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 the chapter.

| | Commonwealth of Australia. | | | New Zealand. | |
| | Entered and Cleared. | | | Entered and Cleared. | |
Year.	Vessels.	Tonnage.	Year.	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
1903	18,158	27,152,668	1903	1,225	2,215,229

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

table for the five census years commencing with 1861, and for the year
1903.

State.	Total Tonnage Entered and Cleared.					
	1861.	1871.	1881.	1891.	1901.	1903.
Commonwealth of Australia—						
New South Wales..........	745,696	1,500,479	2,786,500	5,694,236	8,521,234	9,005,401
Victoria	1,090,002	1,355,025	2,412,534	4,715,109	6,715,491	6,857,854
Queensland...............	44,645	93,236	882,491	997,118	1,685,820	1,798,455
South Australia	199,331	387,026	1,359,591	2,738,589	4,127,903	4,280,890
Western Australia	115,256	137,717	285,046	1,045,555	3,714,263	3,335,895
Tasmania.................	230,218	216,160	383,762	1,044,606	1,432,725	1,874,173
Total............	2,425,148	3,689,643	8,109,924	16,235,213	26,197,436	27,152,668
Colony of New Zealand	403,336	540,261	833,621	1,244,322	2,139,180	2,215,229

The tonnage of 1891 exceeded that of any preceding year. This
result was not altogether due to the actual requirements of the trade of
that year, as, in consequence of the maritime strike, a large quantity of
goods remained unshipped at the close of 1890, and helped to swell the
returns for the succeeding twelve months. It was not until 1895
that the tonnage of 1891 was again reached; but since 1895 there
has been a great expansion of shipping, and 1903 showed not only
the largest total tonnage recorded but, with the exception of Western
Australia, the greatest for each individual state.

Below will be found the proportion of the tonnage of each state to
the total shipping of the Commonwealth of Australia in each of the years
quoted above :—

State.	Percentage of Total of Commonwealth.					
	1861.	1871.	1881.	1891.	1901.	1903.
Commonwealth of Australia—						
New South Wales	30·8	40·7	34·4	35·1	32·5	33·2
Victoria	44·9	36·7	29·7	29·0	25·6	25·2
Queensland	1·8	2·5	10·9	6·2	6·4	6·7
South Australia	8·2	10·5	16·8	16·9	15·8	15·7
Western Australia	4·8	3·7	3·5	6·4	14·2	12·3
Tasmania	9·5	5·9	4·7	6·4	5·5	6·9
Total	100·0	100·0	100·0	100·0	100·0	100·0

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 57·31 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.		1903.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
Commonwealth of Australia—						
New South Wales	2,111	1,687,300	2,303	2,094,297	2,237	2,295,689
Victoria	1,954	1,461,974	1,745	1,992,118	1,661	2,080,716
Queensland...............	376	267,753	430	545,469	475	553,798
South Australia.........	761	683,095	719	1,135,714	779	1,275,784
Western Australia ...	149	237,708	446	973,474	338	806,876
Tasmania	680	371,205	713	485,023	802	627,500
Total	6,031	4,709,035	6,356	7,226,095	6,292	7,640,363

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. | | 1903. | |
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
Commonwealth of Australia—						
New South Wales	1,861	1,385,357	1,995	1,907,226	2,019	1,961,383
Victoria	2,166	1,761,027	1,794	2,072,747	1,886	2,443,065
Queensland	389	302,723	395	440,659	478	546,690
South Australia	865	854,236	826	1,377,399	872	1,523,445
Western Australia	158	269,256	456	977,846	360	884,845
Tasmania	679	352,406	694	433,735	788	560,871
Total..................	6,118	4,925,005	6,160	7,209,612	6,403	7,920,299

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.	1903.	1891.	1901.	1903.
Commonwealth of Australia—						
New South Wales	3,072,657	4,001,523	4,257,072	31·9	27·7	27·3
Victoria	3,223,001	4,064,865	4,523,781	33·5	28·2	29·1
Queensland	570,476	986,128	1,100,488	5·9	6·8	7·1
South Australia	1,537,331	2,513,113	2,799,229	15·9	17·4	18·0
Western Australia	506,964	1,951,320	1,691,721	5·3	13·5	10·9
Tasmania	723,611	918,758	1,188,371	7·5	6·4	7·6
Total..................	9,634,040	14,435,707	15,560,662	100·0	100·0	100·0

EXTERNAL SHIPPING.

It has been explained that in any comparison between the shipping of the Commonwealth of Australia and that of other countries the inter-state 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.		1903.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
United Kingdom—						
Entered	868	1,699,958	716	2,066,167	678	2,234,679
Cleared	588	1,217,582	784	2,144,587	561	1,875,546
Total	1,456	2,917,540	1,500	4,210,754	1,239	4,110,225
British Possessions—						
Entered	894	790,608	1,403	1,971,931	1,105	1,638,567
Cleared	942	903,972	1,349	2,081,623	1,082	1,798,701
Total	1,836	1,694,580	2,752	4,053,554	2,187	3,437,268
Foreign Countries—						
Entered	681	880,814	906	1,774,013	983	2,069,566
Cleared	865	1,108,239	964	1,723,408	1,054	1,974,947
Total	1,546	1,989,053	1,870	3,497,421	2,037	4,044,513
All External Trade—						
Entered	2,443	3,371,380	3,025	5,812,111	2,766	5,942,812
Cleared	2,395	3,229,793	3,097	5,949,618	2,697	5,649,194
Total	4,838	6,601,173	6,122	11,761,729	5,463	11,592,006

The external shipping of the Commonwealth of Australia during 1903 was over 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.		1903.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
British Empire—						
United Kingdom	1,456	2,917,540	1,500	4,210,754	1,239	4,110,225
New Zealand	1,007	749,886	999	1,345,471	940	1,468,030
India and Ceylon	134	276,030	142	330,714	165	431,204
Hong Kong	227	324,820	241	380,174	159	278,599
Canada	27	29,952	61	118,523	56	131,353
Cape Colony	63	55,611	430	681,869	260	434,884
Natal	35	12,950	423	794,583	144	294,805
Fiji	107	105,033	60	58,799	84	78,492
Straits Settlements	61	75,269	90	129,112	142	217,092
Other British Possessions	175	65,029	306	214,309	237	102,809
Total, British	3,292	4,612,120	4,252	8,264,308	3,426	7,547,493
Foreign Countries—						
France	101	255,351	117	304,026	123	325,489
Germany	208	393,001	274	909,798	270	1,001,305
Netherlands	13	15,731	7	14,748	6	9,831
Belgium	27	41,907	14	29,716	19	29,403
United States	418	519,252	385	758,281	485	979,389
China	34	33,135	11	23,797	6	8,908
Japan	7	13,677	80	192,674	133	310,539
New Caledonia............	154	155,226	125	179,486	134	217,954
Java	37	58,379	88	183,349	44	104,872
Philippine Islands	29	36,305	52	87,809	63	135,280
Hawaiian Islands.........	1	430	107	106,205	101	122,049
Peru	16	21,520	39	48,554	26	34,994
Chili	131	146,448	218	324,892	212	327,333
Other Foreign Countries	370	298,691	353	334,086	415	437,167
Total, Foreign.........	1,546	1,989,053	1,870	3,497,421	2,037	4,044,513
All External Tonnage	4,838	6,601,173	6,122	11,761,729	5,463	11,592,006

It will be seen from the above figures that out of a total external tonnage. amounting to 11,592,006 tons in 1903, vessels from the United Kingdom aggregated 4,110,225 tons, or 35·5 per cent. of the whole. New Zealand furnished the next largest tonnage, with 1,468,030 tons, or 12·7 per cent., followed by Germany, with 1,001,305 tons, equal to 8·6 per cent., and the United States, with 979,389 tons, or 8·4 per cent. of the total. During the twelve years, 1891-1903, the tonnage of the United Kingdom increased by 1,192,685 tons, or 41 per cent., while British tonnage as a whole increased by 2,935,373 tons, or 64 per cent., the German by 608,304 tons, or 155 per cent., and the United States tonnage by 460,137 tons, or 89 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 considerably 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.		1903.		1891.	1901.	1903.
	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.			
New South Wales	2,149	2,621,579	2,529	4,519,711	2,519	4,748,329	39·7	38·4	41·0
Victoria	971	1,492,108	1,226	2,650,626	920	2,334,073	22·6	22·5	20·1
Queensland	405	426,642	534	699,692	500	697,967	6·5	6·0	6·0
South Australia	803	1,201,258	721	1,614,790	546	1,481,661	18·2	13·7	12·8
Western Australia	291·	538,591	883	1,762,943	713	1,644,174	8·1	15·0	14·2
Tasmania	219	320,995	229	513,967	265	685,802	4·9	4·4	5·9
Total	4,838	6,601,173	6,122	11,761,729	5,463	11,592,006	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.....	105,619,344	2·4	Spain	30,091,799	1·6
Russia in Europe.....	19,548,000	0·1	Italy	46,298,739	1·4
Norway................	6,490,786	2·9	United States	48,603,539	0·6
Sweden........	16,566,699	3·2	Argentine Republic	17,195,713	3·6
Denmark	12,021,815	4·8	Canada	14,731,488	2·8
Germany	30,882,531	0·5	Cape Colony	12,511,691	5·1
Netherlands...........	18,936,046	3·5	New Zealand.........	2,215,229	2·7
Belgium	20,246,022	2·9	Commonwealth of		
France	38,644,015	1·0	Australia	11,592,006	3·0

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 1903 the proportion was 7·2 per cent. 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 10 per cent. of the total external tonnage. The figures for Tasmania were again high in 1903, the tonnage in ballast being 12·6 per cent. of the total external tonnage, the proportion for the previous year being 14·4. Of the 86,615 tons entered and cleared this state in 1903, 15,671 tons represented sailing vessels entered in ballast from North America, and 16,077 tons sailing vessels in ballast from South Africa. Amongst the clearances there were no less than 10,420 tons representing sailing vessels cleared in ballast for Japan. The total external tonnage entered and cleared the Commonwealth in ballast during the years 1891, 1901, and 1903 was as follows :—

State.	External Tonnage Entered and Cleared in Ballast.			Percentage of Tonnage in Ballast to Total External Tonnage.		
	1891.	1901.	1903.	1891.	1901.	1903.
Commonwealth of Australia—						
New South Wales	100,167	579,904	517,012	3·8	12·8	10·9
Victoria	47,721	194,442	23,246	3·2	7·3	1·0
Queensland	36,700	24,869	25,945	8·6	3·6	3·7
South Australia	52,515	102,899	34,339	4·4	6·4	2·3
Western Australia	14,104	210,581	151,044	2·6	11·9	9·2
Tasmania	16,357	2,355	86,615	1·6	0·5	12·6
Total	267,564	1,115,050	838,201	4·1	9·5	7·2

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 419,700 tons of shipping in ballast, the following being the chief countries represented :—Cape Colony, 157,619 tons ; New Zealand, 83,628 tons ; Natal, 58,104 tons ; Portuguese East Africa, 26,438 tons ; Philippine Islands, 10,924 tons.

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
1903	175,335	7·9

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	17·3	France	16·9
Russia in Europe	33·3	Spain	28·2
Norway	27·9	United States	16·1
Sweden	45·1	New Zealand	8·9
Germany	20·1	Commonwealth of	
Netherlands	33·2	Australia	7·2
Belgium	22·2		

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 85 per cent. during the period extending from 1891 to 1903. 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 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.		1903.		1891.	1901.	1903.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British	15,472	14,087,469	16,544	22,358,652	16,235	23,085,914	86·8	85·3	85·0
French	247	591,524	305	654,475	427	893,693	3·6	2·5	3·3
German	526	843,652	662	1,771,945	609	1,900,546	5·2	6·8	7·0
Scandinavian	319	292,071	403	350,040	289	277,428	1·8	1·3	1·0
Italian	11	9,736	93	118,881	109	150,368	0·1	0 5	0·6
Japanese	17	34,907	120	285,370	128	338,905	0·2	1·1	1·2
American	307	296,096	401	520,705	259	381,716	1·8	2·0	1·4
Other nationalities.	88	79,758	110	137,368	102	124,098	0·5	0·5	0·5
Total	16,987	16,235,213	18,638	26,197,436	18,158	27,152,668	100·0	100·0	100·0

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.		1903.		1891.	1901.	1903.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British............	1,359	1,120,435	·1,234	1,831,590	1,090	1,881,619	90·0	85·6	84·9
French	4	1,862	1	1,562	1	1,248	0·2	0·1	0·1
German	16	12,876	2	1,684	13	16,103	1·0	0·1	0·7
Scandinavian	17	12,906	39	26,541	32	19,660	1·0	1·2	0·9
American	81	91,387	80	263,134	79	288,619	7·4	12·3	13·1
Other nationalities.	4	4,856	23	14,669	10	7,980	0·4	0·7	0·3
Total	1,481	1,244,322	1,379	2,139,180	1,225	2,215,229	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.
1894	281	542,458	12,893	855	616,597	26,806	87	103,161	4,054
1903	286	917,863	15,689	804	963,756	33,000	135	333,610	12,571

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 1903 to 9,216,221 tons entered, and 9,266,980 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 1902. 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.	1903.	1891.	1901.	1903.
Commonwealth of Australia—						
New South Wales	1,582,308	3,258,228	3,376,642	60·3	72·1	71·1
Victoria	1,044,467	2,194,863	2,061,472	70·0	82·8	88·3
Queensland	......	......	379,156	......	......	54·3
South Australia	......	......	1,308,201	......	......	88·3
Western Australia	483,460	1,460,619	1,347,584	89·8	82·9	82·0
Tasmania	287,188	488,379	564,518	89·5	95·0	82·3
Colony of New Zealand	822,086	1,860,622	1,990,423	66·1	87·0	89·9

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 in most cases to the year 1902, the latest for which information is obtainable for the places specified :—

Country.	Percentage of Steam to Total Tonnage.		
	1881.	1891.	1902.
United Kingdom	67·7	84·2	94·8 (1903)
Russia in Europe	74·3	91·0	95·9
Norway	31·1	55·7	72·0
Sweden	46·8	72·1	84·5
Denmark	61·9	81·7	86·9
Germany	70·8	87·2	91·5
Netherlands	74·4	92·5	97·1
Belgium	81·3	94·0	96·5
France	69·5	87·0	95·0
Portugal	82·1	93·6	98·0
Spain	......	94·0	98·0
Italy	72·8	88·3	97·3
United States	55·5	72·3	87·9
Argentine Republic	70·4	86·7	93·7
Canada	....	66·2	82·9
Cape Colony	62·5	79·8	90·1
Natal	....	91·3	93·1
New Zealand	....	66·1	89·9 } 1903
Commonwealth of Australia	68·6	81·8	78·0 } 1903

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.	Average Tonnage per vessel.
INTER-STATE SHIPPING.			
1881	10,484	4,941,294	471
1891	12,149	9,634,040	793
1901	12,516	14,435,707	1,153
1903	12,695	15,560,662	1,225
EXTERNAL SHIPPING.			
1881	3,924	3,168,630	808
1891	4,838	6,601,173	1,364
1901	6,122	11,761,729	1,921
1903	5,463	11,592,006	2,122
ALL COMMONWEALTH SHIPPING.			
1881	14,408	8,109,924	563
1891	16,987	16,235,213	956
1901	18,638	26,197,436	1,406
1903	18,158	27,152,668	1,496

As the table shows, the total number of vessels engaged in the
shipping trade of the Commonwealth of Australia during 1903 was
1,171 more than the figure for 1891, and the returns of tonnage show
an increase of over 10½ millions. The average tonnage of shipping
is 1,496, 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
1903	1,225	2,215,229	61,260	1,808	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 256 since 1891, the total tonnage has increased by about 971,000 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.	1903.
COMMONWEALTH OF AUSTRALIA.				
New South Wales—				
Sydney	1,610,692	3,469,862	5,413,677	5,934,411
Newcastle	1,127,238	1,844,842	2,609,861	2,673,605
Wollongong	14,642	101,888	300,699	204,730
Victoria—				
Melbourne..................	2,144,949	4,362,138	6,366,103	6,487,290
Geelong	93,347	190,932	259,573	278,458
Queensland—				
Brisbane	406,032	855,993	1,207,295	1,408,794
Townsville	205,886	544,470	95,101	98,311
Rockhampton	207,706	471,837	36,653	14,520
Cooktown	217,144	469,577	31,670	16,316
Cairns	56,447	326,898	4,084	524,662
Mackay	104,174	330,119	4,473	410,521
South Australia—				
Port Adelaide	1,078,920	1,990,938	3,296,108	3,563,987
Port Pirie	33,325	321,781	376,856	242,569
Port Darwin...............	90,100	170,642	163,705	194,736
Western Australia—				
Fremantle	42,618	63,068	1,864,195	2,117,454
Albany	219,902	931,502	1,667,707	877,224
Bunbury	7,905	1,189	8,942	235,958
Tasmania—				
Hobart	204,007	646,683	870,733	1,142,756
Launceston	138,657	293,537	199,444	238,401
Devonport.................	....	8,121	124,964	219,559
NEW ZEALAND.				
Wellington	119,243	293,451	591,154	715,117
Auckland	238,886	345,183	736,005	805,340
Bluff Harbour	91,592	196,540	303,496	274,524
Lyttelton	167,151	161,387	208,476	116,402
Dunedin	114,637	97,409	112,718	112,541

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 1903 :—

Port.	Total Trade.	Average per ton of Shipping.			Port.	Total Trade	Average per ton of Shipping.		
	£	£	s.	d.		£	£	s.	d.
New South Wales—					Western Australia—				
Sydney..............	41,607,263	7	0	3	Fremantle	13,098,197	6	3	8
Newcastle	3,193,786	1	3	11	Albany...............	953,127	1	1	9
Victoria—					Tasmania—				
Melbourne	32,584,784	5	0	6	Hobart...............	1,860,895	1	12	7
Queensland—					Launceston	1,760,553	7	7	8
Brisbane	5,862,245	4	3	3	New Zealand—				
South Australia—					Wellington	6,704,653	9	4	9
Port Adelaide......	9,603,611	2	13	11	Auckland...........	5,668,790	7	0	9

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.
	tons.	£			tons.	£
England and Wales—				Scotland—		
London.........	19,063,629	268,109,356		Glasgow	4,297,054	35,654,729
Liverpool.......	14,499,618	243,607,200		Leith	1,952,570	18,612,486
Cardiff	13,179,156	14,660,914		Kirkcaldy ...	2,297,199	1,700,823
Newcastle and N.&S.Shields	9,021,217	17,725,844		Grangemouth.	1,440,229	5,081,729
Hull	4,686,918	52,655,977		Ireland—		
Southampton	3,758,801	30,327,773		Belfast	716,569	8,895,730
Sunderland	1,941,790	2,327,037		Dublin	425,097	3,260,414
Grimsby	1,749,155	20,397,588		Cork	169,537	1,199,971
Dover..	1,895,399	12,034,875		Australia—		
Newport	2,712,574	4,918,629		Sydney.........	5,934,411	41,607,263
Harwich	1,477,382	24,092,151		Melbourne ...	6,487,290	32,584,784
Bristol ......-...	1,366,487	14,905,945		Brisbane	1,408,794	5,862,245
Newhaven.. ...	661,006	14,316,213		Adelaide	3,563,987	9,603,611
Swansea	2,470,614	10,040,222		Fremantle ...	2,117,454	13,098,197
Manchester. ...	1,962,579	29,576,320		Hobart.........	1,142,756	1,860,895
Middlesbrough	1,801,241	5,995,892		New Zealand—		
				Wellington ...	715,117	6,704,653
				Auckland......	805,340	5,668,790

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.

<center>REGISTRATION OF VESSELS.</center>

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 1903 are given below :—

State.	Steam.		Sailing.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
Commonwealth of Australia—						
New South Wales	540	67,469	527	55,386	1,067	122,855
Victoria.....................	159	77,071	223	36,055	382	113,126
Queensland	85	13,751	98	5,939	183	19,690
South Australia	113	38,029	216	19,560	329	57,589
Western Australia	36	13,548	288	8,064	324	21,612
Tasmania	57	9,038	150	8,744	207	17,782
Total—Australia ...	990	218,906	1,502	133,748	2,492	352,654
Colony of New Zealand ...	235	62,722	335	43,897	570	106,619

For comparative purposes a statement is subjoined, showing the mer-
chant 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, $17\frac{1}{2}$ tons ;
and the United States, 5 tons.

Country.	Steam.		Sailing.		Total.	
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.
United Kingdom	10,122	8,399,668	10,330	1,868,936	20,452	10,268,604
New Zealand	235	62,722	335	43,897	570	106,619
Canada	2,419	338,251	4,601	344,896	7,020	683,147
Australia	990	218,906	1,502	133,748	2,492	352,654
Russia and Finland	1,394	441,598	4,984	568,568	6,378	1,010,166
Norway	1,290	567,161	5,569	883,955	6,859	1,451,116
Sweden	965	361,756	2,167	296,874	3,132	658,630
Denmark	533	272,883	3,372	158,845	3,905	431,728
German Empire	1,545	1,622,439	2,500	581,365	4,045	2,203,804
Austria	140	235,990	30	18,369	170	254,359
Hungary	64	83,745	13	6,543	77	90,288
Netherlands	257	334,398	436	72,911	693	407,309
Belgium	68	105,305	5	877	73	106,182
France	1,330	548,921	14,691	668,693	16,021	1,217,614
Spain	520	727,945	466	83,157	986	811,102
Italy	485	448,404	5,205	570,403	5,690	1,018,807
United States	8,054	3,408,088	16,371	2,679,257	24,425	6,086,345

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. Average monthly wages.		Capacity.	Ocean-going steamers. 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 6 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