

## SHIPPING.

THE earliest date for which there is reliable information in regard to the shipping of the states now constituting the Commonwealth of Australia, and also of the colony of New Zealand is the year 1822. Since that time the expansion of the trade has been marvellous, and although population has increased at a high rate, yet the growth of shipping has been even more rapid. In the table given below the increase in the number and tonnage of vessels may be traced. The shipping of New Zealand is treated separately, and all tonnage of this colony, of course, is shown, but it is necessary to point out that the figures for the Commonwealth of Australia include the interstate traffic, and are, therefore, of little value in a comparison between the shipping trade of Australia and that of other countries, as the vessels plying between the various states represent merely coasting trade when the Commonwealth is considered as a whole. This distinction is to be kept in view throughout this chapter, as well as in the later one dealing with commerce:—

Year.	Commonwealth of Australia.		Year.	New Zealand.	
	Entered and Cleared.			Entered and Cleared.	
	Vessels.	Tonnage.		Vessels.	Tonnage.
1822	268	147,869	1822	.....	.....
1841	2,576	552,347	1841	.....	.....
1851	4,780	975,959	1851	560	112,149
1861	9,174	2,425,148	1861	1,142	403,336
1871	11,836	3,689,643	1871	1,438	540,261
1881	14,408	8,109,924	1881	1,527	833,621
1891	16,987	16,235,213	1891	1,481	1,244,322
1901	18,638	26,197,436	1901	1,379	2,139,180
1902	17,878	26,791,360	1902	1,249	2,137,949

In the year 1822 all the settlements on the mainland were comprised in the designation of New South Wales, and as late as 1859 Queensland formed part of that state. Thus an exact distribution of shipping amongst the states comprising the Commonwealth of Australia can be made only for the period subsequent to the year last named. Such a division of the total tonnage entered and cleared is shown in the following



It cannot be claimed that these figures have much meaning, and they would not have been repeated in this work, except for the purpose of showing how easy it is to make fallacious comparisons from reasonably correct data. Queensland appears almost last amongst the states in point of tonnage, yet, unquestionably, that state ranks third as regards the importance of its trade. The explanation of the discrepancy between the real and apparent trade lies in the fact which will hereafter be reverted to, that the same vessels are again and again included as distinct tonnage in the returns of the southern states. For example, a mail-steamer which calls at Fremantle, in Western Australia, continues its voyage to Sydney by way of Adelaide and Melbourne, sometimes calling at Hobart, and figures as a separate vessel at each port. The Canadian mail-steamers and the vessels of the Nippon Yusen Kaisha, or Imperial Japanese Mail Line, are also counted twice in the New South Wales and Queensland returns, but on account of the less number of trips, and the small tonnage of the vessels, the figures for each of these states are not so much inflated as is the case with those of other Commonwealth states. It is apparent therefore that the returns are only of value as indicating the comparative progress of the trade of each separate state, and not the progress of one state as compared with another.

#### INTERSTATE SHIPPING.

The total shipping of the Commonwealth of Australia, dealt with in the preceding section, included the trade between the various states, which represents 56.77 per cent. of the total for Australia. In the following table will be found the number and tonnage of vessels entered at the ports of each state from the other states. As a rule, the expansion of the trade of a state with its neighbours has kept pace with the growth of its commerce with outside countries. It should be remembered that the trade between New Zealand and Australia has been eliminated from the tables showing interstate shipping.

State.	Entered from other States of the Commonwealth.					
	1891.		1901.		1902.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
Commonwealth of Australia—						
New South Wales .....	2,111	1,687,300	2,303	2,094,297	2,074	2,280,536
Victoria .....	1,954	1,461,974	1,745	1,992,118	1,696	2,045,643
Queensland.....	376	267,753	430	545,469	504	672,556
South Australia.....	761	683,095	719	1,135,714	709	1,161,641
Western Australia ...	149	237,708	446	973,474	368	784,547
Tasmania .....	680	371,205	713	485,023	837	581,242
Total .....	6,031	4,709,035	6,356	7,226,095	6,188	7,526,165

The peculiar feature of the foregoing table is the large increase in the tonnage of Western Australia and South Australia, due in both cases to the influx of population and expansion of trade resultant on the great gold discoveries in the former state.

State.	Cleared for other States of the Commonwealth.					
	1891.		1901.		1902.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
<b>Commonwealth of Australia—</b>						
New South Wales .....	1,861	1,385,357	1,995	1,907,226	1,719	1,971,572
Victoria .....	2,166	1,761,027	1,794	2,072,747	1,852	2,279,698
Queensland .....	389	302,723	395	440,659	490	585,215
South Australia .....	865	854,236	826	1,377,399	830	1,415,499
Western Australia .....	158	269,256	456	977,846	388	902,496
Tasmania .....	679	352,406	694	433,735	809	528,524
<b>Total.....</b>	<b>6,118</b>	<b>4,925,005</b>	<b>6,160</b>	<b>7,209,612</b>	<b>6,088</b>	<b>7,683,004</b>

A comparison of the figures given above with those in the preceding table shows that in the case of Victoria, South Australia and Western Australia the tonnage cleared is largely in excess of that entered. This partly arises from the necessity of many vessels clearing at the southern and Western Australian ports in ballast and proceeding for outward cargo to New South Wales ports, principally Newcastle, where on their outward voyage such vessels are, of course, reckoned amongst the external shipping.

The combined tonnage of inter-state shipping entered and cleared with the percentage for each state to the total inter-state shipping of the Commonwealth, will be found below :—

State.	Entered from and Cleared for other States.					
	Total Tonnage.			Percentage of each State to Total.		
	1891.	1901.	1902.	1891.	1901.	1902.
<b>Commonwealth of Australia—</b>						
New South Wales .....	3,072,657	4,001,523	4,252,108	31·9	27·7	28·0
Victoria .....	3,223,001	4,064,865	4,325,341	33·5	28·2	28·4
Queensland .....	570,476	986,128	1,257,771	5·9	6·8	8·3
South Australia .....	1,537,331	2,513,113	2,577,140	15·9	17·4	16·9
Western Australia .....	506,964	1,951,320	1,687,043	5·3	13·5	11·1
Tasmania .....	723,611	918,758	1,109,766	7·5	6·4	7·3
<b>Total.....</b>	<b>9,634,040</b>	<b>14,435,707</b>	<b>15,209,169</b>	<b>100·0</b>	<b>100·0</b>	<b>100·0</b>

## EXTERNAL SHIPPING.

It has been explained that in any comparison between the shipping of the Commonwealth of Australia and that of other countries the interstate trade would have to be excluded; but even then the tonnage would be too high, because of the inclusion of mail-steamers and other vessels on the same voyage in the returns of several of the states. However, it is scarcely possible to amend the returns so as to secure the rejection of the tonnage which is reckoned more than once; and in considering the following statement, showing the shipping trade of the Commonwealth with countries beyond Australia, this point should be borne in mind:—

Division.	1891.		1901.		1902.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
United Kingdom—						
Entered .....	868	1,699,958	716	2,066,167	735	2,232,861
Cleared .....	588	1,217,582	784	2,144,587	667	1,967,529
Total .....	1,456	2,917,540	1,500	4,210,754	1,402	4,200,390
British Possessions—						
Entered .....	894	790,608	1,403	1,971,931	1,244	1,782,396
Cleared .....	942	903,972	1,349	2,081,623	1,201	1,996,403
Total .....	1,836	1,694,580	2,752	4,053,554	2,445	3,779,299
Foreign Countries—						
Entered .....	681	880,814	906	1,774,013	842	1,839,877
Cleared .....	865	1,108,239	964	1,723,408	913	1,762,625
Total .....	1,546	1,989,053	1,870	3,497,421	1,755	3,602,502
All External Trade—						
Entered .....	2,443	3,371,380	3,025	5,812,111	2,821	5,855,634
Cleared .....	2,395	3,229,793	3,097	5,949,618	2,781	5,726,557
Total .....	4,838	6,601,173	6,122	11,761,729	5,602	11,582,191

The external shipping of the Commonwealth of Australia during 1902 was fully 75 per cent. more than the tonnage entered and cleared in 1891, when trade was inflated by the shipment of goods left over from the previous year on account of the maritime strike. A distribution of the traffic amongst the leading divisions of the British Empire and

the principal foreign countries with which the states of the Commonwealth have commercial relations will be found below :—

Country.	Entered from and cleared for Countries beyond the Commonwealth.					
	1891.		1901.		1902.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
<b>British Empire—</b>						
United Kingdom .....	1,456	2,917,540	1,500	4,210,754	1,402	4,200,390
New Zealand .....	1,007	749,886	999	1,345,471	943	1,366,783
India and Ceylon .....	134	276,030	142	330,714	137	374,593
Hong Kong .....	227	324,820	241	380,174	210	332,889
Canada .....	27	29,952	61	118,523	90	175,766
Cape Colony .....	63	55,611	430	681,869	354	593,500
Natal .....	35	12,950	423	794,583	277	547,980
Fiji .....	107	105,033	60	58,799	68	71,924
Straits Settlements .....	61	75,269	90	129,112	144	218,599
Other British Possessions	175	65,029	306	214,309	222	97,265
<b>Total, British .....</b>	<b>3,292</b>	<b>4,612,120</b>	<b>4,252</b>	<b>8,264,308</b>	<b>3,847</b>	<b>7,979,689</b>
<b>Foreign Countries—</b>						
France .....	101	255,351	117	304,026	127	322,460
Germany .....	208	393,001	274	909,798	304	1,141,890
Netherlands .....	13	15,731	7	14,748	3	5,215
Belgium .....	27	41,907	14	29,716	10	20,111
United States .....	418	519,252	385	758,281	359	742,726
China .....	34	33,135	11	23,797	19	28,436
Japan .....	7	13,677	80	192,674	100	247,165
New Caledonia .....	154	155,226	125	179,486	126	205,525
Java .....	37	58,379	88	183,349	58	101,149
Philippine Islands .....	29	36,305	52	87,809	39	77,490
Hawaiian Islands .....	1	430	107	106,205	69	67,451
Peru .....	16	21,520	39	48,554	34	41,929
Chili .....	131	146,448	218	324,892	196	292,908
Other Foreign Countries	370	298,691	353	334,086	311	308,047
<b>Total, Foreign .....</b>	<b>1,546</b>	<b>1,989,053</b>	<b>1,870</b>	<b>3,497,421</b>	<b>1,755</b>	<b>3,602,502</b>
<b>All External Tonnage</b>	<b>4,838</b>	<b>6,601,173</b>	<b>6,122</b>	<b>11,761,729</b>	<b>5,602</b>	<b>11,582,191</b>

It will be seen from the above figures that out of a total external tonnage, amounting to 11,582,191 tons in 1902, vessels from the United Kingdom aggregated 4,200,390 tons, or 36·2 per cent. of the whole. New Zealand furnished the next largest tonnage, with 1,366,783 tons, or 11·8 per cent., followed by Germany, with 1,141,890 tons, equal to 9·8 per cent., and the United States, with 742,726 tons, or 6·4 per cent. of the total. During the eleven years, 1891-1902, the tonnage of the United Kingdom increased by 1,282,850 tons, or 44 per cent., while British tonnage as a whole increased by 3,367,569 tons, or 73 per cent., the German by 748,889 tons, or 191 per cent., and the United States tonnage by 223,474 tons, or 43 per cent.

The enormous increase in the German tonnage is due to the large volume of business captured by the heavily subsidised vessels of the various German lines.

As the following table shows, the largest share of the external tonnage of Australia falls to New South Wales, which takes more than one-third of the total; Victoria comes next with a little over one-fifth, followed by Western Australia with about one-seventh. The figures in the chapter on Commerce, however, give a better idea of the relative importance of the states in external trade, as the tonnage of the mail steamers entered and cleared at Fremantle and Port Adelaide is out of all proportion to the goods landed and shipped there:—

State.	External Tonnage Entered and Cleared.						Percentage of each State to Total of Commonwealth.		
	1891.		1901.		1902.		1891.	1901.	1902.
	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.			
Commonwealth of Australia—									
New South Wales . . . . .	2,149	2,621,579	2,529	4,519,711	2,373	4,476,036	30·7	38·4	38·6
Victoria . . . . .	971	1,492,103	1,226	2,650,026	1,016	2,413,699	22·0	22·5	20·9
Queensland . . . . .	405	426,642	534	699,692	555	809,840	6·5	6·0	7·0
South Australia . . . . .	803	1,201,258	721	1,614,790	624	1,554,136	18·2	13·7	13·4
Western Australia . . . . .	291	538,591	883	1,762,943	772	1,671,031	8·1	15·0	14·4
Tasmania . . . . .	219	329,995	229	513,967	262	657,449	4·9	4·4	5·7
Total . . . . .	4,838	6,601,173	6,122	11,761,729	5,602	11,582,191	100·0	100·0	100·0

A comparison between the shipping of the principal countries of the world and the external tonnage of the Commonwealth of Australia is appended:—

Country.	Tonnage Entered and Cleared.		Country.	Tonnage Entered and Cleared.	
	Total.	Average per head.		Total.	Average per head.
United Kingdom . . . . .	99,872,719	2·4	Spain . . . . .	28,892,629	1·6
Russia in Europe . . . . .	17,465,000	0·1	Italy . . . . .	42,320,578	1·2
Norway . . . . .	6,097,260	2·7	United States . . . . .	49,680,318	0·6
Sweden . . . . .	16,566,699	3·2	Argentine Republic . . . . .	13,364,884	2·9
Denmark . . . . .	11,527,399	4·6	Canada . . . . .	14,543,062	2·7
Germany . . . . .	29,493,043	0·5	Cape Colony . . . . .	9,979,133	4·1
Netherlands . . . . .	18,656,021	3·5	New Zealand . . . . .	2,137,949	2·6
Belgium . . . . .	18,628,728	2·7	Commonwealth of Australia . . . . .	11,582,191	3·0
France . . . . .	38,171,406	1·0			

On the basis of population, therefore, the shipping of the states of the Commonwealth exceeds that of the United Kingdom and the great countries of the United States of America, France, Germany, Italy, Russia, and Spain.

## TONNAGE IN BALLAST.

A peculiar feature of the shipping trade is the small though varying proportion of tonnage in ballast arriving from and departing for places beyond Australia. Thus in the year 1881 this description of tonnage amounted to 5·2 per cent., and in 1891 to 4·1 per cent., of the total external shipping; while in 1902, at 9·6 per cent., the proportion was comparatively high. The increase during recent years is chiefly due to the larger number of vessels which come to New South Wales in quest of freights, the proportion of shipping in ballast for that state being over 12 per cent. of the total external tonnage. The figures for Tasmania were abnormally high in 1902, the tonnage in ballast being as high as 14·4 per cent. of the total external tonnage. Of the 94,697 tons entered and cleared this state, 18,358 tons represented sailing vessels in ballast from France, and 11,990 tons sailing vessels in ballast from the United Kingdom. Amongst the clearances there were no less than 19,275 tons representing sailing vessels cleared in ballast for America. The total external tonnage entered and cleared the Commonwealth in ballast during the years 1891, 1901, and 1902 was as follows:—

State.	External Tonnage Entered and Cleared in Ballast.			Percentage of Tonnage in Ballast to Total External Tonnage.		
	1891.	1901.	1902.	1891.	1901.	1902.
Commonwealth of Australia—						
New South Wales .....	100,167	579,904	554,759	3·8	12·8	12·4
Victoria .....	47,721	194,442	87,496	3·2	7·3	3·6
Queensland .....	36,700	24,869	21,901	8·6	3·6	2·7
South Australia .....	52,515	102,899	197,257	4·4	6·4	12·7
Western Australia .....	14,104	210,581	160,975	2·6	11·9	9·6
Tasmania .....	16,357	2,355	94,697	1·6	0·5	14·4
Total .....	267,564	1,115,050	1,117,085	4·1	9·5	9·6

The reason why so small a proportion of Australian shipping clears in ballast is principally to be found in the great and varied resources of the country; for when the staple produce—wool—is not available, cargoes of wheat, coal, silver, copper, live-stock, frozen meat, butter, fruit, tallow, leather, skins and hides, and other commodities may generally be obtained. Besides, owing to the great distance of the ports of the Commonwealth from the commercial centres of the old world, vessels are not usually sent out without at least some prospect of securing a return cargo. As a rule, it does not pay to send vessels to Australasia seeking freights, as is commonly done with regard to European and American ports. It is strong testimony, therefore, of the value of the trade of New South Wales to shipowners to find entered at the ports of that state direct from outside countries the comparatively large quantity of 442,380 tons of shipping in ballast, the following being the chief countries represented:—Cape Colony, New Zealand, Natal, Philippine Islands, Mauritius, Fiji, Java, Japan.



The tonnage in ballast which entered and cleared at New Zealand ports and the percentage of such to the total tonnage of that colony may be seen in the following table.

Year.	Tonnage in ballast.	Percentage to total tonnage.
1881 .....	76,247	9·0
1891 .....	103,754	8·3
1901 .....	191,266	8·9
1902 .....	215,486	10·1

The proportion of tonnage in ballast to the total shipping of some of the principal countries of the world is subjoined :—

Country.	Percentage of Shipping in Ballast.	Country.	Percentage of Shipping in Ballast.
United Kingdom .....	17·2	France .....	17·9
Russia in Europe .....	33·3	Spain .....	28·7
Norway .....	26·1	United States .....	17·9
Sweden .....	45·1	New Zealand .....	8·9
Germany .....	19·9	Commonwealth of	
Netherlands .....	26·1	Australia .....	9·6
Belgium .....	23·0		

#### NATIONALITY OF ALL VESSELS.

The shipping trade of the Commonwealth of Australia and of the colony of New Zealand is almost entirely in British hands, as will be seen from the subjoined tables, which deal with the total tonnage, both inter-state and external. Although direct communication with continental Europe has been established within recent years, and several lines of magnificent steamers, subsidised by foreign Governments, have entered into the trade between Australia and foreign ports, yet the proportion of shipping belonging to Great Britain and her dependencies has only fallen from 86·8 to 84·7 per cent. during the period extending from 1891 to 1902. The chief increases during the period have been amongst vessels trading from Germany and Japan, the proportion of the former rising from 5·2 per cent. to 7·7 per cent., and of the latter from 0·2 per cent. to 1·2 per cent. :—

Nationality.	Total Shipping Entered and Cleared the Commonwealth.						Percentage of each Nationality.		
	1891.		1901.		1902.		1891.	1901.	1902.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British .....	15,472	14,087,460	16,544	22,358,652	15,889	22,680,040	86·8	85·3	84·7
French .....	247	591,524	305	654,475	324	683,317	3·6	2·5	2·6
German .....	526	843,652	662	1,771,945	659	2,062,267	5·2	6·8	7·7
Scandinavian .....	319	292,071	403	350,040	340	302,281	1·8	1·3	1·1
Italian .....	11	9,736	93	118,881	112	141,409	0·1	0·5	0·5
Japanese .....	17	34,907	120	285,370	119	312,880	0·2	1·1	1·2
American .....	307	296,096	401	520,705	292	409,815	1·8	2·0	1·5
Other nationalities.	88	79,753	110	137,368	143	199,351	0·5	0·5	0·7
<b>Total .....</b>	<b>16,967</b>	<b>16,235,213</b>	<b>18,638</b>	<b>26,197,436</b>	<b>17,873</b>	<b>26,791,360</b>	<b>100·0</b>	<b>100·0</b>	<b>100·0</b>

The returns published by the various states are not in such a form as to admit of the separation of the purely local tonnage from the other shipping of the Empire, and vessels owned in the Commonwealth are classed in the above table as "British." The number and tonnage of the steam and sailing vessels registered in each of the states of the Commonwealth and New Zealand may be found on a succeeding page. Few of the large vessels employed in the inter-state trade have been built in Australia.

The nationality of vessels trading with New Zealand may be seen in the following table :—

Nationality.	Entered and Cleared New Zealand.						Percentage of each Nationality.		
	1891.		1901.		1902.		1891.	1901.	1902.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British.....	1,359	1,120,435	1,234	1,831,590	1,104	1,810,510	90.0	85.6	84.7
French.....	4	1,862	1	1,502	2	728	0.2	0.1	0.1
German.....	16	12,876	2	1,684	10	14,727	1.0	0.1	0.7
Scandinavian.....	17	12,906	39	26,541	37	22,271	1.0	1.2	1.0
American.....	81	91,387	80	263,134	76	274,424	7.4	12.3	12.8
Other nationalities.	4	4,856	23	14,669	20	15,289	0.4	0.7	0.7
Total.....	1,481	1,244,322	1,379	2,139,180	1,249	2,137,949	100.0	100.0	100.0

The following table shows the relative increase during the last ten years in British, foreign, and colonial trade with New Zealand, and the figures possess a certain amount of interest in view of the laws recently passed in that colony granting preferential trade in certain commodities to Great Britain :—

Year.	Shipping Entered and Cleared New Zealand.								
	British.			Colonial.			Foreign.		
	Vessels.	Tonnage.	Crews.	Vessels.	Tonnage.	Crews.	Vessels.	Tonnage.	Crews.
1893	352	607,453	15,128	805	542,558	23,410	95	108,059	3,845
1902	324	943,554	16,854	780	866,956	30,476	145	327,439	12,228

These figures apply to external trade only ; but in addition thereto, as might be expected in a country with such an extensive seaboard as New Zealand, there is a very large coastal trade, amounting in 1902 to 8,249,623 tons entered, and 8,309,635 cleared.

#### STEAM AND SAILING VESSELS.

The tendency to substitute steamers for sailing vessels, which is general throughout the world, is very marked in the Australian trade. Unfortunately the subdivision of the total tonnage into steam and

sailing was not obtainable for the whole of the Commonwealth States until last year. It is not possible, therefore, to show the total increase of steam tonnage, but appended will be found the figures of the external trade of the various states so far as they can be given :—

State.	Steam Tonnage entered and cleared.			Percentage of Steam to Total Tonnage.		
	1891.	1901.	1902.	1891.	1901.	1902.
Commonwealth of Australia—						
New South Wales.....	1,582,308	3,258,228	3,395,190	60·3	72·1	75·9
Victoria .....	1,044,467	2,194,863	2,127,470	70·0	82·8	88·1
Queensland .....	.....	.....	762,696	.....	.....	94·2
South Australia .....	.....	.....	1,319,146	.....	.....	84·9
Western Australia.....	483,460	1,460,619	1,403,121	89·8	82·9	84·0
Tasmania .....	287,188	488,379	568,162	89·5	95·0	86·4
Colony of New Zealand .....	822,086	1,860,622	1,900,813	66·1	87·0	88·9

The substitution of steam for sailing vessels in the shipping trade of some of the principal countries of the world may be gathered from the following table. The figures refer to the year 1900, the latest for which information is obtainable for the places specified :—

Country.	Percentage of Steam to Total Tonnage.		
	1881.	1891.	1901.
United Kingdom.....	67·7	84·2	92·4
Russia in Europe.....	74·3	91·0	95·9
Norway .....	31·1	55·7	70·4
Sweden .....	46·8	72·1	84·5
Denmark .....	61·9	81·7	86·6
Germany .....	70·8	87·2	90·9
Netherlands.....	74·4	92·5	97·2
Belgium .....	81·3	94·0	96·1
France .....	69·5	87·0	94·7
Portugal .....	82·1	93·6	97·7
Spain.....	.....	94·0	97·6
Italy .....	72·8	88·3	96·9
United States .....	55·5	72·3	87·9
Argentine Republic .....	70·4	86·7	90·7
Canada .....	.....	66·2	82·3
Cape Colony .....	62·5	79·8	90·4
Natal.....	.....	91·3	93·3
New Zealand .....	.....	66·1	88·9
Commonwealth of Australia.....	68·6	81·8	82·7

A comprehensive view of the changes which have taken place since the year 1881 in the class of vessel engaged in the inter-state and the

external shipping trade of the Commonwealth is afforded by the following figures :—

Year.	Vessels.	Tonnage.	Crews.	Average Tonnage per vessel	Average Tonnage per hand.
INTER-STATE SHIPPING.					
1881	10,484	4,941,294	251,189	471	20
1891	12,149	9,634,040	386,798	793	25
1901	12,516	14,435,707	475,457	1,153	30
1902	12,276	15,209,169	490,498	1,239	31
EXTERNAL SHIPPING.					
1881	3,924	3,168,630	120,193	808	26
1891	4,838	6,601,173	244,171	1,364	27
1901	6,122	11,761,729	350,266	1,921	34
1902	5,602	11,582,191	362,817	2,068	32
ALL COMMONWEALTH SHIPPING.					
1881	14,408	8,109,924	371,382	563	22
1891	16,987	16,235,213	630,969	956	26
1901	18,638	26,197,436	825,723	1,406	32
1902	17,878	26,791,360	853,315	1,499	31

As the table shows, the total number of vessels engaged in the shipping trade of the Commonwealth of Australia during 1902 was 891 more than the figure for 1891, and the returns of tonnage show an increase of over 10½ millions. The average tonnage of shipping is 1,499, as compared with 956 in 1891, and 563 in 1881. The explanation of this increase of course lies in the fact that a superior type of vessel is now engaged in the shipping trade, and the enterprise of the great British and foreign trading companies will doubtless have the effect of raising still higher the average for succeeding years. Several of the vessels belonging to the fleet of the North German Lloyd are over 10,000 tons, the largest exceeding 13,000 tons. The Peninsular and Oriental Company possesses a magnificent fleet, the steamers ranging in size from 6,600 tons to 10,500 tons. The average tonnage of the steamers of the Orient Pacific Royal Mail Line is over 7,200 tons, of the Messageries Maritimes 6,500 tons, and of the White Star Line, the vessels of which were built principally as cargo carriers, 12,000 tons. Considerable impetus has been given to the foreign shipping trade with Australia through the subsidising of the lines by several of the foreign governments. The North German Lloyd, for example, receives an annual subsidy from the German Government of £115,000, equal to 6s. 8d. per mile. To protect the interests of the German agriculturists it is stipulated in the agreement that the vessels

shall not carry on their homeward journey frozen meat, dairy produce, or cereals in the nature of those grown in Germany. The Japanese Government subsidises its steamers trading to Australia to the extent of £50,000 per annum, and the Messageries Maritimes receives a subsidy of 8s. 4d. per mile. The British lines—the Peninsular and Oriental and the Orient Pacific—each receive £85,000 per annum for carrying the mails to and from Australia.

It is somewhat remarkable to find that the vessels engaged in the inter-state trade have more than kept pace in increase of tonnage with those trading between the Commonwealth and other countries. Of course, the increase in the average tonnage of inter-state vessels is represented as greater than it actually has been, because the mail-steamers on their way to Sydney are cleared at Fremantle, Adelaide, and Melbourne for the states further east; but when allowance has been made on this score, the improvement in the class of vessel trading in local waters will be found most noteworthy. It is well known, however, that the steamers running on the Australian coast favourably compare with those engaged in the coasting trade of any of the great maritime countries of the world. Several of the vessels are over 7,000 tons burthen, and are provided with twin screws and fitted with the most modern appliances and conveniences for the transport of passengers and cargo.

The trade of the Commonwealth with New Zealand appears as external shipping in all returns given in this chapter, and has, therefore not been distinguished separately, but in the following table will be found figures showing the total shipping of that colony with all countries:—

Year.	Vessels.	Tonnage.	Crews.	Average Tonnage per Vessel.	Average Tonnage per hand.
1881	1,527	833,621	30,409	546	27
1891	1,481	1,244,322	43,969	840	28
1901	1,379	2,139,180	59,752	1,551	36
1902	1,249	2,137,949	59,558	1,712	36

The improvement in the class of vessel engaged in the trade will be apparent from the fact that although the number of vessels has decreased by 232 since 1891, the total tonnage has increased by about 894,000 tons, while the average per vessel is more than double that of 1891.

#### RELATIVE IMPORTANCE OF PORTS.

The relative importance of the various ports of the Commonwealth of Australia and New Zealand may be ascertained by an inspection of the table given hereunder. Melbourne takes first place in the amount of tonnage; but the figures are inflated by the counting of the great

ocean steamers as twice entering and twice clearing at Port Phillip. This remark applies equally to Port Adelaide and Albany, and in the last two years to Fremantle. If allowance be made on this score, it will be found that Sydney has a larger quantity of shipping than any other Australasian port, and that it is followed by Melbourne, Newcastle, and Port Adelaide. The figures for the years 1881 and 1891 given for Queensland ports, other than Brisbane, include coastal trade, and the quantity of tonnage shown for these years is, therefore, somewhat in excess of the truth. As this table is only intended to show the relative importance of ports, the inter-state shipping of the Commonwealth has not been excluded, but no account has been taken of the purely coastal trade within each state:—

Port.	Total Tonnage entered and cleared.			
	1881.	1891.	1901.	1902.
<b>COMMONWEALTH OF AUSTRALIA.</b>				
<b>New South Wales—</b>				
Sydney .....	1,610,692	3,469,862	5,413,677	5,939,374
Newcastle .....	1,127,238	1,844,842	2,609,861	2,388,738
Wollongong .....	14,642	101,888	300,699	271,684
<b>Victoria—</b>				
Melbourne.....	2,144,949	4,362,138	6,366,103	6,244,033
Geelong .....	93,347	190,932	259,573	372,273
<b>Queensland—</b>				
Brisbane .....	406,032	855,993	1,207,295	1,540,492
Townsville .....	205,886	544,470	95,101	113,844
Rockhampton .....	207,706	471,837	36,653	54,187
Cooktown .....	217,144	469,577	31,670	27,220
Cairns .....	56,447	326,898	4,084	2,488
Mackay .....	104,174	330,119	4,473	3,375
<b>South Australia—</b>				
Port Adelaide .....	1,078,920	1,990,938	3,296,108	3,424,017
Port Pirie .....	33,325	321,781	376,856	242,605
Port Darwin.....	90,100	170,642	163,705	171,924
<b>Western Australia—</b>				
Fremantle .....	42,618	63,068	1,864,195	2,095,371
Albany .....	219,902	931,502	1,667,707	1,068,472
Bunbury .....	7,905	1,189	8,942	103,147
<b>Tasmania—</b>				
Hobart .....	204,007	646,683	870,733	1,070,171
Launceston .....	138,657	293,537	199,444	237,368
Devonport .....		8,121	124,964	173,141
<b>NEW ZEALAND.</b>				
Wellington .....	119,243	293,451	591,154	666,707
Auckland .....	238,886	345,183	736,005	779,295
Bluff Harbour .....	91,592	196,540	303,496	289,370
Lyttelton .....	167,151	161,387	203,476	144,255
Dunedin .....	114,637	97,409	112,718	112,773

A better idea of the relative importance of the principal ports of the states is obtainable from the trade figures, which are given below for the year 1902 :—

Port.	Total Trade.	Average per ton of Shipping.	Port.	Total Trade.	Average per ton of Shipping.
New South Wales—	£	£ s. d.	Western Australia—	£	£ s. d.
Sydney .....	38,828,608	6 10 9	Fremantle .....	12,026,760	5 14 10
Newcastle .....	3,021,957	1 5 4	Albany .....	1,495,126	1 8 0
Victoria—			Tasmania—		
Melbourne .....	31,451,877	5 0 9	Hobart .....	1,926,136	1 16 0
Queensland—			Launceston .....	1,785,923	7 10 6
Brisbane .....	6,889,198	4 9 5	New Zealand—		
South Australia—			Wellington .....	5,692,039	8 10 9
Port Adelaide .....	8,725,941	2 11 0	Auckland .....	5,178,476	6 12 11

The comparative importance of the ports of the Commonwealth of Australia and New Zealand may be seen by viewing them in connection with the shipping and trade of the chief ports of the United Kingdom, the 1902 figures for which are appended. It will be seen that in aggregate tonnage Melbourne is exceeded only by London, Liverpool, Cardiff, and Newcastle. Sydney comes next on the list, exceeding all other British ports. In value of trade Sydney is exceeded only by London, Liverpool, and Hull. If the Commonwealth of Australia be regarded as one country, however, the comparison is somewhat misleading, as the inter-state trade has been included in the returns :—

Port.	Total Shipping.	Total Trade.	Port.	Total Shipping.	Total Trade.
England and Wales—	tons.	£	Scotland—	tons.	£
London .....	17,564,108	261,179,647	Glasgow .....	4,144,217	33,284,117
Liverpool .....	13,157,714	236,049,898	Leith .....	1,880,271	17,189,216
Cardiff .....	12,556,644	14,463,230	Kirkcaldy .....	2,361,313	1,749,361
Newcastle and N. & S. Shields	8,369,347	17,280,969	Grangemouth.	1,485,658	5,312,242
Hull .....	4,480,538	51,799,849	Ireland—		
Southampton	3,224,491	32,146,816	Belfast .....	628,937	8,343,842
Sunderland .....	1,839,530	2,076,977	Dublin .....	373,674	2,920,118
Grimsby .....	1,797,531	18,726,506	Cork .....	167,992	1,132,123
Dever .....	1,967,892	13,299,269	Australia—		
Newport .....	2,464,543	3,787,022	Sydney .....	5,939,374	38,828,608
Harwich .....	1,432,968	24,677,991	Melbourne .....	6,244,033	31,451,877
Bristol .....	1,237,082	14,067,437	Brisbane .....	1,540,492	6,889,198
Newhaven .....	704,679	13,293,981	Adelaide .....	3,424,017	8,725,941
Swansea .....	2,400,153	10,002,292	Fremantle .....	2,095,371	12,026,760
Manchester .....	1,580,802	25,305,857	Hobart .....	1,070,171	1,926,136
Middlesbrough	1,733,286	6,016,517	New Zealand—		
			Wellington .....	666,707	5,692,039
			Auckland .....	779,295	5,178,476

The yearly movement of tonnage at Melbourne and Sydney far exceeds that of the ports of any other British possession, Hong Kong and Singapore excepted. Two other exceptions might be mentioned—

Gibraltar and Malta; but as these are chiefly ports of call, and the trade is very limited compared with the tonnage, they can scarcely be placed in the same category.

## REGISTRATION OF VESSELS.

The number and tonnage of steam and sailing vessels on the registers of each of the six states of the Commonwealth and the colony of New Zealand at the end of 1902 are given below :—

State.	Steam.		Sailing.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
Commonwealth of Australia—						
New South Wales .....	516	71,953	523	57,772	1,039	129,725
Victoria .....	153	72,805	223	37,545	376	110,350
Queensland .....	101	15,001	168	10,243	269	25,244
South Australia .....	110	33,330	221	19,775	331	53,105
Western Australia .....	30	5,708	197	6,811	227	12,519
Tasmania .....	55	9,246	151	8,979	206	18,225
Total—Australia ...	965	208,043	1,483	141,125	2,448	349,168
Colony of New Zealand ...	224	62,027	325	42,806	549	104,833

For comparative purposes a statement is subjoined, showing the merchant navies of some of the principal maritime countries of the world. In considering the figures, allowance must be made for the fact that the minimum tonnage of vessels included in the registrations is not the same in every instance. Thus for Norway it is 4 tons; Sweden, 20 tons; Denmark, 4 tons; France, 2 tons; Italy, 2 tons; Germany, 17½ tons; and the United States, 5 tons.

Country.	Steam.		Sailing.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
United Kingdom .....	9,484	7,617,793	10,572	1,990,626	20,056	9,608,419
New Zealand .....	224	62,027	325	42,806	549	104,833
Canada .....	2,289	310,253	4,547	342,360	6,836	652,613
Australia .....	965	208,043	1,483	141,125	2,448	349,168
Russia and Finland .....	1,333	417,922	4,704	556,614	6,037	974,536
Norway .....	1,223	531,142	5,445	935,947	6,668	1,467,089
Sweden .....	943	341,622	2,100	298,589	3,103	640,211
Denmark .....	536	259,360	3,305	157,188	3,841	416,548
German Empire .....	1,463	1,506,059	2,496	586,974	3,959	2,093,033
Austria .....	134	219,446	25	13,483	159	232,929
Hungary .....	53	62,235	19	9,166	72	71,401
Netherlands .....	235	306,694	417	75,408	652	382,102
Belgium .....	66	109,336	6	1,121	72	110,457
France .....	1,299	546,541	14,393	564,447	15,692	1,110,988
Spain .....	502	679,392	549	95,187	1,051	774,579
Italy .....	471	424,711	5,337	575,207	5,808	999,918
United States .....	7,414	2,920,953	16,643	2,603,265	24,057	5,524,218



## WAGES OF SEAMEN.

In calculating the average wages paid to seamen, regard must be had to the fact that shipping companies, in some instances, take into consideration personal qualifications and length of service of employees, when fixing rates. The following table shows the average wages, per calendar month, in 1903, paid to white crews of British ocean-going steamers trading with the Commonwealth, and also the rates for white crews of steamers engaged in the inter-state trade. The rates were obtained from the ships' articles deposited with the state shipping officers :—

Capacity	Average monthly wages. White crews.		Capacity.	Average monthly wages. White crews.	
	Ocean-going steamers.	Inter-State steamers.		Ocean-going steamers.	Inter-State steamers.
Navigation—	£ s.	£ s.	Cooking and Providoring—	£ s.	£ s.
1st Mate .....	15 0	15 0	Purser .....	£10 to £25	10 0
2nd „ .....	10 0	12 0	Chief Cook .....	11 0	12 0
3rd „ .....	8 0	10 0	2nd „ .....	6 0	7 0
Boatswain .....	6 10	7 10	Baker .....	6 0	8 0
Carpenter .....	7 10	8 10	Butcher .....	6 0	5 0
A.B. Seaman .....	4 0	6 10	Pantryman .....	4 0	5 10
Ordinary Seaman .....	2 5	3 0	Attendance—		
Winchman .....	7 0	9 10	Head Steward .....	10 0	12 0
Engineer's Department—			2nd „ .....	7 0	7 0
1st Engineer .....	25 0	£22 to £25	Stewardess .....	2 10	2 10
2nd „ .....	15 0	£17 to £18	General Servant .....	3 0	4 0
3rd „ .....	12 10	£14 to £15			
4th „ .....	10 0	12 0			
5th „ .....	8 0	10 0			
6th „ .....	8 0	10 0			
Fireman .....	4 0	8 10			
Greaser .....	4 10	8 10			
Trimmer .....	3 10	6 10			

The crews of some of the British steamers trading to the Commonwealth are composed partly of coloured seamen, chiefly Lascars and

Chinese. In the following table will be found the average rates of wages paid to the various employees in this class:—

Capacity.	Ocean-going steamers.		Capacity.	Ocean-going steamers.	
	Average monthly wages.			Average monthly wages.	
	Lascars.	Chinese.		Lascars.	Chinese.
Navigation—	£ s. d.	£ s. d.	Cooking and Providoring—	£ s. d.	£ s. d.
1st Serang (Boatswain) ..	2 8 8	2 8 0	Bhandary (Cook) .....	1 0 8	1 3 0
1st Tindel (Boatswain's Mate) .....	1 17 4	....	Baker .....	2 0 0	....
2nd " " ..	1 14 8	....	Cassub (Storekeeper) ..	1 10 0	1 18 4
3rd " " ..	1 12 0	....	Butcher .....	2 6 8	....
Seacauz (Helmsman) ..	1 17 4	....	Pantryman .....	1 5 0	....
Carpenter .....	2 17 6	....	Scullion .....	0 17 4	....
Winchman .....	1 9 4	1 18 4	Knifeman .....	0 17 4	....
Oilman .....	1 13 4	....	Iceman .....	0 18 8	....
Lascars (not otherwise described) .....	1 4 0	....	Paniwalla (Water Turn-cock).....	1 10 0	....
Engineers Department—			Attendance—		
Fireman .....	1 2 8	1 10 8	Waiter .....	1 6 8	1 18 4
Trimmer .....	0 16 0	1 6 8	Topass (Sweeper) .....	0 16 0	....
			Cabin Boy .....	0 16 0	1 8 9