

SECTION XVI.

SHIPPING.

§ 1. General.

1. **Record of Shipping before Federation.**—Prior to Federation it was customary for each State to regard the matter of shipping purely from the State standpoint, and vessels arriving from or departing to countries beyond Australia, via other Australian States, were recorded as if direct from or to the oversea country. Thus, a mail steamer from the United Kingdom, which made Fremantle her first port of call in Australia, would be recorded not only there, but again in Adelaide, Melbourne and Sydney, as an arrival from the United Kingdom. Consequently, any aggregation, especially of the recent shipping records of the different States, would repeatedly include a large proportion of the shipping visiting Australia. In earlier years, when many vessels sailed from the various State ports direct for their destination, the error of repeated inclusion was less serious, but as the commerce of Australia developed, more and more ports of call were included in the voyage of each vessel, and the mere aggregation of State records hence became correspondingly misleading. Failure to recognise this was at times responsible for erroneous deductions from the statistical records as then compiled.

2. **Shipping since Federation.**—With the inauguration of the Commonwealth, the statistics of its shipping, especially of its oversea shipping, became of greater intrinsic importance. As an index of the position of Australia among the trading countries of the world, such statistics had a constitutional importance commensurate with Commonwealth interests, and correspondingly greater than those of individual States, and the nationality of the shipping trading with Australia became also a matter of greater moment.

3. **Difficulties of Comparisons of Total Shipping.**—From what is said in subsection 1 above, it is obviously impossible to obtain results for Australia for pre-federal years not subject to the defect of repeated inclusions of the same vessels. Unfortunately, the statistical records of the first three years of Federal history are also subject to the same defect, and do not admit of direct comparison with those now kept. A careful estimate of the extent and effect of repeated inclusion has, however, been made and applied to the records of the earlier years, so as to extend the comparative results to those years. The error of such estimation will be negligible for comparative purposes.

4. **Present System of Record.**—The present system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each visit to the Commonwealth. Repeated voyages of any vessel are, of course, included.

On arrival of every vessel at a port in the Commonwealth, whether from an oversea country or from another port within the Commonwealth, the master is required to deliver to the Customs officer a form giving all particulars necessary for statistical purposes in regard to the ship, passengers and crew. Similarly, on departure from a port, a form

containing corresponding information is lodged. These forms, which provide a complete record of the movements of every vessel in Commonwealth waters, are at the end of each month forwarded by the Customs officer at each port to the Commonwealth Bureau of Statistics, and furnish the material for the compilation of the Shipping and Migration Returns.

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

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of the Commonwealth was altered from the calendar year to agree with the fiscal year.

In all instances the tonnage quoted is the net tonnage.

§ 2. Oversea Shipping.

1. **Total Oversea Shipping.**—In order to extend, as indicated, the comparison of the oversea shipping to the earliest years for which any records are available, an estimate of its probable amount has been made. This estimate is based on a comparison of the results obtained by merely aggregating State statistics, with the defect of multiple records, and the results obtained under the present system, which avoids the multiple record. From the nature of the case it is obvious that the ratio of repeated inclusion to the total traffic has been continually advancing, and this fact has been duly taken into account in deducing the results in the following table:—

• TOTAL OVERSEA SHIPPING ENTERED AND CLEARED THE COMMONWEALTH, 1822 to 1916-17 (MULTIPLE RECORD EXCLUDED BY ESTIMATION PRIOR TO 1904).

Year.	Vessels.	Tons.	Year.	Vessels.	Tons.	Year.	Vessels.	Tons.
1822 ...	73	30,683	1854 ...	3,781	1,744,251	1886 ...	3,793	3,853,246
1823 ...	76	30,543	1855 ...	3,239	1,449,657	1887 ...	3,454	3,764,430
1824 ...	71	29,029	1856 ...	2,669	1,195,794	1888 ...	3,893	4,464,895
1825 ...	80	30,785	1857 ...	2,842	1,520,202	1889 ...	3,897	4,460,426
1826 ...	65	23,587	1858 ...	2,607	1,378,050	1890 ...	3,363	4,150,027
1827 ...	95	29,301	1859 ...	2,759	1,403,210	1891 ...	3,778	4,726,307
1828 ...	124	38,367	1860 ...	2,464	1,288,518	1892 ...	3,432	4,238,500
1829 ...	185	56,735	1861 ...	2,466	1,149,476	1893 ...	3,046	4,150,433
1830 ...	195	56,185	1862 ...	2,917	1,369,231	1894 ...	3,397	4,487,546
1831 ...	185	59,414	1863 ...	3,378	1,564,369	1895 ...	3,331	4,567,883
1832 ...	206	59,628	1864 ...	3,344	1,537,433	1896 ...	3,309	4,631,266
1833 ...	241	73,647	1865 ...	3,005	1,317,934	1897 ...	3,979	4,709,697
1834 ...	249	77,068	1866 ...	3,378	1,470,728	1898 ...	3,222	4,681,398
1835 ...	310	96,928	1867 ...	2,927	1,277,679	1899 ...	3,356	5,244,197
1836 ...	310	93,974	1868 ...	3,080	1,350,573	1900 ...	3,719	5,894,173
1837 ...	442	113,432	1869 ...	3,107	1,472,837	1901 ...	4,028	6,541,991
1838 ...	471	133,038	1870 ...	2,877	1,381,878	1902 ...	3,608	6,234,460
1839 ...	652	191,507	1871 ...	2,748	1,313,642	1903 ...	3,441	6,027,843
1840 ...	915	277,335	1872 ...	2,788	1,380,466	1904 ...	3,700	6,682,011
1841 ...	900	278,738	1873 ...	3,159	1,609,067	1905 ...	4,088	7,444,417
1842 ...	862	232,827	1874 ...	3,153	1,728,269	1906 ...	4,155	7,966,658
1843 ...	736	193,427	1875 ...	3,437	1,914,462	1907 ...	4,394	8,822,866
1844 ...	629	155,654	1876 ...	3,295	1,863,343	1908 ...	4,051	8,581,151
1845 ...	735	164,221	1877 ...	3,157	1,930,434	1909 ...	3,910	8,516,751
1846 ...	888	211,193	1878 ...	3,373	2,127,518	1910 ...	4,048	9,333,146
1847 ...	1,033	245,358	1879 ...	3,344	2,151,338	1911 ...	4,174	9,984,801
1848 ...	1,182	305,840	1880 ...	3,078	2,177,877	1912 ...	4,052	10,275,314
1849 ...	1,137	355,886	1881 ...	3,284	2,549,364	1913 ...	3,985	10,601,948
1850 ...	1,300	425,206	1882 ...	3,652	3,010,944	1914-15 ...	3,911	8,599,258
1851 ...	1,576	515,061	1883 ...	3,857	3,433,102	1915-16 ...	3,394	8,538,322
1852 ...	1,896	844,243	1884 ...	4,315	4,064,947	1916-17 ...	2,986	7,694,442
1853 ...	3,364	1,490,422	1885 ...	4,052	3,999,917			

It will be borne in mind that while the above figures in themselves have no absolute significance, nevertheless, on the assumption that the element of duplication has been in fairly constant ratio, they furnish the best available indication of the growth of Australian oversea shipping.

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

OVERSEA SHIPPING OF VARIOUS COUNTRIES.

Country.	Year.	Tonnage Entered and Cleared.		Country.	Year.	Tonnage Entered and Cleared.	
		Total.	Per Inhabitant.			Total.	Per Inhabitant.
Argentina Rep.	1912	23,372,714	3.2	Japan	1912	43,492,604	0.8
Belgium	1912	32,672,989	4.3	New Zealand	1916	2,940,110	2.7
Canada	1914	25,402,586	3.1	"	1913	3,438,792	3.2
Commonw'lth	1916-17	7,694,442	1.6	Norway	1912	10,806,050	4.4
"	1913	10,601,948	2.2	Un. S. Africa	1914	9,961,583	1.5
Denmark	1912	18,537,064	6.6	Sweden	1912	25,511,890	4.6
France	1912	62,775,775	1.6	United K'dom	1913	164,809,581	3.6
Germany	1912	51,065,940	0.8	United States	1916	76,682,845*	0.7
Italy	1912	56,889,048	1.6				

* Exclusive of Northern Border and Lake Ports.

3. Shipping Communication with various Countries.—Particulars of the number and tonnage of vessels recorded between Australia and various countries, distinguishing British from foreign countries, are given in the following tables—the next table shewing the tonnage of vessels which were recorded as having entered the Commonwealth from the particular countries mentioned; that on page 622 shews the tonnage of vessels which were recorded as having cleared the Commonwealth for the particular countries, while on page 623 is shewn the total tonnage of vessels recorded as entered and cleared from and to the countries named.

The smaller tonnage which entered and cleared Commonwealth ports during the last three years, together with its altered distribution among the various countries, was, of course, almost entirely due to the war. The principal factor in reducing shipping tonnage was the immediate withdrawal of ships of enemy countries. During 1913 German ships to and from the Commonwealth aggregated a tonnage of 1,211,404 tons, whereas the figures for 1914-15 include only 172,679 tons of German shipping. This latter tonnage represents vessels which arrived and departed between the 1st July, 1914, and the outbreak of war, together with a few vessels that arrived later in ignorance of the opening of hostilities. Any German ships now entering the Commonwealth are operated under the British or Allied flags, and are classified accordingly.

The control of shipping by the Imperial Government for war purposes materially lessened the number of voyages of mail boats to and from England, and the tonnage of the Messageries Maritimes line was reduced from similar causes, whereas the increase shewn in the tonnage to and from India and Ceylon and "Other British Countries" represents vessels engaged in war transport services.

**SHIPPING TONNAGE ENTERED AND CLEARED THE COMMONWEALTH FROM
AND TO VARIOUS COUNTRIES, 1912 to 1916-17.**

ENTERED.

Country.	1912.	1913.	1914-15.	1915-16.	1916-17.
United Kingdom ...	1,625,733	1,607,943	1,285,791	1,193,044	1,234,526
Canada ...	112,729	118,604	144,229	143,275	114,246
Fiji ...	73,033	86,442	85,442	72,612	67,981
Hong Kong ...	27,440	33,156	19,898	16,740	26,879
India and Ceylon ...	93,787	107,721	265,273	232,019	253,157
Mauritius ...	27,203	36,092	19,569	17,198	26,585
New Zealand ...	926,342	908,484	771,656	758,622	654,747
Papua ...	73,010	74,943	72,837	66,134	76,063
Union of South Africa ...	96,679	198,505	84,365	93,262	86,465
South Sea Islands ...	37,472	58,498	24,279	44,191	27,552
Straits Settlements ...	102,598	100,238	106,534	105,531	78,433
Other British Countries ...	3,068	10,826	134,057	300,958	73,547
Total British Countries ...	3,199,094	3,341,452	3,013,930	3,043,586	2,720,181
Africa, Portuguese East ...	46,751	63,870	14,391	4,812	34,517
Belgium ...	11,852	9,563	6,871	...	...
Chile ...	176,416	108,121	38,288	19,165	6,581
Dutch East Indies ...	67,761	87,428	87,245	83,648	107,311
France ...	47,191	63,632	34,633	40,652	32,779
Germany ...	427,320	414,294	74,208	...	...
Hawaiian Islands ...	16,508	10,101	...	1,653	...
Japan ...	157,734	160,241	125,789	189,200	164,383
Mexico ...	19,445	9,973	...	...	...
New Caledonia ...	77,265	86,702	41,398	30,906	30,782
Norway ...	34,715	26,200	47,649	29,530	15,967
Peru ...	35,482	21,504	5,973	5,790	3,953
Philippine Islands ...	56,216	47,220	26,943	8,399	...
South Sea Islands (foreign) ...	67,805	66,651	73,762	77,309	73,530
Sweden ...	48,060	80,546	37,504	19,576	20,861
United States ...	453,354	509,922	426,513	570,918	470,624
Other Foreign Countries ...	220,388	264,111	119,858	144,340	169,823
Total Foreign Countries ...	1,964,263	2,030,079	1,161,025	1,225,898	1,131,111
Total all Countries ...	5,163,357	5,371,531	4,174,955	4,269,484	3,851,292

SHIPPING TONNAGE ENTERED AND CLEARED, ETC.—(Continued).

CLEARED.

Country.	1912.	1913.	1914-15.	1915-16.	1916-17.
United Kingdom ...	1,369,143	1,455,018	1,031,279	894,628	1,862,460
Canada ...	54,661	82,849	90,105	101,485	95,215
Fiji ...	85,372	94,958	91,343	81,731	83,514
Hong Kong ...	32,121	27,959	30,566	17,047	18,742
India and Ceylon ...	144,487	126,656	210,688	112,989	108,928
Mauritius ...	4,526	3,505	7,681	2,817	1,558
New Zealand ...	1,183,741	1,198,837	916,809	894,618	640,703
Papua ...	66,409	73,923	63,962	58,378	82,816
Union of South Africa ...	75,467	136,986	67,278	90,546	79,054
South Sea Islands ...	55,717	58,267	24,484	74,027	43,828
Straits Settlements ...	137,139	155,364	115,894	114,831	74,538
Other British Countries ...	...	2,270	522,870	807,481	30,982
Total British Countries	3,208,783	3,416,592	3,172,959	3,250,578	3,122,338
Africa, Portuguese East ...	3,836	5,447	2,691	...	...
Belgium ...	169,020	151,718	34,245	...	...
Chile ...	508,724	398,322	255,547	159,797	80,832
Dutch East Indies ...	155,332	189,499	180,649	112,912	95,283
France ...	94,062	81,240	54,642	29,591	35,820
Germany ...	349,685	385,752	38,358	...	...
Hawaiian Islands ...	34,009	45,634	37,770	16,286	7,014
Japan ...	96,108	117,472	73,228	135,876	119,193
Mexico ...	12,757	25,735	4,461	...	...
New Caledonia ...	74,063	86,321	43,581	51,893	52,297
Peru ...	64,881	52,626	24,431	18,584	21,698
Philippine Islands ...	95,120	46,746	72,272	18,385	2,032
South Sea Islands (foreign) ...	44,875	36,826	52,785	55,855	50,615
United States ...	149,449	148,754	266,133	337,179	173,052
Other Foreign Countries	51,253	41,733	110,551	81,902	82,971
Total Foreign Countries	1,903,174	1,813,825	1,251,344	1,018,260	720,812
Total all Countries ...	5,111,957	5,230,417	4,424,303	4,268,838	3,843,150

The figures in the above table represent the tonnage of shipping recorded as having cleared the Commonwealth for the particular countries named. In the following sub-section countries have been grouped according to larger geographical divisions with the purpose of depicting more clearly the general trend of Australian shipping.

Beyond the immediate military control of shipping, tonnage was further affected by the prohibition by the Government of the export of certain commodities. For instance, the restrictions placed on the export of coal were mainly responsible for the relatively small tonnage between this country and Chile and Peru.

**SHIPPING TONNAGE ENTERED AND CLEARED THE COMMONWEALTH FROM
AND TO VARIOUS COUNTRIES, 1912 to 1916-17.**

Country.	1912.	1913.	1914-15.	1915-16.	1916-17.
United Kingdom	2,994,876	3,062,961	2,317,070	2,087,672	3,096,986
Canada	167,390	201,453	234,334	244,760	209,461
Fiji	158,405	181,400	176,785	154,343	151,495
Hong Kong	59,561	61,115	50,464	33,787	45,621
India and Ceylon	238,274	234,377	475,961	345,008	362,085
Mauritius	31,729	39,597	27,250	20,015	28,143
New Zealand	2,110,083	2,107,321	1,688,465	1,653,240	1,295,450
Papua	139,419	148,866	136,799	124,512	158,879
Union of South Africa	172,146	335,491	151,643	183,808	165,519
South Sea Islands	93,189	116,765	48,763	118,218	71,380
Straits Settlements	239,737	255,602	222,428	220,362	152,971
Other British Countries	3,068	13,096	656,927	1,108,439	104,529
Total British Countries	6,407,877	6,758,044	6,186,889	6,294,164	5,842,519
Africa, Portuguese East	50,587	69,317	17,082	4,812	34,517
Belgium	180,872	161,281	41,116	...	...
Chile	685,140	506,443	293,335	178,962	87,413
Dutch East Indies	223,093	276,927	267,894	196,560	202,594
France	141,253	144,872	89,275	70,243	68,599
Germany	777,005	800,046	112,566	...	...
Hawaiian Islands	50,517	55,735	37,770	17,939	7,014
Japan	253,842	277,713	199,017	325,076	283,581
Mexico	32,202	35,708	4,461	...	...
New Caledonia	151,328	173,023	84,979	82,799	83,079
Norway	34,715	26,289	47,649	32,222	15,967
Peru	100,363	74,130	30,404	24,374	25,651
Philippine Islands	151,336	93,966	99,215	26,784	2,032
South Sea Islands (foreign)	112,680	103,477	126,547	133,164	124,145
Sweden	48,060	80,546	37,504	19,576	20,861
United States	602,803	658,676	692,646	908,097	643,676
Other Foreign Countries	271,641	305,755	230,409	223,550	252,794
Total Foreign Countries	3,867,437	3,843,904	2,412,369	2,244,158	1,851,923
Total all Countries	10,275,314	10,601,948	8,599,258	8,538,322	7,694,442

In respect of these tables it may be pointed out that the statistics for any country do not fully disclose the extent of its shipping communication with particular countries. The reason for this is that vessels are recorded as arriving from, or departing to, a particular country, whereas, as a matter of fact, many regular lines of steamers call and transact business at the ports of several countries in the course of a single voyage. The lines of steamers trading between Australia and Japan, for example, often call at New Guinea, the Philippine Islands, China, etc., but, being intermediate ports, these countries are not referred to in the statistical records. Similarly, in the case of the large mail steamers passing through the Suez Canal, a steamer may call at Colombo, Aden, Port Said, Genoa, Marseilles, London, and in ordinary times, Antwerp and Bremerhaven, yet obviously can only be credited as cleared for one of these ports, to the consequent exclusion of all the other ports from the records.

4. General Trend of Shipping.—A grouping of countries into larger geographical divisions, as in the following tables, shews more readily the general direction of Australian shipping, and, to some extent, avoids the limitations of the records in relation to particular countries, by covering more closely the main trade routes.

GENERAL DIRECTION OF THE SHIPPING OF THE COMMONWEALTH, 1912 to 1916-17.

TONNAGE ENTERED.

Countries.	—	1912.	1913.	1914-15.	1915-16.	1916-17.
United Kingdom & European Countries	Cargo...	2,152,304	2,216,449	1,509,237	1,267,819	1,004,820
	Ballast	71,746	28,067	16,282	81,649	374,380
New Zealand	Cargo...	751,759	681,650	649,252	648,733	559,604
	Ballast	174,583	226,834	132,404	109,889	95,143
Asiatic Countries & Islds. in the Pacific	Cargo...	761,854	785,031	799,811	817,141	782,563
	Ballast	104,197	163,620	217,666	151,296	206,671
Africa	Cargo...	23,561	35,174	50,315	114,914	32,373
	Ballast	151,459	269,181	154,550	288,316	163,096
North and Central America	Cargo...	560,933	624,275	568,329	714,193	584,870
	Ballast	24,595	14,224	4,065	...	...
South America	Cargo...	31,291	23,876	26,798	61,940	9,294
	Ballast	355,075	300,130	56,246	13,694	32,478
	Cargo...	4,281,702	4,369,455	3,603,742	3,624,740	2,979,524
	Ballast	881,655	1,002,076	571,213	644,744	871,768
Total ... ..	...	5,163,357	5,371,531	4,174,955	4,269,484	3,851,292

TONNAGE CLEARED.

United Kingdom & European Countries	Cargo...	2,006,275	2,102,203	1,169,592	961,961	1,878,530
	Ballast	44	162	...	2,699	37,311
New Zealand	Cargo...	1,148,166	1,166,596	865,780	817,827	612,509
	Ballast	35,575	32,239	51,029	76,791	28,194
Asiatic Countries & Islds. in the Pacific	Cargo...	984,875	995,644	966,549	767,700	706,062
	Ballast	42,738	66,414	99,715	126,921	79,535
Africa	Cargo...	83,829	148,750	559,540	851,543	126,071
	Ballast	...	237	6,130	32,148	156
North and Central America	Cargo...	204,116	251,739	305,835	342,332	225,580
	Ballast	12,751	5,599	56,762	100,842	43,306
South America	Cargo...	592,248	460,832	210,292	158,696	100,148
	Ballast	1,340	...	133,079	29,378	5,848
	Cargo...	5,019,509	5,125,766	4,077,588	3,900,059	3,648,900
	Ballast	92,448	104,651	346,715	368,779	194,250
Total ... ..	...	5,111,957	5,230,417	4,424,303	4,268,838	3,843,150

TONNAGE ENTERED AND CLEARED.

Countries.	1912.	1913.	1914-15.	1915-16.	1916-17.	1916-17 Compared with 1911.
United Kingdom & European Countries	4,230,369	4,346,901	2,695,111	2,314,128	3,294,941	— 917,864
New Zealand	2,110,063	2,107,321	1,688,465	1,653,240	1,295,450	— 590,309
Asiatic Countries and Islands in the Pacific	1,893,664	2,010,709	2,083,741	1,863,058	1,774,831	— 47,226
Africa	258,849	456,342	770,535	1,286,821	327,696	— 174,093
North and Central America	802,395	895,837	934,991	1,157,367	853,756	+ 125,912
South America	979,954	784,838	426,415	263,708	147,768	— 686,779
Cargo	9,301,211	9,495,221	7,681,330	7,524,799	6,628,424	— 2,155,373
Ballast	974,103	1,106,727	917,928	1,013,523	1,066,018	— 134,986
Total	10,275,314	10,601,948	8,599,258	8,538,322	7,694,442	— 2,290,359

From these tables it would appear that the tonnage between Australia and Africa was greater during 1915-16 than in 1913. This, however, is merely the effect of the diversion of shipping from its usual occupation to military transport between this country and Egypt.

5. **Nationality of Oversea Shipping.**—As will be seen from the following table, the greater part of the shipping visiting the Commonwealth is of British nationality. The proportion which British shipping represented of the total tonnage which entered and cleared the Commonwealth rose from 72.83 per cent. during 1913 to 82.41 per cent. in 1914-15 and in 1916-17 represented 81.53 per cent. This increase was almost entirely due to the withdrawal of German ships.

The greatly reduced tonnage of French and Norwegian ships in the Australian trade has been replaced, to some extent, by United States and Dutch vessels.

NATIONALITY OF ALL VESSELS WHICH ENTERED AND CLEARED THE COMMONWEALTH FROM AND TO OVERSEA COUNTRIES, 1912 to 1916-17.

Nationality.	Tonnage.				
	1912.	1913.	1914-15.	1915-16.	1916-17.
BRITISH—					
Australian ...	889,285	851,931	1,107,402	1,118,470	887,577
United Kingdom...	5,299,157	5,590,966	4,897,452	5,304,683	4,980,205
New Zealand ...	1,274,584	1,247,742	1,017,721	515,187	335,467
Other British ...	51,199	30,459	64,040	42,808	69,701
Cargo ...	6,949,115	6,915,261	6,406,393	6,189,524	5,448,832
Ballast ...	565,110	805,837	680,222	791,624	824,118
Total British ...	7,514,225	7,721,098	7,086,615	6,981,148	6,272,950
Per cent. on total	73.13	72.83	82.41	81.76	81.53
FOREIGN—					
Austro-Hungarian ...	28,689	32,940	...	...	...
Danish ...	5,573	10,138	...	47,259	18,950
Dutch ...	120,864	193,880	198,223	279,291	285,508
French ...	356,207	366,730	199,619	180,144	120,269
German ...	1,211,738	1,211,404	172,679	...	...
Italian ...	51,098	55,898	39,147	8,886	79,925
Japanese ...	252,081	224,293	257,709	362,266	272,460
Norwegian ...	527,121	471,914	302,767	173,343	100,394
Russian ...	63,286	75,303	56,528	9,199	26,352
Swedish ...	37,330	59,484	60,600	56,234	43,866
United States ...	92,605	154,486	178,620	397,017	424,628
Other Foreign ...	14,497	24,380	46,751	43,535	49,140
Cargo ...	2,352,096	2,579,960	1,274,937	1,335,275	1,179,592
Ballast ...	408,993	300,890	237,706	221,899	241,900
Total Foreign ...	2,761,089	2,880,850	1,512,643	1,557,174	1,421,492
Per cent. on total	26.87	27.17	17.59	18.24	18.47
Cargo ...	9,301,211	9,495,221	7,681,330	7,524,799	6,628,424
Per cent. on total	90.52	89.56	89.33	88.13	86.15
Ballast ...	974,103	1,106,727	917,928	1,013,523	1,066,018
Per cent. on total	9.48	10.44	10.67	11.87	13.85
Grand total ...	10,275,314	10,601,948	8,599,258	8,538,322	7,694,442

The tonnage of Australian-owned vessels engaged in the oversea trade represents in normal times about 8 per cent. of the total, and the tonnage of New Zealand vessels about 12 per cent. Both are ordinarily engaged mainly in the trade with New Zealand and eastern countries. The increase shewn above in Australian tonnage during the years 1914-15 and 1915-16 was a consequence of the diversion of vessels from the interstate trade to military purposes in transporting troops, etc., abroad. Several of these vessels have since been lost by enemy operations, and others have been further diverted from the Australian trade.

The relative proportion of British and foreign tonnage which entered and cleared the Commonwealth during the last five years, apart from tonnage in ballast, is given below. From these figures, which may be considered to indicate more closely the proportion of the actual carrying trade done, than does the total tonnage, it will be seen that the proportion of British tonnage was lower during 1913 than in any other year shewn. In fact, since 1904, when the shipping statistics were first compiled in their present form, the proportion of British ships entered and cleared with cargo has never been so low as in 1913. From what has already been said it will be understood that the figures for 1914-15 and subsequent years are the result of abnormal conditions, and are, therefore, of little economic significance.

**PROPORTION OF TONNAGE OF BRITISH AND FOREIGN NATIONALITY ENTERED
AND CLEARED THE COMMONWEALTH WITH CARGO, 1912 to 1916-17.**

Nationality.				1912.	1913.	1914-15.	1915-16.	1916-17.
British	...	...	...	74.71	72.83	83.40	82.26	82.20
Foreign	...	...	...	25.29	27.17	16.60	17.74	17.80
Total	...	...	...	100.00	100.00	100.00	100.00	100.00

The principal increases in foreign tonnage in the Australian trade have been German, Japanese, United States of America, Norwegian, and Dutch. The greater amount of German and Japanese tonnage has been due to the extension of services between those countries and the Commonwealth, while the revival of the service between this country and San Francisco, which was discontinued after the great earthquake in that city in 1906, accounts for the larger American tonnage in 1913, whereas the subsequent trade development between this country and the United States accounts for the large increase of American shipping during the last two years under review. The Norwegian tonnage, which was largely composed of sailing ships, was chiefly engaged under charter in the carriage of coal, wheat, ore, etc. The Norwegian shipping in the Australian trade has been, however, much affected by the war. The apparent increase in Dutch tonnage requires special explanation. During recent years the vessels of the Royal Dutch Packet Company, on their voyages between Java and the eastern Australian ports, have been frequently, but unavoidably, counted twice on what was practically the same voyage, first on arrival from Java and again on arrival from Papua. As in the case of the United States of America, the increase of Japanese shipping tonnage has been the corollary of increased Japanese trade with Australia.

The following table shews the direction of the activities of the principal foreign countries engaged in the oversea carrying trade of the Commonwealth. A similar analysis with regard to German and French ships will be found in previous issues.

SHIPPING OF PRINCIPAL FOREIGN NATIONS BETWEEN AUSTRALIA AND OTHER COUNTRIES DURING 1916-17.

Countries.	Nationality.					
	Dutch.		Japanese.		United States.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
NEW ZEALAND ...	...	...	3,421	4,004	6,143	1,258
ASIATIC COUNTRIES AND ISLANDS IN THE PACIFIC—						
Dutch East Indies ...	66,500	57,831	942	6,164	...	...
Japan ...	...	...	116,520	101,434	...	796
New Caledonia ...	...	...	3,528	...	...	...
Papua ...	73,893	77,054	...	...	...	...
South Sea Islands ...	...	...	171	9,776	4,333	23,518
Straits Settlements ...	...	...	...	1,885	...	...
Other Asiatic Countries ...	...	7,956	4,977	11,507	615	2,032
AFRICAN COUNTRIES ...	...	...	...	...	923	...
NTH. AMERICAN COUNTRIES—						
United States ...	2,274	...	4,229	...	201,186	137,966
Other Nth. Amer. Countries...	...	...	...	...	...	3,234
STH. AMERICAN COUNTRIES—						
Chile ...	...	1,960	...	2,282	...	33,050
Peru ...	...	...	...	1,620	...	9,574
With Cargo ...	129,547	138,255	125,897	125,466	206,442	158,531
In Ballast ...	13,120	6,546	7,891	13,206	6,758	52,897
Total ...	142,667	144,801	133,788	138,672	213,200	211,428

A further analysis is appended, distinguishing between steam and sailing vessels of British and foreign nationality, which entered and cleared the Commonwealth during the years 1912 to 1916-17.

STEAM AND SAILING VESSELS ENTERED AND CLEARED, 1912 to 1916-17.

Description and Nationality of Vessels.	1912.		1913.		1914-15.		1915-16.		1916-17.	
	Ton-nage.	Per-centages.	Ton-nage.	Per-centages.	Ton-nage.	Per-centages.	Ton-nage.	Per-centages.	Ton-nage.	Per-centages.
Steam—										
British ...	7,084,126	79	7,375,109	77	6,939,087	86	6,760,751	86	6,154,313	85
Foreign ...	1,908,888	21	2,173,491	23	1,103,093	14	1,106,465	14	1,068,404	15
Total Steam	8,993,014	100 (88)	9,548,600	100 (90)	8,042,179	100 (94)	7,867,216	100 (92)	7,222,717	100 (94)
Sailing—										
British ...	430,099	34	345,989	33	147,528	26	220,397	33	118,637	25
Foreign ...	552,201	66	707,359	67	409,551	74	450,709	67	353,088	75
Total Sailing	1,282,300	100 (12)	1,053,348	100 (10)	557,079	100 (6)	671,106	100 (8)	471,725	100 (6)
Steam and Sailing—										
British ...	7,514,225	73	7,721,098	73	7,086,615	83	6,981,148	82	6,272,950	82
Foreign ...	2,761,089	27	2,880,850	27	1,512,643	18	1,557,174	18	1,421,492	18
Total ...	10,275,314	100	10,601,948	100	8,599,258	100	8,538,322	100	7,694,442	100

6. **Tonnage in Ballast.**—The following table shews the tonnage of oversea vessels which entered and cleared the Commonwealth in ballast during the years 1911 to 1916-17.

TONNAGE ENTERED AND CLEARED IN BALLAST, 1911 to 1916-17.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
1911 ...	668,599	409,837	1,078,436	81,120	41,448	122,568
1912 ...	503,041	378,614	881,655	62,069	30,379	92,448
1913 ...	721,124	280,952	1,002,076	84,713	19,938	104,651
1914-15 ...	441,908	129,305	571,213	238,314	108,401	346,715
1915-16 ...	595,591	49,153	644,744	196,033	172,746	368,779
1916-17 ...	720,040	151,728	871,768	104,078	90,172	194,250

PROPORTION OF TOTAL BRITISH AND FOREIGN TONNAGE WHICH ENTERED AND CLEARED IN BALLAST, 1911 to 1916-17.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1911 ...	18.09	31.61	21.60	2.19	3.23	2.46
1912 ...	13.31	27.34	17.03	1.66	2.21	1.81
1913 ...	18.39	19.37	18.66	2.23	1.39	2.00
1914-15 ...	12.88	17.36	13.68	6.51	14.12	7.84
1915-16 ...	17.02	6.38	15.10	5.63	21.95	8.64
1916-17 ...	22.95	21.25	22.64	3.32	12.75	5.05

The tonnage which entered each State of the Commonwealth, in ballast, during 1916-17, was as follows:—

TONNAGE OF OVERSEA VESSELS IN BALLAST WHICH ENTERED EACH STATE AND THE NORTHERN TERRITORY DURING 1916-17.

State ...	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	C'wealth.
Tonnage ...	276,263	86,777	9,818	82,134	414,932	...	1,844	871,768
Percentage of total ...	31.69	9.95	1.13	9.42	47.60	...	0.21	100.00

In normal times the large exports of coal from New South Wales afford special inducements to vessels in search of freights. During 1913, 600,050 tons, or 59.88 per cent. of all ballast tonnage arriving in Australia, entered in New South Wales, 463,134 tons having entered at the coal port of Newcastle. The tonnage in ballast into New South Wales is mainly for coal cargo, into South Australia for wheat and ore, and into Western Australia for timber and cattle. War conditions have, however, completely deranged the shipping of the Commonwealth, and the relatively large tonnage entering Western Australian ports in ballast represented vessels on military transport service.

§ 3. Shipping of Ports.

1. **Shipping of Ports.**—Appended is an abstract of the total shipping tonnage—over-sea and coastwise—which entered the more important ports of Australia during the year 1916-17, together with similar information in regard to some of the ports of New Zealand for the year 1916, and of the United Kingdom for the year 1913 :—

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

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney	6,725,828	London	20,088,071
Melbourne	5,892,661	Liverpool (inc. Birkenhead) ...	15,574,989
Newcastle	3,293,717	Cardiff	12,603,349
Fremantle	2,056,798	Tyne ports	11,701,605
Brisbane	1,894,846	Southampton	8,268,860
Adelaide... ..	*1,746,860	Hull	5,904,698
Townsville	1,074,865	Plymouth	4,717,738
Albany	966,767	Newport	3,630,681
Rockhampton	689,498	Middlesbrough	3,416,582
Mackay	601,515	Swansea	3,374,439
Port Pirie	513,958	Sunderland	3,288,949
Cairns	475,972	Grimsby	3,056,578
Hobart	404,731	Bristol	2,732,832
Bowen	400,741	Manchester	2,685,184
Geelong	328,995	Dover	2,606,277
Burnie	270,811	SCOTLAND—	
Thursday Island	213,713	Glasgow	6,101,819
NEW ZEALAND—		Leith	2,344,195
Wellington	2,833,351	IRELAND—	
Auckland	1,813,711	Cork (inc. Queenstown) ...	4,317,966
Lyttelton	1,633,972	Belfast	3,345,779
Dunedin	814,216	Dublin	2,495,854

* Exclusive of coastal shipping, particulars of which are not available.

From the figures above it may be seen that the shipping business of the port of Sydney is exceeded by that of five ports only in the United Kingdom, viz., London, Liverpool, Cardiff, the Tyne, and Southampton.

§ 4. Vessels Built and Registered.

1. **Vessels Registered.**—The following table shews the number and net tonnage of steam, sailing, and other vessels on the registers of the various States and of the Northern Territory of the Commonwealth of Australia :—

VESSLS ON THE REGISTER, 31st DECEMBER, 1917.

State.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales ...	45	1,511	575	97,990	97	1,544	334	22,815	51	11,525	1,102	135,485
Victoria	26	2,843	163	126,798	21	724	91	5,167	77	31,073	378	166,605
Queensland	23	3,439	80	16,780	22	219	131	2,422	35	3,862	291	26,732
South Australia ...	21	834	94	53,171	10	380	61	3,960	67	11,719	273	70,064
Western Australia ...	12	213	40	26,833	11	191	329	5,167	27	7,030	419	39,434
Tasmania	5	302	55	11,107	46	1,169	100	3,357	2	563	208	16,498
Northern Territory	...	...	1	53	2	26	32	987	...	...	35	466
Total	132	9,142	1,008	332,732	209	4,353	1,098	43,275	253	65,772	2,706	455,274

2. **Vessels Built.**—The following tables shew the number and tonnage of vessels built in the Commonwealth during each of the years 1901-1917, 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, however, does not 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 have been, and 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 THE COMMONWEALTH, 1901 to 1917.

NUMBER.

Year.	Steamers Built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Composite.	Total.				
1901 ...	18	...	1	...	19	4	45	...	68
1902 ...	29	...	...	1	30	8	78	1	117
1903 ...	15	1	2	...	18	17	158	2	195
1904 ...	14	...	1	1	16	13	76	...	105
1905 ...	15	...	4	...	19	22	17	2	60
1906 ...	12	1	1	...	14	22	20	3	59
1907 ...	17	...	...	1	18	12	37	1	68
1908 ...	13	...	3	...	16	18	18	2	54
1909 ...	10	...	...	...	10	12	36	1	59
1910 ...	9	3	2	...	14	11	35	4	64
1911 ...	14	1	2	1	18	8	37	4	67
1912 ...	9	...	3	2	14	12	30	1	57
1913 ...	17	...	2	...	19	12	29	...	60
1914 ...	17	...	...	...	17	8	28	2	55
1915 ...	4	...	2	...	6	5	3	...	14
1916 ...	1	...	...	...	1	4	2	...	7
1917 ...	...	...	...	1	1	...	5	...	6

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1901 ...	2,270	1,251	41	33	1,169	1,027	...	...	3,480	2,311
1902 ...	3,166	1,849	96	82	2,482	2,148	64	64	5,808	4,143
1903 ...	1,569	956	624	455	3,211	2,758	385	350	5,789	4,519
1904 ...	2,094	1,240	161	125	1,641	1,416	...	...	3,896	2,781
1905 ...	2,444	1,462	291	214	338	290	967	896	4,040	2,862
1906 ...	1,426	735	268	189	498	425	546	536	2,738	1,885
1907 ...	2,381	1,305	108	93	840	778	152	145	3,481	2,321
1908 ...	2,492	1,317	265	199	510	428	260	260	3,527	2,204
1909 ...	1,351	735	184	151	805	677	98	98	2,438	1,661
1910 ...	1,944	1,105	137	124	807	691	688	646	3,576	2,566
1911 ...	2,123	1,130	143	115	779	694	762	720	3,807	2,659
1912 ...	2,592	1,592	391	304	673	579	78	78	3,784	2,553
1913 ...	2,227	1,189	300	205	510	484	...	...	3,037	1,878
1914 ...	3,041	1,595	118	97	510	452	148	148	3,817	2,292
1915 ...	914	385	178	115	186	176	...	...	1,278	676
1916 ...	52	27	55	44	39	28	...	...	146	99
1917 ...	104	30	...	...	229	161	...	...	333	191

§ 5. Interstate Shipping.

1. **Total Vessels and Tonnage.**—In the following tables are shewn the number and tonnage of vessels recorded as having entered each State of the Commonwealth from any other State therein, and similarly, the number and tonnage cleared from each State to other Commonwealth States. The table gives results since 1891 and for 1916-17. The shipping on the Murray River, between the States of New South Wales, Victoria and South Australia, is not included:—

INTERSTATE SHIPPING, 1891 to 1916-17—NUMBER OF VESSELS.

ENTERED.

State.	1891.	1901.	1906.	1911.	1915-16.	1916-17.
New South Wales ...	1,692	1,611	1,575	1,791	1,947	1,607
Victoria ...	1,525	1,502	1,561	1,648	1,736	1,423
Queensland ...	376	430	478	567	570	525
South Australia ...	611	650	752	789	631	539
Western Australia ...	149	446	335	415	350	385
Tasmania ...	680	713	840	864	864	728
Northern Territory ...	*	*	*	39	39	29
Total ...	5,033	5,352	5,541	6,113	6,137	5,236

CLEARED.

New South Wales ...	1,415	1,473	1,417	1,728	1,871	1,572
Victoria ...	1,733	1,569	1,610	1,765	1,906	1,580
Queensland ...	389	395	431	572	547	479
South Australia ...	716	756	802	900	657	579
Western Australia ...	158	456	363	394	325	310
Tasmania ...	679	694	809	836	845	717
Northern Territory ...	*	*	*	40	42	23
Total ...	5,090	5,343	5,432	6,235	6,193	5,260

TOTAL.

New South Wales ...	3,107	3,084	2,992	3,519	3,818	3,179
Victoria ...	3,258	3,071	3,171	3,413	3,642	3,003
Queensland ...	765	825	909	1,139	1,117	1,004
South Australia ...	1,327	1,406	1,554	1,689	1,288	1,118
Western Australia ...	307	902	698	809	675	695
Tasmania ...	1,359	1,407	1,649	1,700	1,709	1,445
Northern Territory ...	*	*	*	79	81	52
Total ...	10,123	10,695	10,973	12,348	12,330	10,496

* Included with South Australia.

INTERSTATE SHIPPING, 1891 to 1916-17—TONNAGE.

ENTERED.

State.	1891.	1901.	1906.	1911.	1915-16.	1916-17.
New South Wales	1,617,559	2,031,089	2,456,269	3,318,605	3,563,812	3,104,717
Victoria ...	1,392,818	1,956,900	2,473,771	2,959,551	2,800,103	2,254,634
Queensland ...	267,753	545,469	692,354	840,052	995,373	963,931
South Australia ...	658,600	1,124,499	1,582,802	1,970,490	1,628,771	1,302,537
Western Australia	237,708	973,474	968,664	1,378,800	1,305,537	1,373,625
Tasmania ...	371,205	485,023	721,240	895,546	749,494	525,862
North'm Territory	*	*	*	64,518	80,090	52,663
Total ...	4,545,643	7,116,454	8,895,100	11,427,562	11,123,180	9,577,969

CLEARED.

New South Wales	1,314,339	1,856,501	2,177,496	3,209,723	3,378,270	2,994,899
Victoria ...	1,692,189	2,038,424	2,617,966	3,233,531	3,285,036	2,755,961
Queensland ...	302,723	440,659	578,561	855,776	871,544	779,017
South Australia ...	825,616	1,365,668	1,772,356	2,343,269	1,751,044	1,490,529
Western Australia	269,256	977,846	1,051,629	1,303,359	1,187,222	1,162,325
Tasmania ...	352,406	433,735	636,944	728,170	652,450	479,182
North'm Territory	*	*	*	66,357	83,798	43,607
Total ...	4,760,529	7,112,833	8,834,952	11,740,185	11,209,364	9,705,520

TOTAL.

New South Wales	2,931,898	3,887,590	4,633,765	6,528,328	6,942,082	6,099,616
Victoria ...	3,085,007	3,995,324	5,091,737	6,193,082	6,085,139	5,010,595
Queensland ...	570,476	986,128	1,270,915	1,695,828	1,866,917	1,742,948
South Australia ...	1,488,216	2,490,167	3,355,158	4,313,759	3,379,815	2,793,066
Western Australia	506,964	1,951,320	2,020,293	2,682,159	2,492,759	2,535,950
Tasmania ...	723,611	918,758	1,358,184	1,623,716	1,401,944	1,005,044
North'm Territory	*	*	*	130,875	163,888	96,270
Total ...	9,306,172	14,229,287	17,730,052	23,167,747	22,332,544	19,283,489

* Included with South Australia.

The figures presented in the above table include overseas vessels—largely mail boats—passing from one State to another. This renders the results somewhat unsatisfactory.

In the earlier part of this chapter attention was drawn to the custom in vogue prior to Federation of recording vessels from or to "oversea countries via other Commonwealth States" as *direct* from or to the oversea country. At each port in Australia these vessels were, on the inward voyage (to Australia), entered as from the oversea country, and

cleared to the next Australian port as "interstate"; on the return journey—the outward voyage—they were entered as "interstate," and cleared as for the oversea country. In order to preserve the continuity of the records of the shipping communication of the several States with oversea countries this method has been followed in continuation of the pre-existing practice, excepting that vessels arriving or departing via other Commonwealth States are now so recorded instead of as "direct."

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

To ascertain the aggregate movement of shipping between the States during the year 1916-17, including the total interstate movements of oversea vessels, the figures in the following table must be added to those of the preceding one :—

**SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES
VIA OTHER COMMONWEALTH STATES, 1916-17.**

State.	Entered.		Cleared.		Total.		
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	
New South Wales ...	348	1,368,969	344	1,312,474	692	2,681,443	
Victoria ...	332	1,204,329	259	941,747	591	2,146,076	
Queensland ...	85	369,757	118	522,496	203	892,253	
South Australia ...	133	485,176	150	513,753	283	998,929	
Western Australia ...	9	35,297	3	9,275	12	44,572	
Tasmania ...	42	114,266	59	184,590	101	298,856	
Northern Territory ...	...	...	...	...	...	...
Total ...	1916-17	949	3,577,794	933	3,484,335	1,882	7,062,129
	1906 ...	1,045	3,349,036	1,107	3,442,747	2,152	6,791,783

2. Total Interstate Movement of Shipping.—From the foregoing it is apparent that the interstate movement of shipping includes two very different elements, viz.:—(i.) Oversea ships moving from State to State, and (ii.) the movement of ships engaged solely in the interstate carrying trade. These two elements are approximately as follows :—

TOTAL INTERSTATE MOVEMENT OF SHIPPING, 1911 to 1916-17.

	1911.	1912.	1913.	1914-15.	1915-16.	1916-17.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Oversea vessels moving interstate	10,049,659	10,711,434	11,472,490	8,737,804	8,017,918	7,062,129
Vessels solely interstate ...	6,548,069	6,809,428	8,080,267	8,140,155	7,175,175	6,093,634
Total ...	16,597,728	17,520,862	19,552,757	16,877,959	15,193,093	13,155,763

The following table shews the number and tonnage of vessels which entered and cleared each State during 1916-17, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1916-17.

State.		Entered.		Cleared.		Total.	
		Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	...	1,955	4,473,686	1,916	4,307,373	3,871	8,781,059
Victoria	...	1,755	3,458,963	1,839	3,697,708	3,594	7,156,671
Queensland	...	610	1,333,688	597	1,301,513	1,207	2,635,201
South Australia	...	672	1,787,713	729	2,004,282	1,401	3,791,995
Western Australia	...	394	1,408,922	313	1,171,600	707	2,580,522
Tasmania	...	770	640,128	776	663,772	1,546	1,303,900
Northern Territory	...	29	52,663	23	43,607	52	96,270
Total... ..	{ 1916-17	6,185	13,155,763	6,193	13,189,855	...	...
	{ 1906 ...	6,586	12,244,136	6,539	12,277,699	...	...

3. **Vessels Engaged Solely in Interstate Trade.**—The elimination of the element of oversea vessels, included in the interstate shipping returns, cannot be accurately effected ; nevertheless, a close approximation is furnished if it be assumed that vessels *entered* in the several States as from "oversea countries via other Commonwealth States" have really been *cleared* from other States as "interstate," and further, that the vessels *cleared* to "oversea countries via other Commonwealth States" have likewise been *entered* as "interstate." Applying this suggestion, and so eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade during the years 1911 to 1916-17 will be found to be as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1911 to 1916-17.

Year.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1911 ...	4,794	6,548,069	4,811	6,570,019
1912 ...	5,000	6,809,428	4,990	6,809,426
1913 ...	5,174	8,080,267	5,187	8,105,988
1914-15...	5,143	8,140,155	5,142	8,112,005
1915-16...	5,121	7,175,175	5,112	7,139,451
1916-17...	4,803	6,093,634	4,311	6,127,726

This treatment cannot be extended to the individual States, as the records do not disclose the particular relationship of the States concerned.

4. **Interstate and Coastal Services.**—The foundation of the coastal steamship services in Australia dates back to the year 1851, when a regular trade was established between Melbourne and Geelong by the small screw steamer *Express*. Early in the fifties a company was formed in Tasmania with a capital of £40,000 for the purpose of purchasing steamboats, and employing them in the carriage of passengers and goods between Hobart

and Melbourne. This service was commenced in 1852, and was thus the first regular interstate service in Australia. About this time the great influx of population and the increase in commerce, caused chiefly by the gold discoveries, emphasised the desirability of establishing more regular and quicker means of communication between the principal ports of Australia, and in 1862 the regular interstate service between New South Wales and Victoria was inaugurated by the s.s. *You Yangs*, which was put into commission in regular service between Melbourne, Sydney, and Newcastle. In 1875 a company was formed in Adelaide for the purpose of supplying suitable steamers for the requirements of the trade between Adelaide and Melbourne. The first two steamers of the company were named the *South Australian* and the *Victorian*, and were small vessels of only 400 tons burthen. From the start, success attended these enterprises, and the services thus initiated were rapidly extended and their operations broadened. Numerous other companies were formed to cope with the increasing trade between ports in the Commonwealth, and the companies engaged from time to time added to their fleets of steamers by the acquisition of more modern and faster vessels, until at the end of the year 1916 the total net tonnage owned by the twenty-three companies from whom returns have been received amounted to over 204,000 tons. A summary of the various mail services carried on during the year 1916 is given in Section XVIII. of this work.

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 1901 and 1913 to 1917. The figures for 1913 and subsequent years include particulars relating to a number of smaller companies which did not supply returns for 1901, though they were, for the most part, carrying on business in that year.

PARTICULARS OF STEAMSHIPS ENGAGED IN REGULAR INTERSTATE AND COASTAL SERVICES IN THE COMMONWEALTH, 1901 and 1913 to 1917.

Particulars.	1901.	1913.	1914.	1915.	1916.	1917.
Number of companies making returns ...	11	23	23	23	23	23
Number of steamships ...	113	190	174	174	169	148
Tonnage { Gross ...	184,574	364,937	340,852	340,443	337,068	241,611
Net ...	114,080	206,340	206,424	205,795	204,357	145,424
Horse-power { Nominal ...	18,237	37,865	35,723	35,787	34,038	26,430
Indicated ...	122,519	321,794	288,856	289,488	283,471	207,150
Number of passengers { 1st class ...	4,617	9,826	8,068	9,557	9,077	5,459
for which licensed to { 2nd class and carry ...	4,490	7,635	8,666	6,808	6,578	5,029
steerage ...	403	649	622	623	606	510
Complement { Masters and officers ...	332	659	527	532	519	415
of Crew { Engineers ...	2,375	5,509	5,493	5,508	5,385	3,910
Crew ...						

5. Lighthouses and Lights on the Coast of the Commonwealth.—See Year Book No. 2.

6. Ports of the Commonwealth.—See Year Book No. 3.

§ 6. Shipwrecks.

The following statement shews the number and tonnage of vessels wrecked, or otherwise lost, on the coast or elsewhere under the jurisdiction of the several States, during the years 1901 and 1909 to 1917 :—

NUMBER AND TONNAGE OF VESSELS WRECKED,* 1901 and 1909 to 1917.

Year.	Class of Vessel.	Number and Tonnage of Vessels.										Passengers and Crew.	Lives Lost.
		Under 50 tons.		50 to 500 tons.		500 to 2000 tons.		Over 2000 tons.		Total.			
		No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.		
1901	Steam ...	7	189	5	949	2	2,811	...	...	14	3,949	250	40
	Sailing ...	11	217	6	785	5	5,800	...	...	22	6,802	172	10
	Total ...	18	406	11	1,734	7	8,611	...	...	36	10,751	422	50
1909	Steam ...	1	48	3	359	1	1,382	1	2,286	6	4,075	131	40
	Sailing ...	6	163	3	362	2	2,681	...	...	11	3,206	88	6
	Total ...	7	211	6	721	3	4,063	1	2,286	17	7,281	219	46
1910	Steam ...	1	34	5	941	1	958	2	9,307	9	11,240	624	2
	Sailing ...	5	115	2	205	2	3,095	...	...	9	3,415	94	20
	Total ...	6	149	7	1,146	3	4,053	2	9,307	18	14,655	718	22
1911	Steam ...	4	109	5	681	3	5,194	...	...	12	5,984	275	161
	Sailing ...	7	103	4	642	4	5,100	...	...	15	5,845	128	25
	Total ...	11	212	9	1,323	7	10,294	...	...	27	11,829	403	186
1912	Steam ...	1	11	6	866	...	...	1	2,182	8	3,059	227	151
	Sailing ...	4	44	3	407	5	7,836	...	...	12	8,287	111	19
	Total ...	5	55	9	1,273	5	7,836	1	2,182	20	11,346	338	170
1913	Steam ...	1	25	2	237	...	...	...	...	3	262	23	...
	Sailing ...	10	175	5	359	...	...	...	...	15	534	51	7
	Total ...	11	200	7	596	...	...	...	...	18	796	74	7
1914	Steam ...	3	130	4	926	2	2,721	1	3,558	10	7,335	205	18
	Sailing ...	10	184	11	1,124	2	2,297	...	...	23	3,605	160	34
	Total ...	13	314	15	2,050	4	5,018	1	3,558	33†	10,940	365	52
1915	Steam ...	1	38	3	792	1	1,057	...	...	5	1,887	90	1
	Sailing ...	12	245	4	600	...	...	...	...	16	845	82	13
	Total ...	13	283	7	1,392	1	1,057	...	...	21	2,732	172	14
1916	Steam ...	3	107	6	582	...	...	1	2,529	10	3,218	87	6
	Sailing ...	10	240	1	114	...	...	1	3,087	12	3,441	78	19
	Total ...	13	347	7	696	...	...	2	5,616	22	6,659	165	25
1917	Steam ...	4	72	4	551	1	1,015	2	8,763	11	10,401	415	18
	Sailing ...	14	293	4	378	2	1,296	...	...	20	1,967	88	8
	Total ...	18	365	8	929	3	2,311	2	8,763	31	12,368	503	26

* In some cases the vessels included in the above return were subsequently recovered. † Not including two dredges, particulars of whose tonnage are not available.

§ 7. Control of Commonwealth Shipping.

From the 16th February, 1917, the control of all Commonwealth shipping matters has been under the direction of the Commonwealth Shipping Board, of which Engineer Rear-Admiral Sir William Clarkson, K.B.E., C.M.G., the Controller of Shipping, is chairman.

The policy of the Board is administered by two Central Committees (1) the Overseas Central Committee, and (2) the Interstate Central Committee. The Overseas Committee, which meets in Sydney, with Sir Edward Owen Cox, K.B.E., Deputy-Controller of Oversea Shipping, as chairman, supervises all matters connected with the oversea trade of the Commonwealth, while the Interstate Central Committee, which meets in Melbourne, with the Controller of Shipping (*ex officio*) as chairman, controls the shipping engaged in the coastal trade.

The Controller of Shipping may requisition at schedule rates any vessels which are registered in Australia or engaged in the coasting trade, and may determine which vessels may be made available for the overseas service. The following summary (taken from a Parliamentary Paper, dated 6th June, 1918) shows the number and gross tonnage of vessels which have been diverted from their ordinary service in Australian waters since the beginning of the war, and also the vessels still retained in the interstate trade of the Commonwealth :—

VESSELS WITHDRAWN FROM SERVICE IN AUSTRALIAN WATERS.

	No. of Vessels.	Gross Tonnage.
Vessels which have been withdrawn from interstate services since war commenced	33	141,056
Vessels which have been temporarily withdrawn for special trips	3	9,479
Oversea vessels which carried cargo and passengers on the coast and have been withdrawn since commencement of war	6	21,559
Vessels which traded from Australia to New Zealand and/or Pacific Islands and have been withdrawn since commencement of war	15	74,323
Interstate vessels which have been withdrawn since war commenced	5	5,832
	62	252,249
Vessels now employed in the interstate trade	67	173,282

§ 8. Commonwealth Government Line of Steamers.

1. **Vessels Purchased.**—In October, 1916, the Right Honourable W. M. Hughes, P.C., Prime Minister, purchased at a total net cost of £2,047,900 the following vessels for the Commonwealth of Australia :—

COMMONWEALTH VESSELS PURCHASED.

Class.	Old Name.	New Name.	D.W.Capacity.
*A1 ...	"Strathendrick" ...	"Australdale"† ...	7180
" ...	"Strathspey" ...	"Australpeak" ...	7180
" ...	"Strathdee" ...	"Australrange" ...	7180
†B.C. ...	"Strathbeg" ...	"Australmount" ...	7180
*A1 ...	"Strathleven" ...	"Australcrag" ...	7180
†B.C. ...	"Strathesk" ...	"Australbrook" ...	7180
*A1 ...	"Strathavon" ...	"Australford" ...	7180
" ...	"Strathgarry" ...	"Australbush"† ...	7180
" ...	"Strathairly" ...	"Australpool" ...	7180
" ...	"Strathord" ...	"Australglen" ...	7180
" ...	"Daltonhall" ...	"Australstream" ...	5723
" ...	"Kirkoswald" ...	"Australmead" ...	7740
†B.C. ...	"Ardangorm" ...	"Australport" ...	6650
" ...	"Ardanmhor" ...	"Australplain" ...	7180
" ...	"Vermont" ...	"Australfield" ...	6800

* Classed at Lloyds.

† British Corporation.

‡ Lost through enemy action.

The sailing vessels "John Murray" (1600 tons), "Shandon" (2200 tons) and "Speedway" (1100 tons) were also acquired by the Commonwealth Government, but the former was totally wrecked on Malden Island on the 22nd May, 1918, her crew being saved.

2. Voyages and Freights.—The following is a return of voyages made and cargoes carried from Australia by the above vessels from October, 1916, to 1st August, 1918:—During the period from October, 1916, to October, 1917, twenty-three voyages were made, the cargo carried being principally wheat and/or flour to the United Kingdom or France. Included in the above are:—One cargo, copra to United Kingdom, concentrates (zinc), lead, shell; one cargo, wool and wheat to United Kingdom; one cargo, wheat and flour to South Africa, with some general cargo; two cargoes, wheat and flour to America.

From October, 1917, to 1st August, 1918, the number of voyages made was nineteen, of which fourteen were to the United Kingdom, and five were to the Pacific. The cargoes carried were wheat and/or flour.

In cases where any broken or bunker space has been available, such space has been utilised for the carriage of cordage, binder twine, honey, etc.

3. Vessels Built in America.—Fourteen vessels (four motors and ten steamers) of approximately 35,000 tons deadweight capacity were ordered to be built for the Commonwealth Government in America. The following is a list of the names of the ships built or being built in America:—(a) *Motors*—"Cethana," "Culburra," "Challamba," "Coolcha,"; (b) *Steamers*—"Bellata," "Bundarra," "Birriwa," "Berringa," "Bethanga," "Benowa," "Babinda," "Balcatta," "Boobyalla," "Boorika."

The "Cethana" arrived in Sydney on the 29th August, 1918.

4. Control of Enemy Vessels.—In addition to the above, the management of the Commonwealth Government line of steamers controls seventeen ex-enemy vessels of a deadweight capacity of approximately 130,000 tons.

5. Managing Staff.—The principal officers on the managing staff are as follows:—General manager, Mr. H. B. G. Larkin; assistant manager, Mr. G. H. Kneen; head office, Australia House, Strand, London, W.C. 2. Manager for Australia, Mr. E. A. Eva, 447 Collins Street, Melbourne.

§ 9. Commonwealth Shipbuilding Scheme.

1. **Building Programme.**—The present shipbuilding programme of the Commonwealth Government in Australia provides for the construction of 46 vessels as follows :—

STEEL VESSELS.

Locality.	Number.	Builders.	Type.
Williamstown ...	6	Commonwealth Ship Construction Branch	Steel Cargo Steamers
Walsh Island ...	6	New South Wales Government ...	do.
Cockatoo Island	2	Commonwealth Navy Department ...	do.
Maryborough (Q)	4	Walkers Limited ...	do.
Adelaide ...	4	Poole and Steel ...	do.
Tasmania ...	2	Mersey Shipbuilding Company Ltd. ...	do.

WOODEN VESSELS.

Sydney ...	6	Hughes, Martin and Washington Ltd....	Auxiliary Schooner
Fremantle ...	6	W.A. Shipbuilding Company ...	do.
Sydney ...	6	Wallace Power Boat Company ...	Auxiliary Barquentine
Sydney ...	6	Kidman and Mayoh ...	do.

The steel vessels, which are on the longitudinal system of framing invented by J. W. Isherwood, are 331 feet in length B.P., 48 feet beam and 26 feet 1 inch moulded depth, with a deadweight capacity of approximately 5500 tons on 21 feet 8 inches draft. Each vessel will be propelled by triple expansion three-cylinder engines (25-inch, 41-inch, 68-inch by 45-inch stroke) which, working at 180 lbs. pressure, will develop I.H.P. of 2300 at 75 revolutions, and will steam about $10\frac{1}{2}$ knots.

The auxiliary schooners are each 232 feet long by 42 feet 8 inches breadth by 24 feet $4\frac{1}{2}$ inches moulded depth, and have each a deadweight capacity of 2300 tons. They will be propelled by two sets of 250 h.p. engines of semi-Diesel pattern, estimated to drive the vessels at about seven knots.

The barquentines each measure 244 feet in length by 44 feet breadth by 24 feet 5 inches moulded depth, and have a deadweight capacity of 2600 tons. The engines will be similar to those to be installed in the schooners.

About 6000 tons of steel plates are required for the first six vessels, three of which are under construction at Walsh Island, two at Williamstown, and one at Cockatoo Island. As the whole of the plates could not be obtained in Australia a certain quantity was ordered in America. The remainder of the material for the vessels, including plates, sectional material, engines, auxiliaries and equipment is, as far as possible, being made or obtained in Australia.

To carry out their contracts Messrs. Walkers Ltd., Poole and Steel, Mersey Shipbuilding Company, Hughes, Martin and Washington, W.A. Shipbuilding Company, and Kidman and Mayoh have established entirely new yards.

Extensions and additions have been carried out at Walsh Island and Williamstown yards. The yard being used by the Wallace Power Boat Company, at Woolwich, is an old shipyard, and has been extended and improved by the company.

The following materials have been ordered in England:—Cables, wire ropes, compass outfit, signal lamps, joiners' hardware, side lights, steering chains, and electric wiring. Australian firms are supplying anchors, windlasses, winches, bakers' ovens, sanitary fittings, steering gear, wireless installations, steel derricks, iron and steel castings, wood blocks, stoves, cooking ranges, ships' boats, iron blocks, electric light installations, timber, canvas outfit, and Manilla hemp ropes.

The keel of the first vessel was laid at Williamstown in May last, and satisfactory progress has been made. Provided that deliveries of plates are satisfactory, it is expected that the first vessel will be launched at Williamstown in January, 1919. Under the contract with the New South Wales Government the six ships are to be delivered in three years. Messrs. Walkers Ltd. and Poole and Steel have contracted to deliver four vessels in three years. Preparations for the building of the wooden vessels are well advanced. The contracts call for the delivery of the twenty-four vessels within two years.

The engines for the two steel vessels being built at Williamstown, and the first vessel at Cockatoo Island, are being constructed at Messrs. Thompson and Company's works at Castlemaine, Victoria. The engines for the vessels being built at Walsh Island will be constructed in the engineering shops on the Island.

Reference to the vessels being built in America for the Commonwealth Government is made in § 8, 3, *ante*.

The whole of the merchant shipbuilding programme is under the Ministerial control of the Hon. A. Poynton, M.P., and under the supervision of Mr. H. W. Curchin (Chief Executive Officer), who arrived in Australia, from England, in December, 1917.