1928 to 1932 :—

INTERSTATE AND COASTAL STEAMSHIP SERVICES.—AUSTRALIA.

Particulars.	1928.	1929.	1930.	1931.	1932.
Number of companies making returns	38	29	22	23	23
Number of steamships	201	181	173	162	154
Tonnage { Gross	371,142	360,459	349,163	319,756	306,878
{ Net	208,083	202,749	196,342	178,549	171,089
Horse-power (Nominal)	37,980	37,911	36,230	34,357	33,340
Number of passengers for which licensed					
{ 1st class	7,686	7,983	7,686	7,278	7,222
{ 2nd class and steerage	3,240	1,755	1,784	1,775	1,755
Complement of Crew { Masters and officers	638	588	563	524	498
{ Engineers	630	598	576	538	514
{ Crew	4,922	4,710	4,630	4,232	4,072

§ 6. Tonnage of Cargo.

1. **Oversea and Interstate Cargo.**—The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1927-28 to 1931-32. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

AUSTRALIAN SHIPPING.—CARGO MOVEMENT.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1927-28	3,346,604	2,542,523	3,739,525	946,781	5,090,116	1,134,972
1928-29	3,596,936	2,470,493	4,529,232	759,813	4,381,692	1,168,601
1929-30	4,348,396	2,298,101	3,954,893	643,373	3,460,428	1,111,355
1930-31	2,375,412	1,037,889	5,802,593	639,032	3,295,051	805,314
1931-32	2,072,334	894,380	5,951,914	726,040	3,002,327	1,007,351

2. **Nationality.**—The following table shows the total oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1927-28 to 1931-32.

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

Vessels Registered at Ports in—	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
British—					
Australia	679,122	255,296	237,792	210,168	223,841
United Kingdom	6,036,024	6,988,043	6,861,323	5,528,848	5,429,998
Canada	151,582	190,273	135,154	86,775	64,169
New Zealand	512,929	456,560	441,593	357,258	260,988
Other British	142,629	222,787	163,949	98,492	134,739
Total British	7,522,286	8,112,959	7,839,811	6,290,541	6,113,735
Per cent. on Total	71.13	71.44	69.72	63.83	63.39

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

Vessels Registered at Ports in—	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Foreign—					
Denmark	176,568	117,499	227,779	133,777	137,378
France	151,162	153,670	119,533	92,460	76,666
Germany	377,599	385,692	269,783	241,868	248,983
Italy	125,403	92,476	108,605	90,412	73,962
Japan	303,353	532,174	436,747	1,146,557	1,161,303
Netherlands	256,493	280,675	290,949	234,897	254,768
Norway	722,677	687,509	876,701	868,346	876,991
Sweden	354,084	330,290	355,621	360,373	313,986
United States of America	534,477	585,587	512,923	282,383	232,182
Other Foreign	51,331	77,943	206,311	113,312	154,714
Total Foreign	3,053,147	3,243,515	3,404,952	3,564,385	3,530,933
Per cent. on Total	28.87	28.56	30.28	36.17	36.61
Grand Total	10,575,433	11,356,474	11,244,763	9,854,926	9,644,668

(a) Tons weight and tons measurement combined.

§ 7. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No. 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars 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 30th June, 1933, 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 20s. per ton weight and 1 $\frac{1}{16}$ d. per lb. The charter rate for wheat was 22s. 6d. 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, 1933, was included in the Transport and Communication Bulletin No. 23, published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1932 are shown in the Transport and Communication Bulletin No. 23. 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 the provisions of the Navigation Act 1926 (March, 1926) permission may be granted by the Governor-General in Council in certain specified circumstances to unlicensed British ships to engage in passenger tourist traffic between any specified Commonwealth ports. Certain vessels were granted permission to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney, and Melbourne during the period 6th March, 1926, to 31st May, 1926, and between the 1st January, 1927, and 31st May, 1927. This permission may be renewed from time to time as occasion demands. The Navigation Act 1925 (July, 1925), conferred authority for the suspension, for any specified time, if in the opinion of the Governor-General in Council such is expedient in the public interest, of the operation of the provisions of that part of the principal Act relating to the engagement of ships in the coasting trade by exempting under certain circumstances any ship or class of ships from compliance with any specified provisions of the Act.

7. **Ports and Harbours.**—A report in two volumes on *Transport in Australia*, with special reference to Ports and Harbours facilities, 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.

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 4ft. 8½in. 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, 1932, the total expenditure by the Commonwealth was £4,371,000, the interest charge for the year 1931-32 being £207,556. During the same period, the working of the line, which is the responsibility of the New South Wales and Queensland Railways Commissioners, resulted in losses being shown on both sections as follow:—New South Wales £47,454, and Queensland £2,364. In addition, the following amounts were paid as interest:—New South Wales £72,301, and Queensland £27,075, the remainder, £108,180, being borne by the Commonwealth. Figures relating to the operation, etc., of the line are incorporated as far as possible with 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 1927-28 to 1931-32. 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.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	6,008.99	6,082.25	6,089.93	6,159.70	6,208.30
Victoria ..	4,721.69	4,723.95	4,737.65	4,741.69	4,745.71
Queensland ..	6,619.14	6,720.91	6,726.03	6,794.54	6,821.04
South Australia ..	3,636.42	3,821.29	3,938.68	3,932.33	3,949.04
Western Australia ..	4,707.62	4,809.47	4,841.89	4,911.37	4,966.06
Tasmania ..	841.06	827.26	821.01	806.45	786.45
Federal Capital Territory ..	4.94	4.94	4.94	4.94	4.94
Northern Territory ..	198.68	264.84	316.50	316.50	316.50
Australia ..	26,738.54	27,254.91	27,476.63	27,667.52	27,798.04

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

(ii) *Government and Private Lines Separately.* The next table shows for each State (a) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public, 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, 1932 :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1931-32.

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	6,125.60	..	82.70	6,208.30
Victoria	4,720.77	..	24.94	4,745.71
Queensland	6,558.09	..	262.95	6,821.04
South Australia	2,529.26	1,369.27	50.51	3,949.04
Western Australia	4,235.07	453.99	277.00	4,966.06
Tasmania	644.89	..	141.56	786.45
Federal Capital Territory .. .. .	..	4.94	..	4.94
Northern Territory .. .. .	..	316.50	..	316.50
Australia	24,813.68	2,144.70	839.66	27,798.04

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, 1932 :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1932.

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	2.45	2.63	7.03	6.74	11.76	3.55	0.57	70.18	4.24
Per 1,000 sq. miles of Territory	20.06	54.00	10.17	10.39	5.09	30.01	5.26	0.60	9.35

7. *Classification of Lines according to Gauge, 1931-32.*—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, 1932, and of private railways open for general traffic to the 31st December, 1932, as nearly as possible.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1931-32.

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	771.41	..	..	..	1,369.27
Western Australia	453.99	..	..	..	..	453.99
Federal Capital Territory	4.94	..	..	..	..	4.94
Northern Territory	316.50	..	..	..	316.50
Total	1,056.79	1,087.91	..	..	..	2,144.70

STATE RAILWAYS.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales .. ..	..	6,086.09	39.51	..	..	..	6,125.60
Victoria	4,599.00	..	..	..	121.77	..	4,720.77
Queensland .. ..	..	68.82	6,459.01	..	..	30.26	6,558.09
South Australia	1,451.24	..	1,078.02	..	..	..	2,529.26
Western Australia .. ..	..	..	4,235.07	..	..	..	4,235.07
Tasmania .. ..	..	..	633.56	..	..	11.33	644.89
Total	6,050.24	6,154.91	12,445.17	..	121.77	41.59	24,813.68

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales .. ..	..	45.97	36.73	..	..	..	82.70
Victoria	13.94	..	..	11.00	..	..	24.94
Queensland .. ..	..	..	97.24	..	7.50	158.21	262.95
South Australia .. ..	..	..	50.51	..	..	..	50.51
Western Australia .. ..	..	..	277.00	..	..	..	277.00
Tasmania .. ..	..	..	125.07	..	..	16.49	141.56
Total	13.94	45.97	586.55	11.00	7.50	174.70	839.66

ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales .. ..	..	6,132.06	76.24	..	..	..	6,208.30
Victoria	4,612.94	..	..	11.00	121.77	..	4,745.71
Queensland .. ..	..	68.82	6,556.25	..	7.50	188.47	6,821.04
South Australia	1,451.24	597.86	1,899.94	..	..	..	3,949.04
Western Australia .. ..	..	453.99	4,512.07	..	..	..	4,966.06
Tasmania .. ..	..	..	758.63	..	..	27.82	786.45
Federal Capital Territory .. ..	..	4.94	..	..	..	..	4.94
Northern Territory .. ..	..	..	316.50	..	..	..	316.50
GRAND TOTAL	6,064.18	7,257.67	14,119.63	11.00	129.27	216.29	27,798.04

8. **Summary of Operations, 1931-32.**—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, 1932 :—

RAILWAYS.—FEDERAL, STATE, AND PRIVATE.—SUMMARY 1931-32.

Particulars.	Federal Railways.	State Railways.	Private Railways.	Total for Australia.
Mileage open (route) 30th June, 1932 Miles	2,144.70	24,813.68	839.66	27,798.04
Capital cost £	15,489,464	307,875,986	(a) 5,119,897	(a) 328,485,347
Cost per mile £	7,221	12,407	(a) 6,097	(a) 11,817
Gross revenue £	280,107	37,299,358	(b) 519,879	38,099,844
Gross revenue per train mile d.	130.04	141.39	134.13	141.19
Working Expenses £	357,802	27,784,182	(b) 353,590	28,495,574
Working Expenses per train mile d.	166.11	105.32	91.23	105.60
Net Revenue £	-77,695	9,515,676	(b) 166,289	9,604,270
Net Revenue per train mile d.	-36.07	36.07	42.90	35.59
Train miles run Miles	516,966	63,314,741	930,784	64,761,885
Passengers carried No.	74,076	302,639,095	943,818	303,657,589
Tons of goods, etc., carried Tons	97,700	25,973,772	1,299,889	27,371,361
Average number of employees (d)	1,099	(d) 92,751	(b) (c) 897	94,747
Average wage £	229	223	238	223

(a) Exclusive of the capital cost of 149.98 miles of private lines for which information is not available.
 (b) Incomplete. (c) Employees at 30th June, 1932. (d) Exclusive of Construction Branch.

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, 1929 to 1932, classified according to gauge, together with the percentages on the total :—

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

Gauge.	At 30th June—							
	1929.		1930.		1931.		1932.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	7,847.13	25.41	7,867.32	25.17	7,872.09	25.05	7,860.50	24.88
4 ft. 8½ in. ..	8,998.12	29.14	9,040.86	28.93	9,113.21	29.01	9,205.61	29.14
3 ft. 6 in. ..	13,865.95	44.91	14,176.91	45.37	14,268.41	45.41	14,358.58	45.45
2 ft. 6 in. ..	131.87	0.43	131.87	0.42	131.87	0.42	131.87	0.42
2 ft. 0 in. ..	33.00	0.11	33.00	0.11	33.00	0.11	33.00	0.11
Total ..	30,876.07	100.00	31,249.96	100.00	31,418.58	100.00	31,589.56	100.00

(a) Exclusive of Tasmania.

§ 2. Federal Railways.

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

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

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

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

(iii) *Line Authorized for Construction.* The Northern Territory Railway Extension Act 1923 provided for the construction of a 3 ft. 6 in. gauge line from the then existing terminus at Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000, including the cost of a bridge over the Katherine River which was completed in May, 1926, although the first train crossed on 21st January, 1926. The terminus of the line was moved to the new station at Katherine River on 14th December, 1926. Tenders were then called for the construction of the line from Katherine River to Daly Waters, but, as no satisfactory tender was received, it was decided to do the work by day labour. Under this system, construction proceeded rapidly until December, 1927, when, owing to a reduction in the amount of money to be made available for construction during the year 1927-28, a drastic curtailment of operations was made. The work then proceeded at a limited rate, and, on 1st July, 1928, a further section, to Mataranka (264 miles 67 chains from Darwin) was opened for public traffic. Owing to the need for the curtailment of loan expenditure, the Government then decided not to proceed with construction work beyond Birdum (316 miles 40 chains from Darwin), and on 4th September, 1929, this section was opened for traffic and further construction work ceased.

3. **Central Australia Railway.**—(i) *General.* This line was taken over by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1926, the management devolved upon the Commonwealth Railways Commissioner.

(ii) *Extension Authorized.* The Railways (South Australia) Agreement Act 1926, assented to by the Commonwealth Parliament in February, 1926, ratified the agreement between the Commonwealth and South Australian Governments for the construction of a 3 ft. 6 in. gauge line between Port Augusta and Alice Springs. This involves the construction of an extension to Alice Springs of the then existing 3 ft. 6 in. gauge line from Port Augusta to Oodnadatta. The estimated cost, exclusive of rolling stock, of the proposed extension, which comprises 292 miles, was £1,700,000. The first section 21½ miles from Oodnadatta was completed on the 29th August, 1927. The contract for the construction of the balance of 270¾ miles to Alice Springs was signed on the 11th August, 1927. The contract provided for the completion of the railway to Alice Springs by the 30th June, 1929, but it was not until 2nd August, 1929, that the completed line was taken over for public traffic.

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

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 662 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.85 miles, a saving of 11.54 miles.

6. **Lines Open, Surveyed, etc.**—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1932, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1932.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian—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
Queanbeyan to Canberra (Federal Capital Territory)	4.94
North Australia Railway—Darwin to Birdum	316.50
Total opened for traffic	2,144.70
SURVEYED OR BEING SURVEYED.	
Birdum to Daly Waters (Northern Territory)	43.50
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
Port Augusta—Red Hill—Adelaide	188.98
Total surveyed or being surveyed	1,189.56

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 (3) 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.

7. **Mileage open, worked, and Train miles run.**—The next table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1928 to 1932 :—

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

MILES OPEN FOR TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
	Miles.	Miles.	Miles.	Miles.	Miles.
1928	1,051	478	5	199	1,733
1929	1,052	648	5	265	1,970
1930	1,052	771	5	317	2,145
1931	1,052	771	5	317	2,145
1932	1,052	771	5	317	2,145

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

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
AVERAGE MILES WORKED.					
	Miles.	Miles.	Miles.	Miles.	Miles.
1928	1,051	478	5	199	1,733
1929	1,052	566	5	265	1,888
1930	1,052	760	5	307	2,124
1931	1,052	771	5	317	2,145
1932	1,052	771	5	317	2,145
TRAIN MILES RUN.(a)					
1928	485,848	359,160	15,632	105,042	965,682
1929	500,402	408,970	12,915	82,861	1,005,148
1930	453,151	239,303	9,865	43,594	745,913
1931	403,615	200,051	6,900	40,686	651,252
1932	319,747	154,529	6,865	35,819	516,960

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

8. Cost of Construction and Equipment.—In the following table particulars are given of the cost of construction and equipment of the undermentioned railways for each of the years 1928 to 1932 :—

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.					
	£	£	£	£	£
1928	7,682,126	2,908,644	87,369	1,760,756	12,438,895
1929	7,736,355	3,882,006	83,888	2,431,964	14,134,213
1930	7,805,945	4,730,364	84,253	2,749,807	15,370,369
1931	7,840,504	4,760,548	84,429	2,750,718	15,436,199
1932	7,879,397	4,769,938	84,429	2,755,700	15,489,464
COST PER MILE OPEN.					
1928	7,306	6,086	17,686	8,863	7,178
1929	7,355	5,991	16,981	9,183	7,176
1930	7,421	6,132	17,064	8,688	7,167
1931	7,454	6,171	17,091	8,691	7,197
1932	7,490	6,187	17,091	8,693	7,221

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

The sum of £1,528,821, of which £112,006 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1930, and has been included in the total shown above.

9. **Gross Revenue.**—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1928 to 1932 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.					
	£	£	£	£	£
1928	333,608	188,143	9,044	69,054	599,849
1929	332,199	184,046	6,824	46,156	569,225
1930	265,502	99,626	6,473	32,475	404,136
1931	187,681	88,479	3,964	29,010	309,134
1932	173,402	79,400	3,810	23,495	280,107
GROSS REVENUE PER AVERAGE MILE WORKED.					
1928	317	394	1,831	348	346
1929	316	325	1,381	174	302
1930	252	131	1,311	106	190
1931	179	115	802	92	144
1932	165	103	762	74	131
GROSS REVENUE PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1928	164.80	125.72	138.85	157.77	149.08
1929	159.32	108.00	126.81	133.69	135.92
1930	140.65	99.92	157.48	178.79	130.03
1931	111.60	106.15	137.88	171.13	113.92
1932	130.15	123.32	133.20	157.42	130.04

(ii) *Classification and Percentages.* During the year 1931-32 receipts from coaching traffic, and goods and live stock represented 53 per cent. and 24 per cent. of the total gross revenue of the Trans-Australian line, similar percentages for the remaining lines being :—Central Australia line 17 per cent. and 78 per cent., Federal Capital Territory line 57 per cent. and 43 per cent., and North Australia line 14 per cent. and 36 per cent. coaching, and goods and live stock revenue respectively.

The miscellaneous receipts for the year 1931-32 include an amount of £14,037, revenue from dining cars and refreshment services on the Trans-Australian and Central Australia Railways. A sum of £17,461 was received from this source during the previous year.

10. **Working Expenses.**—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1928 to 1932 :—

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

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

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
TOTAL WORKING EXPENSES.					
	£	£	£	£	£
1928	287,942	170,285	11,234	67,991	537,452
1929	300,270	196,329	10,331	56,862	563,792
1930	296,403	194,918	8,031	55,229	554,581
1931	241,490	155,438	6,363	55,330	458,621
1932	197,147	111,555	5,012	44,088	357,802
PERCENTAGE OF WORKING EXPENSES ON REVENUE.					
	%	%	%	%	%
1928	86.30	90.50	124.21	98.46	89.59
1929	90.39	106.67	151.39	123.20	99.05
1930	111.61	195.65	124.07	170.07	137.23
1931	128.67	175.68	160.52	190.73	148.36
1932	113.69	140.49	131.55	187.65	127.74

Compared with results for the previous year, the percentage of working expenses on revenue shows decreases for each railway. There was a decrease in earnings on each of the railways, due mainly to (a) trade depression generally; (b) aerial and other competition on the Trans-Australian railway; and (c) serious washaways on the Trans-Australian and Central Australia railways. The reductions in working expenses were due to (a) the operation of the Commonwealth Financial Emergency Act; (b) improved methods of working; and (c) the closest scrutiny over every item of expenditure.

(ii) *Averages.* The next table gives the working expenses per average mile worked, and per train-mile run for each railway for the years 1928 to 1932:—

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.					
	£	£	£	£	£
1928	274	356	2,274	342	310
1929	286	347	2,091	215	299
1930	282	256	1,627	180	261
1931	230	202	1,288	175	214
1932	187	145	1,002	139	167
WORKING EXPENSES PER TRAIN-MILE RUN.					
	d.	d.	d.	d.	d.
1928	142.24	113.79	172.47	155.34	133.57
1929	144.01	115.21	191.98	164.70	134.62
1930	156.98	195.49	195.38	304.05	178.44
1931	143.60	186.48	221.32	326.38	169.01
1932	147.98	173.26	175.21	295.40	166.11

(iii) *Classification and Percentages.* Of the total working expenses of the Federal Railways during the year 1931-32, maintenance expenses represented 38 per cent., locomotive, carriage and wagon charges 39 per cent., and traffic expenses 14 per cent. Details for each line were as follow :—Trans-Australian line 33 per cent., 44 per cent. and 12 per cent.; Central Australia line 46 per cent., 36 per cent., and 12 per cent.; Federal Capital Territory line 15 per cent., 39 per cent. and 40 per cent.; and North Australia line 47 per cent., 24 per cent. and 22 per cent. respectively.

11. *Passenger Journeys, and Tonnage of Goods and Live Stock.*—(i) *General.* In the next table particulars are given of the passenger journeys and tonnage of goods and live stock carried on the Federal railways during the years 1928 to 1932 :—

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.
1928	36,212	60,410	53,255	5,899	155,776
1929	36,030	57,993	47,470	5,135	146,628
1930	29,163	45,235	45,457	3,238	123,093
1931	19,209	31,107	31,248	3,384	84,948
1932	15,875	25,683	29,417	3,101	74,076
TONNAGE OF GOODS AND LIVE STOCK CARRIED.					
	tons.	tons.	tons.	tons.	tons.
1928	45,087	96,799	41,848	22,628	206,362
1929	40,750	90,734	23,196	14,919	169,599
1930	20,906	44,047	20,966	7,024	92,943
1931	12,360	38,831	10,077	3,296	64,564
1932	21,316	65,538	7,807	3,039	97,700

(ii) *Passenger-Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1931-32 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1931-32.

Railway.	Passenger Train Mileage.	Number of Passenger Journeys.	Total "Passenger-Miles."	Amount Received from	Average Number	Average Mileage	Average Earnings	Average Fare	Density of Traffic per Average Mile Worked.
				Passengers.	of Passengers carried per Train Mile.	per Passenger Journey.	per "Passenger-Mile."	per Passenger Journey.	
			,000 omitted.	£		Miles.	d.	£ s. d.	
Trans-Australian ..	224,735	15,875	13,318	61,747	59	839	1. 11	3 17 9	12,661
Central Australia ..	22,737	25,683	1,576	8,939	69	61	1. 36	0 6 11	2,043
Federal Capital Territory ..	6,007	29,417	146	1,214	24	5	2. 00	0 0 10	29,566
North Australia ..	11,848	3,101	336	2,766	28	108	1. 98	0 17 10	1,062

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1931-32 :—

RAILWAYS, FEDERAL.—“TON-MILEAGE” SUMMARY, 1931-32.

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.
			‘,000 omitted.	£	Tons.	Miles.	d.	
Trans-Australian ..	95,012	21,316	6,751	41,999	(a) 71	317	1.49	6,419
Central Australia ..	131,792	65,538	7,966	61,589	(a) 60	122	1.85	10,327
Federal Capital Territory ..	858	7,807	39	1,629	(a) 41	5	10.02	7,894
North Australia ..	23,971	3,039	425	8,400	(a) 18	140	4.74	1,344

(a) Approximate.

12. **Rolling Stock.**—Particulars of locomotives and rolling stock in use on the Federal railways, may be found on page 22 of Transport and Communication Bulletin No. 23.

13. **Employees.**—(i) *General.* The following table shows the number of employees on the Federal railways at 30th June in each year from 1928 to 1932 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES.

Railway.	30th June—									
	1928.		1929.		1930.		1931.		1932.	
	Salaried Staff.	Wages Staff.								
	No.	No.								
Trans-Australian	126	756	128	776	117	733	106	(b) 554	102	(b) 556
Central Australia	69	492	68	539	59	383	57	331	55	275
Federal Capital Territory (a)	5	8	5	7	4	5	4	5
North Australia ..	24	320	22	178	15	93	13	100	14	82
Total ..	219	1,568	223	1,501	196	1,216	180	990	175	918

(a) Worked by New South Wales Government Railways until 1st July, 1928. (b) Includes those engaged on construction work, 1931, 4 and 1932, 15.

(ii) *Average Employed throughout Year.* The average number of employees throughout the year 1931-32 was 179 salaried staff and 1,020 wages staff (100 of whom were on construction work).

14. **Accidents.**—The following table shows the number of accidents in each of the years 1928 to 1932 :—

RAILWAYS, FEDERAL.—ACCIDENTS.

Railway.	Number of Persons.									
	Killed.					Injured.				
	1928.	1929.	1930.	1931.	1932.	1928.	1929.	1930.	1931.	1932.
Trans-Australian ..	3	..	..	..	..	3	3	..	2	3
Central Australia	2	..	I	..	..	7	7	..	2	I
Federal Capital Territory ..	..	..	..	..	..	I	..	..	..	I
North Australia ..	2	..	..	..	..	9	4	..	..	I
Total ..	7	..	I	..	..	20	14	..	4	6

Of those injured in 1932, five were railway employees, the remaining one being a passenger. Further details are available on page 25 of Transport and Communication Bulletin No. 23.

§ 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, 1928 to 1932.**—(i) *General.* The following table shows the length of State railways open for traffic on the 30th June in the years 1928 to 1932 :—

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.
1928	5,867	4,697	6,345	2,527	3,977	658	24,071
1929	5,940	4,699	6,447	2,542	4,079	653	24,360
1930	5,974	4,713	6,447	2,536	4,111	679	24,460
1931	6,044	4,717	6,529	2,529	4,180	665	24,664
1932	6,126	4,721	6,558	2,529	4,235	645	24,814

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1932 accompanies this chapter.

The appended statement shows the actual mileage opened for traffic in the year 1932, also the annual average increase in mileage opened since 1922 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1931-32	81.60	4.02	29.31	..	54.68	-20.00	149.61
Average annual mileage increase for 10 years to 30th June, 1932 ..	100.95	40.39	75.88	17.20	69.68	0.81	304.91

(ii) *New South Wales.* During the year ended 30th June, 1932, the following new lines were opened for traffic, viz. :—Wolli Creek to East Hills 10.22 miles, Sydney (Central) to Waverton 3.74 miles, South Grafton to Grafton 1.62 miles and Camurra to Boggabilla 74.40 miles, while the line from Westmead to Rogan's Hill 7.57 miles was closed. Minor adjustments decreased the length of existing lines by 0.81 miles, the total increase for the year being therefore 81.60 miles.

(iii) *Victoria.* During the year ended 30th June, 1932, no new lines were opened, but adjustments were made increasing the previous length 4.02 miles, the main adjustment being due to the completion of the deviation in the Wodonga-Tallangatta line.

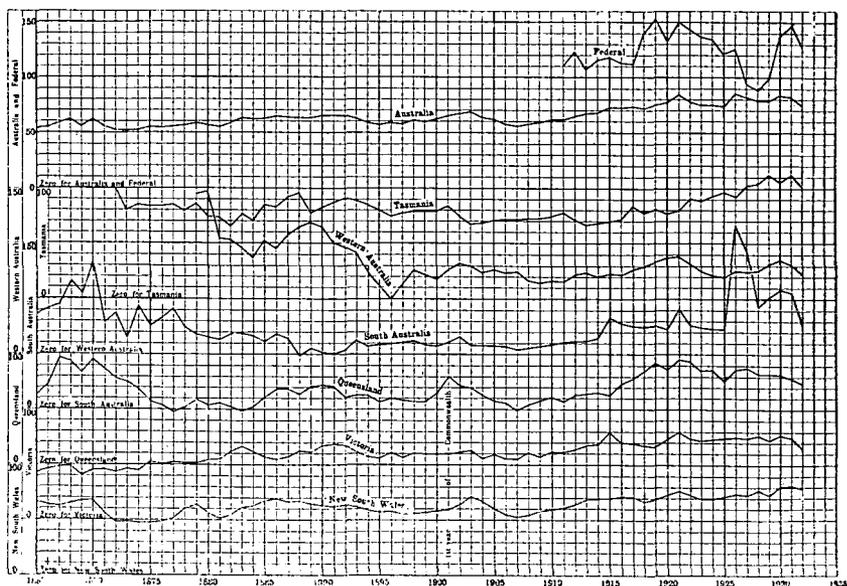
(iv) *Queensland.* The following new mileage was opened during the year :—Wallaville to Morganville 6.51 miles, Meandarra to Glenmorgan 13.84 miles and Mungungo to Monto 8.92 miles. An adjustment of 0.04 miles brought the total increase to 29.31 miles.

(v) *South Australia.* There were no alterations to route mileage during this year.

(vi) *Western Australia.* The following new mileage was opened for traffic during the year :—Meekatharra to Paroo 67.15 miles, while the Kalgoorlie to Kanowna line 12.47 miles was closed, giving a total increase of 54.68 miles.

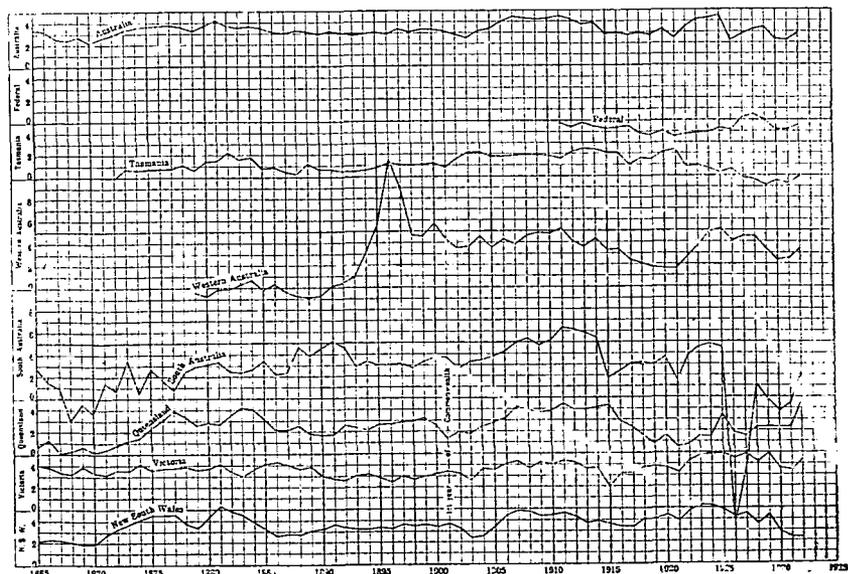
(vii) *Tasmania.* The line from Flowerdale Junction to Mawcena 20.00 miles was closed, there being no other alterations to the existing route mileage.

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1932.



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.

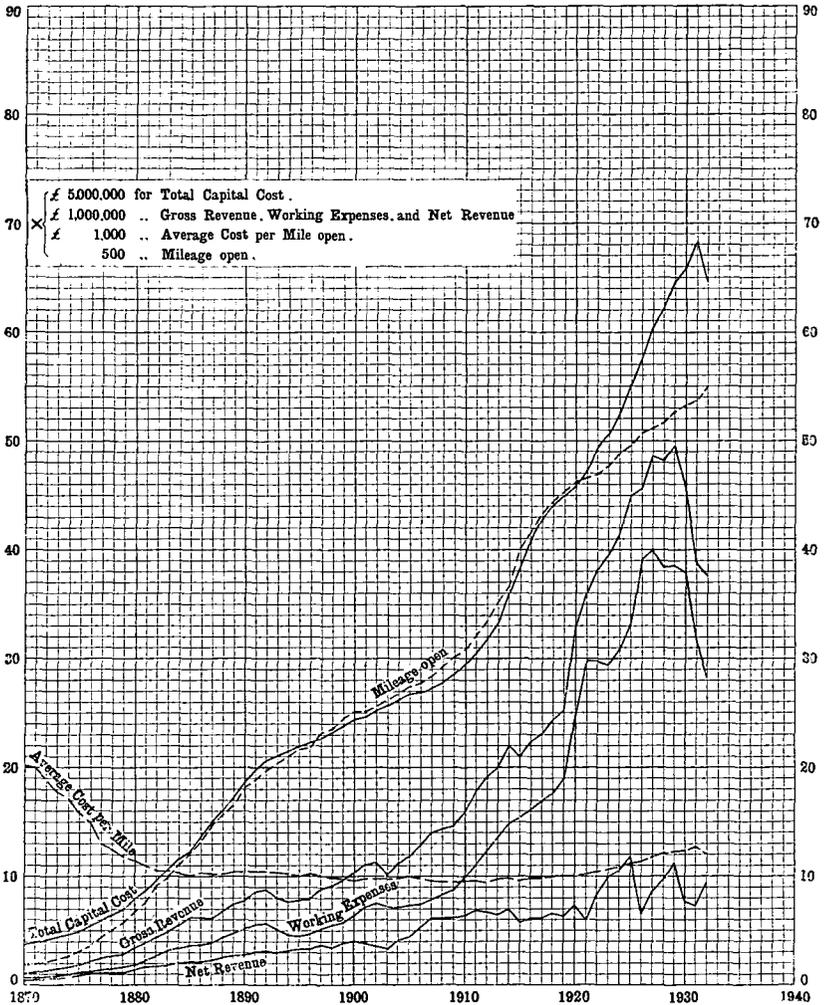
PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1932.



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 1932.



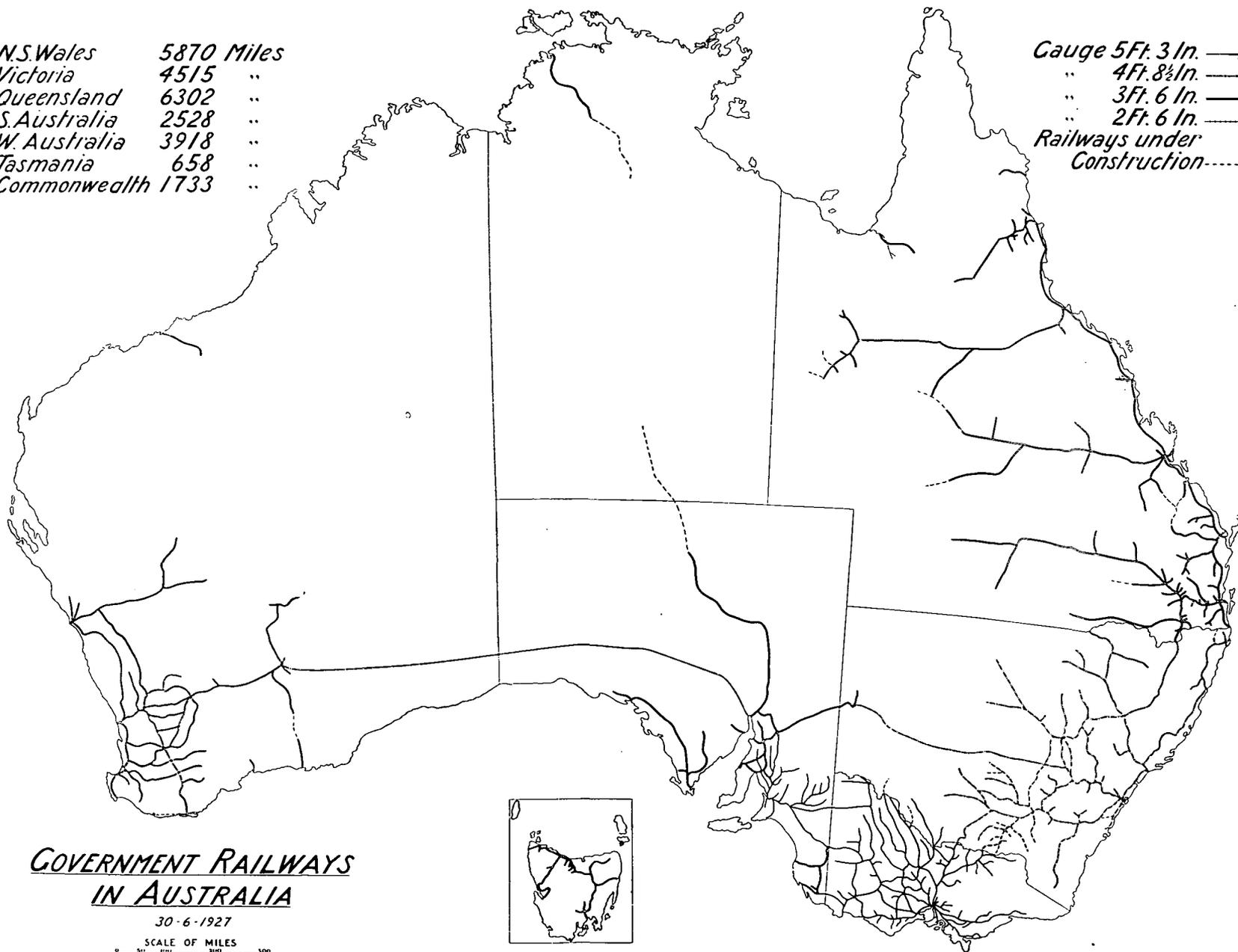
EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

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.

<i>N.S. Wales</i>	<i>5870 Miles</i>	
<i>Victoria</i>	<i>4515</i>	<i>..</i>
<i>Queensland</i>	<i>6302</i>	<i>..</i>
<i>S. Australia</i>	<i>2528</i>	<i>..</i>
<i>W. Australia</i>	<i>3918</i>	<i>..</i>
<i>Tasmania</i>	<i>658</i>	<i>..</i>
<i>Commonwealth</i>	<i>1733</i>	<i>..</i>

Gauge 5 Ft. 3 In. ———
.. 4 Ft. 8 1/2 In. ———
.. 3 Ft. 6 In. ———
.. 2 Ft. 6 In. - - - - -
Railways under Construction - - - - -



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, 1932, is given in the Transport and Communication Bulletin No. 23 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 1928 to 1932 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.							
1928 ..	5,826	4,661	6,340	2,528	3,971	658	23,984
1929 ..	5,903	4,698	6,387	2,545	3,993	654	24,180
1930 ..	5,959	4,708	6,447	2,538	4,110	660	24,422
1931 ..	6,013	4,710	6,509	2,535	4,123	665	24,555
1932 ..	6,050	4,720	6,550	2,529	4,214	645	24,708

TRAIN-MILES RUN. (a)

1928 ..	26,896,580	17,694,928	11,655,122	6,503,474	5,729,735	1,416,741	69,896,580
1929 ..	27,382,124	17,979,219	11,893,147	5,765,356	5,829,465	1,465,929	70,255,250
1930 ..	26,713,951	17,679,565	11,838,713	5,551,082	5,729,796	1,594,487	69,028,594
1931 ..	25,628,405	15,945,315	10,883,045	4,991,695	5,402,694	1,251,102	64,102,256
1932 ..	25,848,580	15,363,776	10,964,819	4,914,265	5,093,179	1,130,122	63,314,741

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

5. Lines under Construction, and Lines Authorized, 1932.—(i) *General.* The following statement gives particulars at the 30th June, 1932, 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, 1932.

Particulars.	N.S.W.	Vic. (b)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction	(a) 38.75	102.75	(c) 8.00	..	130.27	..	279.77
Mileage authorized but not commenced	366.24	39.50	1,130.00	26.25	319.85	..	1,881.84

(a) Exclusive of 127 miles on which work has been suspended.

(b) See sub-section (b) below.

(c) Exclusive of 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.* The total mileage under construction was 38.75 miles, from Moss Vale to Port Kembla. Work has been suspended 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 Yarrowonga to Oaklands (37 miles). Work has also been suspended on the former line. 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, 1932, the following line was under construction :—Central Division—3 ft. 6 in. gauge—Thangool to Lawgi (8 miles). The following lines are partially constructed, but work thereon is temporarily suspended :—Goondoon to Kalliwa Creek (18 miles); Yaraka 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.* At 30th June, 1932, no railway construction work was in progress.

(e) *Western Australia.* The following lines were in course of construction by the Railways Department on the 30th June, 1932 :—Paroo to Willuna (44.18 miles); Pemberton to Westcliffe (27.90 miles); and Lake Grace to Karlgarin (58.19 miles); a total of 130.27 miles.

(f) *Tasmania.* At 30th June, 1932, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1932, 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); Sandy Hollow via Gulgong to Maryvale (146.48 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 366.24 miles.

(b) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1932 :—5 ft. 3 in. gauge : La La Siding to Big Pat's Creek (2.50 miles); Casterton to Nangeela (9 miles); and Orbost to Brodribb (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); an aggregate distance of 39.50 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); Wandooan 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); a total of 1,130 miles.

(d) *South Australia.* Parliament has authorized the construction of a line on the 3 ft. 6 in. gauge from Keilpa to Mangalo Hall (26.25 miles).

(e) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1932:—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); a total distance of 319.85 miles.

(f) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1932.

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, 1932, amounted to £307,875,986, representing an average cost of £47.00 per head of population. If the cost of railways owned by the Commonwealth Government is included, the total capital cost (£323,365,450) is equivalent to an amount of £49.37 per head of the population of the Commonwealth, while the total mileage open (26,958.38 miles) per 1,000 of population is 4.12. 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, 1932.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population at 30th June, 1932.
	Miles.	£	£	£	Miles.
New South Wales (a) ..	(b)6,125.60	(d)137,792,319	(d) 22,493	(d) 54.28	(c) 2.41
Victoria	4,720.77	74,415,458	15,763	41.20	2.61
Queensland	(b)6,558.09	(d) 33,884,190	(d) 5,167	(d) 34.90	(c) 6.75
South Australia (a) ..	2,529.26	27,202,936	10,756	46.06	4.28
Western Australia (a) ..	4,235.06	23,648,654	5,584	55.98	10.02
Tasmania	644.90	6,561,429	10,173	29.58	2.91
All States	24,813.68	(c)307,875,986	(c) 12,407	(c) 47.00	(c) 3.79

(a) Exclusive of Federal railways. (b) Includes portion of Grafton-South Brisbane uniform gauge line—New South Wales 26 miles, Queensland 68.82 miles (see para. 4, page 167). (c) Includes Grafton-South Brisbane line. (d) Exclusive of Grafton-South Brisbane line.

The lowest average cost (£5,584) per mile open is in Western Australia, and the highest (£22,493) in New South Wales, as compared with an average of £12,407 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.

The reduction of £28,000,000 in the capital cost of the Queensland railways is the result of a continued agitation on the part of the railway authorities for some relief from the over-capitalization of the government railways. As the latter are largely a means of developing the country, it follows that they cannot be conducted as a purely commercial undertaking, nor can they be expected to show a profit after payment of operation costs and interest charges on capital invested. As it was deemed hardly equitable to burden the railways with the interest charges on capital expended largely in developing the State, part of the capitalization of the railways was transferred to a separate fund by "The Railway (Capital Indebtedness) Reduction Act of 1931."

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 stores advance accounts and the discounts and flotation charges on loans allocated to the railways. 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 1928 to 1932 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL COST OF LINES OPEN.							
	£	£	£	£	£	£	£
1928 ..	116,221,374	72,282,201	56,281,445	26,021,454	21,403,256	6,483,281	298,693,011
1929 ..	122,566,422	73,061,522	58,251,561	26,835,717	22,427,112	6,494,003	309,636,337
1930 ..	124,555,236	74,193,518	58,727,528	27,272,316	22,846,871	6,534,186	314,129,655
1931 ..	130,802,362 ^a	74,392,935	59,497,495 ^a	27,255,643	23,329,093	6,549,965	326,108,493
1932 ..	137,792,319 ^a	74,415,458	33,884,190 ^a	27,202,936	23,648,654	6,561,429	337,875,986

COST PER MILE OPEN.

1928 ..	19,809	15,390	8,871	10,297	5,382	9,849	12,409
1929 ..	20,633	15,548	9,035	10,558	5,498	9,945	12,711
1930 ..	20,849	15,743	9,109	10,756	5,558	9,617	12,843
1931 ..	(a) 21,735	15,753	(a) 9,210	10,776	5,581	9,851	(b) 13,222
1932 ..	(a) 22,493	15,763	(a) 5,167	10,756	5,584	10,173	(b) 12,407

(a) Exclusive of Grafton-South Brisbane line.

(b) Includes Grafton-South Brisbane line.

(b) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1932 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1932.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1932 ..	675,245	4,325,022	..	..	640,908	16,935	5,658,110

(iii) *Loan Expenditure.* The subjoined table shows the total net loan expenditure on Government railways in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1928 to 1932 :—

RAILWAYS, STATE.—NET LOAN EXPENDITURE.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	All States.
	£	£	£	£	£	£	£
1928 ..	8,172,114	1,674,906	1,646,982	555,798	806,583	37,196	12,893,579
1929 ..	6,356,971	1,229,521	1,212,131	706,144	826,204	Cr. 11,684	10,319,287
1930 ..	5,034,505	947,527	739,548	495,153	849,335	Cr. 69,940	7,906,128
1931 ..	2,312,557	455,293	434,350	Cr. 55,467	454,159	44,725	3,645,617
1932 ..	1,052,137	..	50,275	Cr. 127,576	137,025	Cr. 15,008	1,096,853

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1932 :—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1932.

State.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.(a)	All States.
Expenditure	£ 138,411,296	£ 73,929,260	£ 61,680,964	£ 32,042,091	£ 23,860,653	£ 6,918,344	£ 336,842,608

(a) Including tramways.

7. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1928 to 1932 inclusive were as follow :—

RAILWAYS, STATE.—GROSS REVENUE.

Year ended 30th June—	N.S.W.	Victoria. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
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TOTAL GROSS REVENUE.

	£	£	£	£	£	£	£
1928	19,029,512	12,821,059	7,381,532	3,941,276	3,858,051	554,743	47,586,173
1929	20,415,616	13,162,973	7,568,647	3,593,646	3,799,764	503,855	49,044,501
1930	18,628,692	12,001,806	7,302,281	3,276,945	3,659,203	507,374	45,374,301
1931	16,005,741	10,008,358	6,476,979	2,586,132	3,198,913	400,176	38,676,299
1932	15,801,022	9,454,394	5,994,523	2,746,341	2,922,385	381,283	37,299,858

GROSS REVENUE PER AVERAGE MILE WORKED.

	£	£	£	£	£	£	£
1928	3,266	2,751	1,164	1,559	972	843	1,984
1929	3,458	2,802	1,185	1,412	951	711	2,028
1930	3,126	2,549	1,133	1,291	890	769	1,858
1931	2,662	2,124	995	1,020	776	602	1,575
1932	2,612	2,003	915	1,086	693	591	1,510

GROSS REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1928	169.80	173.89	152.00	145.44	161.60	93.98	163.39
1929	178.04	175.71	152.73	149.60	156.43	86.01	167.54
1930	167.34	163.01	147.79	141.68	153.27	80.94	157.76
1931	149.89	150.64	142.83	124.34	142.10	76.77	144.80
1932	146.71	147.69	131.21	134.12	137.71	80.97	141.39

(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, 1930-31, £158,508, 1931-32, £139,429.

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

(ii) *Coaching, Goods, and Miscellaneous Receipts.* (a) *Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1928 to 1932, 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.							
	£	£	£	£	£	£	£
1928 ..	7,851,512	6,015,383	2,410,293	1,120,094	1,028,656	199,865	18,625,803
1929 ..	8,124,716	5,871,037	2,444,697	1,013,296	979,999	180,295	18,614,040
1930 ..	7,440,016	5,428,350	2,377,798	807,090	928,435	177,799	17,159,488
1931 ..	5,870,676	4,378,162	2,021,666	635,490	724,989	144,526	13,775,509
1932 ..	5,606,430	3,946,053	1,762,225	631,104	649,890	132,456	12,728,158

GOODS AND LIVE STOCK TRAFFIC RECEIPTS.							
1928 ..	10,228,586	5,763,701	4,824,885	2,616,503	2,619,816	335,431	26,388,922
1929 ..	10,379,192	6,251,682	4,949,614	2,358,579	2,610,193	305,287	26,854,547
1930 ..	9,353,867	5,599,182	4,780,114	2,249,895	2,523,302	311,669	24,818,029
1931 ..	7,841,406	4,817,808	4,191,161	1,787,747	2,289,638	241,458	21,169,218
1932 ..	7,853,315	4,805,738	4,008,966	1,948,293	2,106,129	234,986	20,957,427

MISCELLANEOUS RECEIPTS.							
		(b)					
1928 ..	949,414	1,041,975	146,354	204,679	209,579	19,447	2,571,448
1929 ..	1,911,708	1,040,254	174,336	221,771	209,572	18,273	3,575,914
1930 ..	1,832,809	974,274	144,369	219,960	207,466	17,906	3,396,784
1931 ..	2,293,659	812,388	264,152	162,895	184,286	14,192	3,731,572
1932 ..	2,341,277	702,513	223,332	166,944	166,366	13,841	3,014,273

(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, 1930-31, £158,508; 1931-32, £139,429.

(b) Percentages. The following table shows for the two years 1930-31 and 1931-32 the percentage which each class of receipts bears to the total gross revenue :—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS.

State.	1931.			1932.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	36.68	48.99	14.33	35.48	49.70	14.82
Victoria ..	43.74	48.14	8.12	41.74	50.83	7.43
Queensland ..	31.21	64.71	4.08	29.40	66.87	3.73
South Australia ..	24.57	69.13	6.30	22.98	70.94	6.08
Western Australia ..	22.66	71.58	5.76	22.24	72.07	5.69
Tasmania ..	36.12	60.34	3.54	34.74	61.63	3.63
All States ..	35.62	54.73	9.65	34.12	56.19	9.69

(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, 1932. Further particulars of passenger-mileage will be found in sub-paragraph 14 (i) hereinafter.

RAILWAYS, STATE.—PASSENGER EARNINGS, AVERAGES, 1932.

State.	Number of Passenger-Train-Miles.	Passenger Earnings.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
	No.	£	£	d.
New South Wales	17,148,109	4,943,790	817	69.19
Victoria	10,533,970	3,514,104	744	80.06
Queensland	4,676,854	1,319,524	201	67.71
South Australia	3,139,985	493,933	195	37.75
Western Australia	(a) 1,937,741	489,436	116	60.62
Tasmania	(a) 506,378	107,587	167	50.99
All States	37,943,037	10,868,374	440	68.74

(a) Includes "Assistant" and "Light" mileage.

(d) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1932, 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, 1932.

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	8,700,471	610,054,212	7,853,315	1,300	216.63	187.46
Victoria	4,829,806	6,186,081	4,805,738	1,018	238.80	186.44
Queensland	6,287,965	3,860,668	4,008,966	612	153.01	249.22
South Australia	1,774,280	2,419,094	1,948,293	770	263.54	193.29
Western Australia	(a) 3,265,871	2,847,568	2,106,129	500	154.77	177.51
Tasmania	(a) 626,710	449,039	234,986	364	89.99	125.59
All States	25,485,103	25,816,662	20,957,427	848	197.36	194.83

(a) Includes "Assistant" and "Light" mileage.

(b) Exclusive of 157,110 tons of coal on which wayleave charges only were collected.

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 where traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage thereof on gross revenue in each State for the years 1928 to 1932 :—

RAILWAYS, STATE.—WORKING EXPENSES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL WORKING EXPENSES.							
	£	£	£	£	£	£	£
1928	14,756,327	9,812,749	6,106,140	3,660,740	2,910,811	573,885	37,820,632
1929	14,978,050	9,532,798	6,202,801	3,622,567	3,055,446	563,652	37,955,314
1930	14,962,423	9,311,548	5,946,163	3,573,121	3,112,895	535,414	37,441,564
1931	12,899,646	7,499,934	5,975,478	2,734,619	2,610,839	448,838	31,269,334
1932	12,532,869	6,181,490	4,429,218	2,130,395	2,123,281	386,929	27,784,182

PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.

	%	%	%	%	%	%	%
1928	77.54	76.54	82.72	93.20	75.45	103.45	79.48
1929	73.37	72.42	81.95	100.80	80.41	111.86	77.39
1930	80.33	77.58	81.43	109.04	85.07	105.53	82.52
1931	80.59	74.94	78.36	105.74	81.62	112.16	80.85
1932	79.32	65.38	73.89	77.57	72.65	101.48	74.49

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1932 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 1928 to 1932 :—

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.							
	£	£	£	£	£	£	£
1928	2,533	2,105	963	1,448	733	872	1,577
1929	2,537	2,029	971	1,423	765	862	1,570
1930	2,511	1,978	922	1,408	758	811	1,533
1931	2,145	1,592	780	1,079	633	675	1,273
1932	2,071	1,310	676	842	504	600	1,124

WORKING EXPENSES PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1928	131.67	133.09	125.74	135.09	121.92	97.22	129.86
1929	131.28	127.25	125.17	150.80	125.79	96.22	129.66
1930	134.42	126.47	120.34	154.48	130.39	85.41	130.18
1931	120.80	112.88	111.93	131.48	115.98	86.10	117.07
1932	116.36	96.56	96.95	104.04	100.05	82.17	105.32

(iii) *Distribution.* The subjoined table shows the distribution of working expenses under four chief heads of expenditure for the years 1928 to 1932 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
MAINTENANCE.							
	£	£	£	£	£	£	£
1928	2,596,755	2,109,404	1,589,177	584,350	731,860	140,989	7,752,535
1929	2,538,981	1,926,157	1,608,978	658,941	748,123	158,302	7,639,482
1930	2,583,896	1,749,068	1,529,521	678,976	800,784	133,459	7,475,704
1931	2,199,347	1,394,185	1,401,338	438,462	576,723	117,319	6,127,374
1932	2,346,791	1,110,987	1,221,829	335,280	470,544	102,116	5,587,547

LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.

1928	7,158,605	3,659,881	2,657,596	2,002,377	1,306,504	233,670	17,018,633
1929	7,003,464	3,579,620	2,719,211	1,899,717	1,381,160	235,641	16,818,813
1930	6,926,296	3,587,086	2,630,642	1,796,616	1,368,160	236,855	16,545,655
1931	5,642,719	2,840,181	2,068,942	1,382,409	1,218,580	192,911	13,345,742
1932	5,280,630	2,260,152	1,780,463	1,102,292	978,698	168,194	11,570,429

TRAFFIC EXPENSES.

1928	3,877,254	2,673,518	1,709,518	823,189	773,806	124,845	9,982,130
1929	3,848,525	2,605,790	1,721,355	764,203	803,016	130,068	9,872,957
1930	3,703,106	2,536,635	1,629,238	735,022	819,671	132,233	9,555,905
1931	3,212,276	2,026,918	1,321,254	564,025	698,463	110,037	7,932,973
1932	3,059,815	1,690,542	1,177,336	457,706	572,101	92,275	7,049,775

OTHER CHARGES.

1928	1,123,713	1,369,946	149,849	250,824	98,641	74,381	3,067,354
1929	1,587,080	1,421,231	153,257	299,706	123,147	39,641	3,624,062
1930	1,749,125	1,438,759	156,762	362,507	124,280	32,867	3,864,300
1931	1,845,304	1,238,650	283,944	349,723	117,073	28,571	3,863,265
1932	1,845,633	1,119,809	249,590	235,117	101,938	24,344	3,576,431

9. *Salaries and Wages.*—The following table shows the total amount paid in salaries and wages in each State during the years 1928 to 1932 :—

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.							
	£	£	£	£	£	£	£
1928	12,693,706	7,725,188	4,751,885	2,915,912	2,442,997	345,803	30,875,491
1929	12,422,298	7,436,531	4,805,836	2,499,872	2,551,056	374,107	30,089,700
1930	11,656,142	7,097,012	4,649,032	2,437,783	2,587,456	364,636	28,792,061
1931	10,167,293	5,587,539	3,851,295	1,743,574	2,099,947	314,590	23,764,238
1932	9,637,122	4,435,648	3,341,129	1,382,707	1,620,084	260,943	20,677,633

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 1928 to 1932 :—

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.							
	£	£	£	£	£	£	£
1928	4,273,185	3,008,310	1,275,392	280,536	947,240	-19,142	9,765,521
1929	5,437,566	3,630,175	1,365,846	-28,921	744,318	-59,797	11,089,187
1930	3,664,269	2,690,258	1,356,118	-296,176	546,308	-28,040	7,932,737
1931	3,106,095	2,508,424	1,401,501	-148,487	588,074	-48,662	7,406,945
1932	3,268,153	3,272,814	1,565,305	615,946	799,104	-5,646	9,515,676

PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.

	%	%	%	%	%	%	%
1928	3.68	4.16	2.27	1.08	4.43	-0.29	3.27
1929	4.44	4.97	2.34	-0.11	3.32	-0.92	3.58
1930	2.94	3.63	2.31	-1.09	2.39	-0.43	2.53
1931	(a) 2.40	3.38	(a) 2.38	-0.54	2.52	-0.74	(b) 2.27
1932	(a) 2.37	4.40	(a) 4.62	2.26	3.37	-0.09	(b) 3.09

(a) Exclusive of Grafton-South Brisbane line.

(b) Includes Grafton-South Brisbane line.

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.							
	£	£	£	£	£	£	£
1928	733	645	201	111	239	-29	407
1929	921	773	214	-11	186	-91	458
1930	615	571	211	-117	132	-42	325
1931	517	532	215	-59	143	-73	302
1932	540	693	239	243	190	-9	385

NET REVENUE PER TRAIN-MILE RUN.

	d.	d.	d.	d.	d.	d.	d.
1928	38.13	40.80	26.26	10.35	39.68	-3.24	33.53
1929	46.76	48.46	27.56	-1.20	30.64	-10.21	37.88
1930	32.92	36.54	27.45	-12.80	22.88	-4.47	27.58
1931	29.09	37.76	30.90	-7.14	26.12	-9.33	27.73
1932	30.34	51.12	34.26	30.08	37.65	-1.20	36.07

11. **Interest.** The amount of interest payable on expenditure from loans on the construction and equipment of the railways in each State, during the years ended 30th June, 1928 to 1932, 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.							
	£	£	£	£	£	£	£
1928	5,882,452	3,321,727	2,827,223	1,271,686	920,569	284,076	14,507,733
1929	6,150,000	3,473,575	2,902,710	1,366,807	923,017	283,554	15,099,663
1930	6,420,643	3,508,657	2,953,211	1,399,053	950,797	284,379	15,516,740
1931	6,790,082	3,596,758	3,018,355	1,426,741	968,066	285,881	16,205,274
1932	6,519,217	3,641,109	3,589,643	1,217,338	989,173	263,900	14,328,560

(a) Interest charges on the Grafton—South Brisbane line for the year 1930–31 amounted to £215,971, of which New South Wales contributed £70,269 and Queensland £26,311, the remainder, £119,391, being borne by the Commonwealth. The total charges for 1931–32 were £213,027, of which New South Wales contributed £72,301, Queensland £32,546 and the Commonwealth £108,180. See B § 1, 4 ante.

Exchange on interest payments in London during the year 1931–32, New South Wales £1,313,541, Victoria £440,938 and South Australia £176,913, are not included in the amounts shown above for those States. With regard to the remaining States, the amounts of exchange, which are not available, are not charged against the Railways, and are therefore not included in the above figures. The interest payable on the cost of construction and equipment, exclusive of expenditure from consolidated revenue (£5,658,110) for that purpose, was at the rate of 4.74 per cent., in 1931–32.

The reduction of £28,000,000 in the Queensland Capital Account referred to on page 169 is reflected in the decrease in the annual interest payable by that State.

12. **Profit or Loss.**—The following table shows the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment for the last five years :—

RAILWAYS, STATE.—PROFIT OR LOSS.

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.							
	£	£	£	£	£	£	£
1928	-1,609,267	-315,960	-1,551,831	-991,150	+26,671	-303,218	-4,744,755
1929	-712,434	+156,600	-1,536,864	-1,395,728	-178,699	-343,351	-4,010,476
1930	-2,756,374	-818,399	-1,597,093	-1,695,229	-404,489	-312,419	-7,584,003
1931	a-3,683,987	-1,088,334	-1,616,854a	-1,575,228	-379,992	-334,543	a-8,798,329
1932	a-3,251,064	-368,295	-24,338a	-601,392	-190,069	-269,546	a-4,812,884
PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.							
	%	%	%	%	%	%	%
1928	-1.38	-0.44	-2.76	-3.81	+0.12	-4.68	-1.59
1929	-0.58	+0.21	-2.64	-5.20	-0.80	-5.29	-1.30
1930	-2.21	-1.10	-2.72	-6.22	-1.77	-4.78	-2.41
1931	(b)-2.73	-1.46	(b)-2.64	-5.78	-1.63	-5.11	(c)-2.70
1932	(b)-2.36	-0.49	(b)-0.07	-2.21	-0.80	-4.11	(c)-1.56

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

(b) Exclusive of Grafton—South Brisbane line.

(c) Includes Grafton—South Brisbane line.

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 long and bulky hauls of wheat, live stock and wool to the coast require a large equipment of rolling stock, but the requirement for back freight is very much less. In this respect, therefore, the Australian railways are at a disadvantage compared with those of countries where there is a more balanced traffic in both directions.

The following table gives particulars for the years 1928 to 1932 :—

RAILWAYS, STATE.—TRAFFIC.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
NUMBER OF PASSENGER JOURNEYS.							
1928 ..	148,046,881	164,574,870	24,800,934	19,539,347	16,032,536	2,322,410	375,316,978
1929 ..	151,116,086	161,002,267	24,738,327	17,829,946	14,904,917	2,212,817	371,804,360
1930 ..	147,892,548	157,119,071	24,440,946	17,829,098	14,175,175	2,243,265	363,700,103
1931 ..	126,811,993	134,655,220	22,009,473	15,437,440	11,702,741	1,852,145	312,469,012
1932 ..	128,359,419	125,990,585	20,761,976	15,608,245	10,394,311	1,680,897	302,795,433

PER 100 OF MEAN POPULATION.

1928 ..	6.171	9.453	2.754	3.399	4.088	1.102	6.035
1929 ..	6.178	9.146	2.697	3.081	3.674	1.041	5.882
1930 ..	5.972	8.839	2.621	3.075	3.408	1.043	5.685
1931 ..	5.075	7.518	2.319	2.652	2.786	849	4.837
1932 ..	5.056	6.976	2.138	2.643	2.460	758	4.623

PER AVERAGE MILE OF LINE WORKED.

1928 ..	25,412	35,307	3,912	7,730	4,037	3,528	15,649
1929 ..	25,598	34,272	3,873	7,007	3,732	3,384	15,377
1930 ..	24,821	33,370	3,791	7,024	3,449	3,399	14,892
1931 ..	21,089	28,588	3,382	6,091	2,838	2,786	12,725
1932 ..	21,216	26,693	3,170	6,172	2,467	2,606	12,255

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

1928 ..	15,433,083	8,117,961	4,670,447	3,401,901	3,697,648	715,387	36,036,427
1929 ..	14,516,643	8,187,088	4,558,099	2,748,423	3,670,147	660,523	34,340,923
1930 ..	12,150,964	7,513,606	4,528,201	2,652,753	3,530,188	632,052	31,007,764
1931 ..	10,743,109	6,099,310	3,857,766	2,162,709	3,153,525	466,153	26,482,572
1932 ..	10,211,322	6,186,081	3,860,668	2,419,094	2,847,568	449,039	25,973,772

PER 100 OF MEAN POPULATION.

1928 ..	643	466	519	592	943	339	579
1929 ..	593	465	497	475	905	311	543
1930 ..	491	423	486	457	849	294	485
1931 ..	430	341	406	372	751	214	410
1932 ..	402	342	398	410	674	202	396

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.							
1928 ..	2,649	1,741	737	1,346	931	1,087	1,500
1929 ..	2,459	1,743	714	1,080	919	1,010	1,423
1930 ..	2,039	1,596	702	1,045	859	958	1,270
1931 ..	1,787	1,295	593	853	765	701	1,079
1932 ..	1,688	1,311	589	956	676	696	1,051

(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 1931-32 :—

RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1931-32.

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	a 120,864,158	7,495,261	128,359,419	2,481,973	2,461,817	4,943,790
Victoria ..	b 120,848,507	5,142,078	125,990,585	2,131,983	1,382,121	3,514,104
Queensland..	16,097,969	4,664,007	20,761,976	258,306	1,061,218	1,319,524
S. Australia	c 14,509,509	1,098,736	15,608,245	205,489	288,444	493,933
W. Australia	9,137,011	1,257,300	10,394,311	132,071	357,365	489,436
Tasmania ..	(d)	(d)	1,680,897	(d)	(d)	107,587
Total ..	(e)	(e)	302,795,433	(e)	(e)	10,868,374

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

(c) Within 25 miles of Adelaide.

(d) Not available.

(b) Within 20 miles
(e) Incomplete.

(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 1931-32 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED.

State.	Coal, Coke, and Shale.	Other Minerals.	Grain and Flour.	Hay, Straw and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
TONS CARRIED.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	4,498,158	704,662	2,233,809	179,624	186,610	612,443	1,796,016	10,211,322
Victoria	218,013	238,267	1,673,296	188,444	85,684	593,769	3,278,608	6,186,081
Queensland	504,558	322,693	1,773,315 ^(a)	(b)	87,040	321,182	851,880	3,860,668
South Australia	120,400	420,196	1,004,752	14,616	27,248	101,808	727,074	2,419,091
Western Australia	197,779	177,016	1,310,178	48,712	23,763	85,676	1,004,444	2,847,568
Tasmania	171,130	(c)	52,560	25,660	4,028	21,660	174,001	449,039
All States	5,710,038	1,862,834	8,047,910	457,056	414,373	1,649,538	7,832,023	25,973,772

PERCENTAGE OF TOTAL TONNAGE CARRIED.

	%	%	%	%	%	%	%	%
New South Wales	44.05	6.90	21.87	1.76	1.83	6.00	17.59	100.00
Victoria	3.52	3.85	27.05	3.95	1.39	8.14	52.00	100.00
Queensland	13.07	8.36	445.93	(b)	2.25	8.32	22.07	100.00
South Australia	4.98	17.37	41.53	0.60	1.13	4.33	30.06	100.00
Western Australia	6.95	6.22	46.01	1.71	0.83	3.01	35.27	100.00
Tasmania	38.11	(c)	11.70	5.72	0.90	4.82	38.75	100.00
All States	21.98	7.17	30.99	1.76	1.60	6.35	30.15	100.00

(a) Agricultural produce.
coal, coke, and shale.

(b) Included with "All other commodities."

(c) Included with

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1931-32 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1931-32.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	4,533,059	2,899,897	2,495,818	905,384	1,003,713	163,268	12,001,139
Wheat ..	(a)	981,794	(a)	523,922	743,302	(a)	d 2,249,018
Wool ..	849,641	239,189	535,868	55,016	74,565	5,383	1,759,662
Live stock	1,250,462	550,461	518,187	165,871	126,708	18,607	2,630,296
Minerals—							
Coal, coke, and shale ..	1,027,316	72,462	235,657	38,397	110,067	(b) 35,137	1,519,036
Others ..	192,837	61,935	223,436	259,703	47,774	(c) 12,591	798,276
Total	7,853,315	4,805,738	4,008,966	1,948,293	2,106,129	234,986	20,957,427

(a) Included with General Merchandise.
(d) Incomplete.

(b) Native coal.

(c) Minerals other than native coal.

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 1927–28 to 1931–32.

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. (ooo omitted.)	No. (ooo omitted.)	No. (ooo omitted.)	£	No.	Miles.	d.	d.	No.
NEW SOUTH WALES.									
1928	16,036	148,047	1,809,307	6,998,147	113	12.22	0.93	11.34	310,569
1929	16,738	151,116	1,820,701	7,238,329	108	12.05	0.95	11.50	308,409
1930	16,952	147,893	1,731,073	6,610,951	102	11.70	0.92	10.73	290,519
1931	16,496	126,812	1,414,061	5,172,359	85	11.15	0.88	9.79	235,161
1932	17,148	128,359	1,366,764	4,943,790	80	10.64	0.86	9.24	220,768
VICTORIA.									
1928	11,915	164,575	1,416,970	5,358,775	119	8.61	0.91	7.81	303,985
1929	12,104	161,002	1,420,570	5,222,224	117	8.82	0.88	7.78	302,392
1930	12,188	157,119	1,352,954	4,829,808	111	8.61	0.86	7.38	287,349
1931	11,066	134,655	1,134,376	3,890,604	103	8.42	0.82	6.93	240,830
1932	10,534	125,991	1,053,215	3,514,104	100	8.35	0.80	6.69	223,138
QUEENSLAND.									
1928	3,921	24,801	(a)	1,900,898	(a)	(a)	(a)	18.40	(a)
1929	4,143	24,738	(a)	1,905,285	(a)	(a)	(a)	18.48	(a)
1930	4,313	24,441	(a)	1,838,812	(a)	(a)	(a)	18.06	(a)
1931 ^b	4,411	21,955	(a)	1,510,412	(a)	(a)	(a)	16.51	(a)
1932 ^b	4,625	20,695	(a)	1,290,225	(a)	(a)	(a)	14.96	(a)
SOUTH AUSTRALIA.									
1928	3,729	19,539	242,308	927,520	65	12.40	0.92	11.39	95,861
1929	3,563	17,830	219,857	815,323	62	12.33	0.89	10.98	86,403
1930	3,342	17,829	208,634	628,474	62	11.70	0.72	8.46	82,193
1931	3,193	15,437	167,738	499,745	53	10.87	0.72	7.77	66,179
1932	3,140	15,608	166,407	493,933	53	10.66	0.71	7.59	65,792
WESTERN AUSTRALIA.									
1928	2,131	16,033	(a)	829,598	(a)	(a)	(a)	12.42	(a)
1929	2,169	14,905	(a)	774,225	(a)	(a)	(a)	12.47	(a)
1930	2,206	14,175	(a)	720,137	(a)	(a)	(a)	12.19	(a)
1931 ^c	2,062	11,703	(a)	551,347	(a)	(a)	(a)	11.31	(a)
1932 ^c	1,938	10,394	(a)	480,436	(a)	(a)	(a)	11.30	(a)
TASMANIA.									
1928	615	2,322	37,971	167,234	62	16.35	1.05	17.28	57,685
1929	627	2,213	35,751	149,792	57	16.15	1.05	16.25	54,674
1930	670	2,243	35,257	147,487	53	15.71	1.00	15.77	53,428
1931 (c)	590	1,852	28,646	117,339	49	15.46	0.98	15.20	43,083
1932 (c)	506	1,681	27,158	107,587	54	16.16	0.95	15.36	42,111

(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 1927-28 to 1931-32 :—

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

Year ended the 30th June—	Goods-Train-Mileage.	Total Tons Carried.	Total "Ton-miles."	Earnings.	Average Freight-paying Load Carried per "Train."	Average Haul per Ton.	Earnings per "Ton-mile."	Density of Traffic per Average Mile Worked.
	No. (,000 omitted.)	No. (,000 omitted.)	No (,000 omitted.)	£	Tons.	Miles.	d.	Tons.
NEW SOUTH WALES.								
1928	10,861	15,223	1,550,375	10,228,586	158	101.84	1.56	266,408
1929	10,645	14,307	1,690,560	10,379,192	183	118.16	1.45	286,376
1930	9,762	11,861	1,498,723	9,353,867	177	126.35	1.48	251,778
1931	8,997	10,616	1,425,184	7,841,406	184	134.25	1.30	237,260
1932	8,700	10,054	1,407,451	7,853,315	186	139.99	1.33	233,030
VICTORIA.								
1928	5,780	8,118	737,856	5,763,701	164	90.89	1.87	158,304
1929	5,876	8,187	834,605	6,251,682	173	101.94	1.80	177,651
1930	5,483	7,514	737,623	5,599,182	166	98.17	1.82	156,674
1931	4,879	6,099	713,022	4,817,808	174	116.90	1.62	151,385
1932	4,830	6,186	769,228	4,805,733	181	124.34	1.49	162,972
QUEENSLAND.								
1928	7,734	4,670	552,442	4,824,885	671	120.67	2.09	89,872
1929	7,751	4,558	553,816	4,949,614	671	124.03	2.14	88,572
1930	7,546	4,528	554,171	4,780,114	673	125.20	2.06	88,628
1931b	6,406	3,838	495,912	4,148,845	677	133.20	2.00	79,149
1932b	6,257	3,835	510,699	3,968,227	683	139.02	1.83	82,034
SOUTH AUSTRALIA.								
1928	2,774	3,402	395,919	2,616,503	147	116.38	1.57	156,731
1929	2,202	2,748	337,639	2,358,579	156	122.91	1.66	132,694
1930	2,209	2,653	350,325	2,249,895	164	131.29	1.55	138,044
1931	1,799	2,163	285,639	1,787,747	165	132.07	1.50	112,711
1932	1,774	2,419	287,619	1,948,293	170	118.37	1.63	113,731
WESTERN AUSTRALIA.								
1928	3,723	3,698	357,966	2,619,816	111	96.81	1.76	90,145
1929	3,773	3,670	367,032	2,610,193	113	100.00	1.71	91,919
1930	3,654	3,530	361,935	2,523,302	115	102.53	1.67	88,083
1931	3,487	3,154	373,405	2,289,638	121	118.41	1.47	90,566
1932	3,266	2,848	347,492	2,106,129	119	122.03	1.45	82,461
TASMANIA.								
1928	3814	690	34,180	310,348	642	40.54	2.17	51,926
1929	3787	636	31,140	281,577	640	48.99	2.17	47,623
1930	3857	607	33,715	288,373	639	55.58	2.05	51,991
1931	3667	444	27,253	220,545	641	61.39	1.94	40,988
1932	3627	427	26,690	215,180	643	62.45	1.93	41,386

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

In New South Wales the tonnage carried is exclusive of some coal on which way leave charges only have been collected, the quantities being 209,806 tons (1928), 209,664 tons (1929), 289,667 tons (1930), 127,209 tons (1931) and 157,110 tons (1932). Particulars for Tasmania do not include live stock.

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

An earlier issue of this work (No. 18, pp. 305-6) gives detailed information as at 30th June, 1924, in regard to the following rates :—(a) Ordinary Passenger Mileage rates ; (b) Highest and Lowest Class Freight rates ; (c) Rates for agricultural produce.

16. **Rolling Stock.**—Particulars of locomotives and rolling stock in use on State railways may be found on page 22 of *Transport and Communication Bulletin No. 23*.

17. **Employees.**—(i) *At 30th June.* The following table gives the number of railway employees in each year from 1928 to 1932 inclusive, classified according to (a) salaried staff, and (b) wages staff :—

RAILWAYS, STATE.—EMPLOYEES.(a)

State.	At 30th June—									
	1928.		1929.		1930.		1931.		1932.	
	Salaried Staff.	Wages Staff.								
New South Wales	6,052	38,053	5,995	37,535	5,754	34,243	5,947	34,517	6,016	36,320
Victoria ..	4,363	23,618	4,295	23,025	4,249	20,361	4,051	17,985	3,977	17,709
Queensland ..	3,478	16,146	3,403	15,467	3,219	14,542	3,030	12,970	2,997	12,630
South Australia ..	1,295	7,353	1,312	7,401	1,293	6,794	1,158	5,866	1,141	5,577
Western Australia ..	1,412	7,565	1,418	7,770	1,424	7,587	1,287	5,900	1,257	6,152
Tasmania ..	212	1,309	219	1,376	217	1,352	191	1,234	174	1,137
All States ..	16,812	94,104	16,642	92,574	16,156	84,879	15,664	78,192	15,562	79,525

(a) Exclusive of construction staff.

In the period under review the totals of salaried and wages staffs decreased from 110,916 in 1928 to 95,087 in 1932, a decline of 14.3 per cent.

(ii) *Average staff employed, 1931-32.* 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, 1931-32.

State.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales ..	5,926	34,403	90	1,917	6,016	36,320
Victoria ..	3,977	17,709	..	..	3,977	17,709
Queensland ..	2,985	12,598	12	32	2,997	12,630
South Australia ..	1,141	5,538	..	39	1,141	5,577
Western Australia ..	1,244	5,919	13	233	1,257	6,152
Tasmania ..	174	1,137	..	..	174	1,137
All States ..	15,447	77,304	115	2,221	15,562	79,525

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

18. 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 1928 to 1932 inclusive :—

RAILWAYS, STATE.—ACCIDENTS.

State.	In year ended 30th June—									
	1928.		1929.		1930.		1931.		1932.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	77	629	61	565	64	571	44	409	73	308
Victoria ..	60	238	46	281	57	197	57	150	56	227
Queensland ..	20	163	19	125	26	133	15	138	13	124
South Australia	23	255	20	156	9	196	13	98	7	104
Western Australia	16	351	15	354	18	330	13	195	23	266
Tasmania ..	1	18	2	71	6	84	2	42	4	16
All States ..	197	1,654	163	1,552	180	1,511	144	1,032	176	1,045

Particulars relating to the number of passengers, employees and other persons affected by railway accidents are published on page 25 of Transport and Communication Bulletin No. 23.

19. 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 1931-32 :—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL, 1931-32.

Government Railways.	Oil.						Coal.		
	Lubricating.			Fuel.			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 ^d	410,536	40,148	1 11.47	1,101,080	39,860	0 8.69	1,263,045	997,505 0 15 9.54	
Victoria ..	151,694	20,858	2 9.00	1,439,121	57,821	0 9.64	526,562	477,486 0 18 1.63	
Queensland ..	151,252	18,022	2 4.60	134,001	7,738	1 1.86	349,083	301,120 0 17 3.02	
South Australia	51,591	6,148	2 4.60	(b)	(b)	(b)	140,900	206,145 1 9 3.13	
Western Australia	50,031	5,536	2 2.56	253,976	14,499	1 1.70	264,015	249,905 0 18 11.17	
Tasmania ..	27,427	3,148	2 3.55	43,957	1,500	0 8.19	42,981	48,042 1 2 4.26	
Total States ..	842,531	93,860	2 2.74	2,972,135	121,418	0 9.80	2,586,586	2,280,203 0 17 7.57	
Federal ..	16,011	1,634	2 0.49	57,627	4,548	1 6.94	16,739	30,822 1 16 9.92	
Total, Australia..	858,542	95,494	2 2.69	3,029,762	125,966	0 9.98	2,603,325	2,311,025 0 17 9.05	

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

The range in the average cost per ton of coal from 15s. 9d. in New South Wales to £1 17s. 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 1931-32 showed a decrease of 1s. 7.18d. on that for 1930-31.

§ 4. Private Railways.

1. **Total Mileage Open, 1931-32.**—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 1931-32 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 1931-32:—

RAILWAYS, PRIVATE.—SUMMARY, 1931-32.

State.	Companies from which returns were received.	Miles Open (Route).	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles.	Passenger Journeys.	Tonnage of Goods, etc.	Rolling Stock.			
									No. of Employees.	Locos.	Coaches.	Other Vehicles.
New South Wales ..	7	82.70	1,287,730	246,587	178,967	456,225	847,528	538,908	404	46	2	729
Victoria ..	2	24.94	92,904	9,632	5,780	20,488	13,532	29,586	16	5	4	35
Queensland	13	262.95	594,641	36,276	33,037	75,971	16,174	188,504	70	24	19	485
South Australia ..	1	50.51	(a)	(a)	(a)	24,640	210	353,239	9	8	1	196
Western Australia	1	277.00	2,232,578	157,239	78,517	240,135	28,615	127,574	232	23	23	495
Tasmania	4	141.56	912,035	70,145	57,289	112,725	37,759	62,078	166	22	18	303
All States(b)	28	839.66	5,119,897	519,879	353,590	930,184	943,818	1,299,889	897	128	67	2,243

(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.

C. TRAMWAYS.

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

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

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1931-32, also in Australia as a whole for the years 1927-28 to 1931-32, classified (a) according to the motive power utilized, and (b) according to gauge:—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1931-32.

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total Australia.
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ACCORDING TO MOTIVE POWER.

	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	168.00	154.38	56.86	82.84	61.27	30.73	554.08
Steam	9.06	..	6.65	..	6.26	..	21.97
Cable .. ..	..	24.29	..	..	..	..	24.29
Horse .. ..	..	..	..	..	1.50	..	1.50
Total	177.06	178.67	63.51	82.84	69.03	30.73	601.84

ACCORDING TO GAUGE.

Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	177.06	173.49	56.86	82.84	..	..	490.25
3 ft. 6 in. ..	..	..	6.65	..	69.03	30.73	106.41
Total	177.06	178.67	63.51	82.84	69.03	30.73	601.84

Of the total mileage of tramway lines, 379.84 are Government owned, 185.69 are municipal and 36.31 are private. Further details on this subject may be obtained from page 28 of Transport and Communication Bulletin No. 23.

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA.

Nature of Motive Power.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
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ACCORDING TO MOTIVE POWER.

	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	555.33	557.99	571.85	574.52	554.08
Steam	39.18	40.19	41.62	29.37	21.97
Cable	30.60	30.60	26.44	24.29	24.29
Horse	2.51	1.50	1.50	1.50	1.50
Total	627.08	630.28	641.41	629.68	601.84

(iii) *Cost of Construction and Equipment.* The table hereunder shows the total cost of construction and equipment of all tramways to the 30th June, 1932, classified according to the nature of the motive power. Further details relating to controlling authorities are available on page 28 of Transport and Communication Bulletin No. 23.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1931-32.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
ACCORDING TO MOTIVE POWER.							
Electric	£ 7,991,205	£ 7,343,985	£ 2,142,310	£ 4,043,913	£ 1,722,915	£ 628,794	£ 23,873,122
Steam ..	187,302	..	53,235	..	60,632	..	301,169
Cable ..	..	1,300,785	..	..	..	..	1,300,785
Horse ..	..	..	..	..	10,104	..	10,104
Total ..	8,178,507	8,644,770	2,195,545	4,043,913	1,793,651	628,794	25,485,180

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 conversion of the Newcastle system from steam to electric traction has now been completed, the last of the steam lines having been closed in November, 1930. 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 1926 to 1932 :—

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

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment. (a)	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.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1928 ..	214.08	11,342,078	4,558,546	3,940,913	617,633	576,702	86.45	5.45	346,128	11,039
1929 ..	213.93	11,476,189	4,460,063	3,837,213	622,850	615,997	86.03	5.43	333,615	11,090
1930 ..	213.91	11,497,978	3,905,205	3,628,554	276,651	646,892	92.92	2.41	307,874	10,147
1931 ..	203.09	8,170,592	3,059,897	3,124,366	-64,469	475,571	102.11	-0.79	266,393	8,191
1932 ..	177.06	8,178,507	3,306,557	3,049,267	257,290	546,626	92.22	3.14	286,504	8,417

(a) Includes £47,455 paid from the Consolidated Revenue on which no interest is payable.

(b) Exclusive of the cost of power houses now charged to the Railway Department.

The cost of construction and equipment is exclusive of the amount of the Stores Advance Account.

3. **Victoria.**—(i) *General.* In Melbourne, electric and cable tramway systems with route mileages of 114.54 miles and 24.29 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 line from Black Rock to Beaumaris was closed for traffic in August, 1931. The State Electricity Commission operates 10.98 miles of electric tramways at Geelong, and there are also systems of electric tramways 21.25 miles in length at Ballarat and Bendigo constructed and worked by a private company.

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 1928 to 1932 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.	In-terest.	Per-centage of Working Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No., 000	No.
1928 ..	179.32	7,585,691	2,605,879	1,817,236	788,643	306,927	69.74	10.40	232,377	5,890
1929 ..	180.19	7,943,382	2,586,663	1,846,454	740,209	313,854	71.38	9.32	228,308	5,713
1930 ..	180.46	8,623,910	2,470,482	1,775,726	694,756	314,433	71.88	8.06	214,431	5,162
1931 ..	180.85	8,690,155	2,191,009	1,524,033	666,976	347,546	69.56	7.68	188,452	4,785
1932 ..	178.67	8,644,770	2,049,698	1,327,161	722,537	326,250	64.75	8.36	175,433	4,740

4. **Queensland.**—(i) *General.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the *Brisbane Tramway Trust Act 1922*, appointed a Trust to control and operate the system until 1st December, 1925, on which date the control passed to the Brisbane City Council. Under the provisions of the *Brisbane City Council Act 1925*, the Council took over the liabilities of the Tramway Trust to the extent of £2,000,000 which had been incurred in London, and assumed complete control of the system. The total length of the Brisbane tramways was 56.86 route miles at 31st December, 1932, 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 1928 to 1932 :—

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.	In-terest.	Per-centage of Work-ing Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1928 ..	62.06	2,248,469	827,357	623,869	203,488	114,494	75.41	9.05	79,456	1,653
1929 ..	62.38	2,267,872	810,148	600,567	209,581	115,483	74.13	9.24	77,791	1,594
1930 ..	63.23	2,294,020	780,844	568,241	212,603	113,032	72.77	9.27	75,128	1,520
1931 ..	63.34	2,273,109	716,605	519,738	196,867	109,346	72.53	8.66	70,761	1,404
1932 ..	63.51	2,195,545	688,883	481,186	207,697	106,689	69.85	9.46	69,478	1,431

5. *South Australia.—(i) General.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1932, the Tramways Trust operated a total route mileage of 82.84 miles of 4-ft. 8½-in. gauge.

(ii) *Particulars of Working.—Electric Tramways.* The following table gives particulars of the working of electric tramways in Adelaide for each year from 1928 to 1932 :—

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.	In-terest.	Per-centage of Work-ing Expenses on Gross Revenue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1928..	74.17	3,176,738	695,649	496,194	199,455	210,676	71.33	6.28	68,546	1,781
1929..	75.79	3,527,710	677,513	501,362	176,151	231,737	74.00	4.99	66,578	1,982
1930..	82.83	3,834,302	756,560	521,839	234,721	258,697	68.98	6.12	59,853	1,736
1931..	82.84	a4,036,396	a 722,104	a 445,260	a 276,844	a 287,534	a 61.66	a 6.86	a 52,756	a 1,840
1932..	82.84	a4,043,913	a 659,575	a 383,400	a 276,175	a 264,597	a 58.13	a 6.83	a 48,467	a 1,777

(a) Includes motor omnibuses. Separate particulars are not available.

There are also various Government horse-tramways in country districts, worked in connexion with the railway system, which are used mainly for passenger service, though some are for special purposes.

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, 1932, was 41.10 route miles. Electric tramways with a route mileage at 31st August, 1932, of 8.61 miles and controlled by the municipal authorities, are in operation in Fremantle. In

Kalgoorlie and Boulder a private company controls the electric tramways, of which, at the end of 1932, 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 Government tramways, with a total length of 7.76 miles of 3-ft. 6-in. gauge. The lines are under control of the Department of Works and Labour, and the total mileage of 7.76 miles is made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports and providing communication between the jetties and the goods sheds or warehouses.

(ii) *Particulars of Working.—All Tramways.* The following table gives a summary for all tramways in the State for the years 1928 to 1932 :—

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

Year.	Mileage Open for Traffic (Route)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest. (b)	Per-centage of Work-ing Ex-pen-ses on Gross Re-venue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1928 ..	69.69	1,739,579	423,474	341,569	81,905	53,668	80.66	4.71	41,048	912
1929 ..	67.76	1,753,499	427,224	354,960	72,264	54,651	83.09	4.12	43,206	822
1930 ..	69.02	1,783,798	429,067	365,087	63,980	55,857	85.09	3.59	43,358	882
1931 ..	69.03	1,793,341	379,240	326,790	52,450	57,432	86.17	2.92	38,292	794
1932 ..	69.03	1,793,651	359,080	288,098	70,982	55,480	80.23	3.96	36,133	781

(a) Electric tramways only. operated by a private company.

(b) Exclusive of Kalgoorlie and Boulder electric tramways

7. *Tasmania.*—(i) *General.* In Hobart there is a system of electric tramways consisting of 19.00 route miles of 3-ft. 6-in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 11.73 miles of 3-ft. 6-in. gauge.

There are also several lines of privately-owned steam tramways, which have been included with private railways, as they do not come within the category of street tramways for the conveyance of passengers.

(ii) *Particulars of Working.—Electric Tramways.*—The following table gives a summary of the working of the two electric systems for the years 1928 to 1932 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY.

Year.	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	In-terest.	Per-centage of Work-ing Ex-pen-ses on Gross Re-venue.	Per-centage of Net Earnings on Capital Cost.	Passen-gers carried.	Persons em-ployed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1928 ..	28.76	538,323	182,769	132,813	49,956	36,872	72.67	8.95	17,206	377
1929 ..	30.23	567,841	171,664	138,808	32,856	32,549	80.86	5.79	17,334	387
1930 ..	30.53	581,395	172,187	141,801	30,386	35,614	82.35	5.23	17,356	392
1931 ..	30.53	612,632	159,136	127,854	31,282	37,308	80.34	5.11	16,360	388
1932 ..	30.73	628,794	154,812	115,096	39,716	41,485	74.34	6.32	15,493	353

8. Australia.—*All Tramways—Summary 1928 to 1932.* The following table gives a summary of the working of all tramway systems in Australia for the years 1928 to 1932 :—

ALL TRAMWAYS—AUSTRALIA—SUMMARY.

Particulars.	1928.	1929.	1930.	1931.	1932.
Mileage open for traffic .. Miles	628.08	630.28	639.98	624.50	562.05
Cost of Construction and Equip- ment £	26,650,878	27,536,493	28,616,003	225,576,225	225,505,180
Cost per mile £	42,432	43,689	44,714	40,955	45,379
Gross Revenue £	9,293,674	9,133,275	8,514,345	7,227,991	7,218,005
Working Expenses £	7,352,594	7,279,364	7,001,248	6,068,041	5,644,208
Net Earnings £	1,941,080	1,853,911	1,513,097	1,159,950	1,574,397
Interest £	1,299,339	1,364,271	1,424,525	1,314,737	1,341,127
Percentage of Working Expenses on Gross Revenue %	79.11	79.70	82.23	83.95	78.19
Percentage of Net Earnings on Capital Cost %	7.28	6.73	5.29	4.54	6.17
Tram-miles run .. .000 miles	80,506	80,566	79,010	77,308	79,963
Gross revenue per tram mile .. d.	27.71	27.21	25.86	22.44	21.66
Working expenses per tram mile .. d.	21.92	21.69	21.27	18.84	16.94
Net earnings per tram mile .. d.	5.79	5.52	4.59	3.60	4.72
Passengers carried .. .000	784,761	766,832	718,000	633,014	631,508
Passengers carried per tram mile .. No.	9.75	9.52	9.09	8.19	7.90
Average revenue per passenger journey d.	2.84	2.86	2.85	2.74	2.74
Persons employed at end of year .. No.	21,652	21,588	19,839	17,402	17,479

(a) Exclusive of cost of power houses for New South Wales electric tramways which are now charged to Railways.

D. AIRCRAFT.

1. *Historical.*—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in Official Year Book No. 16, pp. 334-5.

2. *Foundation of Civil Aviation Department.*—A brief account of the foundation and the objects of this Department will be found in Official Year Book No. 19, p. 299.

3. *Activities of Civil Aviation Department.*—(i) *Aerodromes and Landing Grounds.* Amongst the various activities have been the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :— (a) Perth to Derby (1,467 miles); (b) Derby to Wyndham (600 miles); (c) Perth to Adelaide (1,453 miles); (d) Adelaide to Sydney (790 miles); (e) Sydney to Brisbane (550 miles); (f) Brisbane to Charleville (444 miles); (g) Charleville to Camooweal (825 miles); (h) Camooweal to Daly Waters (475 miles); (i) Daly Waters to Birdum Creek (50 miles); (j) Cloncurry to Normanton (215 miles); (k) Melbourne to Hay (233 miles); (l) Mildura to Broken Hill (189 miles); and (m) Melbourne to Charleville via Cootamundra (900 miles).

Preliminary surveys of various additional routes also have been made, and certain landing grounds in the Northern Territory are now in course of preparation.

Up to 30th June, 1933, 183 landing grounds had been acquired or leased by the Government and prepared for civil aviation purposes. There were also 115 public aerodrome licences in force.

(ii) *Aerial Services.* (a) *General.* Since 1920 the grant of financial assistance for the establishment and maintenance of regular air transport services is part of the Government's policy for the development of civil aviation in Australia.

At 30th June, 1933, three subsidized contractors were operating under contracts which provided that such space as is required on each trip must be reserved for mails, the letters for transmission being surcharged 3d. per $\frac{1}{2}$ ounce. The total route mileage of these services is 5,529 miles.

The various subsidized regular air services over prepared routes have completed 10,053,416 passenger-miles, and carried 49,663 paying passengers over various stages. Over 163,000 lb. of letters have also been carried.

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

(b) *Re-organization of Services.* An inter-departmental committee was appointed by the Government in 1932 to investigate the question of the development of air communications between Australia and the United Kingdom and within Australia. The Government has approved the recommendations of the Committee which are, briefly, as follows :—

- (1) That an air service should be established linking Australia and the United Kingdom :
- (2) That the Commonwealth Government should accept responsibility for providing the service between Singapore and Darwin :
- (3) That as from the inception of the overseas service there should be maintained air transport services over the following routes within Australia :—
 - (i) Darwin—Cootamundra through Western Queensland and Western New South Wales (2,267 miles) ;
 - (ii) Katherine—Perth via the Kimberleys and the North-west coast of Western Australia (2,300 miles) ;
 - (iii) Charleville—Brisbane (444 miles) ;
 - (iv) Cloncurry—Normanton (215 miles) ;
 - (v) Ord River—Wyndham (158 miles) ;
 - (vi) Melbourne—Hobart, via King Island and Launceston (475 miles).

It is expected that the services will be in operation early in 1934.

(c) *Aerial Mail Services at 30th June, 1933.* The following aerial mail services were in operation at 30th June, 1933 :—

(1) *Subsidized Services.* West Australian Airways Ltd.—Perth to Derby (W.A.), 1,467 miles ; Derby to Wyndham (W.A.), 600 miles, and Perth (W.A.) to Adelaide (S.A.), 1,453 miles. Queensland and Northern Territory Aerial Services Ltd.—Brisbane to Camooweal (Q.), 1,269 miles, Cloncurry to Normanton (Q.), 215 miles, and Daly Waters to Birdum (N.T.), 50 miles. Larkin Aircraft Supply Co. Ltd.—Camooweal (Q.) to Daly Waters (N.T.), 475 miles. All these services are operated once weekly in each direction over the routes mentioned. The Derby to Wyndham service is not operated in the “wet” season, which is usually December to March. The Daly Waters to Birdum service is operated during the “wet” season only, when surface transport between these two centres is impracticable except per medium of pack-horses.

(2) *Unsubsidized Services.* The following services were in operation at 30th June, 1933, without the assistance of Government subsidies :—(i) Rockhampton—Brisbane, 360 miles, weekly in each direction (Rockhampton Aerial Services Ltd.) ; (ii) Brisbane—Sydney, 500 miles, daily in each direction except Sundays (New England Airways Ltd.) ; (iii) Melbourne—Hobart, via Flinders Island, 356 miles, weekly in each direction (Hart Aircraft Services Pty. Ltd.) ; (iv) Melbourne—Hobart, via King Island, 396 miles, weekly in each direction (Matthews Aviation Pty. Ltd.) ; and (v) Launceston—Flinders Island, 120 miles, bi-weekly in each direction (Tasmanian Aerial Services Ltd.). Surcharged air mail is carried on services (ii) and (v) under arrangements with the Postmaster-General's Department.

(d) *Aerial Ambulance Service.* Following an agreement made between the Queensland and Northern Territory Aerial Services Ltd. and the Australian Inland Mission, an aerial ambulance service to provide medical service where required in Western and Northern Queensland and operating from a base at Cloncurry was inaugurated on the 17th May, 1928. The aircraft company agreed to provide the aircraft and pilot, and the mission authorities the doctor. The scheme has proved most successful and many instances are recorded of lives being saved by the services thus made available.

(e) *Reliability.* During 1932, over 564,693 miles were flown by the three subsidized companies operating regular air services, without a fatal accident. The total mileage flown by all civil aircraft in Australia and New Guinea during the same period was over 2,994,000 miles, and five fatal accidents occurred, an average of one fatal accident for every 598,800 miles flown.

4. **Air Survey.**—An air survey of approximately 260,000 square miles of Central Australia was carried out by Mr. Donald Mackay and party in May and June, 1933. Two aeroplanes were employed and the work extended over a period of eight weeks. The base of operations was in the vicinity of the Petermann Ranges and flights were made northerly and westerly from that locality. As a result of the survey, which was financed solely by Mr. Mackay, a considerable addition to the present scanty store of topographical data of Central Australia will result.

5. **Aircraft Construction.**—Aircraft have been manufactured in Australia from time to time and locally built aircraft are in use on certain subsidized routes. Development, however, has not yet reached a completely organized stage.

During the year, two locally constructed Genairco aircraft were shipped to Fiji for use in the operation of a seaplane service between the islands of that Territory.

The Aircraft Section at Cockatoo Island Dockyard is now constructing a twin-engined six-seater passenger aircraft (the "Codock") to the design of Wing-Commander L. J. Wackett, Aeronautical Superintendent of the Dockyard. It is understood that the "Codock" is being built to the order of Air Commodore Sir Charles Kingsford Smith.

6. **Training of Air Pilots.**—(i) *The Associated Aero Clubs.* The Associated Australian Aero Clubs provide facilities in the capital cities of all States for flying instruction and practice. At the end of June, 1933, over 700 pupils had passed through the various flying training organizations and had qualified for private "A" pilots' licences, whilst many graduates had completed advanced courses of training, gained their commercial "B" licences, and now own aircraft.

The Commonwealth Government renders these six clubs assistance by providing D.H. 60 "Moth" aeroplanes and spare engines, hangar accommodation, the free use of aerodromes, suitable club houses which are leased to the clubs, and bonuses for practice flying carried out and for each pupil trained to a standard that will enable him to obtain a private ("A") pilot's licence. In lieu of the bonus for practice flying the Sydney and Melbourne Clubs are paid a subsidy in respect of each member who qualifies for the renewal of his pilot's licence.

Aviation pageants are held from time to time by the various sections of the Australian Aero Club and are increasing in popularity.

(ii) *Other Aero Clubs.* During 1932 several D.H. 60 "Moth" aeroplanes were made available for loan to the following clubs operating in country districts:—Bendigo and Ballarat (V.); Central Queensland Aero Club, Rockhampton (Q.); and Lismore (N.S.W.). No assistance other than the loan of a machine is given to these organizations.

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

7. **Notable Flights.**—Since the end of the European war 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. During the period 1st July, 1932, to 30th June, 1933, there were four solo flights from Europe to Australia, each of which was in the nature of a holiday flight, no attempt being made on any existing record. A flight of interest was the visit of the American Lockheed-Orion, high speed commercial monoplane, piloted by J. Dickson and carrying two passengers, which, in the course of a world business tour, flew from Sydney via Melbourne, Adelaide and Alice Springs to Wyndham in a few hours over two days, leaving from there for Sourabaya

and the East. Sir Charles Kingsford Smith, with a co-pilot, wireless operator, mechanic and passenger, flew from New South Wales to New Zealand in January, and returned in March, 1933. Mrs. M. R. Bonney flew from Australia to England, arriving at Croydon two months after leaving Australia. Unfavourable weather and a mishap to the machine which necessitated the despatch of spare parts from England, contributed to the delay in completion of the flight. Mrs. Bonney is the first Australian airwoman to fly from Australia to England.

In June, 1933, one of Imperial Airways Atlanta type machines (fitted with four engines) carried out a survey tour of the proposed England-Australia air mail route.

8. **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, 1928 to 1932 :—

CIVIL AIRCRAFT.—AUSTRALIA.—SUMMARY.

Particulars.	Year ended 30th June—					
	1928.	1929.	1930.	1931.	1932.	
Registered Aircraft Owners						
(a) No.	37	72	122	129	115	
Registered Aircraft (a) No.	90	175	220	225	189	
Licensed Pilots—(a)						
Private No.	127	209	344	407	363	
Commercial .. No.	76	122	181	209	183	
Licensed Ground Engineers						
(a) No.	163	198	257	293	289	
Aerodromes—(a)						
Government No.	46	56	58	57	58	
Public No.	13	19	39	66	94	
Government Emergency						
Grounds .. No.	94	108	114	121	124	
Flights carried out	No.	56,216	92,000	128,916	113,340	96,192
Hours flown .. . No.	15,783	27,268	42,963	44,507	31,959	
Approx. Mileage .. Miles	1,153,572	1,992,070	3,234,307	3,596,930	2,527,700	
Passengers carried—						
Paying No.	36,397	56,363	91,415	80,651	56,883	
Non-paying .. No.	5,629	10,037	12,801	13,699	13,771	
Total No.	42,026	66,400	104,216	94,350	70,654	
Goods, weight carried	lb.	116,373	160,424	196,795	204,445	221,552
Mails, letters carried	No.	301,677	316,338	383,942	(b) 48,593	(b) 29,494
Accidents—						
Persons killed	No.	2	7	18	29	7
Persons injured	No.	5	10	20	20	17

(a) At 30th June.

(b) Weight in lb. all contractors.

In earlier issues of the Year Book, particulars of flying carried out in the various States have been shown, but, owing to the extension of interstate flying both by the subsidized companies and private pilots, it has been found impracticable to obtain complete details for the several States separately. The figures shown in the above table are therefore for the Commonwealth as a whole.

9. **New Guinea Activities.**—The discovery of gold in New Guinea 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 approximately one hour, the nature of the intervening country is such that a journey by other means occupies more than a week. Several air transport companies are operating successfully without any direct assistance in the form of Government subsidies. The principal company (Guinea Airways Ltd.) is now operating three specially constructed freight machines for the transportation of several thousand tons of hydro-electric power plant and dredging machinery to the Bulolo fields. This work is being successfully accomplished, and constitutes one of the most notable feats of transport in the history of aviation. Mails are carried by Guinea Airways Ltd., under arrangement with the Postmaster-General's Department, from Port Moresby to Wau and Salamaua. The air mail fee is 2d. per ounce in addition to the ordinary postage plus 3d. per half-ounce (air mail surcharge) if an Australian air service is also used. The subjoined table gives a summary of operations for the years ended 30th June, 1928 to 1932.

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

Particulars.	Year ended 30th June—				
	1928.	1929.	1930.	1931.	1932.
Registered Aircraft Owners					
(a) No.	5	7	7	5	6
Registered Aircraft (a) No.	12	15	13	15	15
Licensed Pilots—(a)					
Private .. No.	..	..	1	4	2
Commercial .. No.	9	10	11	13	16
Licensed Ground Engineers					
(a) No.	8	10	11	18	31
Aerodromes—(a)					
Government .. No.	2	2	2	2	2
Emergency Landing					
Grounds .. No.	4	4	4	3	3
Flights carried out .. No.	821	1,532	2,882	2,672	4,664
Hours flown .. No.	1,534	2,626	3,619	3,969	5,160
Approximate mileage Miles	107,208	187,705	272,976	325,807	424,232
Passengers carried—					
Paying .. No.	814	1,293	2,490	2,992	3,450
Non-paying .. No.	94	65	649	87	31
Total .. No.	908	1,358	3,139	3,079	3,481
Goods, weight carried lb.	518,831	1,385,510	3,062,430	3,107,616	9,778,072
Mails, weight carried lb.	6,171	13,876	23,257	24,604	23,394
Accidents—					
Persons killed .. No.	..	..	..	1	..
Persons injured .. No.	..	..	..	1	..

(a) At 30th June.

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 1927-28 to 1931-32 :—

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

Particulars.		1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Motor bodies built in Australia ..	No.	58,955	72,193	46,409	10,417	6,322
	Value £	3,436,674	4,357,841	3,118,987	864,209	450,510
Motor bodies imported ..	No.	9,583	14,546	6,556	137	61
	Value £	1,115,303	1,471,878	697,862	14,007	7,360
Chassis imported ..	No.	67,875	99,500	61,981	9,367	4,146
	Value £	6,758,255	8,830,362	5,807,024	721,893	355,415
Fuels imported—						
Crude petroleum ..	Million gallons	74	105	122	93	49
	Value £	791,766	858,678	1,118,332	823,575	448,651
Petroleum spirit, etc. ..	Million gallons	178	200	240	171	156
	Value £	6,087,217	6,816,287	7,429,485	4,054,265	2,622,414

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

At the 30th June, 1932, the number of motor cars per 1,000 of population was 63.19.

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. By regulating the licensing of motor omnibuses, the economic waste arising from duplication of routes and services parallel with or contiguous to existing railway and tramway systems is avoided. The general principle governing the allocation of routes is that omnibus services should act as feeders to existing transport utilities. Revenue from licence fees is devoted principally to the maintenance or construction of roadways to enable them to withstand the wear and tear caused by the heavy traffic. In some States the various railway and tramway systems conduct adjunct motor services 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 1931–32. Particulars of the registration of motor vehicles, etc., for the year 1931–32 are contained in the subjoined table :—

MOTOR VEHICLES.—SUMMARY, 1931–32.

States and Territories.	Motor Vehicles Registered.					Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.	Per 1,000 of Population.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Total.
	No.	No.	No.	No.	No.		£	£	£
New South Wales	143,970	22,741	40,050	206,761	81.72	308,087	1,396,419	153,749	1,550,168
Victoria ..	117,160	22,568	28,224	167,952	92.99	226,712	1,041,344	56,691	1,098,035
Queensland ..	678,992	8,034	41,934	88,960	91.62	60,930	470,279	24,462	494,741
South Australia ..	39,023	7,860	10,909	57,792	98.62	81,300	459,395	40,309	499,704
Western Australia	28,316	6,700	12,386	47,402	112.33	56,171	259,705	19,111	278,816
Tasmania	11,327	3,661	2,222	17,210	77.87	19,426	33,834	9,713	93,547
Northern Territory	233	39	307	579	115.80	589	208	284	492
Federal Capital Territory	949	93	222	1,264	140.45	1,624	6,523	856	7,379
Australia ..	419,970	71,696	96,254	587,920	89.76	754,839	3,717,707	305,175	4,022,882

(a) Solid tyred vehicles. (b) Pneumatic tyred vehicles. (c) Gross Revenue.

(ii) *Quinquennium* 1928–1932. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1927–28 to 1931–32 :—

MOTOR VEHICLES.—REGISTRATIONS, ETC., AUSTRALIA.

Year.	Motor Vehicles Registered.					Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.	Per 1,000 of Population.		Vehicle Registration and Motor Tax.	Drivers' and Riders', etc., Licences.	Total.
							£	£	£
1927–28	419,131	84,017	(a)62,006	565,154	89.9	681,237	3,364,861	249,964	3,614,825
1928–29	474,359	88,049	(a)71,851	634,259	99.5	767,328	3,877,734	289,300	4,167,034
1929–30	466,930	84,897	104,487	656,314	101.9	823,452	4,194,910	329,988	4,524,898
1930–31	429,206	76,966	97,933	604,105	92.9	805,626	3,747,726	324,907	4,072,633
1931–32	419,970	71,696	96,254	587,920	89.8	754,839	3,717,707	305,175	4,022,882

(a) Incomplete, partly included with Motor Cars.

(iii) *Relation to Population.* The table hereunder gives the number of vehicles (exclusive of motor cycles) registered per 1,000 of population in each State for each of the years 1921 and 1928 to 1932 :—

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, 1928	74	72	74	110	81	54	86	143	77
„ 1929	84	81	82	119	90	62	94	149	86
„ 1930	87	87	88	100	101	68	106	154	89
„ 1931	79	80	86	82	92	65	110	155	81
„ 1932	73	81	83	85	96	61	119	134	79

(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 1927-28 to 1931-32. 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, etc.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales	7 3 5	7 4 5	7 5 8	7 2 6	7 8 8
Victoria	6 16 6	6 19 2	7 0 10	7 0 2	6 19 2
Queensland	5 7 2	5 14 5	5 13 8	5 12 3	5 13 3
South Australia	7 10 5	7 6 10	9 7 11	8 5 9	8 16 7
Western Australia	6 1 9	6 10 0	6 16 1	6 15 8	6 3 11
Tasmania	5 1 11	5 0 11	5 1 6	5 11 1	5 15 0
Northern Territory	0 5 7	0 7 5	0 3 6	1 0 0	0 7 6
Federal Capital Territory ..	6 7 1	6 0 11	6 2 2	4 19 9	5 9 2
Australia	6 14 10	6 17 0	7 2 0	6 17 8	7 0 1

6. **Comparative Motor Vehicle Statistics, 1932.**—The result of the 1933 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were almost 33,400,000 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1933.

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1933.

Country.	Approximate Population in Millions.	Motor Cars, Trucks, and Buses.	Motor Cycles.
Australia	7	527,493	65,000
Argentina	11	329,400	..
Belgium	8	150,000	45,000
Brazil	40	163,200	..
Canada	10	1,103,089	9,265
Cuba	4	27,500	..
Denmark	4	126,321	25,000
France	41	1,710,955	488,147
Germany	63	659,532	819,178
Great Britain	44	1,493,474	434,399
India	319	108,355	15,000
Irish Free State	3	49,223	5,668
Italy	41	301,533	98,471
Japanese Empire	66	104,800	25,000
Mexico	16	88,930	852
Netherlands	8	136,100	33,800
Netherlands East Indies	53	71,754	7,891
New Zealand	2	190,267	32,953
Union of South Africa	7	156,643	30,436
Spain	23	172,000	14,800
Sweden	6	151,500	55,000
Switzerland	4	90,100	47,300
United States of America	123	24,378,182	..

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. The figures for Australia are estimated at 31st December, 1932, and differ from those stated in para. 5, which are actual registrations at 30th June, 1932.

As regards numbers of motor cars, Australia ranks sixth among the countries of the world, having been displaced by Germany from fifth position during 1928.

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, and a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. **Postal 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, 1932. 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, 1932.**

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus- tralia.
Number of post offices (a) ..	2,428	2,548	1,194	763	560	511	8,004
Number of square miles of territory to each office in State ..	128	34	562	1,186	1,743	51	372
Number of inhabitants to each office ..	1,046	709	813	774	754	434	818
Number of inhabitants per 100 square miles ..	818	2,055	145	65	43	841	220

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

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

(ii) *Number of Offices.* The following table shows the number of post offices in each State from 1901 to 1931-32 :—

POST OFFICES—NUMBER.

State.	At 31st December—				At 30th June—					
	1901.(b)		1912.		1922.		1931.		1932.	
	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	438	1,770	508	2,051	459	2,129	439	2,103	438	1,990
Victoria ..	181	2,076	293	2,281	270	2,306	279	2,280	278	2,270
Queensland ..	137	1,165	214	1,149	211	1,030	199	1,000	199	995
South Australia ..	180	523	162	601	139	666	146	620	146	617
Western Australia	181	34	160	360	131	537	124	432	124	436
Tasmania ..	57	315	57	389	47	456	43	472	43	468
Australia ..	1,174	5,883	1,394	6,831	1,257	7,124	1,230	6,907	1,228	6,776

(a) Includes offices previously designated as " Allowance " and " Receiving " Offices (b) Figures for 1902 are not available.

(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—					
	1902.		1912.		1922.		1931.		1932.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	(a)	..	(a)	..	87	..	174	..	175	..
New South Wales ..	5,724	973	12,614	1,798	12,451	2,087	12,336	1,884	12,357	2,010
Victoria ..	3,955	880	7,845	1,060	8,553	1,095	9,574	1,129	9,490	1,103
Queensland ..	2,627	(b)	3,942	768	4,792	766	4,865	908	4,818	832
South Australia ..	1,974	(b)	2,173	364	2,895	441	3,340	359	3,252	242
Western Australia ..	1,286	136	2,246	251	2,200	338	2,548	329	2,564	309
Tasmania ..	(c)860	(b)	1,094	217	1,229	236	1,354	257	1,398	238
Australia ..	16,426	1,989	29,914	4,458	32,207	4,963	34,191	4,860	34,054	4,734

(a) Included in Victorian Staff. (b) Included in "employees." Separate particulars are not available. (c) Estimated.

3. **Gross Revenue, Postmaster-General's Department.—Branches.** The gross revenue collected in respect of each branch of the Department during each of the past 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—	£	£	£	£	£	£	£
1927-8 ..	2,340,390	1,628,140	814,355	468,877	380,661	170,459	5,802,882
1928-9 ..	2,380,622	1,656,326	827,737	461,723	387,675	170,321	5,884,404
1929-30 ..	2,392,882	1,842,658	849,828	454,731	419,644	172,399	6,131,542
1930-31 ..	2,355,336	1,642,917	875,705	440,665	394,620	176,915	5,886,258
1931-32 ..	2,305,357	1,583,136	841,602	435,526	381,113	162,695	5,709,629
Telegraph Branch (a)—							
1927-8 ..	527,405	344,525	231,203	185,318	130,217	48,541	1,467,209
1928-9 ..	532,292	334,168	237,042	182,017	137,360	46,554	1,469,433
1929-30 ..	556,561	396,383	240,612	177,115	138,964	47,224	1,556,859
1930-31 ..	459,170	325,045	208,556	158,023	115,124	42,672	1,308,590
1931-32 ..	436,523	307,740	207,108	153,191	109,237	40,358	1,254,157
Telephone Branch—							
1927-8 ..	1,932,584	1,412,763	707,484	561,279	288,153	131,788	5,034,051
1928-9 ..	2,106,433	1,529,034	762,998	599,035	320,603	140,856	5,459,559
1929-30 ..	2,305,453	1,633,790	818,170	607,730	350,385	147,758	5,862,686
1930-31 ..	2,199,466	1,598,415	814,794	565,982	326,252	139,447	5,644,356
1931-32 ..	2,069,555	1,555,437	792,607	529,790	297,713	134,263	5,399,365
All Branches—							
1927-8 ..	4,800,379	3,385,428	1,753,042	1,215,474	799,031	350,788	12,304,142
1928-9 ..	5,019,347	3,520,128	1,827,777	1,242,775	845,638	357,731	12,813,396
1929-30 ..	5,254,896	3,872,831	1,908,610	1,238,376	908,993	367,381	13,551,087
1930-31 ..	5,013,972	3,566,377	1,899,055	1,164,670	835,996	359,034	12,839,104
1931-32 ..	4,831,635	3,446,313	1,841,317	1,118,507	788,063	337,316	12,363,151
Total Revenue per head of mean population—							
1927-8 ..	1.99	1.94	1.95	2.10	2.04	1.66	1.97
1928-9 ..	2.05	2.00	1.99	2.13	2.08	1.68	2.02
1929-30 ..	2.11	2.18	2.05	2.12	2.19	1.71	2.11
1930-31 ..	2.00	1.99	2.00	1.99	1.99	1.65	1.98
1931-32 ..	1.90	1.91	1.89	1.89	1.87	1.52	1.89

(a) Includes radio receipts.

As compared with the corresponding figures for the previous year, a decrease of 3.7 per cent. is shown, the decreases in the several branches being as follows:—Postal 2.9 per cent., Telegraph 4.2 per cent., and Telephone 4.4 per cent.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1932. 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, 1931-32.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£	£
Salaries and contingencies—								
Salaries	65,874	1,992,153	1,415,316	728,570	536,717	366,380	182,649	5,287,659
Conveyance of mails .. .. .	..	441,522	263,612	213,003	75,282	75,779	38,532	1,107,730
Contingencies	3,763	493,334	381,512	182,539	135,171	93,903	66,040	1,356,262
Ocean mails	110,000	..	..	..	..	..	..	110,000
Miscellaneous	919	27,901	20,289	7,296	8,259	4,569	6,313	75,546
Pensions and retiring allowances .. .. .	..	43,563	39,845	..	..	20,422	..	103,830
Rent, repairs, maintenance	75	20,353	14,152	14,214	6,333	5,148	1,196	61,471
Proportion of Audit Office expenses .. .. .	..	3,756	2,677	1,432	876	627	332	9,700
New works—								
Telegraph and telephone	26	188,951	108,943	53,796	37,099	27,443	15,806	(c) 432,064
New buildings, etc. .. .. .	..	3,863	113	307	4,999	1,027	146	(d) 10,455
Interest on transferred properties .. .. .	..	114,328	61,362	45,575	37,523	21,869	9,924	290,581
Other	3,351,009	..	..	..	..	..	..	3,351,009
	(a)							
Total	3,531,666	3,329,724	2,307,821	1,246,732	842,259	617,167	320,938	12,196,307
	(b)							

(a) Particulars of apportionment to each State not available. (b) Including expenditure not apportioned to States. (c) Excluding expenditure under the *Appropriation (Unemployment Relief Works) Act 1931* (£48,790). (d) Including expenditure under the aforementioned Act (£51,513).

(ii) *Total, 1928 to 1932.* 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, 1928 to 1932 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPARTMENT, 1928 TO 1932.

Expenditure.	Year ended 30th June—				
	1928.	1929.	1930.	1931.	1932.
	£	£	£	£	£
Total	16,098,777	15,693,070	15,797,072	14,282,984	12,196,307

The total expenditure for 1931-32 decreased by 24.2 per cent. compared with the amount for 1927-28.

5. **Profit or Loss, Postmaster-General's Department.**—(i) *States 1931-32.* The foregoing statements of gross revenue and expenditure which represent actual collections and payments made and include capital and interest payments, 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 during the year, were as follow :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1931-32.

Branch.	Profit or Loss.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Postal ..	{ Profit Loss	£ 476,450 ..	£ 421,783 ..	£ 211,794 ..	£ 90,980 ..	£ 71,532 ..	£ .. 5,005	£ 1,267,534 ..
Telegraph (a)	{ Profit Loss	.. 59,422	.. 20,082	.. 37,290	.. 24,053	.. 39,611	.. 12,141	.. 152,435
Telephone ..	{ Profit Loss	.. 44,968	.. 51,687	.. 3,617	.. 133,862	.. 75,163	.. 69,793	.. 379,090
All Branches	{ Profit Loss	372,060 ..	390,178 ..	170,887 ..	66,935 ..	43,242 ..	86,939 ..	736,009 ..

(a) Including Wireless Branch.

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1931-32 closed with a surplus of £736,009. For the preceding year a deficit of £67,004 was shown.

(ii) *Branches, 1928 to 1932.* The following statement gives particulars of the operating results of each branch for the period 1928 to 1932 :—

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

Year Ended 30th June—	Branch.							
	Postal.		Telegraph.		Telephone.		All Branches.	
	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.
1928 ..	£ 403,850	..	£ 312,075	..	£ 322,438	..	£ 230,663	..
1929 ..	531,870	..	228,134	..	247,212	..	..	..
1930 ..	557,105	..	232,188	..	127,034	..	197,883	..
1931 ..	721,282	..	355,366	..	432,920	..	..	67,004
1932 ..	1,267,534	..	152,435	..	379,090	..	736,009	..

6. *Capital Account.*—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1932.

FIXED ASSETS, POSTMASTER-GENERAL'S DEPARTMENT, 30th JUNE, 1932.

Particulars.	Net Value, 1st July, 1931.	Capital Expenditure, 1931-32.	Gross Value, 30th June, 1932.	Less Depreciation, &c. 1931-32. (a)	Net Value, 30th June, 1932.
Telephone Lines and equipment	£ 31,239,593	£ 702,756	£ 31,942,349	£ 474,631	£ 31,467,718
Telegraph Lines and Trunk Line equipment ..	10,136,138	94,843	10,230,981	81,613	10,149,368
Postal equipment ..	593,927	18,219	612,146	8,746	603,400
Sites, Buildings, Furniture, and Office equipment ..	393,675	7,429	401,104	6,086	395,018
Miscellaneous ..	9,288,913	39,913	9,328,826	16,971	9,311,855
Wireless equipment and Buildings	601,586	17,070	618,656	42,412	576,244
	95,972	35,190	131,162	1,260	129,902
Total ..	52,349,804	915,420	53,265,224	631,719	52,633,505

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

During the past quinquennium the value of the fixed assets has increased by 23 per cent., the net value at 30th June, 1927, being £42,888,248.

§ 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 1928 to 1932. 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 and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.								
1928	821,324	131,819	152,666	24,502	14,028	2,252	7,024	1,127
1929	797,743	125,959	151,698	23,952	14,873	2,348	7,376	1,164
1930	791,241	123,433	150,812	23,527	13,889	2,166	7,267	1,134
1931	701,694	108,409	127,959	19,769	9,769	1,509	6,447	996
1932	677,847	103,484	118,906	18,153	8,841	1,350	6,096	931

TOTAL POSTAL MATTER DEALT WITH.

1927	928,874	152,072	188,725	30,897	12,903	2,112	8,347	1,366
1928	921,149	147,841	183,514	29,453	14,704	2,360	8,074	1,296
1929	887,799	140,179	180,612	28,518	15,571	2,458	8,413	1,328
1930	865,412	135,004	178,018	27,771	14,586	2,275	8,268	1,290
1931	761,508	117,650	152,326	23,534	10,209	1,577	7,244	1,119
1932	731,134	111,619	139,502	21,297	9,203	1,405	6,731	1,028

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1931-32.

POSTAL MATTER DEALT WITH—STATES, 1931-32. (a)

State.	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	264,860	104,336	56,754	22,357	3,675	1,448	2,275	896
Victoria ..	207,952	115,138	25,002	13,843	1,668	923	1,703	943
Queensland ..	89,275	91,955	20,486	21,101	1,872	1,929	912	939
South Australia	48,507	82,139	7,064	11,962	828	1,402	488	827
Western Australia	43,095	102,016	4,623	10,940	671	1,588	473	1,119
Tasmania ..	24,158	108,918	4,977	22,440	127	573	245	1,105
Australia ..	677,847	103,484	118,906	18,153	8,841	1,350	6,096	931

(a) See explanation in paragraph (i).

POSTAL MATTER DEALT WITH—STATES, 1931-32(a)—continued.

State.	Letters, Postcards and Packets.		Newspapers.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
OVERSEA DISPATCHED.								
New South Wales	13,340	5,255	1,970	776	79	31	132	52
Victoria ..	8,623	4,774	4,184	2,317	43	24	47	26
Queensland ..	2,299	2,368	560	577	13	13	22	23
South Australia	1,989	3,368	274	464	7	12	31	52
Western Australia	2,400	5,682	341	808	9	21	27	63
Tasmania ..	1,473	6,643	173	781	1	6	1	6
Australia ..	30,124	4,599	7,502	1,145	152	23	260	40
OVERSEA RECEIVED.								
New South Wales	9,500	3,742	6,152	2,424	88	35	177	70
Victoria ..	5,992	3,317	2,043	1,131	62	35	114	63
Queensland ..	2,348	2,418	2,121	2,185	20	20	34	35
South Australia	1,260	2,134	855	1,447	13	21	14	23
Western Australia	3,254	7,704	1,557	3,687	23	54	31	73
Tasmania ..	809	3,646	366	1,650	4	17	4	16
Australia ..	23,163	3,536	13,094	1,999	210	32	374	57

(a) See explanation in paragraph (i).

2. **Value-Payable Parcel and Letter Post.**—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1928 to 1932:—

VALUE-PAYABLE PARCELS 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.
1928	296,391	20,005	236,040	11,789	79,761	505	644,491
1929	313,654	24,426	248,210	14,564	79,699	430	680,983
1930	299,930	26,145	232,968	16,653	82,148	420	658,264
1931	248,316	27,786	179,564	18,413	75,977	568	550,624
1932	280,589	37,144	182,902	25,315	80,330	714	606,994

VALUE-PAYABLE PARCELS POST.—SUMMARY—*continued.*

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

	£	£	£	£	£	£	£
1928	462,794	35,699	350,712	17,095	114,035	1,040	981,375
1929	462,964	41,878	364,156	19,964	103,683	859	993,504
1930	436,025	42,457	334,491	24,755	101,716	716	940,160
1931	342,786	38,596	242,756	21,108	86,103	764	732,113
1932	331,328	47,481	230,761	26,931	83,973	920	721,394

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

	£	£	£	£	£	£	£
1928	36,318	2,547	30,700	1,264	8,939	62	79,830
1929	38,968	3,116	33,048	1,669	8,914	53	85,768
1930	38,518	3,465	30,449	2,044	9,354	52	83,882
1931	32,791	3,684	23,430	2,294	8,944	68	71,211
1932	36,606	4,787	23,962	3,088	9,450	90	77,983

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 found favour for several years in Western Australia. These three States have the largest areas, and consequently more people at long distances from business centres who avail themselves of the value-payable system. Although South Australia 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, 1932 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1931–32.

Service.	Orient S.N. Co.	Queens- land Ports.	South Australian Ports.	Western Australian Ports.	Tas- manian Ports.
Annual subsidy	£ 110,000	£ 1,200	£ 5,000	£ 5,520	£ 30,853

4. *Total Cost of Carriage of Mails.*—During the year 1931–32 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £29,095; by road services, £603,845; and by railway services, £430,234. The total expenditure during the financial year 1931–32 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,214,859.

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 1931-32, and the methods adopted in the disposal thereof:—

DEAD LETTER OFFICES.—SUMMARY, 1931-32.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS, AND LETTER-CARDS.							
Returned direct to writers or delivered	980,417	227,633	177,788	65,537	114,789	82,650	1,648,814
Destroyed in accordance with Act	66,457	25,869	25,890	8,334	7,056	2,244	135,870
Returned to other States or Countries as unclaimed	43,907	17,513	17,118	4,303	12,031	930	95,802
Total	1,090,781	271,015	220,796	78,194	133,876	85,824	1,880,486
PACKETS AND CIRCULARS.							
Returned direct to writers or delivered	687,775	92,123	152,882	7,772	74,358	33,864	1,048,774
Destroyed in accordance with Act	105,804	41,903	31,805	57,214	1,657	468	238,851
Returned to other States or Countries as unclaimed	1,706	12,042	4,538	5,101	783	252	24,422
Total	795,285	146,068	189,225	70,087	76,798	34,584	1,312,047
Grand Total (letters, packets, etc.)	1,886,066	417,083	410,021	148,281	210,674	120,408	3,192,533

During the year 1931-32 money and valuables to the amount of £62,149 were found in undelivered postal articles, while 37,057 postal articles were posted without address, including 421 which contained money and valuables to the extent of £1,819.

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, 1931-32.* Particulars regarding the business transacted in each State for the year 1931-32 are given hereunder:—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1931-32.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Sold.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales	7,101,048	7,196,101	45,688	2,557,284	56,911
Victoria	2,614,520	2,818,972	17,137	1,543,392	35,921
Queensland	2,303,644	2,120,414	15,985	643,259	14,398
South Australia	771,902	771,717	6,339	347,149	8,156
Western Australia	1,133,643	1,058,113	9,823	339,522	7,461
Tasmania	425,759	401,663	2,982	148,075	3,419
Australia	14,350,516	14,366,980	97,954	5,578,681	126,266

The figures in the foregoing table relating to money orders show a substantial decrease compared with the corresponding particulars for the previous year, while those referring to postal notes show an increase.

(iii) *Australia, 1928 to 1932.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1927-28 to 1931-32 :—

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).
1928 ..	3,349	17,011	3,188	16,411	15,402	5,579	15,357	5,568
1929 ..	3,416	17,094	3,233	16,503	15,626	5,741	15,591	5,737
1930 ..	3,415	17,447	3,224	16,811	15,879	5,843	15,924	5,968
1931 ..	3,055	15,790	2,989	15,381	14,691	5,343	14,731	5,348
1932 ..	2,781	14,351	2,788	14,367	16,205	5,579	16,132	5,563

(iv) *Classification of Money Orders Issued and Paid.* (a) *Orders Issued.* The next table shows the number and value of money orders issued during the year 1931-32, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1931-32.

Where Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
Australia	2,647,267	10,970	78,069	44,841	2,781,147
VALUE.					
Australia	£ 13,911,254	£ 29,807	£ 219,276	£ 190,179	£ 14,350,516

(b) *Orders Paid.* The number and value of money orders paid during the year 1931-32, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1931-32.

Where Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
NUMBER.					
Australia	2,666,125	41,292	54,826	25,537	2,787,780
VALUE.					
Australia	£ 13,940,757	£ 83,939	£ 250,682	£ 91,602	£ 14,366,980

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

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1931-32, 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, 1931-32.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
Issued in same State	6,734,619	3,019,162	1,432,613	683,653	800,048	330,096	13,000,191
Issued in other States	895,644	420,634	381,022	74,707	35,338	1,324,253	3,131,598
Total ..	7,630,263	3,439,796	1,813,635	758,360	835,386	1,654,349	16,131,789
VALUE.							
Issued in same State	£ 2,306,020	£ 1,081,211	£ 513,130	£ 236,411	£ 293,175	£ 110,066	£ 4,540,013
Issued in other States	277,030	159,769	109,945	30,193	12,508	433,306	1,022,751
Total ..	2,583,050	1,240,980	623,075	266,604	305,683	543,372	5,562,764

The number and value of postal notes paid in Australia during the year showed an increase of 9.5 per cent. and 4.0 per cent. respectively compared with the corresponding figures for the year 1930-31.

§ 3. Telegraphs.

i. *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), 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 re-organization.

(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 re-organization 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 re-organization there are now only nine repeating centres, fourteen centres having been abolished.

(iii) *Carrier Wave System.* This system which permits a number of messages to be transmitted simultaneously over the one line is now in operation between Perth and Adelaide, Adelaide and Melbourne, Melbourne and Sydney, and Sydney and Brisbane. There are now 38,260 miles of uni-directional telegraph carrier channels in operation.

(iv) *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.

(v) *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, Melbourne and Brisbane, Melbourne and Adelaide, Melbourne and Perth, 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 now is worked so that each channel has an output up to 50 words per minute. Between Sydney and Bathurst, Sydney and West Maitland, Melbourne and Bendigo, Melbourne and Mildura, Brisbane and Toowoomba, Brisbane and Charleville, Perth and Fremantle, and Perth and Kalgoorlie, start-stop telegraph printing systems are in operation.

(vi) *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 31st December, 1932, was 1,585,515 or 12.7 per cent. of the total lodgments, and the popularity of this facility is growing.

(vii) *Radiograms within the Commonwealth.* 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.

(viii) *Picturegram Service.* During the year ended 30th June, 1932, 174 picturegrams were transmitted between Sydney and Melbourne, the revenue being £402. 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.

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 1928 to 1932 :—

TELEGRAPHS, AUSTRALIA.—SUMMARY.

Particulars for Year ended 30th June.	1928.	1929.	1930.	1931.	1932.
Number of offices	9,136	9,252	9,317	9,189	9,225
Length of wire (miles)—					
Telegraph purposes only	73,303	72,642	71,629	62,009	58,891
Telegraph and telephone purposes ..	87,376	87,303	88,785	98,140	98,369
Length of line (miles)—					
Conductors in Morse cable	3,441	3,500	3,735	3,789	4,157
Conductors in submarine cable					
(statute miles)	4,505	4,676	4,524	4,859	4,863
Pole routes (miles)	97,110	96,467	98,450	100,596	100,507

(ii) *States.* The following table gives corresponding particulars for each State for the year 1931-32 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1932.

Particulars.	N.S.W.	Victoria.	Q'land.	S.Aust.	W.Aust.	Tas.	Australia.
Number of offices	3,072	2,426	1,436	795	957	539	9,225
Length of wire (miles)—							
Telegraph purposes only	20,949	8,301	12,885	7,276	8,746	734	58,891
Telegraph and telephone purposes ..	35,493	14,663	26,281	11,312	6,942	1,673	98,369
Length of line (miles)—							
Conductors in Morse cable	2,019	1,434	471	..	209	24	4,157
Conductors in submarine cable (statute miles) ..	3,601	282	313	251	..	416	4,863
Pole routes (miles)	34,962	19,342	15,923	15,059	11,699	3,522	100,507

A total length of 157,260 miles of wire is available for telegraph purposes, of which 98,369 miles are also used for telephone purposes. Compared with those for the previous year the figures show a decrease of 2,889 miles (1.8 per cent.) in the total length and an increase of 129 miles (0.13 per cent.) in the length of line used for both telegraph and telephone purposes. The decrease in the mileage of wire available for telegraph purposes only is due to the extension of the practice of superimposing telegraph facilities over telephone wires.

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—				
	1928.	1929.	1930.	1931.	1932.
Number (a) ..	16,608,226	16,345,152	15,724,246	12,985,298	12,679,951

(a) Including interstate cablegrams.

(ii) *States*. The appended table shows the total number of telegrams dispatched in each State in 1931–32 according to the class of message transmitted :—

TELEGRAMS DISPATCHED.—STATES, 1931–32.

Class of Message Transmitted within the Commonwealth.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Paid and Collect—							
Ordinary ..	3,477,640	2,482,595	1,990,999	846,500	1,160,641	233,219	10,191,594
Urgent ..	249,618	98,405	73,799	29,324	41,322	0,218	500,686
Press ..	217,464	139,658	96,367	36,591	30,575	20,844	541,499
Lettergram ..	74,200	71,087	72,520	32,556	77,572	30,380	358,315
Radiogram ..	7,337	4,869	4,041	3,679	2,551	5,653	28,130
Total ..	4,026,259	2,796,614	2,237,726	943,650	1,312,661	298,314	11,620,224
Unpaid—							
Service ..	128,604	51,358	44,259	40,262	47,104	16,687	328,274
Shipping ..	28,931	86,591	20,127	3,943	12,076	5,225	156,893
Meteorological ..	179,181	78,130	76,058	83,247	127,171	25,773	574,560
Total ..	336,716	216,079	140,444	132,452	186,351	47,685	1,059,727
Grand Total	4,362,975	3,012,693	2,378,170	1,081,102	1,499,012	345,999	12,679,951

The figures in the foregoing table show a decrease in the total volume of telegraph business of 305,347 messages (2.3 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 expenditure of the telegraph systems for the years 1927–28 to 1931–32 are given in earlier pages.

6. **Telegraph Density.**—Analysis of the latest world statistics available discloses a high telegraph density in Australia; the ratio of telegrams to population being the highest for any country in the world except New Zealand. 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	3.1	2.1
Austria	0.5	0.4
Belgium	2.3	0.7
Canada	0.5	1.2
Czechoslovakia	1.8	0.4
Denmark	0.4	0.6
France	3.8	0.8
Germany	0.8	0.3
Great Britain	2.9	1.0
Hungary	1.9	0.3
Japan	1.5	0.8
Netherlands	0.8	0.5
New Zealand	1.4	2.9
Norway	1.2	1.1
Poland	0.6	0.1
Spain	3.4	1.0
Sweden	0.5	0.6
Switzerland	1.0	0.6
Union of South Africa	2.3	0.6
United States of America	0.7	1.5

§ 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.

4. **Overseas Cable and Radio Business.**—(i) *Australia.* The subjoined table shows the number of cablegrams and radiograms received and dispatched in Australia from 1929-30 to 1931-32 :—

CABLEGRAMS AND RADIOGRAMS.—AUSTRALIA.

Messages.	Number Received.			Number Dispatched.			Total Number Received and Dispatched.		
	1929-30.	1930-31.	1931-32.	1929-30.	1930-31.	1931-32.	1929-30.	1930-31.	1931-32.
Number ..	718,339	572,423	564,205	781,982	647,655	610,763	1,500,321	1,220,078	1,174,968

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1931-32 is given hereunder :—

CABLEGRAMS AND RADIOGRAMS.—STATES, 1931-32.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number received ..	287,696	187,894	24,720	27,399	28,343	8,153	564,205
Number dispatched	301,117	202,870	31,618	31,060	35,040	9,058	610,763
Total ..	588,813	390,764	56,338	58,459	63,383	17,211	1,174,968

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

CABLEGRAM AND RADIOGRAM RATES, JUNE, 1932.

To—	Rate per Word and Route.		
	Via Pacific.	Via Eastern.	Via Beam.
European Countries ..	2s. 6d. to 2s. 7d.	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries ..	5s. 3d. to 6s. 3d.	2s. 5d. to 4s. 7d.	..
Africa .. ..	..	1s. 8d. to 5s. 4d.	2s. 2½d. to 2s. 11d.
North America ..	1s. 7d. to 3s. 5d.	2s. 4d. to 4s. 4d.	1s. 5½d. to 3s. 7d.
Central America ..	3s. 10d. to 4s. 4d.	5s. to 6s. 1d.	3s. 5½d. to 4s. 10d.
West Indies ..	3s. to 5s. 3d.	4s. to 5s. 8d.	..
South America ..	4s. 1d. to 6s. 8d.	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 deliverable 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 on press messages exchanged with Great Britain is 6d. via cable and 4d. via radio.

(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. 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.

§ 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, 1930 to 1932:—

TELEPHONE LINES.—AUSTRALIA.

Particulars..	1930.	1931.	1932.
Ordinary Lines—			
Conduits duct miles	5,844	6,047	6,217
" route miles	3,310	3,416	3,571
Conductors in aerial cables .. loop mileage	5,461	5,213	4,436
Conductors in underground cables .. "	761,723	789,736	800,081
Conductors in cables for junction circuits .. "	101,040	105,047	103,237
Open conductors .. single wire mileage	424,007	422,737	418,264
Trunk Lines—			
Telephone trunk lines only miles	232,909	233,543	236,209
Telegraph and telephone purposes "	88,785	98,140	98,369

(ii) *Comparison with Other Countries.* Despite the depressed business conditions Australia still maintains its position in the list of countries showing the most rapid advance in the use of the telephone, and it occupies sixth place, with 74.0 telephones per 1,000 of population. This position may be considered highly satisfactory in view of the area and distribution of population in Australia and the average length of wire required to provide a subscriber's service. The average length of wire per telephone in Australia is 5.3 miles, as compared with 4.4 miles in the United States of America, 3.7 miles in New Zealand and 3.6 miles in Canada.

(iii) *Trunk Line System.* Owing to the financial stringency, extensions of the trunk line system were necessarily on a smaller scale than usual in 1931-32. The objective aimed at is to provide facilities whereby any telephone subscriber may communicate with any other subscriber in the Commonwealth with reasonable promptitude. Following on the provision of a telephone service between Adelaide and Perth in 1930, commercial communication is now available between the whole of the States on the mainland. Communication with Tasmania depends on the construction of the proposed submarine telephone cable from Lorne (Vic.) via King Island to Stanley (Tas.).

The carrier system of telephony, whereby several additional channels of communication may be obtained over one pair of wires, thus obviating the costly expenditure involved in erecting additional wire along important routes where the business justifies extra channels, is being availed of to an increasingly greater extent,

At the 30th June, 1933, there were fifty carrier telephone systems in operation in Australia, giving a total of eighty-five channels with an aggregate channel mileage of approximately 23,700 miles.

(iv) *Automatic Exchanges.* At 30th June, 1932, there were 68 automatic or semi-automatic exchanges in operation providing facilities for 192,390 telephones, 186,979 of which were in the metropolitan areas. Encouraging results have been obtained from the trials made of specially constructed automatic units designed to provide an economical day and night service at rural exchanges, and it is proposed to install an additional number of units so that improved facilities may be made available in districts where, owing to the small volume of traffic, the expense of establishing continuous telephone attendance by other means is not justified.

(v) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1930 to 1932, 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 ..	1930	1,951	1,656	924	551	652	360	6,094
	1931	1,946	1,652	934	553	646	355	6,086
	1932	1,942	1,641	938	552	648	348	6,069
No. of Telephone Offices (Including Exchanges)	1930	3,008	2,358	1,417	786	970	520	9,059
	1931	2,993	2,353	1,424	787	934	516	9,007
	1932	2,981	2,350	1,429	790	937	513	9,000
No. of lines connected ..	1930	150,606	118,074	49,737	42,868	22,558	11,969	395,812
	1931	141,445	113,282	48,979	39,552	21,258	11,727	376,243
	1932	135,179	110,213	48,346	37,815	20,639	11,380	363,572
No. of instruments con- nected	1930	199,007	160,381	62,607	54,550	29,082	14,542	520,169
	1931	188,345	154,647	62,375	50,656	27,734	14,298	498,055
	1932	181,326	151,455	62,005	48,696	27,117	13,967	484,626
(a) No. of subscribers' instruments	1930	194,253	157,325	60,451	53,189	27,829	13,747	506,794
	1931	183,507	151,190	60,065	49,237	26,505	13,499	484,003
	1932	176,426	147,989	59,740	47,181	25,884	13,148	470,368
(b) No. of public tele- phones	1930	2,879	2,295	1,522	785	957	528	8,966
	1931	2,944	2,213	1,527	788	900	525	8,897
	1932	2,986	2,199	1,532	788	903	544	8,952
(c) No. of other local instruments	1930	1,875	761	634	576	296	267	4,409
	1931	1,894	1,244	783	631	329	274	5,155
	1932	1,914	1,267	793	727	330	275	5,306
Instruments per 100 of population	1930	7.98	8.99	6.64	9.32	6.95	6.75	8.08
	1931	7.49	8.60	6.50	8.61	6.59	6.52	7.66
	1932	7.15	8.39	6.38	8.25	6.42	6.32	7.40
Earnings		£	£	£	£	£	£	£
	1930	2,361,924	1,685,377	839,531	632,367	363,327	150,507	6,033,033
	1931	2,246,395	1,628,164	819,395	568,925	328,833	139,636	5,731,348
1932	2,087,878	1,556,936	798,088	529,743	303,527	134,905	5,411,077	
Working expenses ..	1930	1,660,982	1,230,603	678,680	563,847	271,644	187,676	4,593,432
	1931	1,643,800	1,219,722	558,500	496,697	272,543	167,225	4,358,487
	1932	1,351,053	1,033,698	485,962	405,252	241,369	143,919	3,661,253
Percentage of working ex- penses on earnings	1930	70.32	73.02	80.84	89.16	74.77	124.70	76.14
	1931	73.18	74.91	68.16	87.30	82.88	119.76	76.05
	1932	64.71	66.39	60.89	76.50	79.52	106.68	67.66

The number of instruments per 100 of population declined from 7.66 in 1930-31 to 7.40 in 1931-32. The actual number of instruments decreased from 498,055 to 484,626, a loss of 2.69 per cent. Of the 484,626 instruments connected at 30th June, 1932, 214,755, or 44.3 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.

(vi) *Systems in Use.* The following table shows the percentage of automatic, common battery, and magneto telephone lines at 30th June, 1930 to 1932 :—

PERCENTAGE OF AUTOMATIC, COMMON BATTERY, AND MAGNETO LINES.

System.	30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Automatic	1930	42.5	39.2	34.3	38.9	41.3	28.7	39.5
	1931	41.8	37.3	34.1	37.9	40.9	28.7	38.5
	1932	42.6	37.1	35.7	37.3	40.8	29.0	38.9
Common Battery	1930	3.0	18.6	..	13.7	6.3	16.6	9.1
	1931	2.9	18.6	..	13.4	6.1	16.8	9.0
	1932	2.9	19.0	..	13.5	6.2	17.2	9.1
Magneto	1930	54.5	42.2	65.7	47.4	52.4	54.7	51.4
	1931	55.3	44.1	65.9	48.7	53.0	54.5	52.5
	1932	54.5	43.9	64.3	49.2	53.0	53.8	51.9

(vii) *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 1931-32 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1931-32.

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.
New South Wales	13,817	11.13	62,058	3.97	58,903	2.08	134,778	3.88
Victoria ..	7,407	10.00	56,296	3.89	46,527	1.63	110,230	3.35
Queensland ..	6,469	8.92	11,876	3.21	29,488	2.31	47,833	3.43
South Australia ..	5,163	7.95	14,862	3.19	17,978	1.43	38,003	3.00
Western Australia	6,837	5.85	3,868	3.80	9,938	1.36	20,643	3.33
Tasmania ..	2,711	3.96	1,006	2.21	7,552	1.90	11,269	2.42
Australia ..	42,404	8.90	149,966	3.79	170,386	1.88	362,756	3.49

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 nearly two and a half times the number registered at suburban exchanges, while the average for suburban exchanges was slightly more than double the number shown for rural exchanges.

(viii) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1929-30 to 1931-32 :—

TELEPHONES.—TRUNK LINE CALLS AND REVENUE.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1929-30 ..	12,250,856	9,380,862	6,190,891	3,966,504	2,075,417	1,524,185	35,388,715
1930-31 ..	10,384,188	8,100,657	5,549,423	3,099,105	1,736,945	1,293,759	30,164,077
1931-32 ..	9,678,897	8,067,603	5,334,890	3,059,101	1,549,363	1,218,231	28,908,085
Total Revenue for Year—	£	£	£	£	£	£	£
1929-30 ..	549,585	382,055	331,305	174,119	110,955	49,048	1,597,067
1930-31 ..	512,403	358,833	318,748	142,557	90,085	43,494	1,466,120
1931-32 ..	480,847	357,688	300,801	140,023	83,831	41,500	1,404,690
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1929-30 ..	10.76	9.77	12.84	10.54	12.83	7.72	10.83
1930-31 ..	11.84	10.63	13.78	11.04	12.45	8.07	11.66
1931-32 ..	11.91	10.64	13.53	10.99	12.99	8.18	11.66

The number of trunk line calls originated during 1931-32 decreased by over a million compared with the figures for the previous year, but the average revenue per call remained the same.

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

§ 6. Radio Telegraphy and Telephony.

1. Radio Telegraphy and Telephony.—(i) *General.* A statement in regard to the initial steps taken to establish radio telegraphy in Australia was given in Official Year Book No. 18, p. 343.

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 require that all ships registered in Australia of 1,600 tons or more registered tonnage or carrying more than twelve passengers, shall be fitted with an efficient radio telegraph installation; (c) Land Stations to be operated where no telegraph of telephone facilities exist; (d) Broadcasting Stations, other than those of the National Broadcasting Service; (e) Broadcast Listeners' Receiving Sets; (f) Portable Stations, for transportable sets on motor cars, &c.; (g) Aircraft Stations; (h) Experimental Stations; and (i) Special Stations, for services other than those named above.

The following table shows the number of each class of licence issued in each State, etc., during the years 1931-32 and 1932-33 :—

WIRELESS LICENCES, 1931-32.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua and New Guinea	Grand Total.
Coast	2	1	6	1	5	3	1	19	9	28
Ship	10	54	12	20	6	1	..	103	..	103
Land (b) ..	8	3	3	1	2	3	3	23	3	26
Broadcasting (a) ..	16	13	8	6	4	3	..	50	..	50
Broadcast listeners' ..	141,450	139,323	28,938	37,120	12,679	9,540	22	369,072	20	369,092
Experimental ..	295	269	160	93	67	27	..	851	6	857
Portable	9	1	7	..	1	..	5	23	..	23
Special	28	12	..	1	6	..	..	47	..	47
Total Licences issued	141,818	139,676	29,074	37,242	12,770	9,577	31	370,188	38	370,226

(a) In addition there are twelve stations operated by the National Broadcasting Service. (b) In addition to the licensed stations, two are operated by the Postmaster-General's Department, viz. :—Wave Hill (N.T.) and Camooweal (Q.).

WIRELESS LICENCES, 1932-33.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua and New Guinea	Grand Total.
Coast	2	1	6	1	5	3	1	19	9	28
Ship	21	60	2	12	4	..	..	99	..	99
Land (b) ..	8	3	3	1	2	3	4	24	3	27
Broadcasting (a) ..	15	14	8	4	4	3	..	48	..	48
Broadcast listeners' ..	178,000	170,995	36,146	50,097	20,536	12,563	53	468,390	40	468,430
Experimental ..	387	323	126	111	68	30	..	1,045	2	1,047
Portable	9	1	7	2	1	..	5	25	..	25
Special	26	11	..	1	6	..	..	44	..	44
Total Licences Issued	178,468	171,408	36,298	50,229	20,626	12,602	63	469,694	54	469,748

(a) In addition there are twelve stations operated by the National Broadcasting Service. (b) In addition to the licensed stations two are operated by the Postmaster-General's Department, viz. :—Wave Hill (N.T.) and Camooweal (Q.).

(ii) *Broadcasting.* (a) *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 Department receives 9s. and the Commission 12s. from each listener's licence fee of 24s.

There are at present twelve National Stations—2*F.C.* Sydney, 2*B.L.* Sydney, 2*N.C.* Newcastle—regional station—programmes relayed from Sydney, 2*C.O.* Corowa—regional station—programmes relayed from Melbourne, 3*L.O.* Melbourne, 3*A.R.* Melbourne, 4*Q.G.* Brisbane, 4*R.K.* Rockhampton—regional station—programmes relayed from Brisbane, 5*C.L.* Adelaide, 5*C.K.* Crystal Brook—regional station—programmes relayed from Adelaide, 6*W.F.* Perth, 7*H.O.* Hobart.

Additional regional stations will soon be erected with a view to ensuring satisfactory reception in all but the very sparsely populated centres of the Commonwealth.

(b) *Licensed 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. The 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.

(c) *Simultaneous Broadcasts.* Simultaneous broadcasting in the various States has been a regular feature for some years. By means of telephone trunk lines and amplifying apparatus, items of national interest and programmes of special merit are distributed to the various stations of the National Broadcasting Service. In some cases they are relayed overseas by means of short wave stations or the Anglo-Australian radiotelephone service. Frequently, the licensed stations also are linked by telephone trunk lines for simultaneous broadcasts.

(iii) *Beam Wireless.* The Beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (Australasia) Ltd. were completed early in 1927, and a direct beam wireless service to England was established on 8th April, 1927. A similar service to Canada, United States, and Mexico 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 Wireless Communication. Particulars of international traffic via "Beam" are given in para. (vi) (a) hereunder.

(iv) *International Wireless Telephone Service.* A wireless telephone service between Australia and England was opened on the 30th April, 1930. Since then, additional direct services have been opened to New Zealand and Java, and the Anglo-Australian service has been extended to most of the countries in Europe, and to Egypt, Palestine, certain trans-Atlantic liners, India, South Africa, and North and South America. The fee for a conversation between Australia and England is £6 for a minimum of three minutes' effective conversation and £2 for each additional minute, and to Continental countries is slightly higher. The fee for calls to Egypt, and the trans-Atlantic liners is £2 8s. per minute, and to India, South Africa, and North and South America £3 per minute. The rates to the last-mentioned countries increase slightly on calls made to the western portions. Calls to New Zealand and Java cost £1 and £3 per minute respectively.

The Australian telephone subscriber now has access to about 32,000,000 telephones, or approximately 93 per cent. of the world's total. Since the first overseas radio telephone service was established in 1930, 3,398 calls have been completed, of which 2,436 were between Australia and Great Britain, and 551 between Australia and New Zealand. During the year ended 30th June, 1933, 1,015 calls were completed, 606 originating in Australia and 409 in other countries. Of the total calls, 722 were between Australia and Great Britain, 191 between Australia and New Zealand, 36 between Australia and the United States of America, and 66 between Australia and other foreign countries.

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

(vi) *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, 1932 :—

RADIO TRAFFIC.—INTERNATIONAL, YEAR ENDED 30th JUNE, 1932.

Class of Traffic.	Number of Words Transmitted.			Number of Words Received.		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary	885,186	372,106	1,257,292	545,041	123,172	668,213
Deferred	481,277	197,770	679,047	379,043	70,938	449,981
Government	72,553	10,763	83,316	65,012	1,954	66,966
Press (including deferred press) ..	196,223	11,817	208,040	935,642	21,933	957,575
Daily letter and week-end telegrams (a) ..	3,147,509	762,534	3,910,043	2,023,127	240,497	2,263,624
Total	4,782,748	1,354,990	6,137,738	3,947,865	458,494	4,406,359

(a) Includes Christmas and New Year Greeting telegrams.

(b) *Coast Stations.* Particulars of the traffic handled by the several coast stations during the year 1931-32 are as follow :—

RADIO TRAFFIC.—COAST STATIONS, 1931-32.

State or Territory.	Particulars.				
	Total, Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales	1,085,495	62,276	1,969	2,229	66,474
Victoria	87,495	7,827	73	1,121	9,021
Queensland	164,328	14,311	2,048	2,695	19,054
South Australia	46,705	4,114	357	684	5,155
Western Australia	339,431	10,879	1,033	2,482	14,394
Tasmania	180,059	11,019	866	1,375	13,260
Northern Territory	32,826	1,578	1,376	1,439	4,393
Australia	1,936,339	112,004	7,722	12,025	131,751
Papua	152,075	9,440	746	871	11,057
Grand Total	2,088,414	121,444	8,468	12,896	142,808

(c) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1931-32 are given hereunder :—

RADIO TRAFFIC.—ISLAND STATIONS, 1931-32.

Particulars.	To Australia.	From Australia.	Inter- Island.	Ship.	Service.	Total.
Messages	13,094	9,874	17,142	1,431	..	41,541
Words	233,421	143,140	203,196	19,873	..	599,630

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

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

Certificates issued under the International Radiotelegraph Convention of London (1912) ceased to be valid on 31st December, 1929, after which date it became necessary for certificate holders to exchange their certificates for equivalent certificates issued under the provisions of the Washington Convention (1927). To 30th June, 1933, 321 first class and 425 second class certificates had been issued under the new conditions.

At 30th June, 1933, 8 limited certificates in radiotelegraphy, 103 limited certificates in radiotelephony, and 1,112 amateur proficiency certificates, in addition to 114 watchers' certificates, had been issued.