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**NATIONAL INDUSTRIES**

**EDITED BY HENRY HIGGS, C.B.**

**BRITISH SHIPPING**

## **NATIONAL INDUSTRIES**

Edited by

**HENRY HIGGS, C.B.**

*Large 8vo. Cloth gilt.*

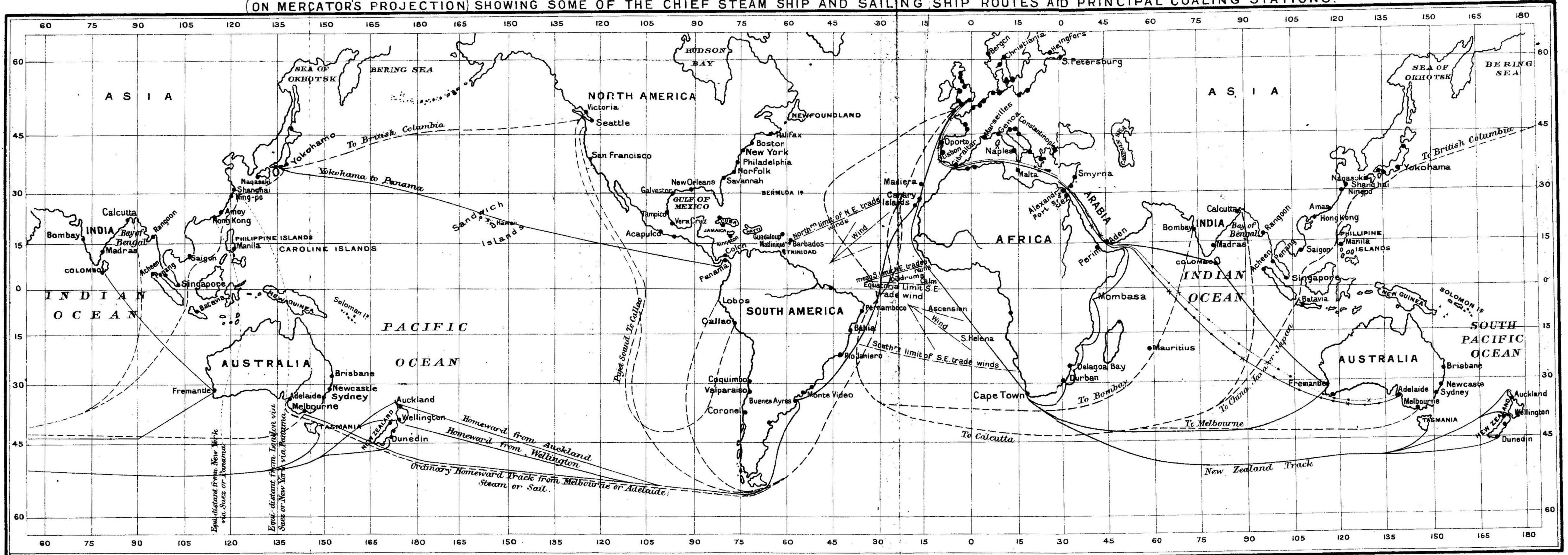
**A HISTORY OF INLAND TRANSPORT  
AND COMMUNICATION IN ENGLAND.**  
By Edwin A. Pratt,

**BRITISH SHIPPING.** By A. W. Kirkaldy.

**THE COAL TRADE.** By H. Stanley Jevons.

# TRACK CHART OF THE WORLD

(ON MERCATOR'S PROJECTION) SHOWING SOME OF THE CHIEF STEAM SHIP AND SAILING SHIP ROUTES AND PRINCIPAL COALING STATIONS.



The parallel tracks from Australia to London via the Suez Canal show the tracks taken by two modern cargo steamers of which A left Adelaide at 6 p.m. on Sep. 27<sup>th</sup> 1912, & M. left Adelaide at 10 p.m. on Sep. 26<sup>th</sup> 1912. After being within wireless speaking distance all the way to Europe A passed M off Lisbon. The — track is A, the — track is M; each day's run is marked with a dot, each week's run with a cross.

For the Atlantic Lines see pp 377-382

Sailing ship tracks ———  
 Steam ship tracks ———  
 Coaling Stations •

**BRITISH SHIPPING**  
**ITS HISTORY, ORGANISATION**  
**AND IMPORTANCE**

BY

**ADAM W. KIRKALDY**

M.A., B.LITT. (OXON.), M.COM.

PROFESSOR OF FINANCE IN THE UNIVERSITY OF BIRMINGHAM

WITH A MAP OF MAIN ROUTES AND COALING-STATIONS,  
AND FULL APPENDICES

*Second Impression*

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1919

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TO  
MY OLD FRIEND  
CAPTAIN THOMAS YOUNG  
IN MEMORY  
OF MANY PLEASANT DAYS SPENT ON BOARD THE  
*CITY OF AGRA, ESSEX, AND AJANA*



## PREFACE

THIS series of books " is designed to give a succinct account of the present position of National Industries in national and international trade, the effects of Government regulations, foreign tariffs, foreign competition, and the rivalry of other branches of production which offer alternative commodities or services to the consumer."

To write an essay on British Shipping bearing all these points in mind was no easy task to undertake, especially when the length of the book was necessarily limited. But the writing of the book has been a great pleasure for many reasons. One's interests from early boyhood have been connected with the sea and ships, thus the work entailed a review of many past years, and the recollection of many interesting experiences. Moreover, in making oneself familiar with the latest phases of the industry it has been necessary to visit ships, ports and docks, and to interview, or correspond with, those who are in authority." The kindly courtesy with which questions, both oral and written, have been answered, merits more than the mere expression of thanks.

I am especially indebted to the following Gentlemen and Corporations for assistance, and for permission to use material :—

*Lloyd's*, who allowed me to reprint from their

Calendar the Tracks of Atlantic Steamers, and the Sailing Ship Records, which had been very carefully compiled by Mr Basil Lubbock, who through Lloyd's expressed his pleasure that his tables should be printed in this book.

*Lloyd's Register of British and Foreign Shipping*, who placed their valuable reports at my disposal and gave me permission to publish any parts that might be necessary.

*The British Corporation for the Survey and Registry of Shipping*, who furnished me with information as to the origin, development and present work of their institution.

*The Suez Canal Company*, who not only sent me their printed reports, but assisted in drawing up the table printed in the appendix.

The *Authorities* of the following Ports and Docks were especially courteous in sending me their reports and balance sheets, and in replying to questions:—London, Liverpool, Glasgow, Manchester, Bristol, Cardiff, Newport and Swansea.

The Editor of *Fairplay* most readily consented to the reproduction of the diagrams which had been prepared for his Journal, and thus are among the appendices of this volume. I have also for some time past made a practice of reading the leading shipping papers, and would take this opportunity to acknowledge my indebtedness to *Fairplay*, the *Shipping World*, and *The Syren and Shipping* for much information that might have otherwise escaped my notice. Lastly, but by no means least, am I indebted to many friends with whom I have dis-

## PREFACE

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tossed the shipping questions of the hour. Foremost amongst these is the old friend to whom I have dedicated this volume.

For all mistakes or slips, and there are probably many in a book like this, I take all responsibility. I shall gladly receive from readers any corrections or suggestions on points where they feel that a correction or modification should be made.

It had been intended to include in this book a section on the general subject of the labour connected with the shipping industry. It was found, however, that doing so would have increased the volume to almost unwieldy dimensions. The subject may, however, be dealt with in another essay at no very distant date.

A. W. KIRKALDY

BIRMINGHAM, *May* 1914

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## APPENDIX 1'

From "Lloyd's Calendar," 1913, Pages 570-72

(Reproduced by Permission)

### RECORD SAILING SHIP VOYAGES

Mr Basil Lubbock has been kind enough to furnish the following particulars of Record Sailing Ship Passages. The passage is usually from pilot to pilot, but in a few cases from anchorage to anchorage. All vessels are British except those marked A, which are American; A, b, American built but British owned; and G, German. Under Record—D means days, H hours.

All the vessels mentioned were ship-rigged except where otherwise stated.

	Date	Vessel	Tons	Record		Remarks
				D.	H.	
<b>UNITED KINGDOM TO AUSTRALIA</b>						
	1869	Thermopylae, comp.	927	60	0	London to Melbourne (pilot to pilot)
	1877	Ben Voirlich, iron	1,474	61	0	Liverpool to Melbourne (dock to dock)
	1870	Thermopylae, comp.	927	61	0	London to Melbourne
A b	1861	Marco Polo, wood	1,512	61	0	Liverpool to Melbourne
A b	1864	James Baines, wood	2,275	63	0	Liverpool to Melbourne
<b>AUSTRALIA TO UNITED KINGDOM</b>						
A b	1853	Lightning, wood	2,090	63	0	Melbourne to Liverpool
	1856	Heather Belle, wood	479	64	0	Melbourne to Liverpool
	1885	Cutty Sark, comp.	963	67	0	Sydney to Lizard
	1869	Patriarch, iron	1,339	63	0	Sydney to Lizard

UNITED KINGDOM TO INDIA

	186-	Alnwick Castle, wood	.	.	1,087	67	0	Channel to Sandheads
	1863	The Tweed, wood	.	.	1,745	77	0	London to Bombay (with Persian Gulf Telegraph Cable on board)
	1863	Hotspur, wood	.	.	1,050	79	0	Lizard to Madras
A b	1857	Lightning, wood	.	.	2,090	87	0	Portsmouth to Calcutta

UNITED KINGDOM TO CHINA

	1866-7	Ariel, comp.	.	.	853	80	0	London to Hong Kong (by long Eastern route and against N.E. monsoon)
	1857	Northfleet, wood	.	.	951	88	0	Woolwich to Hong Kong
	1858	Northfleet, wood	.	.	951	88	7	Woolwich to Hong Kong

UNITED KINGDOM TO UNITED STATES

A	1855	Mary Whitridge, wood	.	.	987	14	9	Liverpool to Baltimore
A	1860	Andrew Jackson, wood	.	.	1,676	15	0	Rock Light to Sandy Hook

EUROPE TO WEST COAST, SOUTH AMERICA

G	1903	Preussen, steel 5-mast	.	.	5,081	57	0	Hambourg to Iquique
	1904	Eudora, 4-mast barque	.	.	1,991	57	16	Eddystone to Coquimbo
G	1904	Preussen, steel 5-mast	.	.	5,081	62	0	Hambourg to Iquique
G	1904	Preussen, steel 5-mast	.	.	5,081	62	0	Hambourg to Iquique
G	1897	Potosi, steel 5-mast barque	.	.	4,026	64	0	Hambourg to Valparaiso
G	1901	Potosi, steel 5-mast barque	.	.	4,026	66	0	Hambourg to Valparaiso
	1903	Tamar, steel	.	.	2,112	68	0	Dover to Callao

Date	Vessel	Tons	Record		Remarks
			D.	M.	
<b>UNITED STATES TO UNITED KINGDOM</b>					
A b 1854	James Baines, wood . . . .	2,275	12	6	Boston to Liverpool
A ..	Adelaide, wood . . . .	..	12	8	New York to Liverpool
A b 1854	Red Jacket, wood . . . .	2,035	13	1	New York to Liverpool
A 1853	Typhoon, wood . . . .	1,610	13	6	Portsmouth, N.H., to Liverpool (dock to dock)
A ..	Fidelia, wood . . . .	..	13	7	New York to N.W. Lightship
A 1859	Dreadnought, wood . . . .	1,413	13	8	New York to Liverpool
A 1854	Dreadnought, wood . . . .	1,413	13	11	New York to Liverpool
A 1853	Sovereign of the Seas, wood . . . .	2,421	13	19	New York to Liverpool
A b 1854	Lightning, wood . . . .	2,090	13	19½	From the Banks Boston to Liverpool (best run in 24 hours, 436 nautical miles)
<b>UNITED STATES TO SAN FRANCISCO</b>					
A 1851	Flying Cloud, wood . . . .	1,793	89	0	From New York
A 1854	Flying Cloud, wood . . . .	1,793	89	0	From New York
A 1860	Andrew Jackson, wood . . . .	1,676	89	0	From New York
A 1852	Sword Fish, wood . . . .	1,036	90	0	From New York
A 1853	Flying Fish, wood . . . .	1,505	92	0	From New York
A 1853	John Gilpin, wood . . . .	1,089	93	0	From New York
A 1856	Sweepstakes, wood . . . .	1,735	94	0	From New York
A 1851	Surprise, wood . . . .	1,361	96	0	From New York
A 1854	Romance of the Seas, wood . . . .	1,782	96	0	From Boston
<b>SAN FRANCISCO TO UNITED STATES</b>					
A 1854	Comet, wood . . . .	1,836	76	0	To New York
A 1853	Northern Light, wood . . . .	1,021	76	5	To Boston Light

A	1853	Contest, wood . . . . .	1,150	80	0	To New York
A	1898	Shenandoah, wood 4-mast barque	3,154	95	0	To New York

## CHINA TO UNITED STATES

A	1847-8	Sea Witch, wood . . . . .	890	78	0	From Canton
A	1845	Natchey, wood . . . . .	..	78	6	Macao to Boston
A	1848-9	Sea Witch, wood . . . . .	890	79	0	From Canton
A	1847	Sea Witch, wood . . . . .	890	81	0	From Canton
A	1846	Natchey, wood . . . . .	..	83	0	
A	1852	N.B. Palmer, wood . . . . .	1,490	84	0	From Canton

## CHINA TO UNITED KINGDOM

	1869	Sir Lancelot, comp. . . . .	886	89	0	From Foochow
A	1852	Witch of the Wave, wood . . . . .	1,200	90	0	From Whampoa
A	1855	Nightingale, wood . . . . .	1,066	91	0	From Shanghai
	1869	Thermopylae, comp. . . . .	927	91	0	From Foochow
	1871	Titania, comp. . . . .	879	93	0	From Foochow
A	1850	Oriental, wood . . . . .	1,003	97	0	From Grand Ladrons
	1868	Spindrift, comp. . . . .	899	97	0	From Foochow
	1868	Ariel, comp. . . . .	853	97	0	From Foochow
	1870	Lahloo, comp. . . . .	799	97	0	From Foochow
	1869	Titania, comp. . . . .	879	98	0	From Shanghai
	1868	Sir Lancelot, comp. . . . .	886	98	0	From Foochow
	1866	Ariel, comp. . . . .	853	99	0	From Foochow

	Date	Vessel	Tons	Record		Remarks
				D.	H.	
<b>CHINA TO UNITED KINGDOM—continued</b>						
	1866	Tae ping, comp.	767	99	0	From Foochow
	1866	Serica, wood	708	99	0	From Foochow
	1867	Sir Lancelot, comp.	686	99	0	From Shanghai
<b>MISCELLANEOUS</b>						
	1898	Drumalis, iron	..	14	0	Cape Town to Newcastle N.S.W.
	1900	Audorinha, steel 4-mast barque	3,481	14	0	Cape Town to Newcastle N.S.W.
A	1855	Swordfish, wood	1,036	32	9	San Francisco to Shanghai
	1896	Wendur, iron 4-mast barque	2,046	29	13	Newcastle, N.S.W. to Valparaiso
	1896	Loch Torridon, iron 4-mast barque	2,081	30	2	Newcastle, N.S.W. to Valparaiso
	..	Eurydice, iron	1,152	19	0	Yokohama to Port Townsend
	1870	Thermopylae, comp	927	28	0	Newcastle, N.S.W. to Shanghai
A	1853	Hornet, wood	1,426	34	0	San Francisco to Callao
	1897	Westgate, iron	1,921	80	0	New York to Sydney
	1897	Benares, iron 4-mast barque	1,721	40	0	Table Bay to New York
	1897	Foyledale	..	25	0	Higo to Tacoma
	1897	Selkirkshire, iron barque	1,237	21	0	Yokohama to Astoria
	1899	Puritan, steel 4-mast barque	2,361	16	0	New York to Butt of Lewis
	1894	Eudora, steel 4-mast barque	1,991	99	0	Swansea to San Francisco
	1896	Siren, iron	1,478	25	0	Table Bay to Sydney
<b>OLD INDIA PASSAGES</b>						
	1820	Lord Wellington, H.E.I.C.	..	82	0	London to Calcutta
	1826	Thomas Coutts, H.E.I.C.	..	82	0	London to Bombay
	183-	Castle Huntley, H.E.I.C.	..	77	0	Torbay to Bombay
	183-	Earl of Balcarres, H.E.I.C.	..	79	0	London to Bombay
	1836	Parkfield	..	75	0	Liverpool to Bombay

	--	Seringapatam, Green's	.	.	--	85	/	0	London to Bombay
A	1822	The George of Salem <sup>1</sup>	.	.	--	89		0	Salem to Calcutta
A	1823	The George of Salem <sup>1</sup>	.	.	--	96		0	Salem to Calcutta
A	1831	The George of Salem <sup>1</sup>	.	.	--	93		0	Calcutta to Salem
A	1830	The George of Salem <sup>1</sup>	.	.	--	95		0	Calcutta to Salem
A	1821	The George of Salem <sup>1</sup>	.	.	--	95		0	Calcutta to Salem

<sup>1</sup>This vessel made 21 successful voyages to Calcutta and was known all over the world as "The Salem Frigate."

#### FASTEST DAY'S RUN

The *Lightning*, 436 Nautical Miles

March 1, 1854. The *Lightning* (Black Ball Australian Liner) when crossing from Boston to Liverpool on her maiden voyage. Her position on February 28th was, Lat. 52.38 N., Long. 22.45 W. Log entry reads as follows:—"Wind, south. Strong gales; bore away for the North Channel; carried away the foretop-sail and lost jib; hove the log several times and found the ship going through the water at the rate of 18 or 18½ knots; lee rail under water and rigging slack.

## APPENDIX II

### TOTAL NET TONNAGE OF BRITISH AND FOREIGN VESSELS, SAILING AND STEAM, ENTERED AND CLEARED AT PORTS IN THE UNITED KINGDOM FROM AND TO FOREIGN COUNTRIES AND BRITISH POSSESSIONS.

*(Compiled from the Statistical Abstracts for the United Kingdom.)*

	1855	1860	1870	1880	1890	1900	1910	1911	1913
<b>BRITISH—</b>									
Steam	..	..	13,341,058	30,976,037	49,023,775	61,755,995	78,926,015	81,101,068	..
Sailing	..	..	11,731,122	10,372,947	4,949,337	2,408,183	889,015	784,386	..
<b>Total</b>	<b>10,919,732</b>	<b>13,914,923</b>	<b>25,072,180</b>	<b>41,348,984</b>	<b>53,973,112</b>	<b>64,164,178</b>	<b>79,815,030</b>	<b>81,885,454</b>	<b>..</b>
<b>FOREIGN—</b>									
Steam	..	..	1,731,273	6,237,905	12,661,234	29,996,788	51,205,189	53,997,891	..
Sailing	..	..	9,836,729	11,149,174	7,649,523	5,816,079	3,010,039	3,025,996	..
<b>Total</b>	<b>7,569,738</b>	<b>10,774,369</b>	<b>11,568,002</b>	<b>17,387,079</b>	<b>20,310,757</b>	<b>35,812,867</b>	<b>54,215,228</b>	<b>57,023,887</b>	<b>..</b>
<b>TOTAL—</b> British and Foreign	<b>18,489,470</b>	<b>24,689,292</b>	<b>36,640,182</b>	<b>58,736,063</b>	<b>74,283,869</b>	<b>99,977,045</b>	<b>134,030,258</b>	<b>138,909,341</b>	<b>..</b>
Percentage of British to total	59.05	56.3	68.4	70.4	72.6	64.1	59.5	58.9	..
Or reducing the tonnage to terms of steam tonnage, reckoning one ton steamer equal to		British Foreign	16,273,838 4,190,455	33,589,273 9,025,198	50,261,109 14,573,615	62,358,041 31,450,808	79,148,268 51,957,698	81,297,164 54,754,390	.. ..

## • APPENDIX III

TABLE SHOWING THE DEVELOPMENT IN THE IMPORTATION OF FROZEN MUTTON INTO THE *United Kingdom* FROM AUSTRALIA, NEW ZEALAND, AND SOUTH AMERICA FROM 1880 TO 1893.

(Compiled from official returns.)

## CARCASSES

Year	Australia	New Zealand	Falkland Islands	River Plate	Total
1880	400	..	..	..	400
1881	17,275	..	..	..	17,275
1882	57,256	8,839	..	..	66,095
1883	63,733	120,893	..	17,165	201,791
1886	66,960	655,888	30,000	434,699	1,187,547
1890	207,984	1,533,393	10,168	1,196,531	2,948,076
1893	605,692	1,893,604	16,425	1,373,723	3,889,444

TOTAL EXPORTS OF FROZEN MEAT FROM NEW ZEALAND. 1882-1911.

Year	lbs.	Year	lbs.
1882	1,707,328	1900	206,621,072
1883	9,853,200	1903	266,408,800
1886	38,758,160	1905	189,356,608
1890	100,934,756	1910	297,269,952
1893	100,262,453	1911	252,063,280
1895	127,018,864		

EXPORT OF FROZEN MUTTON FROM ARGENTINA. 1895-1911.

Year	Tons.	Year	Tons.
1895	41,882	1910	75,102
1900	56,412	1911	85,916
1905	78,351		



## APPENDIX IV

### STATISTICS SHOWING THE DEVELOPMENT OF THE SUEZ CANAL COMPANY FROM THE DATE OF OPENING.

(The figures in this table were checked at the office of the Suez Canal Company.)

Year	No. of Vessels	Gross Tonnage	Net Tonnage Suez Canal Measurement	Average net Tonnage	Receipts General	Dividends Net	Price of Stock	Percentage of British Tonnage
1870	486	654,914	436,609	898	£206,373	23,500	Fr. about 272 frs.	66.35
1875	1,494	2,940,708	2,009,984	1,345	£553,785	24,920	<sup>1</sup> £22½— <sup>2</sup> £33½	74.18
1880	2,026	4,344,520	3,057,422	1,509	£1,593,620	44,754	<sup>1</sup> £28½— <sup>2</sup> £49½	79.97
1885	3,624	8,985,412	6,335,753	1,748	£2,488,298	80,642	<sup>1</sup> £71½— <sup>2</sup> £98½	76.77
1890	3,389	9,749,129	6,890,094	2,033	£2,679,360	86,751	<sup>2</sup> £93½	77.37
1895	3,434	11,833,637	8,448,383	2,460	£3,124,149	92,500	<sup>2</sup> £129	71.8
1900	3,441	13,699,238	9,738,152	2,830	£3,624,944	108	<sup>2</sup> £140½	57.6
1905	4,116	18,310,442	13,134,105	3,161	£4,554,672	141	<sup>2</sup> £177	63.6
1910	4,533	23,054,901	16,581,898	3,658	£5,217,462	151	<sup>1</sup> £196½— <sup>2</sup> £219	62.9
1912	5,373	28,008,945	20,275,120	3,774	£5,596,905	165	<sup>1</sup> £225— <sup>2</sup> £262	63.4

<sup>1</sup> Highest and Lowest prices for the year.

<sup>2</sup> Average price for the year.

The shares were first quoted on the London Stock Exchange on February 23rd 1875.

### DEPTH OF WATER IN THE SUEZ CANAL

On January 5th 1914, the Company announced that the maximum draught of water authorised in the Canal has been increased to 29 feet.

The increasing draught of water authorised since the opening of the Canal is as under:—

Year	feet	inches	Year	feet	inches	Year	feet
1870	24	4	1902	26	4	1908	28

## APPENDIX V

## COPY OF A SUEZ CANAL ACCOUNT, 1913.

Messrs the CAPTAIN AND OWNERS  
of the S.S. "X. Y. Z."

In Account with THE ENGLISH COALING COMPANY, Ltd.

Homeward.

Dr To Canal dues on Tons 5610.58 @ Fcs. 6.75 Fcs.	37,871	42
" Canal dues on passengers . . . . .		
" Pilotage (night) . . . . .	25	
" Light dues on Tons Turk 4922.22 £ E 28.611 . . . . .	741	69
" Bill of health and Sanitary fees 27.74 Night pratique clearance . . . . .	27	74
" Customs and Port clearance . . . . .	4	67
" Mooring and unmooring ship....Hire of Rats' screens . . . . .	15	
" Mooring boat through Canal . . . . .	87	50
" Telegrams to and from Suez 7.50 London 3.77 . . . . .	11	27
" Shipchandler's A/c.....Water A/c . . . . .	920	97
" Cash advanced to Captain . . . . .	505	50
" Services of Steam despatch launch in Suez Roads, sundries, postage, boat hires, clear- ance here and at Suez . . . . .	65	
" 25 Trimmers @ 5 fcs. 125. Gratuity to Pilots 50 . . . . .	175	
" Consular fees, French . . . . .	20	
" Doctor's A/c.....Hospital fund . . . . .		
" Hire of Electric Light . . . . .	202	20
" Suez A/c....B/health and Sanitary fees . . . . .	55	74
" " ....Night pratique and attendance . . . . .	52	46
" " ....Telegram to London . . . . .	3	77
" Police Guards . . . . .	17	50
	Fcs.	
	40,802	43
Ex. of Fcs. 25.03 per £ stg. £1630.210 . . . . .		
809 Tons Cardiff Coals @ 32/6 £1314.12 . . . . .	£	2,944 15 4

## APPENDIX VI

NUMBER AND TONNAGE OF SHIPS CONSTRUCTED BY  
BRITISH SHIPBUILDING YARDS DURING THE  
YEARS 1911 AND 1912.

Reproduced by permission of the Editor of *Fairplay*.

	No. of Ships	Tons Gross 1912	Tons Gross 1911
1 Swan, Hunter & Wigham Richardson, Wallsend . . . . .	21	126,152	112,758
2 Wm Doxford & Sons, Sunderland . . . . .	18	92,481	84,471
3 Workman, Clark & Co., Belfast . . . . .	10	85,391	66,399
4 Wm. Gray & Co., West Hartlepool . . . . .	20	80,886	73,500
5 Harland & Wolff, Belfast . . . . .	7	77,591	118,209
6 Cammell, Laird & Co., Birkenhead . . . . .	11	77,032	27,276
7 Russell & Co., Port Glasgow . . . . .	13	71,224	72,229
8 Palmer's Shipbuilding & Iron Co., Jarrow . . . . .	7	58,902	39,342
9 Scotts' Shipbuilding & Engineering Co., Greenock . . . . .	9	58,313	31,478
10 Northumberland Shipbuilding Co., How- don . . . . .	12	53,050	57,829
11 Vickers, Ltd., Barrow . . . . .	4	52,860	49,960
12 C. Connell & Co., Scotstoun . . . . .	8	45,314	37,850
13 Ropner & Sons, Stockton . . . . .	10	44,473	28,570
14 Irvine's Shipbuilding Co., West Hartlepool . . . . .	10	44,013	63,478
15 Barclay, Curle & Co., Whiteinch . . . . .	8	43,412	40,134
16 Sir W. G. Armstrong, Whitworth & Co., Newcastle . . . . .	8	41,535	74,124
17 Wm. Hamilton & Co., Port Glasgow . . . . .	7	40,029	26,101
18 J. L. Thompson & Sons, Sunderland . . . . .	8	37,749	41,584
19 R. & W. Hawthorn, Leslie & Co., Hebburn . . . . .	7	37,460	39,594
20 Fairfield Shipbuilding and Engineering Co., Govan . . . . .	4	36,626	40,107

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	No. of Ships	Tons Gross 1912	Tons Gross
21 Caird & Co., Greenock . . . . .	4	35,586	23,477
22 Wm. Denny & Bros., Dumbarton . . . . .	7	33,925	40,446
23 Richardson, Duck & Co., Stockton . . . . .	8	33,703	32,417
24 Short Bros., Sunderland . . . . .	6	31,431	26,589
25 A Stephen & Sons, Linthouse . . . . .	5	29,611	36,159
26 D. & W. Henderson & Co., Partick . . . . .	5	27,768	29,247
27 J. Readhead & Sons, South Shields . . . . .	6	26,527	32,911
28 A. McMillan & Son, Dumbarton . . . . .	6	26,141	19,901
29 Craig, Taylor & Co., Stockton . . . . .	6	26,037	31,793
30 Greenock & Grangemouth Dockyard Co., Greenock and Grangemouth . . . . .	10	23,586	11,543
31 Sir James Laing & Sons, Sunderland . . . . .	5	23,538	17,786
32 Sir Raylton Dixon & Co., Middlesbrough . . . . .	8	23,467	36,782
33 Sunderland Shipbuilding Co., Sunderland . . . . .	7	22,931	19,469
34 Bartram & Sons, Sunderland . . . . .	5	22,855	21,083
35 John Brown & Co., Clydebank . . . . .	6	22,782	65,613
36 Earle's Shipbuilding & Engineering Co., Hull . . . . .	12	22,198	18,742
37 Wm. Beardmore & Co., Dalmuir . . . . .	3	21,500	31,400
38 J. Priestman & Co., Sunderland . . . . .	5	19,439	14,631
39 R. Thompson & Sons, Sunderland . . . . .	6	19,221	14,733
40 J. Blumer & Co., Sunderland . . . . .	5	15,973	14,701
41 Robt. Duncan & Co., Port Glasgow . . . . .	4	15,059	4,965
42 Ailsa Shipbuilding Co., Troon and Ayr . . . . .	9	14,035	6,562
43 W. Pickersgill & Sons, Sunderland . . . . .	4	13,788	11,262
44 Napier & Miller, Old Kilpatrick . . . . .	7	13,782	14,004
45 Wm. Dobson & Co., Newcastle . . . . .	4	12,230	21,227
46 Blyth Shipbuilding Co., Blyth . . . . .	4	12,215	9,258
47 London & Glasgow Engineering and Iron Shipbuilding Co., Glasgow . . . . .	3	12,210	10,800
48 Caledon Shipbuilding & Engineering Co., Dundee . . . . .	8	11,704	11,763
49 Tyne Iron Shipbuilding Co., Willington Quay . . . . .	3	11,537	19,459
50 Osbourne, Graham & Co., Sunderland . . . . .	6	11,408	10,001
51 Mackie & Thomson, Govan . . . . .	15	11,320	5,549
52 Wood, Skinner & Co., Bill Quay . . . . .	5	10,946	15,118
53 Smith's Dock Co., Middlesbrough . . . . .	30	10,029	11,983
54 Fleming & Ferguson, Paisley . . . . .	12	9,300	6,700

	No. of Ships	Tons Gross 1912	Tons Gross 1911
55 Clyde Shipbuilding & Engineering Co., Port Glasgow . . . . .	5	8,831	12,376
56 S. P. Austin & Son, Sunderland . . . .	4	8,420	10,047
57 Cochrane & Sons, Selby . . . . .	36	8,242	8,832
58 Goolie & Dundee Shipbuilding Co., Goolie and Dundee . . . . .	27	8,110	8,906
59 Wm. Simons & Co., Renfrew . . . . .	10	7,643	6,100
60 Campbeltown Shipbuilding Co., Camp- beltown . . . . .	4	7,574	7,400
61 Lobnitz & Co., Renfrew . . . . .	14	7,100	6,565
62 Dunlop, Bremner & Co., Port Glasgow .	4	7,025	1,156
63 Cook, Welton and Gemmell, Beverley .	27	7,012	7,521
64 W. Harkess & Son, Middlesbrough . .	9	6,630	7,117
65 Rennie-Forreest Shipbuilding Co., Wiven- hoe . . . . .	34	6,104	—
66 Mackay Bros., Alloa . . . . .	3	5,331	705
67 Ramage & Ferguson, Leith . . . . .	5	5,202	5,164
68 Hall, Russell & Co., Aberdeen . . . .	19	5,196	5,225
69 J. S. White & Co., Cowes . . . . .	..	4,476	2,627
70 John Crown & Sons, Sunderland . . . .	3	4,267	6,264
71 A. W. Robertson & Co., London . . . .	23	4,223	2,774
72 J. I. Thornycroft & Co., Southampton	11	3,100	4,247
73 Bow, McLachlan & Co., Paisley . . . .	11	3,039	3,409
74 Ferguson Bros., Port Glasgow . . . . .	4	2,980	6,152
75 R. Williamson & Son, Workington . .	4	2,823	1,637
76 Alley & Maclellan, Glasgow . . . . .	32	2,750	2,630
77 John Duthie Torry Shipbuilding Co., Aberdeen . . . . .	17	2,609	2,751
78 Scott & Sons, Bowling . . . . .	8	2,600	1,280
79 Murdoch & Murray, Port Glasgow . . .	7	2,521	998
80 J. P. Rennoldson & Sons, South Shields	8	2,230	820
81 C. H. Walker & Co., Sudbrook . . . .	20	2,131	1,573
82 J. Fullerton & Co., Paisley . . . . .	4	2,121	2,140
83 Hawthorns & Co., Leith . . . . .	6	1,915	..
84 Alex. Hall & Co., Aberdeen . . . . .	11	1,803	1,650
85 Ardrossan Shipbuilding Co., Ardrossan	9	1,785	1,532
86 Dublin Dockyard Co., Dublin . . . . .	4	1,641	1,976
87 A. & J. Inglis, Glasgow . . . . .	2	1,333	7,371
88 Edwards & Co., Millwall . . . . .	23	1,311	1,072

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	No. of Ships	Tons Gross 1912	Tons Gross 1911
89 Joseph Scarr & Son, Beverley . . . . .	8	1,145	1,860
90 Crabtree & Co., Great Yarmouth . . . . .	6	1,062	—
91 J. T. Eltringham & Co., South Shields . . . . .	5	1,029	1,972
92 Geo. Brown & Co., Greenock . . . . .	6	1,010	2,524
93 Yarrow & Co., Glasgow . . . . .	7	1,007	1,881
94 Henry Scarr, Hesele . . . . .	7	820	1,470
95 Beeching Bros., Yarmouth . . . . .	8	800	—
96 Hepple & Co., South Shields . . . . .	7	758	449
97 Fellows & Co., Great Yarmouth . . . . .	6	548	—
98 P. McGregor & Sons, Kirkintilloch . . . . .	7	435	..
99 D. M. Cumming, Glasgow . . . . .	7	325	—
100 Ritchie, Graham & Milne, Whiteinch . . . . .	5	315	..
101 John Cran & Co., Leith . . . . .	5	292	602
102 Simpson, Strickland & Co., Dartmouth . . . . .	81	257	108

The following is a summary of the engineering returns for the same two years :—

	1912 l.h.p.	1911 l.h.p.
John Brown & Co., Clydebank . . . . .	178,500	104,550
Vickers, Limited, Barrow . . . . .	136,750	121,000
North Eastern Marine Engineering Company, Wallsend and Sunderland . . . . .	129,125	98,105
Wallsend Slipway, and Engineering Company, Wallsend . . . . .	123,600	72,800
Cammell, Laird & Co., Birkenhead . . . . .	101,350	122,249
Parsons Marine Steam Turbine Company, Wallsend . . . . .	96,800	68,500
R. and W. Hawthorn, Lealie and Co., Newcastle . . . . .	82,850	132,200
Blair & Co., Stockton . . . . .	76,850	71,150
Richardsons, Westgarth & Co., Middlesbrough and Sunderland (marine) . . . . .	67,000	63,630
Wm. Beardmore & Co., Dalmuir . . . . .	60,000	49,000
Denny & Co., Dumbarton . . . . .	58,400	72,650
J. S. White & Co., E. Cowes . . . . .	56,476	37,195
Fairfield Shipbuilding & Engineering Company, Govan . . . . .	55,200	67,250
Workman, Clark & Co., Belfast . . . . .	53,400	51,800
David Rowan & Co., Glasgow . . . . .	52,700	58,050

	1912 l.h.p.	1911 l.h.p.
Scott's Shipbuilding & Engineering Company, Greenock . . . . .	51,550	22,100
Central Marine Engine Works, West Hartlepool . . . . .	46,510	41,360
Dunsmuir & Jackson, Glasgow . . . . .	41,650	40,500
Harland & Wolff, Belfast . . . . .	39,300	96,916
J. Dickinson & Sons, Sunderland . . . . .	38,940	38,820
Geo. Clark, Sunderland . . . . .	35,800	47,316
Wm. Doxford & Sons, Sunderland . . . . .	35,500	43,450
Earle's Shipbuilding & Engineering Company, Hull . . . . .	34,260	26,920
Barclay, Curle & Co., Whiteinch . . . . .	33,850	32,750
J. I. Thornycroft & Co., Southampton . . . . .	33,350	49,530
London and Glasgow Engineering Company, Glasgow . . . . .	33,100	26,000
Alex. Stephen & Sons, Linthouse . . . . .	31,920	40,000
J. G. Kincaid & Co., Greenock . . . . .	30,250	16,840
Caird & Co., . . . . .	27,000	..
Swan, Hunter & Wigham Richardson, Wallsend . . . . .	26,000	91,100
Rankin & Blackmore, Greenock . . . . .	25,000	18,600
Palmer's Shipbuilding & Iron Company, Jarrow . . . . .	19,130	27,000
C. D. Holmes & Co., Hull . . . . .	17,170	12,910
Ross & Duncan, Glasgow . . . . .	15,420	15,180
J. Readhead & Sons, South Shields . . . . .	14,300	17,050
D. & W. Henderson & Co., Partick . . . . .	14,255	29,835
Ailsa Shipbuilding Company, Troon and Ayr . . . . .	13,150	..
Fleming & Ferguson, Paisley . . . . .	12,200	12,500
Lobnitz & Co., Renfrew . . . . .	12,100	9,450
Wm. Simons & Co., Renfrew . . . . .	12,060	11,095
Smith's Dock Company, Middlesbrough . . . . .	12,000	..
Bow, McLachlan & Co., Paisley . . . . .	11,440	9,350
MacColl & Pollock, Sunderland . . . . .	11,440	5,230
Clyde Shipbuilding & Engineering Company, Port Glasgow . . . . .	11,100	12,950
Amos & Smith, Hull . . . . .	11,020	13,440
Shields Engineering & Dry Docks Company, N. Shields . . . . .	10,290	12,535
Muir & Houston, Glasgow . . . . .	9,930	3,840
Caledon Shipbuilding & Engineering Co., Dundee . . . . .	9,400	14,200
McKie & Baxter, Glasgow . . . . .	9,115	..
Hall, Russel & Co., Aberdeen . . . . .	8,925	10,010
G. T. Grey, South Shields . . . . .	7,730	4,055

## APPENDIX VI

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	1912	1911
	i.h.p.	i.h.p.
W. V. V. Lidgerwood, Coatbridge . . . . .	6,860	14,605
Ramage & Ferguson, Leith . . . . .	6,250	6,500
Ferguson Bros., Port Glasgow . . . . .	5,320	10,000
Crabtree & Co., Great Yarmouth . . . . .	5,105	..
A. & J. Inglis, Glasgow . . . . .	4,100	18,259
J. P. Rennoldson & Sons, South Shields . . . . .	4,086	2,300
Alex Hall & Co., Aberdeen . . . . .	3,900	3,550
Aitchison, Blair & Co., Clydebank . . . . .	3,850	4,580
Campbell & Calderwood, Paisley . . . . .	3,550	3,110
Dunlop Bremner & Co., Port Glasgow . . . . .	3,250	..
Simpson, Strickland & Co., Dartmouth . . . . .	1,958	2,497
Hepple & Co., South Shields . . . . .	1,550	1,398
MacColl & Co., Belfast . . . . .	750	1,400
John Cran & Co., Leith . . . . .	250	2,000
Menzies & Co., Leith . . . . .	180	555
Alley & Maclellan, Glasgow . . . . .	60	765



## APPENDIX VII

### EARNINGS OF SHIPBUILDING COMPANIES. 1912.

Reproduced by permission of the Editor of *Fairplay*.

THE results of the working during the past year of the shipbuilding and engineering companies whose accounts are published are given below. As compared with a year ago, the figures show a slight improvement as regards the percentage of dividend paid, the rate this year being 6.98 per cent. as compared with 6.11 per cent. last year, but it should be borne in mind that the accounts of three companies which last year made a loss on working and were unable to pay a dividend are this year omitted. The three companies are the London and Glasgow Shipbuilding Company, which last year made a loss of £2,636; this Company was purchased by Messrs Harland and Wolff in February last, paying £9 3s for the £9 shares, which were quoted in the market at the time at £6. The Thames Ironworks, which lost £3,458 last year, is in the hands of a receiver. Messrs Richardsons, Westgarth and Co., the third company referred to, which lost £6,475 last year, have not yet issued their accounts. Four of the fifteen companies in the list have been unable to secure a profit after providing for interest, etc., and it is to be feared that a large number of shipbuilding and engineering establishments, whose accounts are not published, are in the same condition. In shipbuilding pure and simple the larger portion of the shipbuilders in this country have carried on their business this year at a loss. One well-known concern on the Clyde had made a loss on its working up to the middle of the year, when a spec. boat on the stocks was sold at a very handsome price, which put the balance on the right side. Another Clyde firm has not made a penny profit in shipbuilding for

four years. The shipbuilding concerns in the country which have made large profits have obtained these from other branches than shipbuilding—in fact, it is stated on very good authority that two or three of the large concerns would be infinitely better off at the present time if they had not a shipbuilding branch in their business.

One well-known shipbuilder maintains that if all the accounts of the shipbuilding trade could be published, it would show a disastrous state of affairs, the action of the men in malingering, etc., making it impossible to carry out the contracts taken a year or so ago at anything but a heavy loss:—

Name of Company	Capital	Loans, debts, etc.	Profit for year	Dividend	Per Cent.
Swan, Hunter and Wigham Richard- son	£ 1,173,577	£ 624,762	£ 151,087	£ 74,547	6.35
Wm. Doxford & Sons	450,000	229,500	81,115	27,500	6.11
Cammell, Laird & Co.	2,372,895	2,229,733	120,961	86,531	3.64
Vickers	5,200,000	3,933,406	641,685	440,788	8.47
Armstrong, Whit- worth & Co.	4,210,000	3,197,547	507,826	441,250	10.48
Wm. Beardmore & Co.	2,000,000	2,096,425	188,131	100,000	5.00
J. I. Thornycroft & Co.	346,500	313,795	54,795	37,125	10.71
J. Brown & Co.	3,423,000	2,322,243	227,109	216,725	6.33
S. P. Austin & Co.	135,000	75,896	15,253	10,000	7.40
D. and W. Hender- son & Co.	525,000	147,531	-20,912	7,500	1.42
Sir Jas. Laing & Sons	138,786	194,078	-14,642	nil	—
R. & W. Hawthorn, Leslie & Co.	462,700	177,413	63,096	46,270	10.00
Smith's Dock Co.	600,000	426,470	82,413	50,000	8.03
Palmer's Shipbuild- ing Co.	698,564	827,059	-31,580	nil	—
Fairfield Shipbuild- ing Co.	500,000	1,152,912	-45,123	15,000	3.00
Totals	22,236,022	17,948,770	2,224,794	1,553,236	6.98

# APPENDIX

## WORKING OF SOME CABLES Reproduced by permission

Name of Company	Paid-up Capital	Debentures, Loans, Bills Payable, etc.	Book Value of Steamers	Sundry Debtors, Bills Receivable, Investments and Cash
	£	£	£	£
Adam Steamship Co. . . . .	62,500	20,964	81,664	16,639
Angus Shipping Co. . . . .	22,783	1,494	22,217	11,363
Ariadne Steamship Co. . . . .	25,000	16,915	49,030	6,180
Armenia S.S. Co. . . . .	18,000	3,061	18,000	1,370
Auchen S.S. Co. . . . .	74,550	89,171	146,000	18,169
Blake S.S. Co. . . . .	17,390	14,351	37,915	—
Bradford S.S. Co. . . . .	66,840	14,942	77,204	5,938
Britain Steamship Co. . . . .	463,960	36,151	582,000	50,974
Canterbury S.S. Co. . . . .	20,850	16,344	40,862	2,841
Celtic Shipping Co. . . . .	25,000	37,028	63,336	1,850
Century Shipping Co. . . . .	207,630	137,491	400,969	65,319
Clutha Shipping Co. . . . .	47,250	17,749	63,118	9,828
Conway Shipping Co. . . . .	54,600	2,050	56,019	1,078
Cornhill Shipping Co. . . . .	30,500	166,223	197,443	22,426
Eftikhia S.S. Co. . . . .	25,000	37,108	73,490	2,052
Empire Transport Co. . . . .	225,000	415,623	335,000	318,369
Court Line . . . . .	100,000	78,965	144,477	39,230
Cuban S.S. Co. . . . .	94,500	72,473	136,351	36,804
Darwin S.S. Co. . . . .	10,208	9,664	19,500	3,251
Dene S.S. Co. . . . .	67,360	27,108	81,000	15,436
Dowgate S.S. Co. . . . .	150,306	64,724	209,495	34,054
Dunedin S.S. Co. . . . .	32,275	33,436	90,009	15,219
Eastern and Australian S.S. Co. . . . .	97,840	93,472	184,452	20,584
Eriasson Shipping Co. . . . .	15,000	32,462	45,393	8,180
Eskaide Shipping Co. . . . .	62,570	31,894	97,756	7,169
Fergrove S.N. Co. . . . .	222,920	46,521	242,000	63,515
Field Line (Cardiff) . . . . .	54,360	99,344	140,604	41,769
Field S.S. Co. . . . .	48,510	13,538	56,790	9,983
Glasgow King S.S. Co. . . . .	55,070	28,395	99,921	21,115
Goole and West Riding S.S. Co. . . . .	20,000	17,634	36,000	8,253
Glenroy S.S. Co. . . . .	32,000	646	32,000	8,960
Grindon Hall S.S. Co. . . . .	20,000	—*	20,000	1,749
<b>Carry forward</b>	<b>2,479,786</b>	<b>1,676,966</b>	<b>3,879,006</b>	<b>669,693</b>

\* Depreciation is taken at 5 per cent. on original cost or 6 per

# DIX VIII

## SHIP COMPANIES IN 1912.

of the Editor of *Fairplay*.

No. of Vessels	Tons. Gross	Profit or Loss from Voyages	Dividend on Capital	Per cent	Transferred to Depreciation, etc.	Depreciation at 5 Per cent*
		£	£		£	£
4	14,805	12,710	6,250	10	5,914	4,900
2	5,297	8,760	5,554	25	3,000	1,333
2	6,585	12,830	2,500	10	7,710	2,942
1	2,330	1,117	nil	—	nil	900
4	15,396	12,394	nil	—	nil	8,773
1	3,740	3,106	559	3.21	1,000	1,896
2	8,390	†12,887	†9,625	14.40	nil	3,860
19	69,124	67,778	23,198	5	23,657	34,920
1	4,209	4,520	1,303	6.25	6,000	2,043
1	4,122	5,006	625	2½	nil	3,167
10	43,812	48,508	15,572	7½	32,850	20,049
2	8,699	15,677	4,200	8.88	10,000	4,056
1	4,003	8,094	5,460	10	1,000	2,751
6	20,578	20,137	nil	—	10,213	9,872
2	6,676	7,133	1,750	5	2,000	4,409
8	34,906	75,590	11,250	5	40,000	16,750
4	17,600	23,052	7,000	7	8,971	9,207
5	15,837	26,380	4,725	5	16,848	11,217
1	2,787	3,945	2,552	25	1,250	1,170
3	10,852	18,971	1,685	2½	10,448	5,487
6	21,142	21,680	7,515	5	10,000	13,170
3	12,291	16,375	3,227	10	9,000	5,940
4	16,009	19,784	nil	—	14,700	14,700
2	3,806	8,089	1,500	10	4,393	2,723
3	10,483	16,746	4,693	7½	9,050	5,997
10	31,331	53,112	16,719	7½	28,750	16,065
5	11,840	18,166	nil	—	5,000	8,436
2	6,133	7,879	2,911	6	3,000	3,587
3	11,556	23,710	5,507	10	16,700	4,996
4	3,657	4,779	1,200	6	2,800	2,300
1	2,755	3,526	1,280	4	500	1,600
1	3,713	10,358	2,400	12	7,563	1,875
123	434,464	592,499	150,760	—	292,317	230,891

cent. on written-down value.

2 P

† At the rate of.

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Name of Company	Paid-up Capital	Debentures, Loans, Bills Payable, etc.	Book Value of Steamers	Wundry Debtors, Bills Receivable, Investments and Cash
	£	£	£	£
Brought forward . . . . .	2,479,786	1,676,956	3,879,006	869,593
Gulf Line . . . . .	233,906	222,209	462,746	22,049
Hugh Hall S.S. Co. . . . .	30,000	3,500	32,500	2,283
Hain S.S. Co. . . . .	499,570	278,223	805,123	124,675
Harrowing S.S. Co. . . . .	137,290	64,958	186,289	13,362
Hathor S.S. Co. . . . .	27,000	15,341	35,771	10,796
Haws S.S. Co. . . . .	21,000	7,461	24,900	1,981
Hindustan S. Shipping Co. . . . .	67,095	47,979	109,981	18,787
International Line S.S. Co. . . . .	134,975	41,410	190,904	17,415
Irish Shipowners' Co. . . . .	257,239	95,848	350,000	17,358
Isles S. Shipping Co. . . . .	54,885	26,720	67,151	10,832
Jones, W. and C. T., S.S. Co. . . . .	280,000	37,697	249,863	89,993
King Line . . . . .	200,000	152,344	333,550	38,498
Lancashire Shipping Co. . . . .	160,000	83,418	298,562	33,579
Langbank S.S. Co. . . . .	28,000	2,948	28,000	5,263
Leander S.S. Co. . . . .	19,570	22,006	53,000	4,064
London Exchange S.S. Co. . . . .	32,190	16,530	41,500	3,272
London and Northern S.S. Co. . . . .	286,875	144,303	513,761	31,628
Lydford S.S. Co. . . . .	16,000	21,738	38,111	1,762
Manchester Liners . . . . .	451,790	255,419	675,839	122,526
Mackill S.S. Co. . . . .	114,840	25,491	127,867	33,294
Mercantile S.S. Co. . . . .	328,000	12,745	320,000	76,322
Mitre Shipping Co. . . . .	116,210	75,916	195,673	63,329
Mogul S.S. Co. . . . .	81,681	100,518	165,994	1,281
Monarch S.S. Co. . . . .	158,800	133,743	382,981	49,656
Moor Line . . . . .	366,490	166,091	571,458	70,374
Nautilus S.S. Co. . . . .	143,145	157,197	303,929	34,560
Neptune S.N. Co. . . . .	210,982	87,432	303,435	38,579
Nitrate Producers' S.S. Co. . . . .	266,265	48,881	228,530	111,666
Norfolk and N. American S.S. Co. . . . .	134,975	162,216	214,405	111,754
North of England S.S. Co. . . . .	41,213	31,145	84,000	11,546
North Shipping Co. . . . .	19,750	15,228	34,000	7,376
North Wales Shipping Co. . . . .	35,000	1,037	30,500	14,393
Orders and Handford S.S. Co. . . . .	95,500	7,798	74,500	43,328
Palace Shipping Co. . . . .	50,672	138,552	217,435	129
Carry forward . . . . .	7,580,694	4,382,967	11,651,324	2,107,493

\* Depreciation is taken at 5 per cent. on original value.

## APPENDIX VIII

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No. of Vessels	Tons. Gross	Profit or Loss from Voyages	Dividend on Capital	Per cent	Transferred to Depreciation, etc.	Depreciation at 5 Per cent *
		£	£		£	£
123	434,464	592,489	150,760		292,317	230,891
6	22,683	40,802	nil	—	28,500	27,765
1	4,809	9,970	3,600	12	5,760	2,275
31	105,164	141,538	49,957	10	80,000	42,759
6	19,276	14,305	nil	—	nil	9,314
2	7,505	8,474	2,025	7½	2,800	2,146
1	2,847	3,141	nil	—	nil	1,800
4	13,918	18,243	3,354	5	7,550	7,105
9	30,599	35,539	7,248	5·37	15,000	16,330
9	35,311	41,243	nil	—	31,957	22,917
3	10,665	18,201	4,116	7½	9,000	4,358
11	40,129	68,694	14,000	5	49,000	17,872
11	38,149	41,733	10,000	5	13,922	20,848
9	38,210	44,641	10,000	6½	20,500	19,140
1	4,599	6,664	1,400	5	500	2,025
3	8,514	18,519	1,957	10	13,500	3,180
1	3,807	3,017	nil	—	nil	2,075
21	66,262	84,573	20,344	7·09	30,000	35,422
1	4,431	3,880	960	6	1,111	1,906
14	63,295	101,946	40,063	8·86	45,000	33,792
4	16,385	20,565	5,742	5	12,000	7,672
16	54,958	60,933	26,400	8·04	22,000	19,200
4	15,301	30,965	5,810	5	19,165	9,784
3	15,084	21,950	nil	—	nil	9,960
9	40,023	65,403	15,880	10	32,500	22,979
24	84,900	113,922	31,902	8·70	60,000	34,287
12	45,169	37,142	8,589	6	20,000	15,696
10	35,349	43,650	16,382	7·76	25,000	15,506
9	40,652	98,614	18,001	6·76	68,362	28,113
5	25,712	23,856	8,098	6	20,000	15,810
3	11,319	-20,206	6,182	15	12,250	5,235
1	3,676	6,768	2,469	12·50	2,500	1,700
1	3,691	9,131	5,250	15	4,000	1,750
6	13,452	33,122	19,100	20	15,600	7,820
4	19,287	29,143	3,040	6	20,000	13,046
376	1,380,595	1,916,992	492,629	—	979,794	712,478

\* or 6 per cent. on written-down value.

Name of Company	Paid-up Capital	Debentures, Loans, Bills payable, etc.	Book Value of Steamers	Sundry Debtors, Bills Receivable, Investments and Cash
	£	£	£	£
Brought forward . . . . .	7,580,694	4,382,967	11,651,324	2,107,493
Pearreth S.S. Co. . . . .	19,814	89,101	113,075	8,060
Poldhu S.S. Co. . . . .	24,000	8,000	32,000	3,223
Polurrian S.S. Co. . . . .	24,000	8,000	31,948	1,782
Pool Shipping Co. . . . .	250,000	92,650	275,845	107,422
Portwood S.S. Co. . . . .	10,000	3,035	12,371	1,178
Priestfield S.S. Co. . . . .	11,480	37,774	57,841	2,597
Pyman S.S. Co. . . . .	247,730	107,092	349,494	61,594
Raithwaite S.S. Co. . . . .	47,840	17,817	58,470	14,619
Red "R" S.S. Co. . . . .	52,999	25,699	140,264	3,200
Reindeer S.S. Co. . . . .	17,300	568	17,300	1,873
Rowland and Marwood S.S. Co. . . . .	132,060	39,003	202,347	19,418
Scarbrick S.S. Co. . . . .	17,753	17,893	39,630	2,766
Scholefield S.S. Co. . . . .	74,690	28,853	84,880	28,688
Smailes & Sons S.S. Co. . . . .	65,360	24,230	102,843	5,990
Southdown S.S. Co. . . . .	75,664	19,816	118,396	18,728
Speeding & Marshall S.S. Co. . . . .	62,737	26,652	86,675	6,892
Sutherland S.S. Co. . . . .	131,772	206,463	358,321	31,075
Tatem Steam Nav. Co. . . . .	350,000	35,410	516,950	86,824
Taylor and Sanderson S.S. Co. . . . .	114,275	18,448	120,469	56,992
Temperley S.S. Co. . . . .	56,520	63,528	138,071	12,745
Thompson S. Shipping Co. . . . .	73,526	75,751	147,014	9,615
Trechmann S.S. Co. . . . .	101,260	24,942	142,788	23,257
Tredegar Hall S.S. Co. . . . .	20,000	nil	20,000	1,020
Tronto S.S. Co. . . . .	25,792	16,698	42,500	576
Tyne and Blyth S.S. Owning Co. . . . .	60,040	5,442	65,214	3,959
Tyneside Line . . . . .	45,000	30,043	75,326	6,887
Ulster S.S. Co. . . . .	195,000	154,247	374,000	27,285
West Hartlepool S.N. Co. . . . .	410,000	340,202	686,874	64,733
Wetherall S.S. Co. . . . .	50,000	826	55,800	10,732
Whitgift S.S. Co. . . . .	30,319	39,956	62,470	13,180
Wingrove S.S. Co. . . . .	70,000	7,239	74,456	978
Windsor Hall S.S. Co. . . . .	20,000	nil	20,000	868
Woodfield S.S. Co. . . . .	82,458	80,998	166,357	13,628
Redcroft S.S. Co. . . . .	9,760	26,724	33,721	5,965
Totals . . . . .	10,559,843	5,058,067	16,477,354	2,785,817

\* Depreciation is taken at 5 per cent. on original cost or 6 per

## APPENDIX VIII

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No. of Vessels	Tons. Gross	Profit or Loss from Voyages	Dividend on Capital	Per cent	Transferred to Depreciation, etc.	Depreciation at 5 Per cent*
		£	£		£	£
376	1,380,595	1,916,992	492,629		979,794	712,478
3	10,620	14,601	990	5	nil	5,654
1	2,793	5,418	2,400	10	2,000	2,040
1	2,801	4,413	600	2½	1,738	2,021
9	37,146	65,620	37,500	15	21,916	18,256
1	3,100	2,665	918	9·18	1,419	742
1	4,033	6,941	nil	—	nil	2,892
13	43,411	82,402	24,773	10	38,000	26,571
2	7,244	21,921	4,784	10	12,000	4,228
5	18,452	60,408	7,794	14·70	47,778	8,911
1	2,412	1,046	519	3	500	1,165
12	39,755	54,359	11,005	8½	32,000	13,041
2	4,544	4,450	1,243	7	2,930	2,378
4	11,704	22,229	7,469	10	7,150	5,522
4	13,182	20,808	6,536	10	12,000	6,171
5	14,668	30,344	9,080	12	20,929	7,104
2	6,246	12,207	1,568	2½	3,000	5,200
13	47,672	52,397	9,882	7½	20,000	24,952
20	84,908	†211,724	42,000	12	156,800	34,317
7	22,136	39,468	17,141	15	17,500	7,230
4	12,784	15,620	2,826	5	7,500	6,904
5	15,543	15,318	2,544	3·45	5,000	8,821
8	20,508	12,833	6,076	6	5,000	6,567
1	3,764	12,593	3,200	16	8,972	1,700
1	4,668	7,311	1,280	4·96	5,000	2,850
2	4,727	4,613	1,501	2½	1,000	3,261
6	7,812	9,190	4,500	10	3,270	4,549
15	47,282	†35,858	9,750	5	20,000	23,040
17	54,971	64,035	nil	—	7,538	36,908
5	4,350	13,019	4,000	8	7,300	3,348
1	4,397	3,332	nil	—	nil	3,123
2	5,369	524	nil	—	nil	3,719
1	3,694	9,534	2,600	13	6,390	1,575
10	30,622	29,686	2,474	3	7,500	10,101
1	4,294	4,633	976	10	2,000	1,889
561	1,981,209	2,869,516	720,558	6·82	1,463,919	1,011,028

cent. on written-down value.

† At the rate of.

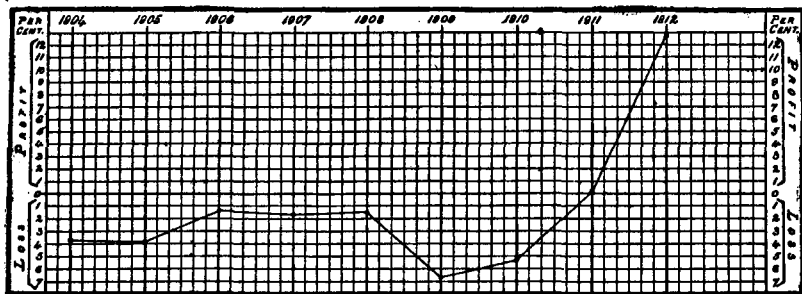


APPENDIX VIII—Continued  
TEN YEARS OF CARGO-BOAT EARNINGS

Year	Paid-up Capital	Debtenture Loans	Book Value of Steamers	No. of Vessels	Tons Gross	Profit on Voyages	Dividend on Capital	Per cent	Depreciation written off	Depreciation 5 per cent
1904	£7,594,278	£3,167,128	£10,753,752	393	1,184,358	£840,541	£277,129	3·64	£216,154	£622,725
1905	8,577,424	3,775,681	12,353,849	464	1,362,049	762,698	286,005	3·33	238,505	740,901
1906	8,081,800	3,609,142	12,130,285	433	1,336,823	979,545	327,445	4·05	348,651	731,971
1907	9,167,259	4,448,905	13,732,764	490	1,616,401	1,079,257	383,077	4·17	413,390	832,716
1908	9,022,401	4,409,343	14,338,652	533	1,695,837	1,145,387	335,165	3·48	393,696	876,170
1909	9,517,011	4,985,051	13,915,494	508	1,603,341	647,997	179,886	1·89	189,043	837,890
1910	9,457,650	5,548,999	14,610,877	522	1,725,335	842,511	217,681	2·30	290,115	864,187
1911	9,883,584	6,261,588	15,717,739	535	1,833,360	1,471,541	370,061	3·73	506,040	943,088
1912	10,559,843	6,058,067	16,477,354	561	1,981,209	2,869,516	720,558	6·82	1,463,919	1,011,028
1913	10,964,108	5,490,388	16,682,965	598	2,121,427	5,505,850	1,377,815	12·56	3,344,643	1,073,665
Average	£9,342,535	£4,780,429	£14,071,373	503	1,636,014	£1,594,484	£447,462	4·78	£740,415	£853,434

## APPENDIX IX SHIPPING PROFITS.

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THIS diagram shows at a glance the amount of profit which has been made by cargo boat companies during the past nine years. The profits have been arrived at by deducting the interests on loans, office expenses, and depreciation at the rate of 5 per cent. per annum on the cost of the fleet.

## APPENDIX X

**TABLE OF DISTANCES (SPECIALLY CALCULATED FOR THIS BOOK) FROM THE CHIEF EUROPEAN PORT, LONDON, AND THE CHIEF AMERICAN PORT, NEW YORK, TO PORTS AFFECTED BY THE PANAMA CANAL.**

	Via Cape of Good Hope	Via Cape Horn	Via Suez Canal	Via Panama Canal	Saving via Suez over Panama	Saving via Panama over Suez
London to Fremantle . . .	10,900	..	9,340	14,550	5,210	..
New York to Fremantle . . .	<sup>1</sup> 11,571	..	11,317	11,910	593	..
London to Adelaide . . .	11,910	..	10,748	12,998	2,248	..
New York to Adelaide . . .	<sup>1</sup> 12,580	..	12,850	<sup>1</sup> 10,356	..	2,294
London to Melbourne . . .	12,220	..	11,057	12,860	1,803	..
New York to Melbourne . . .	<sup>1</sup> 12,860	..	12,920	<sup>1</sup> 10,226	..	2,694
London to Sydney . . .	12,530	..	11,542	11,579	28	..
New York to Sydney . . .	<sup>1</sup> 13,120	..	13,390	<sup>9</sup> 9,930	..	3,460
London to Brisbane . . .	13,030	..	12,043	11,750	..	293
New York to Brisbane . . .	<sup>1</sup> 13,660	..	13,890	<sup>9</sup> 9,110	..	4,780
London to Auckland . . .	13,760	..	12,600	11,580	..	1,020
New York to Auckland . . .	<sup>1</sup> 14,300	..	13,480	<sup>8</sup> 8,940	..	4,540
London to Wellington . . .	13,280	..	12,447	11,370	..	1,077
New York to Wellington . . .	<sup>1</sup> 13,910	..	13,327	<sup>8</sup> 8,730	..	4,597
London to Dunedin . . .	12,940	..	12,107	11,610	..	497
New York to Dunedin . . .	<sup>1</sup> 13,570	..	13,987	<sup>8</sup> 8,970	..	5,017
London to Calcutta . . .	11,730	..	7,900	17,210	9,310	..
New York to Calcutta . . .	<sup>1</sup> 12,360	..	9,780	14,570	4,790	..
London to Singapore . . .	11,417	..	8,241	15,580	7,339	..

New York to Singapore . . .	11,040	--	10,121	12,940	2,819	..
London to Manila . . .	12,980	--	9,560	14,260	4,700	..
New York to Manila . . .	13,610	--	11,440	11,620	180	..
London to Hong Kong . . .	13,030	--	9,681	14,410	4,729	..
New York to Hong Kong . . .	13,660	..	11,561	11,770	219	..
London to Shanghai . . .	13,790	..	10,441	15,430	4,989	..
New York to Shanghai . . .	13,420	..	12,321	11,240	..	1,081
London to Yokohama . . .	14,287	..	11,112	12,860	1,748	..
New York to Yokohama . . .	14,917	..	12,992	10,220	..	2,772
London to Coronel . . .	..	8,557	..	7,720	..	837
New York to Coronel . . .	..	8,217	..	5,080	..	3,138
London to Valparaiso . . .	..	8,777	..	7,360	..	1,417
New York to Valparaiso . . .	..	8,452	..	4,720	..	3,732
London to Iquiqui . . .	..	9,555	..	6,840	..	2,715
New York to Iquiqui . . .	..	9,233	..	4,200	..	5,033
London to Callao . . .	..	10,013	..	6,190	..	3,823
New York to Callao . . .	..	9,688	..	3,550	..	6,138
London to San Francisco . . .	..	13,548	..	8,010	..	5,538
New York to San Francisco . . .	..	13,223	..	5,370	..	7,853
London to Portland Or. . .	..	14,163	..	8,625	..	5,538
New York to Portland Or. . .	..	13,838	..	5,985	..	7,853
London to Vancouver City . . .	..	14,348	..	8,810	..	5,538
New York to Vancouver City . . .	..	14,023	..	6,170	..	7,853
London to Pernambuco . . .	4,124	} Not affected by either Suez or Panama,				
New York to Pernambuco . . .	3,760					
London to Rio de Janeiro . . .	5,197					
New York to Rio de Janeiro . . .	4,760					
London to Buenos Ayres . . .	6,291					
New York to Buenos Ayres . . .	5,888					

<sup>1</sup> Via St Vincent.

<sup>2</sup> Via Rapa and Wellington.

<sup>3</sup> Via Rapa.

## APPENDIX XI

### PRICE AND CONDITIONS OF SUPPLY OF COAL AT VARIOUS COALING PORTS FOR THE YEAR 1912.

(These prices are extracted from actual Contracts.)

Port	Description of Coal	Price and Condition of Supply
Aarhus . . .	North Country	21/- F.O.B. and trimmed per ton of 1000 kilos.
Adelaide . . .	Southern or Newcastle, N.E.W.	23/- F.A.S. in the river.
	do. do.	24/- F.A.S. in outer harbour. Current.
Aden . . .	Welsh	25/6 F.A.S.
Albany . . .	Southern or Newcastle, N.E.W.	27/- F.O.B.
Alexandria . . .	Welsh	21/6 F.O.B.
	North Country	20/9 F.O.B.
Algiers . . .	Welsh	19/9 F.O.B.
	North Country	13/9 F.O.B.
Amsterdam . . .	Westphalian	13/6 F.O.B. and trimmed.
Antwerp . . .	Westphalian	20/6 ex steamer F.O.B.
Auckland . . .	Coalbrookdale	31/- F.O.B. and trimmed
Asores (St Michael)	Welsh	49/6 F.O.B. as Buenos Ayres.
Bahia . . .	Welsh	42/- F.O.B. as Buence Ayres
Bahia Blanca . . .	Welsh	
Baltimore (in har- bour) . . .	Best Clearfield bituminous	\$3.15 F.O.B. and trimmed.
Barbadoes . . .	American	23/- F.O.B. and trimmed. In quarantine 1/- per ton extra. Sunday, holiday or night work extra.

Bergen . . .	Best North Country *	20/- F.O.B. and trimmed per ton of 1000 kilos.
Bermuda . . .	Best New River . . .	29/- F.O.B. St George's Harbour
	Poochontas . . .	35/- F.O.B. Murray Anchorage.
Bilbao . . .	Welsh . . .	24/6 F.O.B. and trimmed in river. Outer harbour 1/- per ton extra. Extra for work on Sundays, holidays or at night.
Bombay . . .	Best Deshurgur . . .	16/8 F.O.B. If bunkering in stream in fine weather 6d. per ton extra, if during Monsoon 1/6 per ton extra.
Brisbane . . .	Queensland . . .	15/6 F.A.S. Morton Bay.
	Queensland . . .	10/6 F.A.S. Railway wharf.
Bordeaux . . .	Welsh . . .	24/-
	North Country . . .	23/- } F.O.B. per ton of 1000 kilos.
Boston . . .	Peerless Poochontas . . .	\$4.10 } F.O.B., trimming 15 cents per ton extra.
	New River . . .	\$4.10 }
Bremen (Freihafen)	Westphalian and North Country . . .	16/8 per ton of 1000 kilos. Trimming 3d. per ton extra. Sunday, holiday or night work extra. Payment to be made on delivery in cash less 1% discount, or by captain's draft at 30 days.
Bremerhaven . . .	Westphalian . . .	15/9 do.
	North Country . . .	15/9 do.
Brünshüttel . . .	North Country . . .	17/6 F.O.B. per ton of 1000 kilos.
Buenos Ayres . . .	Welsh . . .	39/- F.O.B. docks. Sunday, holiday, night or in quarantine extra.
Calais . . .	French Naval . . .	16/- F.O.B. and trimmed per ton of 1000 kilos. Sunday, holiday or night work 6d. per ton extra.
Calcutta . . .	Best Bengal . . .	8 Re. F.O.B. and trimmed.
Cape Breton Island	Dominion . . .	\$3.25 on ship's rail at shoots. Trimming 15 cents per ton extra.
Capetown . . .	Natal Navigation . . .	24/- trimmed into bunkers at docks.

Port	Description of Coal	Price and Condition of Supply
Catania . . .	Welsh . . . . .	22/9 F.O.B., 1/- per ton extra ex lighters.
Charleston . . .	Best New River . . . . .	\$5.35 } F.O.B. and trimmed. Sunday, holiday,
	Pocohontas . . . . .	\$5.35 } night or quarantine extra.
Chingwantao . . .	Kaiping (lump) . . . . .	13/9 F.O.B. and trimmed alongside wharf.
Christiania . . .	Northumberland . . . . .	20/- } per ton of 1000 kilos ex lighters in harbour.
	Durham (unscreened) . . . . .	20/- } Trimming 6d. per ton extra. Sunday, holiday or night work 50 ore per ton extra. Screened coal 1/3 per ton extra.
Colombo . . . . .	Welsh . . . . .	35/- } F.O.B. Trimming 3d. per ton extra (1910,
	Delmege (Indian) . . . . .	21/6 } 27/9).
	Best Natal . . . . .	25/- } F.O.B. and trimmed.
	Bongal (Deshgurgur) . . . . .	21/- }
Constantinople . . .	Welsh . . . . .	25/- } Sunday or night work 6d. per ton extra.
	Durham (unscreened) . . . . .	21/- } Scutari side 1s. per ton extra, at Kavak
	Best Candyli . . . . .	20/3 } 2/- per ton extra, F.O.B.
Copenhagen . . . . .	Best Newcastle . . . . .	17/- } F.O.B., from lighters 1/- per ton extra.
	Durham . . . . .	17/- } Night or holiday labour 6d. per ton extra.
Corubion . . . . .	Welsh . . . . .	24/- F.O.B. alongside hulk. Night, Sunday, or holiday labour extra.
Dairen (Dalny) . . .	Fushun lump) . . . . .	
Dartmouth . . . . .	Northumberland (un- screened). . . . .	16/6 } F.O.B. at hulks, exclusive of trimming and other expenses usually borne by steamer.
	Durham (unscreened) . . . . .	17/- }
Delagoa Bay . . . . .	Witbank . . . . .	13/- F.A.S. wharf. Dues and trimming 1/- per ton extra (ton 2000 lbs.).

Dunkirk . . .	French Naval . . .	19/3 } per ton of 1000 kilos F.O.B. and trimmed
	Durham . . .	19/3 } ex lighters.
Durban . . .	Best Utrecht large steam	14/- F.A.S. steamer at wharf (1910, 13/9).
Emden . . .	Westphalian . . .	16/- F.O.B., trimmed per ton of 1000 kilos.
Fayal . . .	Welsh . . .	32/- F.O.B. and trimmed.
Ferrol . . .	Welsh . . .	23/6 F.O.B. alongside hulk.
Fiume . . .	North Country . . .	22/6 F.O.B. per ton of 1000 kilos, 6d. per ton extra for Sunday or night labour Public weigher's certificates to be accepted.
Freemantle . . .	Southern . . .	25/6 } F.O.B. but not trimmed.
	Newcastle, N.S.W. . . .	25/6 }
Galveston . . .	Poochontas . . .	\$6.85 trimmed in harbour per ton of 2000 lbs.
Geestomunde . . .	Westphalian . . .	16/3 } terms as Bremen.
	North Country . . .	16/3 }
Genoa . . .	Welsh . . .	23/3 } F.O.B. Sunday, holiday and night labour
	North Country . . .	20/3 } 1/3 per ton extra.
Ghent . . .	Westphalian . . .	14/6 F.O.B. and trimmed.
Gibraltar . . .	Welsh . . .	23/- } F.O.B. alongside hulk or mole at suppliers'
	Durham (unscreened) . . .	21/- } option.
Gothenburg . . .	Northumberland (large screened steam) . . .	18/6 F.O.B. and trimmed.
Gulf port . . .	Alabama Pratt . . .	\$3.40 } per ton of 2000 lbs. trimmed at pier.
	Cahaba . . .	\$3.40 } Ex lighters in stream 25 cents per ton extra. Night, Sunday or holiday labour 25 cents per ton extra.
Halifax N.S. . . .	Dominion . . .	\$4.50 on ships' rail. Trimming 15 cents per ton extra.
Hamburg . . .	Northumberland steam . . .	12/9 } F.O.B. Trimming extra. Sunday, holiday
	Durham . . .	13/3 } and night labour extra.



Port	Description of Coal	Price and Condition of Supply
Havre . . . .	Welsh . . . . .	21/6 } F.O.B. Sunday, holiday and night labour
	North Country . . . . .	19/6 } extra.
Hong Kong . . . .	Kaiping (lump) . . . . .	19/3 F.O.B. and trimmed alongside wharves or in harbour.
Karachi . . . . .	Best Jardine Navigation	16/6 } F.O.B. and trimmed.
	Deshurgur . . . . .	16/9 }
Karatsu . . . . .	Good Karatsu (lump) . . . . .	13/6 F.O.B. and trimmed.
Keelung . . . . .	Best Keelung steam . . . . .	15/- F.O.B. and trimmed.
Kobe . . . . .	Akaiike (lump) . . . . .	16/9 F.O.B. trimmed.
Labuan . . . . .	Best Labuan . . . . .	F.O.B. harbour. Trimming extra.
La Plata . . . . .	Welsh . . . . .	39/- F.O.B. wharf, as Buenos Ayres.
Las Palmas . . . . .	Welsh . . . . .	22/- } F.O.B. and trimmed. Sunday, night or
	Durham (unscreened)	18/- } quarantine labour extra.
Leghorn . . . . .	Welsh . . . . .	29/- } per ton of 1000 kilos. Trimming 6d. per
	North Country . . . . .	21/6 } ton extra; overtime extra.
Lisbon . . . . .	Welsh . . . . .	24/3 } F.O.B. and trimmed.
	North Country . . . . .	23/- }
Lyttelton . . . . .	Coalbrookdale . . . . .	19/6 F.O.B. ex steamer.
Madeira . . . . .	Welsh . . . . .	23/- F.O.B. and trimmed.
Malta . . . . .	Welsh . . . . .	22/- } F.O.B., no extra charge if loaded at night.
	Durham (unscreened)	20/- }
Manila . . . . .	Good Australian . . . . .	23/9 } F.O.B. and trimmed.
	Japanese . . . . .	21/- }
Marseilles . . . . .	Welsh . . . . .	25/6 F.O.B.
Mauritius . . . . .	Welsh . . . . .	39/- } F.O.B. (1910, 41/-). Trimming 1/- per ton
	North Country . . . . .	33/6 } extra. Sunday night or quarantine labour
	Natal and Transvaal . . . . .	33/6 } extra.

Melbourne . . .	Southern or Newcastle, N.S.W. . . . .	19/6 in Yarra or in Hobson Bay.
Messina . . .	Welsh . . . . .	20/- } F.O.B., ex lighters 1s. per ton extra.
	North Country . . . . .	19/- }
Mobile . . .	Best Alabama steam . . . . .	\$3.15 per ton of 2000 lbs. Trimming 10 cents per ton extra. Sunday, night or holiday work 25 cents per ton extra.
Moji . . .	Aksuike (lump) . . . . .	13/- } F.O.B. and trimmed.
	Good Japan (lump) . . . . .	12/- }
Monte Video . . .	Welsh . . . . .	41/- F.O.B., 1/- per ton less if supplied in harbour.
Nagasaki . . .	Matsushima (lump) . . . . .	14/3 F.O.B. and trimmed.
Naples . . .	Welsh . . . . .	24/- F.O.B., 4d. per ton extra for trimming.
Newcastle, N.S.W. . .	Seaham, Abermain or Neath (best screened) . . . . .	11/- F.O.B. alongside Government cranes.
Newchwang . . .	Kaiping (lump) . . . . .	16/3 F.O.B. and trimmed in stream. If alongside wharf 1/- per ton less.
New Orleans . . .	Pittsburg steam . . . . .	\$3.75 } per ton of 2000 lbs. F.O.B. and trimmed.
	Pratt . . . . .	\$3.50 }
Newport (News)	New River . . . . .	\$3 F.O.B. at piers. Trimming 10 cents per ton extra.
New York . . .	Best Clearfield bituminous steam . . . . .	\$3.15 F.A.S.
Nordenham . . .	North Country . . . . .	15/9 } Terms as at Bremen.
	Westphalian . . . . .	15/9 }
Norfolk (Va.) . . .	Best Pocohontas . . . . .	\$3 F.O.B. Trimming 10 cents per ton extra.
Oran . . .	Welsh . . . . .	23/6 } F.O.B.
	Durham (unscreened). . . . .	21/- }
Oturu . . .	Yubari (lump) . . . . .	16/- F.O.B. and trimmed.
Penang . . .	Best Australian . . . . .	24/- }
	Bengal (Jardines Navigation)	19/6 } F.O.B.
	Japanese . . . . .	21/6 }

Port	Description of Coal	Price and Condition of Supply
Pensacola . . .	Cahaba . . . . .	\$3.25 F.O.B. and trimmed per ton of 2000 lbs.; 25 cents per ton extra for Sunday or night work.
Perim . . . . .	Welsh . . . . .	Current
Pernambuco . . .	Welsh . . . . .	49/6 F.O.B. Terms as at Buenos Ayres
Philadelphia . . .	Best Clearfield bituminous steam . . . . .	\$3.15 F.O.B. and trimmed.
Piræus . . . . .	Welsh . . . . .	22/6 } F.O.B. per ton of 1000 kilos; lighterage, if 20/9 } required, extra.
Plymouth . . . . .	Durham (unscreened) . . . . .	22/6 } F.O.B.
Port Chalmers . . .	Welsh . . . . .	17/- }
Port Natal . . . .	Durham (unscreened) . . . . .	21/6 F.O.B. ex steamer.
Portland . . . . .	Coalbrookdale . . . . .	14/9 } F.A.S.
Port Said . . . . .	Natal Navigation . . . . .	14/- }
Pulo Laut (S.E. Borneo) . . . . .	Klobane (screened) . . . . .	17/- } F.O.B. alongside hulks, exclusive of trim- 18/6 } ming and other expenses usually born by steamer.
Rangoon . . . . .	Durham (unscreened) . . . . .	26/- } F.O.B. and trimmed (1910 22/6). Sunday, 22/6 } holiday and night labour extra.
Rio de Janeiro . . .	Northumberland do. . . . .	
Rosario . . . . .	Welsh . . . . .	14/- F.O.B. and trimmed alongside wharf.
Rotterdam . . . . .	Durham (unscreened) . . . . .	18/9 F.O.B. and trimmed.
	Pulo Laut (lump) . . . . .	36/- F.O.B. as at Buenos Ayres.
	Heilgers standard . . . . .	43/- F.O.B. as at Buenos Ayres.
	Welsh . . . . .	
	Westphalian . . . . .	13/6 } F.O.B. per ton of 1000 kilos.
	North Country . . . . .	13/6 }

Rouen . . . .	North Country . . . .	20/- If supplied in docks 1/- to 2/6 per ton extra. Payment in cash before departure for steamer.
St John N.B. . . .	Dominion . . . .	\$4.75 F.O.B. and trimmed.
St Lucia . . . .	American . . . .	23/- F.O.B. and trimmed alongside wharf. Sunday, night, holiday or quarantine labour extra.
St Michaels . . . .	Welsh . . . .	29/6 F.O.B. and trimmed.
St Nazaire . . . .	Welsh . . . .	27 francs 50 cs. F.O.B. per ton of 1000-kilos.
St Thomas W.I. . . .	Best Pocohontas steam . . . .	22/- F.O.B. alongside wharf. Trimming 3d. per ton extra. Ex lighters 2/- per ton extra.
St Vincent . . . .	Welsh . . . .	31/- F.O.B. at Naval anchorage. Sunday, night, holiday or quarantine labour extra.
Santos . . . .	Welsh . . . .	44/6 F.O.B. as at Buenos Ayres.
Savannah . . . .	New River . . . .	\$4.20 } F.O.B. and trimmed at wharf.
	Maryland Company's Im- perial . . . .	\$4.20 }
Savona . . . .	Welsh . . . .	27/3 } Sunday, holiday, and night labour extra
	North Country . . . .	22/6 } as per port tariff.
Sewalls Point . . . .	New River . . . .	\$3 F.O.B. at pier. Trimming 10 cents per ton extra.
Shanghai . . . .	Kaiping (lump) . . . .	15/- F.O.B. and trimmed alongside wharf. In stream 1/- per ton extra.
Singapore . . . .	Welsh . . . .	35/- }
	Australian . . . .	24/- } F.O.B. alongside wharf.
	Japanese . . . .	22/6 }
	Bengal . . . .	19/6 }
Smyrna . . . .	Welsh . . . .	Current. Trimming 3d. per ton extra.
Spalato . . . .	Best Newcastle . . . .	26/- F.O.B. per ton of 1000 kilos. Lighterage, if required, extra.
Stettin . . . .	North Country . . . .	16/9 }
	Silesian . . . .	16/9 } F.O.B. per ton of 1000 kilos.

Port	Description of Coal	Price and Condition of Supply
Suez . . . .	Welsh . . . . .	36/- F.O.B. and trimmed.
Sydney . . . .	Wallarah . . . . .	11/6 per ton of 2240 lbs. Loading and trimming 1/6 per ton extra.
Syra . . . . .	Welsh . . . . .	22/3 } F.O.B. Bunkering in quarantine extra.
	Durham (unscreened). . . . .	20/6 } F.O.B. and trimmed.
Taku Bar . . . .	Kaiping (lump) . . . . .	14/9 F.O.B. and trimmed.
Teneriffe . . . .	Welsh . . . . .	22/- } F.O.B. and trimmed. Sunday, night or 19/- } quarantine labour extra.
	Durham (unscreened) . . . . .	12/9 F.O.B. and trimmed alongside wharf.
Tongku . . . . .	Kaiping (lump) . . . . .	28/6 } F.O.B. per ton of 1000 kilos., 6d. per ton 20/6 } extra for work on Sunday or at night. Public Weigher's certificates to be accepted.
Triscoe . . . . .	Welsh . . . . .	
	North Country . . . . .	
Trinidad . . . .	Pocohontas steam . . . . .	22/- per ton of 2240 lbs. ex hulks. Ex lighters 2/- per ton extra. Sunday, night or holiday labour extra.
Vigo . . . . .	Welsh . . . . .	24/3 F.O.B. alongside hulk.
	Welsh . . . . .	25/3 F.O.B. ex lighters.
Wakamatsu . . . .	Akaiike (lump) . . . . .	12/3 F.O.B. and trimmed.
Wellington, N.Z. . . .	Coalbrookdale . . . . .	18/6 F.O.B. ex steamer.
Wilmington . . . .	Pocohontas . . . . .	\$4.85 F.O.B. trimming 10 cents per ton extra.
Yokosuka . . . . .	Yubari (lump) . . . . .	20/6 F.O.B. and trimmed.
Yokohama . . . . .	Yubari (lump) . . . . .	18/6 F.O.B. and trimmed.
Zoa . . . . .	Welsh . . . . .	22/6 } F.O.B.
	Durham (unscreened) . . . . .	20/6 }

## APPENDIX XII

TABLE SHOWING VALUE AND MEASUREMENT  
OF VARIOUS COALS AND PETRÔLEUM.

	Car- bon	Total Heat of Combustion	Evapora- tive Power from and at 212°	Cubic Feet to 1 Ton
	Per Cent	Units	Pounds	
<sup>1</sup> Welsh best . . . . .	88.26	15,788	16.34	..
<sup>1</sup> Welsh average . . . . .	83.78	14,858	15.52	42.7
<sup>1</sup> Newcastle . . . . .	82.12	14,820	15.32	45.3
<sup>1</sup> Derbyshire . . . . .	79.68	13,860	14.34	47.4
<sup>1</sup> South Yorkshire . . . . .	81.88	14,296	14.71	46.0
<sup>1</sup> Lancashire . . . . .	77.90	13,918	14.56	45.2
<sup>1</sup> Scotch . . . . .	78.53	14,164	14.77	42.0
<sup>1</sup> American (bituminous)	73.21	*13,861-14,140	..	42.44
<sup>1</sup> American (anthracite) .	88.54	..	..	42.35
<sup>1</sup> French (hard ditto) . .	88.56	15,525	16.10	42.75
<sup>1</sup> Indian (average) . . . .	70.20	..	..	..
Australian . . . . .	..	..	..	..
New South Wales :—				
1. Mount Kembla . . . . .	62.29	..	12.6	..
2. Bulli (Natural Coke from old Bulli mine) . .	80.05	..	..	..
3. Belambi . . . . .	..	..	..	..
American (semi-Anthra- cite) . . . . .	85-90	..	..	..
do. (hard dry ditto) . .	91-98	..	..	..
Petroleum :—				
<sup>1</sup> American (Crude) . . . .	84.7	20,240	20.33	39-46
<sup>1</sup> Caucasian (Crude) . . . .	86.6	20,138	20.85	42.

<sup>1</sup> Taken from Seaton and Rounthwaite's *Pocket Book of Marine Engineering*, p. 238.

<sup>2</sup> Taken from Emory Johnson's Report, p. 168.

FROM MEADE'S "COAL AND IRON INDUSTRIES  
OF THE UNITED KINGDOM."

*Durham and Northumberland :—*

Colliery	Carbon	
Haswell . . . . .	83·47	} Household
Hartley . . . . .	84·28	
Original Hartley . . . . .	81·18	
South Peareth . . . . .	81·41	} Gas Coal
Bowden Close . . . . .	84·92	
Willington . . . . .	86·81	
Garesfield . . . . .	86·9	
Buddles Hartley . . . . .	78·69	} Steam Coal
Newcastle „ . . . . .	81·81	
Haswell (Sunderland) . . . . .	83·71	
Seaton Burn . . . . .	78·65	

*Nottingham :—*

Coal in Shireoaks neighbourhood	Carbon
Portland Colliery, Kirkby	77·40
Langley Colliery	80·41
	77·97

*Leicester :—*

Ibstock . . . . .	74·97
Whitwick . . . . .	69·00

*Shropshire :—*

Donnington . . . . .	63·8
„ . . . . .	62·1
Madeley . . . . .	64·9
Ketley . . . . .	56·1
Madeley . . . . .	64·4
„ . . . . .	62·7
Brooseley . . . . .	61·1

Yorkshire :—		Carbon.
Barnsley . . . . .		80·05
Elsecar . . . . .		81·93
Park Gate . . . . .		80·07
Wombwell Main . . . . .		80·50
Darfield Main . . . . .		81·39
Oaks . . . . .		82·52
Masbro Park . . . . .		82·19
Edmund Main . . . . .		82·19

FRANCE.<sup>1</sup>

	Carbon
Anthracite, common . . . . .	79·15

According to the Analyses of M. Regnault :—

	Carbon
Anthracite . . . . .	95
Anthracite Coal . . . . .	92
Coal, Maigre, with short flame . . . . .	90
Coal, Demi-grasse . . . . .	87
Coal, Grasse . . . . .	85
Coal Gas . . . . .	85
Coal, Maigre, with long flame . . . . .	78

Weight of a cubic yard in lbs.—

	Locality	lbs.
France :	Allier . . . . .	2207
	Tantal . . . . .	2283
	Brassac . . . . .	2413

## PENNSYLVANIA.

The following information is given by Dr Chance, State Geologist of Pennsylvania, and published in a book on *The Anthracite Coal Industry* by P. Roberts in 1901.

<sup>1</sup> From the *Report of the Coal Commission*, 1871.



Semi-Anthracite, 85 to 90 per cent. Carbon.

Hard dry Anthracite, 91 to 98 per cent. Carbon.

The average weight of hard and dry Anthracite is 2362 lbs. per cubic yard.

#### JAPAN.

From a Report of the Mining Industry of Japan (Past and Present), issued by the Department of Agriculture and Commerce, Tokio, in 1909.

Average of :—		Carbon
25 Collieries in Fukuoka Prefecture	.. ..	53·22
4 " Saga	" .. ..	52·70
4 " Nagasaki	" .. ..	57·22
7 " Kumonoto	" . . .	81·21
4 " Hokkaido	" . . .	52·65
5 " Honshu (Main Island)	. . .	36·71
4 Anthracite Collieries, Yamaguchi Prefecture		68·73
4 Brown Coal Collieries, County of Asa	.. ..	37·51
1 Anthracite Colliery, Wakayama Prefecture		87·26

The following table gives an estimate formed by an experienced English shipmaster of the steaming values of various coals as compared with the best Welsh Steam Coal. Although of no scientific importance, the comparison may have some practical value:—

One Hundred tons of best Welsh Steam Coal will, on an average, do the same amount of work as	}	112 tons Southern Coal
		(Australia).
		120 tons Newcastle, New South Wales Coal.
		130 tons Brisbane Coal.
		140 tons Western Australian Coal. - (This coal is improving in quality.)
		105-110 tons Clearfield Coal, as supplied at New York.
"	"	105-108 tons English North Country Coal.

An American estimate may be usefully compared with the above :—

“ The efficiency of several kinds of coal is roughly indicated by a statement made by the captain of a vessel who reports that his ship's daily coal consumption is 22 tons of best No. 1 Welsh, 25 tons of Tyne, 29 to 30 of Indian or Japanese, 24 to 25 of Newcastle (Australian), 30 of Chilean, 24 to 25 of New River (West Virginian), and 26 of Alabama coal. Another vessel was reported to have a daily consumption of 25 tons of best Welsh as compared with 26½ tons of Pocohontas, 26 Welsh run-of-mine, 28 of Lancashire or Tyne, and 30 of Indian or Japanese coal. Pocohontas coal is particularly effective in vessels with forced draft, in which class of vessels its steam value is about equal to that of Welsh coal.”<sup>1</sup>

<sup>1</sup> Cf. Emory Johnson's *Panama Canal Traffic and Tolls*, 1912, p. 159.

## APPENDIX XIII

## SOME IMPORTANT SHIPPING DATES

- 1194 (?). Laws of Oléron.
1344. Madeira discovered by the English (?).
1492. Columbus discovered Hispaniola.
1497. John Cabot discovered the Mainland of America.
1498. Vasco da Gama discovered the Cape Route to India.
1508. First mention of Marine Insurance in England.
1513. Balboa sighted the Pacific Ocean.
1514. Henry VIII incorporated by Royal Charter the Trinity House. The *Great Harry* launched at Erith.
1545. First treatise on Navigation published.
1608. First effective Telescope produced.
1660. Board of Trade and Plantations established.
1688. First mention of Lloyd's Coffee-House in Tower Street.
1692. Lloyd's Coffee-House removed to Lombard Street.
1696. "Lloyd's News" established.
1700. First Dock opened at London.  
Marine Barometer invented.
1715. First Dock opened at Liverpool.
1720. First Marine Insurance Company established.
1726. "Lloyd's News" reissued under the name of "Lloyd's List."
1731. The Sextant invented.
1735. Harrison invented the Marine Chronometer.
1740. Oldest "Lloyd's List" in existence.
1767. The "Nautical Almanac" first published.
1768. Captain Cook's first voyage of discovery.
1774. Lloyd's removed to the Royal Exchange.
1779. Murder of Captain Cook.
1782. Insurance subjected to Stamp Duty.
1786. First Registration of Shipping, London. Board of Trade and Plantations modified; this inaugurated the present Board of Trade, "a Committee of Council on Trade."  
First use of rolled plates for boiler construction.

1787. Registration of Shipping throughout the Empire.
1788. Settlement commenced in Australia. Foundation of the City of Sydney.
1796. Lifeboats first used.
1798. River Police instituted at London.
1802. The West India Docks, London, opened.
1805. The London Docks opened.
1806. The East India Docks opened.
1812. The *Comet* steamboat on the Clyde.
1813. First notice of an iron cable being part of a ship's equipment in "Lloyd's Register."
1815. First Steam Vessel on the Thames.
1817. New Custom House, London, opened.
1818. Auxiliary steamer, *Savannah*, crossed the Atlantic.
1819. First iron craft, the *Vulcan*, built on the Forth and Clyde Canal.
1820. Royal Astronomical Society founded.
1822. First steamer registered by Lloyd's. (Five years later there were 81 steamers on the Register.)
1825. First auxiliary steam voyage to India.  
Iron steamer commenced service on River Shannon.
1828. St Katherine's Docks, London, opened.
1829. The name *Lloyd's Registry of Shipping* used for the first time.
1830. Royal Geographical Society founded.
1833. Trade with India thrown open.
1836. "Shipping and Mercantile Gazette" founded.
1837. The P. & O. Company founded.  
First iron ship registered by Lloyd's. The *Sirius*, 180 tons, built at London, owned at Marseilles.
1838. *Great Western* and *Sirius* commenced regular steam service across the North Atlantic.  
The Screw Propeller introduced.  
First Regular Steamboat Service across Atlantic; voyage seventeen days.
1839. The Cunard Company founded. (Originally called The British and North American Royal Mail Steam Packet Co.)
1840. Penny Post.  
First Cunard steamer, *Britannia*, sailed.
1843. Iron steamships first built in Great Britain.
1846. Corn Law passed.
1847. Gold discovered in California.

1848. North-West Passage discovered.
1850. An Act for improving the condition of Masters, Mates, and Seamen, and maintaining discipline in the Merchant Service, passed. This Act made it (i.) compulsory for the Senior Officers to hold certificates of efficiency; (ii.) necessary to establish Shipping Offices at the principal ports; (iii.) to house and diet sailors according to rules, and (iv.) obligatory to keep an Official Log.
1851. First Submarine Telegraph.  
Queen's Cup won by yacht *America*.
1855. Meteorological Office established.
1856. Free Navigation of Danube secured under European Commission.  
Declaration of Paris signed by European Powers.
1857. International Code of Signals established.
1858. *Great Eastern* launched.  
First message by Atlantic Cable—but submarine Atlantic Cable not permanently successful until 1866.
1859. Royal Naval Reserve authorised.
1860. First steam ironclad launched.
1861. Storm Warnings first issued.
1862. International Rule of the Road at Sea settled.
1863. Twin-screws used.
1864. Royal School of Naval Architecture established.
1866. Atlantic Cable laid by *Great Eastern*.
1867. Marine Insurance Duty reduced.
1869. Suez Canal opened.
1870. Telegraphs transferred to Government.  
Ice-breaking vessel first employed.
1871. Lloyd's incorporated.  
German Empire proclaimed.
1872. Daily weather-charts first issued.
1873. Royal Naval College opened.
1874. International Postal Convention.
1876. Amsterdam-North Sea Canal opened.
1877. Telephone invented.
1878. Chamber of Shipping of United Kingdom established.
1880. Royal Albert Dock opened.  
First shipment of frozen mutton from Australia arrived in London.
1881. London Chamber of Commerce incorporated.

1881. *Aberdeen* (s.) Triple-Expansion Engines.  
 1882. New Eddystone Lighthouse opened.  
 1884. First compound steam turbine engine built.  
 1885. First steamer converted to carry oil in bulk.  
 1886. Tilbury Docks opened.  
 1887. Colonial Conference in London.  
 1889. New Barry Docks, Cardiff, opened.  
 1893. London Shipping Exchange opened.  
 Imperial Institute inaugurated.  
 Corinth Ship Canal opened.  
 1894. Merchant Shipping Act passed, consolidating former Acts.  
 Manchester Ship Canal opened.  
*Turbinia*, first turbine steamer, launched on the Tyne.  
 Quadruple Expansion Engines invented.  
 1895. Baltic and North Sea Canal opened.  
 1897. Blackwall Tunnel opened.  
 1898. War between United States and Spain.  
 Imperial Penny postage instituted.  
 1899. War in South Africa commenced.  
 International Meteorological Committee established.  
 First Wireless Telegraphy with France.  
 1900. Merchant Shipping (Liability of Shipowners) Act passed.  
 Subsidised steamship service with Jamaica arranged.  
 Wireless Telegraphy adopted by Admiralty.  
 Advisory Committee on Commercial Intelligence appointed  
 by Board of Trade.  
 1901. Commonwealth of Australia inaugurated.  
 New International Code of Signals in use.  
*Discovery* Antarctic Expedition sailed.  
 International Maritime Congress, Washington.  
 First Turbine Steamer on Clyde.  
 Export duty of 1s. per ton levied on coal.  
 Royal Commission on Coal Supplies of the United Kingdom.  
 1902. Report of Trinity House Fog Signal Committee.  
 Report of Admiralty Committee on Merchant Cruisers issued.  
 Combination of Atlantic S.S. Lines.  
 Colonial Conference in London.  
 Report of Royal Commission on Port of London issued.  
 British Pacific Cable opened.  
 Messages sent by wireless telegraphy across the Atlantic.  
 1903. Government Agreement with the Cunard Company.

1903. Report of Board of Trade Committee.  
 Report of Select Committee of House of Lords on Light Load Line issued.  
 Light Dues reduced 12½ per cent.  
 International Conference on Wireless Telegraphy at Berlin.  
 First Report of Royal Commission on Coal Supplies issued.  
 New Baltic Mercantile and Shipping Exchange opened London.  
 Cross-Channel steamers propelled by steam turbines.  
 Dr Diesel invented the Internal Combustion Marine Engine.
1904. Panama Canal concession acquired by United States.  
 Long voyage on oil fuel—*Nebraskan* (s.), California to New York, 12,724 knots, in 51 days, 7 hours.  
 Steam turbines adopted by Cunard Company.  
 Sailing Shipowners' International Union established.  
 Daily Paper, with news by wireless telegraphy, published at sea on *Campania* (s.).  
 Wireless telegraphy weather reports received from Atlantic liners at sea.  
 Wireless Telegraphy Act passed.  
 New International Telegraphic Code in operation.  
 New German steering regulations.  
 Report of Departmental Committee on law relating to compensation for injuries to workmen, including seamen, issued.  
*Victorian*, first transatlantic turbine seamer, launched. Return of Antarctic Expedition.
1905. Continuous wireless telegraphic communication with land reported by Atlantic liner.  
 Baltic and White Sea Conference (of steamship owners) formed.  
 Report of Royal Commission on Coal Supplies issued.  
 Record Atlantic passage by turbine steamer *Virginian*, 4 days, 6 hours.  
 Committee on Tonnage Measurement and Rates appointed by Board of Trade.  
 Shipowners' Negligence (Remedies) Act passed.
1906. *Lusitania* and *Mauretania*, largest and fastest liners, launched.  
*R. O. Rickmers* (German five-masted barque with auxiliary steam power, 5548 tons), largest sailing vessel, launched.  
 Panama Canal—Lock type decided upon.

1906. Royal Commission on Canals and Waterways appointed.  
 New Load Line Tables in operation, 1st March.  
 Marine Insurance Act, operating from 1st January 1907 passed.  
 Report of Board of Trade Committee on Tonnage Measurement for Dock Dues issued.  
 Merchant Shipping Act, 1906, passed, operating from 1st June 1907, save as otherwise provided.  
 Coal export duty of 1s. per ton repealed as from 1st November.  
 Royal Commission on Shipping Rings appointed.  
 Trials of submarine signalling apparatus conducted by Admiralty.  
 Ocean voyages by *Port Jackson* as training ship for boys.  
 First wireless telephony experiments.
1907. Colonial Merchant Shipping Conference in London.  
 Light Dues reduced further  $7\frac{1}{2}$  per cent. as from 1st April.  
 Report of New Zealand Royal Commission on Fires on Wool Ships issued.  
 Merchant Shipping Act, 1907, passed (Tonnage Deduction for Propelling Power), operating from 1st January 1914 for ships existing, under construction, or contracted for before 1st May 1907.  
 Shipping Federation Committee on supply of officers for the Mercantile Marine appointed.  
 New Zealand proclaimed a Dominion. International Yacht Racing Union formed, and rules adopted.
1908. Gyroscopic apparatus to prevent rolling of ships invented.  
 Porhydrometer—automatic cargo-weighting apparatus—invented.  
 Report of Royal Commission on Lighthouse Administration issued.  
 Light Dues reduced further 10 per cent. (total reduction 80 per cent.), to take effect 1st April 1909.  
 Stamp-duty on Marine Insurance. Voyage policies reduced from 3d. to 1d. per cent., to take effect 1st January 1909.  
 S.S. *Otaki*, first merchant vessel fitted with combination of reciprocating engines and turbines, built.  
 Port of London Authority established by Port of London Act.
1909. From 1st January German load-line regulations equally effective with corresponding British regulations.



1909. Steamer launched to ferry trains between Sassnitz (Germany) and Trelleborg (Sweden), 65 miles (Feb.).  
 Control of Thames below Teddington, and of London Docks, etc., transferred to Port of London Authority as from 31st March.  
 British Antarctic Expedition arrived back at New Zealand (March).  
 Meeting of International Commission on Weather Signals in London (June).  
 Report of Royal Commission on Shipping Rings issued (June).  
 Classification of Steel Vessels adopted by Lloyd's Register (June).  
 Board of Trade Committee on Pilotage appointed (July).  
 Merchant Shipping Advisory Committee re-appointed by Board of Trade, 28th August, for two years.  
 New York to London *via* Fishguard, in 5 days, 1 hour, 40 minutes (August).  
*S.S. Pallion*, self-discharging collier, built.  
 Marine Insurance (Gambling Policies) Act passed (October).  
 Final Report of Royal Commission on Canals and Inland Navigation issued (December).
1910. Board of Trade Committee on sight tests appointed (June).  
 British Antarctic Expedition left England (June).  
 Lloyd's Register rules for survey of marine internal combustion engines issued (June).  
 International Diplomatic Conference on Maritime Law at Brussels (September).  
 The geared turbine engine invented and fitted to the steamer *Vespasian*.
1911. Gyroscopic compass invented (January).  
 Pilotage Committee Report issued (March).  
 Reduction of Suez Canal dues 50 centimes per ton, to *fos. 675*, from 1st January 1912, announced June.  
 General Dock and Railway Strikes (August).  
 Lloyd's Act, 1911, passed (August).  
 Merchant Shipping (Seamen's Allotment) Act passed (August).  
 Ships' Medical Scales Committee Report issued (August).  
 International Association of Marine Underwriters founded (November).  
 Maritime Conventions Act, 1911, passed (December).  
 National Insurance Act, 1911 (December).

1912. Loss of *Titanic*, April 15th.  
London Dock Strike (May).  
Report of Committee on Sight Tests issued (June).  
Departmental Committee on Derelicts and Obstructions to Navigation (June).  
Royal Commission on Liquid Fuel (July).  
Board of Trade Committee on Boats and Davits (August).  
Suez Canal dues reduced further 50 centimes, from 1st January 1913 (August).
1913. Australian Navigation Act (February).  
Life-Saving Appliances, New Rules (March).  
Load-Line Committee appointed (April).  
Boats and Davits Committee, Final Report (June).  
*Volturno* (s.) burnt in the Atlantic; use of oil on the rough sea helped in saving passengers and crew (October).  
International Conference on Safety of Life at Sea met at the Foreign Office, London, under the Presidency of Lord Mersey (November 12).
1914. International Conference on Safety of Life at Sea drew up a Convention, consisting of 74 articles, to be signed by all interested Governments. This will standardise the conditions of safety in all the great maritime countries of the world (January 20). Text of Convention published. February 15th.

## APPENDIX XIV

## LIST OF MERCHANT SHIPPING ACTS

1. The Merchant Shipping Act, 1894.
2. The Merchant Shipping (Undermanning) Act, 1897.
3. The Merchant Shipping (Liability of Shipowners) Act, 1898.
4. The Merchant Shipping (Mercantile Marine Fund) Act, 1898.
5. The Mercantile Shipping (Liability of Shipowners and Others) Act, 1900.
6. The Merchant Shipping Acts Amendment Act, 1906.
  - (a) Board of Trade Instructions to Inspectors of Ships' Dimensions under the Act of 1906.
  - (b) Load-Line Exemption.
  - (c) Loading of Timber Rules.
  - (d) Language Test. Instructions to Superintendents and Consuls at Home Trade Ports.
  - (e) Regulations relating to Ships' Names.
7. Merchant Shipping (Tonnage Deduction for Propelling Power) Act, 1907: (a) Board of Trade Instructions to Surveyors under above.
8. Marine Insurance (Gambling Policies) Act, 1904.
9. Merchant Shipping (Seamen Allotment) Act, 1911.
10. Merchant Shipping Act, 1911.
11. Merchant Shipping (Stevedores and Trimmers) Act, 1911.
12. Maritime Conventions Act, 1911.
13. Pilotage Act, 1913.

## APPENDIX XV

*Appendix P from the Board of Trade Regulations relating to the Examination of Masters and Mates in the Mercantile Marine.*

TABLE SHOWING THE REQUIREMENTS AS TO SEA SERVICE NECESSARY TO QUALIFY FOR EXAMINATION FOR CERTIFICATES OF COMPETENCY.

## NOTE

A candidate for an Ordinary certificate of any grade who has not previously held an Ordinary certificate of a lower grade, must prove that he has served twelve months in the foreign trade or eighteen months in the home or coasting trade in a square-rigged sailing vessel. Service in square-rigged sailing vessels.

Where Foreign-going certificates are required to be held to qualify candidates for examination, they may be either the Ordinary certificates, or those for fore-and-aft rigged vessels or for foreign-going steamships. Nature of Certificate.

It must be clearly understood that the amount of service laid down in the Regulations for each grade of certificate of competency is the absolute minimum that can be accepted, and unless a candidate can show the full amount he must in no case be allowed up for examination.

The regulations relating to examinations for engineer officers are summarized on pp. 266 and 267.

Rank	Minimum Age	Total Sea Service (Years)	Officer's Service in Merchant Vessels		
			Years	Lowest Capacity	Lowest Certificate required
<b>ORDINARY CERTIFICATES FOR FOREIGN-GOING SHIPS</b>					
2nd Mate	17	4	..	No officer's service required.	None.
Only Mate	19	5	..	No officer's service required.	None.
1st Mate	19	5	1	3rd or 4th Mate in foreign trade in charge of watch.	2nd Mate foreign-going.
			1½	Or Only Mate in home or coasting trade.	2nd Mate foreign-going or home trade mate.
			1	Or Pilot with 1st Class pilot's certificate.	None.
Master	21	6	1	Only Mate in foreign trade. . . .	Only Mate foreign-going.
			1½	Or Only Mate in home or coasting trade.  <i>And in addition, unless the above service was performed with a First Mate's Foreign-going certificate, he will also be required to prove one of the following services prescribed for that grade.</i>	Only Mate foreign-going.
			1	3rd or 4th Mate in foreign trade in charge of watch.	2nd Mate foreign-going.

Rank	Minimum Age	Total Sea Service (Years)	Officer's Service in Merchant Vessels		
			Years	Lowest Capacity	Lowest Certificate required
Extra Master .	..	6½	1½	Or Only Mate in home or coasting trade.	2nd Mate foreign-going, or home trade Mate.
			1	Or Pilot with 1st-class pilot's certificate.	None.
			1	OR HE MUST HAVE SERVED 2nd Mate in foreign trade... <i>(Provided that, if this service as 2nd Mate was performed under an Additional or Auxiliary 1st Mate, it will only be accepted if a 3rd and 4th Mate were also carried.)</i>	1st Mate foreign-going.
			1½	And in addition 3rd or 4th Mate in foreign trade in charge of watch.	2nd Mate foreign-going.
			3	OR HE MUST HAVE SERVED Master in home or coasting trade.	2nd Mate foreign-going or Master home trade for one year of such service.
			1	Or Master in home or coasting trade. And in addition Mate in home or coasting trade.	Do.
3	Same as master				

\* If all the service was in home or coasting trade.

Rank	Minimum Age	Total Sea Service (Years)	Officer's Service in Merchant Vessels		
			Years	Lowest Capacity	Lowest Certificate required

**CERTIFICATES FOR FOREIGN-GOING FORE-AND-AFT RIGGED VESSELS**

2nd Mate  
Only Mate  
1st Mate  
Master

} Same as for ordinary certificates; except that no service in square-rigged sailing vessels is required.

**CERTIFICATES FOR FOREIGN-GOING STEAMSHIPS**

2nd Mate  
Only Mate  
1st Mate  
Master

} Same as for foreign-going ships; except that the service of officer may have been performed in a steamship and that no service in square-rigged sailing vessels is required.

**CERTIFICATES FOR HOME TRADE PASSENGER SHIPS**

Mate	19	4	—	No officer's services required.	None.
Master	20	5	.1	Only Mate.	Mate home trade or 2nd Mate foreign-going.
			2½	Or 2nd Mate in charge of watch.	Mate, home trade, or 2nd Mate foreign-going.
			1	Or As pilot with 1st class pilot's certificate.	None.

## APPENDIX XVI

TWO DIAGRAMS AND EXPLANATION, REPRODUCED  
FROM *Fairplay* BY PERMISSION OF THE EDITOR,  
SHOWING FLUCTUATION IN FREIGHTS BETWEEN  
1884 AND 1912.

## FREIGHT FLUCTUATIONS.

THE fluctuations which have taken place in freights in different directions during the past thirty years have been enormous, as has been evidenced by the tables compiled each year by Messrs Angier Bros., and published in these columns. We have endeavoured, by the aid of these tables and the returns published by the Board of Trade from time to time, to give a diagram showing the extent of these rises. It should be mentioned, however, that averages are deceptive, and that it is impossible with the data obtainable to secure absolutely reliable figures; but with the information at our disposal we have endeavoured to make the comparison as complete as possible. As the year 1900 is reckoned as the best year shipowners have had for many years, we have taken this year as a basis, and show by percentages the rises and falls in the years since 1884.

From this diagram it will be seen that, as regards both outward and homeward freights, 1889 was the record year, but from 1884 to 1889 freights were



good and did not show any very serious fluctuation. From 1889 to 1895 freights fell to the extent of 40 per cent. The engineers' strike in 1897, by stopping the production of new shipping, together with the Spanish-American war in 1898, sent outward and homeward freights up to 91.35 per cent. of the 1900 standard, and it was solely due to the demand of the British Government for transports for South Africa that freights went up still higher in 1900, when as much as 35s. per ton gross per month was paid for the hiring of some of the large mail and passenger steamers for the transport of troops. These high figures for passenger steamers are, however, not taken into account in the table for obvious reasons. It should be borne in mind that since 1885 the size of steamers engaged in the cargo-carrying trade has increased considerably, and that vessels, owing to their increased size and better despatch, can now carry cargo at a much lower rate to leave a profit than vessels could do thirty years ago.

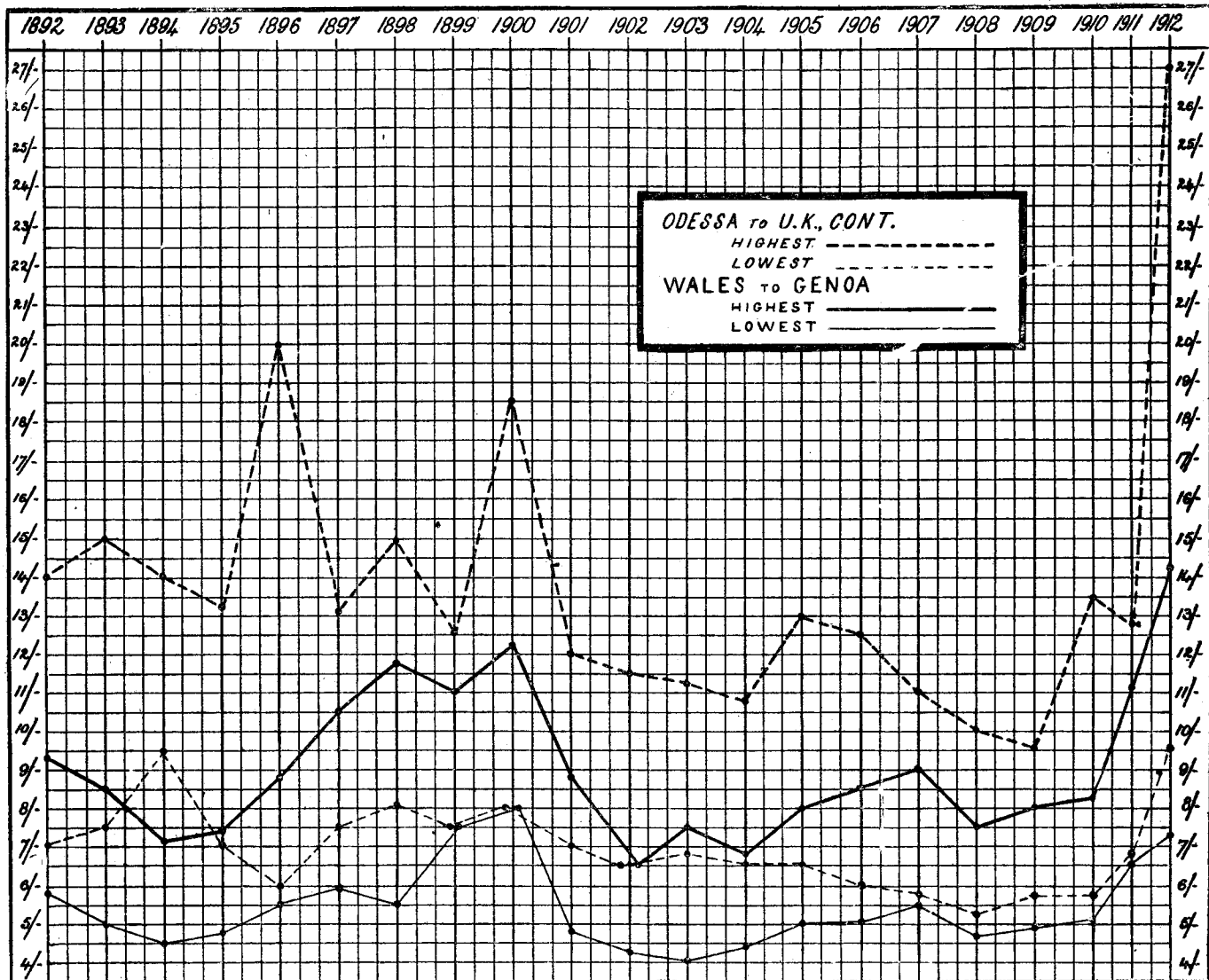
The high freights for carrying cargo that were paid in 1900, however, were not the result of an increase in trade generally, but were of a fictitious character, with the result when the transports, etc., were released by the Government, and had to seek freights in their regular trades, the result was disastrous, freights falling 26 per cent. in the following year, and remaining at an unremunerative level until September, 1911, when, shipowners having for some years refrained from building to any large extent owing to the impossibility of profitably employing

tonnage, the increased trade caused the demand for steamers to more than equal the supply, with the natural consequence that freights were forced up to a paying basis. At that time it was fully anticipated by shipowners generally that they were in for a year or two of good freights, although nothing of an extra abnormal character was anticipated. The strike in the Plate caused a large number of vessels to be tied up there which were consequently taken off the market. The coal strike in this country also caused a further large amount of tonnage to be laid idle, while the transport workers' strike in the middle of the year further delayed vessels. When the disputes were over there was a glut of goods to be shifted at different parts of the world, with the result that in order to secure vessels the different markets had to increase the rates, and freights reached a point which no owner in his wildest moment had anticipated. For instance, in order to induce vessels to go to the Plate in ballast, as much as 31s. had to be paid, which was directly attributable to the strike on this side tying tonnage up. The threatened closing of the Dardanelles was the final spurt, as much as 27s. being paid to induce owners to take the risk of loading in the Black Sea. It was generally recognised that the spurt in the autumn was more or less fictitious and would not last, and therefore the fall in freights which took place a month or so ago was not altogether unexpected. The sudden drop in Black Sea rates from 27s. to 12s. caused other markets to fall in sympathy, but rates are still

of a remunerative character, and it is generally believed that shipowners will have nothing to complain of for some time to come in the rates of freight they will be able to obtain.

As showing the freight fluctuations which have taken place during the period from 1892 to 1911 we give, in the appended folding sheets, further diagrams showing the highest and lowest rates of the homeward trade from Odessa and the highest and lowest rates from Wales to Genoa.

## HIGHEST AND LOWEST FREIGHTS, 1892 to 1912.



NOTE.—During the year 1913 Odesa to U.K., Cont., highest was 15s., lowest 7s. 6d. Wales to Genoa, highest was 12s., lowest 7s.

# APPENDICES

## APPENDIX XVII

### NET TONNAGE OF THE LEADING MERCANTILE FLEETS OF THE WORLD FROM 1850 TO 1910, SHOWING:—

(a) Sailing ship and Steamship Tonnage.

(b) World's Totals.

(c) The British, United Kingdom, United States of America, and German Percentage of the World's Total.

(d) These Percentages also shown in terms of Steamship Tonnage, reckoning 1 ton of steam = 4 tons sailing.

(The tonnage figures in this Table are taken from *Progress of Merchant Shipping in the United Kingdom and Principal Maritime Countries*, Cd. 6180, 1912.)

COUNTRIES		1850	1860	1870	1880	1890	1900	1905	1907	1910
United Kingdom	Sailing	3,396,659	4,204,360	4,577,855	3,851,045	2,936,021	2,096,498	1,670,766	1,461,376	1,113,944
	Steam	168,474	454,327	1,112,934	2,723,468	5,042,517	7,207,610	9,064,816	10,023,723	10,442,719
British Possessions	Sailing	648,672	1,096,464	1,369,145	1,646,844	1,338,361	915,096	906,372	883,448	879,926
	Steam	19,157	45,817	89,200	225,814	371,189	532,188	696,430	814,808	926,399
British Empire	Sailing	4,045,331	5,300,824	5,947,000	5,497,889	4,274,582	3,011,594	2,577,138	2,344,824	1,993,870
	Steam	187,631	500,144	1,202,134	2,949,282	5,413,706	7,739,798	9,761,266	10,838,531	11,369,118
Russia (including Finland)	Sailing	..	..	..	655,771	560,267	556,614	511,518	564,721	581,316
	Steam	..	..	..	100,421	234,418	417,922	440,643	501,638	535,040
Norway	Sailing	298,315	558,927	1,009,200	1,460,596	1,502,584	1,002,675	813,864	750,862	628,287
	Steam	..	..	13,715	58,062	203,115	505,443	668,250	819,282	897,440
Sweden	Sailing	..	..	..	421,693	369,680	288,687	263,425	238,742	175,916
	Steam	..	..	..	81,049	141,267	325,105	459,664	532,515	596,763
Denmark	Sailing	..	..	168,193	197,509	189,406	158,303	149,310	141,035	131,342
	Steam	..	..	10,453	51,957	112,788	250,137	334,124	404,946	415,496
German Empire	Sailing	..	..	900,361	965,767	709,761	593,770	553,817	533,652	506,837
	Steam	..	..	81,994	215,758	723,652	1,347,875	1,915,475	2,256,783	2,396,733
Netherlands	Sailing	289,870	423,790	370,159	263,887	127,200	78,493	54,417	49,640	45,936
	Steam	2,706	10,132	19,455	64,394	128,511	268,430	356,890	398,026	488,339
Belgium	Sailing	33,315	28,857	20,648	10,442	4,393	741	2,844	964	3,402
	Steam	1,604	4,254	9,501	65,224	71,553	112,518	96,889	119,223	187,730
France	Sailing	674,228	928,099	917,633	641,539	444,092	501,175	676,193	662,828	636,081
	Steam	13,925	68,025	154,415	277,759	499,921	527,551	711,027	739,819	815,537
Portugal	Sailing	..	..	..	..	..	57,925	43,126	38,363	43,844
	Steam	..	..	..	..	..	51,506	58,077	62,675	70,193
Spain	Sailing	..	..	..	326,438	210,247	95,187	58,201	45,185	44,940
	Steam	..	..	..	233,695	407,935	679,392	685,680	676,926	744,517
Italy	Sailing	..	..	980,064	922,126	634,149	571,164	541,171	468,674	432,695
	Steam	..	..	32,100	77,050	106,567	376,844	484,432	526,586	674,497
Austria Hungary	Sailing	..	..	279,400	258,642	138,796	52,736	39,565	37,658	32,235
	Steam	..	..	49,977	63,970	97,852	246,989	366,070	418,838	477,616
Greece	Sailing	..	263,075	398,703	..	226,702	175,867	145,312	145,283	145,284
	Steam	..	..	5,360	..	44,884	143,436	225,512	257,900	301,785
United States of America—	Sailing	1,540,769	2,448,941	1,324,256	1,206,206	749,065	485,352	353,333	269,021	234,848
	Trade Steam	44,942	97,296	192,544	146,604	197,630	341,342	601,180	602,125	556,977
(b) Enrolled for River and Lakes	Sailing	1,418,550	1,982,297	1,795,389	1,650,270	1,816,344	2,021,690	2,361,716	2,450,405	2,372,873
	Steam	481,005	770,641	882,551	1,064,954	1,661,458	2,316,455	3,140,314	3,677,243	4,343,384
China	Sailing	..	..	..	21,694	11,801	20,541	19,560	18,243	14,314
	Steam	..	..	..	..	..	18,215	45,617	57,604	88,888
Japan	Sailing	..	..	..	41,215	..	320,571	334,684	366,013	412,859
	Steam	..	..	..	..	..	543,365	938,783	1,116,193	1,233,785
Total		9,032,191	13,295,302	16,765,205	19,991,863	22,000,000	26,205,398	30,849,067	33,132,066	34,629,742
World's Total	Sailing	8,300,378	11,844,810	14,111,006	14,541,684	12,000,000	9,993,075	9,559,194	9,126,113	8,435,874
	Steam	731,813	1,450,492	2,654,199	5,450,179	10,000,000	16,212,323	21,289,873	24,005,953	26,193,868
British percentage of world's total		46.86	43.33	42.64	42.25	43	41.02	39.99	39.79	38.58
United Kingdom do.		39.47	34.80	33.94	32.88	35.43	35.50	34.80	34.66	33.37
United States of America do.		38.58	39.51	25.02	20.38	19.87	19.70	20.92	21.12	21.68
German do.		..	..	5.85	5.91	6.43	7.40	8.00	8.42	8.38
British percentage of world's total in terms of steamship tonnage, reckoning 1 ton steam = 4 tons sailing		42.7	40.86	43.49	47.56	48	45.39	43.98	43.46	41.93
United Kingdom do.		36.25	33.95	36.51	40.57	43	41.32	40.00	39.48	37.88
United States of America including (a) and (b) do.		45.09	44.55	30.00	21.19	19	17.55	24.24	18.86	19.61
German do.		..	..	5.85	5.03	6	7.99	8.67	9.09	8.91

## APPENDIX XIX

### TOTAL VALUES OF IMPORTS AND EXPORTS IN THE TRADE BETWEEN GREAT BRITAIN AND THE UNDERMENTIONED COUNTRIES FROM 1855 TO 1912.

The black figures show the order of importance of the trade with each country.

*(Compiled from the Statistical Abstracts for the United Kingdom.)*

IMPORTS AND EXPORTS—	1855	1860	1870	1880	1890	1900	1910	1912
	£	£	£	£	£	£	£	£
France	4 19,568,299	4 30,475,409	2 59,590,513	3 69,961,257	3 69,538,951	2 79,496,109	5 85,295,754	4 91,905,234
Germany (Prussia, Hanse Towns Hanover, till 1870)	2 30,740,883	3 34,450,891	4 43,469,742	4 53,411,263	4 56,589,612	4 69,724,457	3 96,110,119	3 102,468,044
Russia (1856)	5 14,932,778	5 21,647,777	6 30,631,726	7 26,996,212	7 32,596,922	8 38,344,427	7 64,559,311	9 60,484,369
Holland	6 13,630,909	6 18,009,652	5 31,619,562	6 41,563,737	6 42,346,916	6 46,312,113	8 58,451,873	7 68,331,672
Belgium	13 6,480,939	13 8,043,915	8 20,197,018	8 24,241,694	8 30,978,742	7 38,349,910	9 53,567,530	8 63,399,027
China, including Hong Kong	8 10,050,586	8 14,775,321	9 19,839,840	9 22,571,090	14 15,560,539	16 12,016,444	16 17,957,824	16 19,811,449
Japan	..	19 167,513	19 1,873,466	18 4,345,018	13 5,212,366	17 11,474,451	18 15,205,737	18 16,409,087
British India, including Strait Settlements and Ceylon	3 26,129,392	2 38,550,136	3 54,521,127	2 72,726,587	2 80,487,511	3 75,978,627	2 116,106,158	2 142,228,981
Australia (and Australasia till 1900)	7 11,721,825	7 17,068,460	7 24,810,745	5 44,411,426	5 54,821,038	5 47,346,385	6 69,648,914	6 74,400,312
New Zealand	..	..	..	..	..	14 17,515,173	11 30,345,216	12 31,489,404
Canada and Newfoundland	11 7,782,235	10 10,813,772	11 16,099,791	10 21,905,007	10 20,717,222	10 31,799,453	10 50,619,380	10 56,643,668
United States of America	1 43,804,355	1 67,634,883	1 81,110,770	1 145,035,452	1 143,623,461	1 176,133,216	1 182,156,504	1 201,312,770
British West Indies and Guiana	12 7,452,813	11 8,633,435	14 9,688,210	15 9,821,167	17 6,636,929	20 5,006,943	20 6,751,093	21 5,941,685
South America, West Coast, Chili and Peru	10 8,142,070	12 8,333,460	12 13,330,054	16 8,654,500	16 9,127,622	18 10,740,412	17 17,545,691	17 17,838,800
South America, East Coast, Brazil, Uruguay, Argentina	9 8,268,775	9 11,570,508	10 17,420,877	11 17,713,881	9 27,230,679	9 34,857,925	4 87,826,603	5 90,024,073
Central America and Mexico	18 1,358,247	18 1,451,157	18 2,792,187	19 3,931,415	19 4,913,335	21 4,204,242	21 6,027,159	20 6,965,614
South Africa, (Cape of Good Hope and Natal)	17 1,786,390	16 3,876,233	17 4,836,287	14 12,844,522	13 15,899,164	12 17,965,201	12 29,917,339	11 33,533,119
Denmark	16 4,107,261	17 3,491,870	16 5,382,744	17 7,633,340	15 10,681,395	13 17,911,938	13 26,259,817	13 29,155,379
Sweden and Norway (together till 1890)	15 5,339,663	15 5,925,691	13 11,809,064	12 16,121,208	11 18,908,614	19 9,667,000	19 11,206,376	19 12,953,537
Spain	14 6,093,720	14 6,615,021	15 9,180,769	13 14,778,533	12 18,211,337	11 22,216,203	14 19,241,986	14 22,081,623



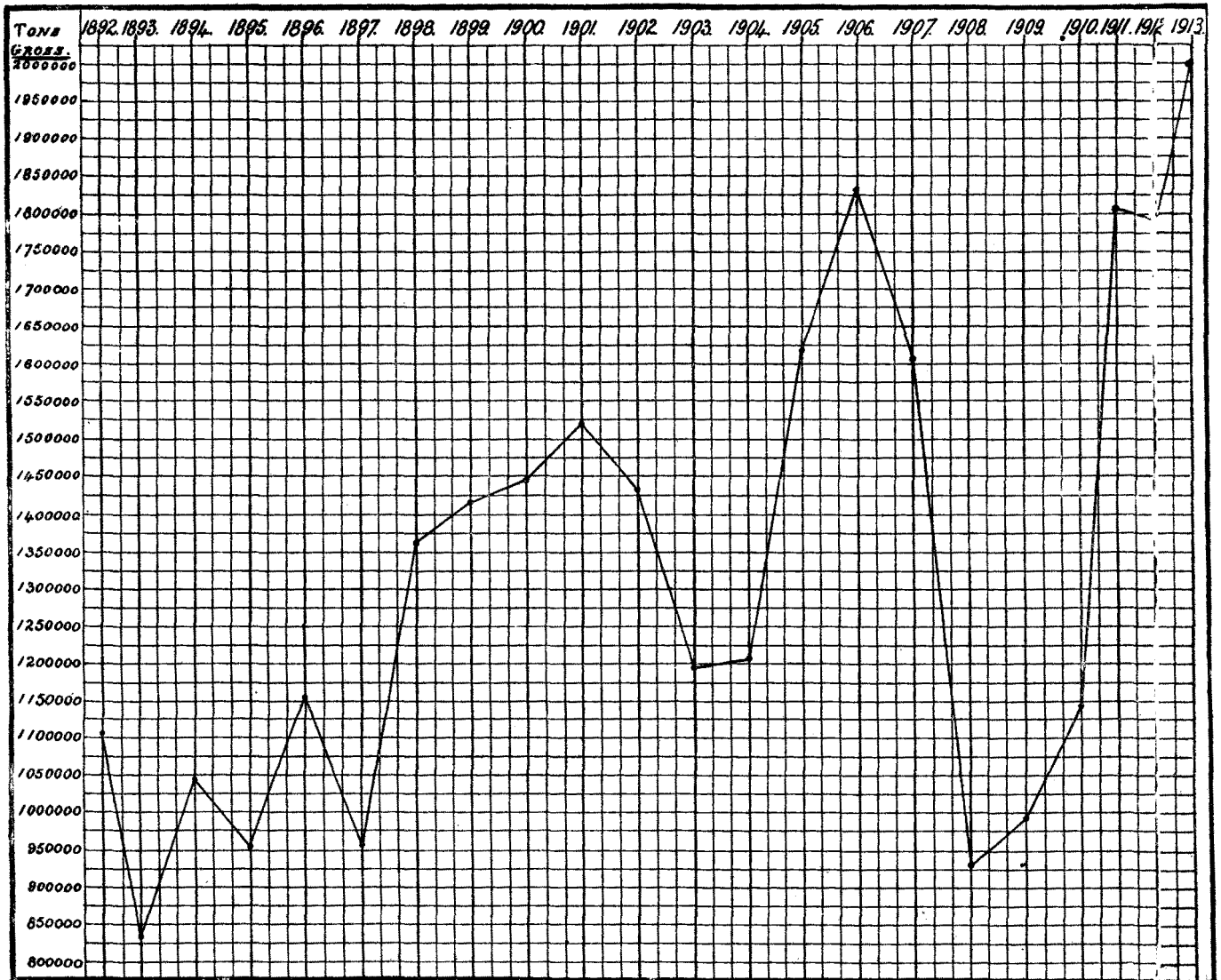
## APPENDIX XXI

THE following list gives the total output of merchant and warship tonnage in the yards of the United Kingdom. In the diagram also given below the warship tonnage and dry docks have been deducted.

Launched in 1913	933 vessels of 2,186,607 tons gross.
" 1912	964 " 2,042,048 "
" 1911	1,120 " 1,997,822 "
" 1910	754 " 1,287,799 "
" 1909	730 " 1,130,822 "
" 1908	878 " 1,033,498 "

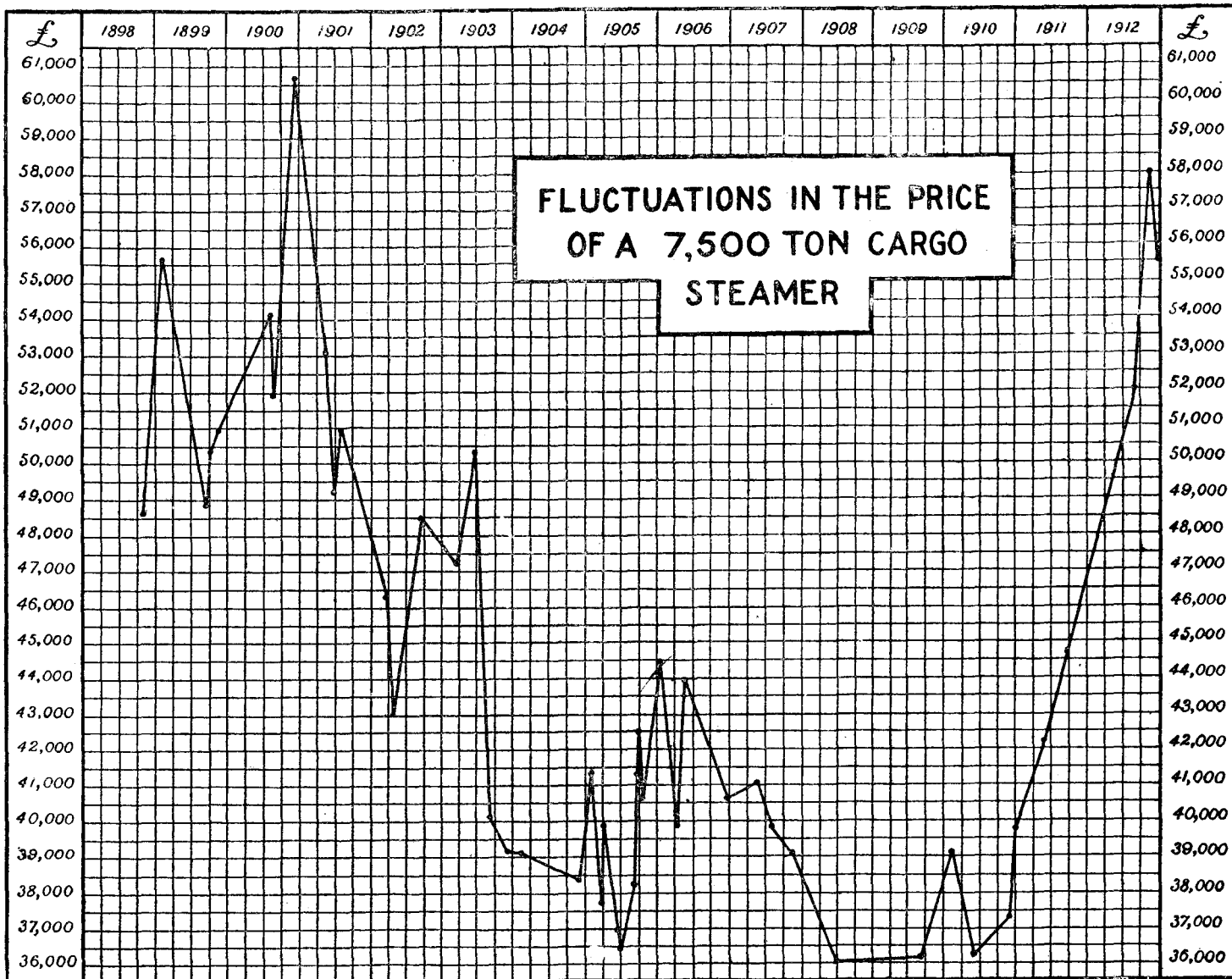
Launched in 1907	1,159 vessels of 1,759,801 tons gross.
" 1906	1,140 " 1,956,211 "
" 1905	820 " 1,706,719 "
" 1904	745 " 1,275,237 "
" 1903	734 " 1,314,218 "
" 1902	712 " 1,470,208 "

**OUTPUT OF MERCHANT TONNAGE (WARSHIPS EXCLUDED), from 1892 to 1913.**





APPENDIX XXII



Reproduced by permission of the Editor of *Fairplay*.

During 1913 the price continued to fall, in June it was £54,000, and in December £48,000

## APPENDIX XXIII

### WORKING OF SOME REPRESENTATIVE PASSENGER STEAMSHIP LINES IN THE YEAR 1912.

Reproduced by permission of the Editor of *Fairplay*.

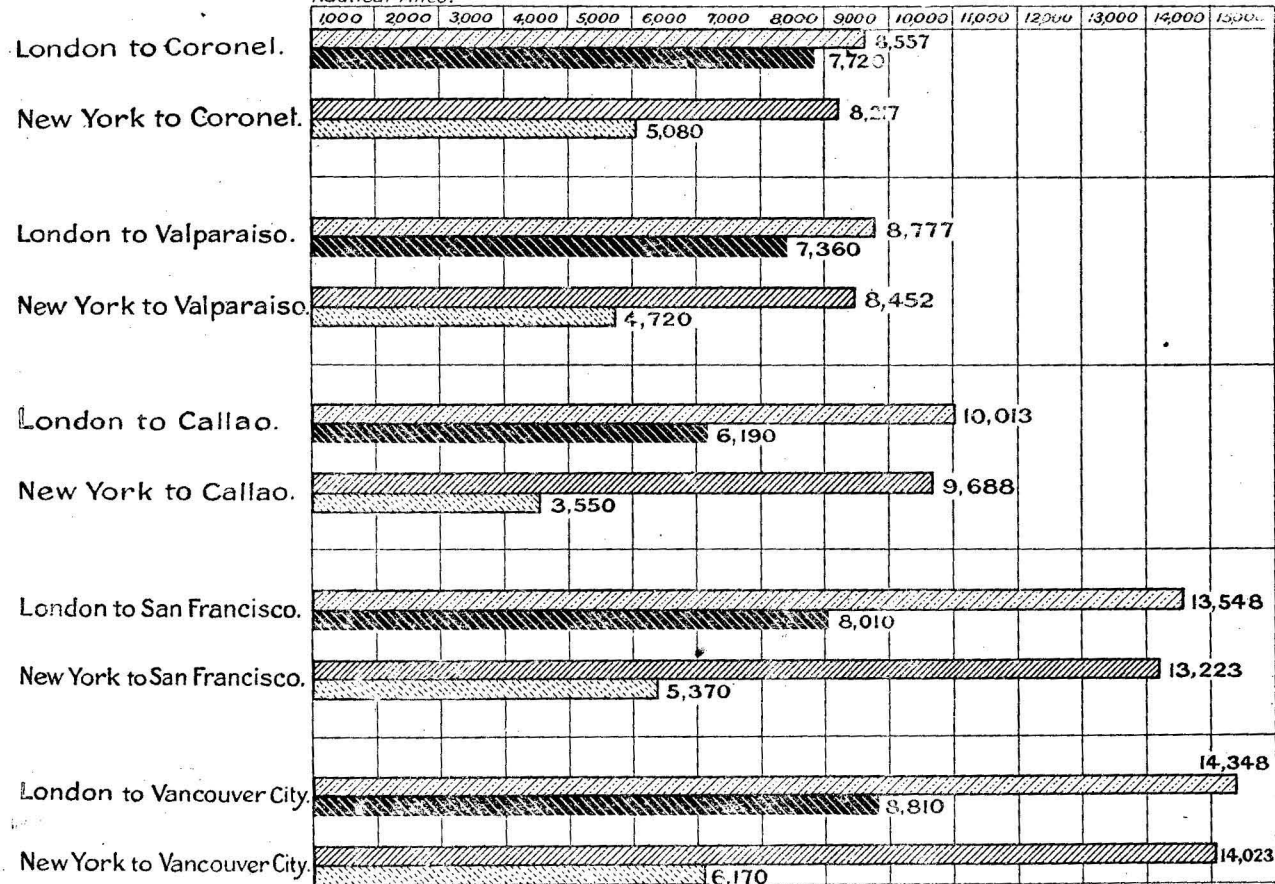
Name of Company	Paid up Capital	Debentures	Sundry Creditors & Loans	Book Value of Fleet	Sundry Debtors, Investments, Cash, etc.	Fleet		Dividend Paid	Percentage
						No. of Vessels	Tons Gross		
African Steamship Co.	£675,000	£153,910	£165,322	£1,034,832	£138,548	23	64,791	£50,625	7½
Ancher Line (Henderson Bros.) .. ..	575,000	465,000	634,096	1,595,958	375,319	19	112,214	35,582	6.18
Australasian United Steam Navigation Co.	343,620	246,845	250,510	640,612	215,658	23	57,077	27,489	8
Booth Steamship Co. ..	550,000	400,000	397,125	1,374,249	294,026	37	105,086	41,500	7.54
British & African Steam Navigation Co. ..	650,000	372,200	142,594	918,055	291,725	40	107,784	32,500	5
British India Steam Navigation Co. ..	1,657,200	543,420	1,127,218	3,384,299	900,131	108	458,619	106,790	6.44
Bucknall Steamship Co.	102,250	290,462	419,420	648,071	171,332	27	117,476	<i>nil</i>	—
China Mutual Steam Navigation Co. ..	508,235	<i>nil</i>	184,570	832,410	113,317	19	118,895	50,208	9.87
Clan Line .. ..	500,000	750,000	243,290	1,996,187	27,141	53	223,019	30,600	6
Cunard Steamship Co.	1,600,020	3,600,000	476,544	5,571,280	1,176,347	26	267,017	96,001	6
Elder Line .. ..	500,000	233,810	95,999	689,299	163,909	30	91,083	25,000	5
Ellerman Lines .. ..	1,400,000	<i>nil</i>	887,586	2,162,558	243,000	87	355,791	98,000	7
Houlder Line .. ..	474,245	200,000	278,430	348,532	381,043	8	36,062	<i>nil</i>	—
Imperial Direct West India Mail Service Co.	250,000	105,550	125,474	248,730	15,777	6	28,124	<i>nil</i>	—
Indo-China Steam Navigation Co. .. ..	495,890	277,050	26,910	764,208	132,313	38	90,428	14,877	3
F. Leyland and Co. ..	2,614,350	335,600	191,663	2,167,087	798,439	41	251,155	<i>nil</i>	—
National Steamship Co.	225,000	34,825	3,758	102,071	13,578	2	16,005	<i>nil</i>	—
New Zealand Shipping Co. .. ..	696,384	385,100	722,960	1,423,893	829,905	24	164,149	69,638	10
Oceanic Steam Navigation Co. .. ..	750,000	1,250,000	3,554,083	8,136,635	1,161,137	43	425,579	450,000	60
Orient Steam Navigation Co. .. ..	1,19,310	712,500	640,506	1,948,128	152,642	9	97,390	73,875	23.13
Pacific Steam Navigation .. ..	1,477,125	<i>nil</i>	285,222	1,486,170	738,413	35	167,826	88,627	6
P. and O. Company ..	3,500,000	1,800,000	1,027,541	3,296,592	4,793,444	89	447,391	291,000	8.31
Prince Line .. ..	601,495	<i>nil</i>	314,927	1,094,403	42,556	38	142,275	60,149	10
Royal Mail Steam Packet Co. .. ..	1,700,000	2,250,000	1,196,516	4,875,183	817,454	59	237,502	85,000	5
	<b>£22,165,124</b>	<b>£14,406,272</b>	<b>£13,391,364</b>	<b>£46,739,492</b>	<b>13,987,154</b>	<b>884</b>	<b>4,182,828</b>	<b>£1,726,861</b>	<b>7.79</b>
International Mercantile Marine Co. of New Jersey .. ..	20,332,541	15,540,832	3,087,329	37,897,974	3,062,029	120	1,067,425	<i>nil</i>	—





APPENDIX XXIV.

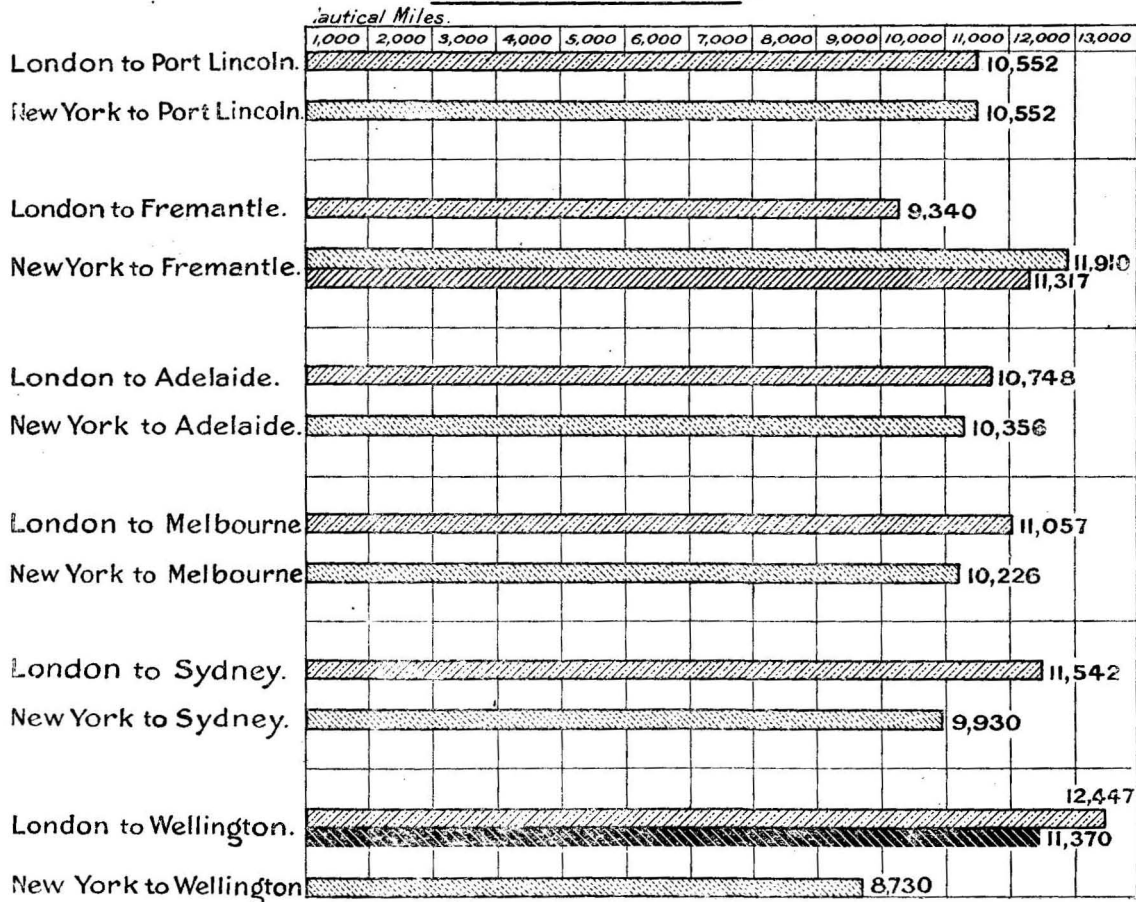
*Diagram of Distances showing the Effect of the Panama Route.*





**(1) NORTH & SOUTH AMERICA.**

Nautical Miles.

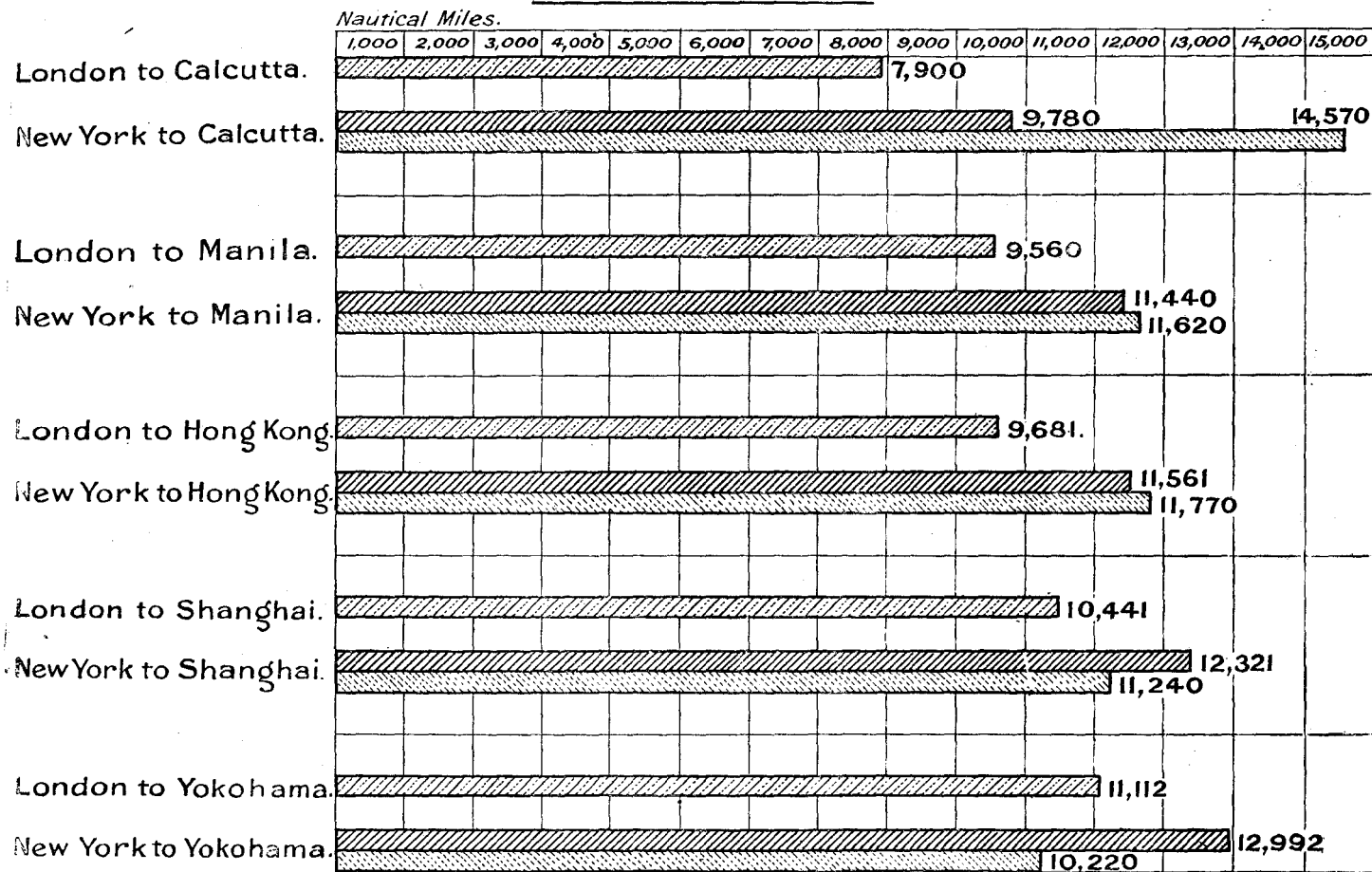


-  ..... London via Cape Horn.
-  ..... London via Panama.
-  ..... New York via Cape Horn.
-  ..... New York via Panama.

*Diagram of Distances showing the Effect of the Panama Route.***(2) AUSTRALASIA.**

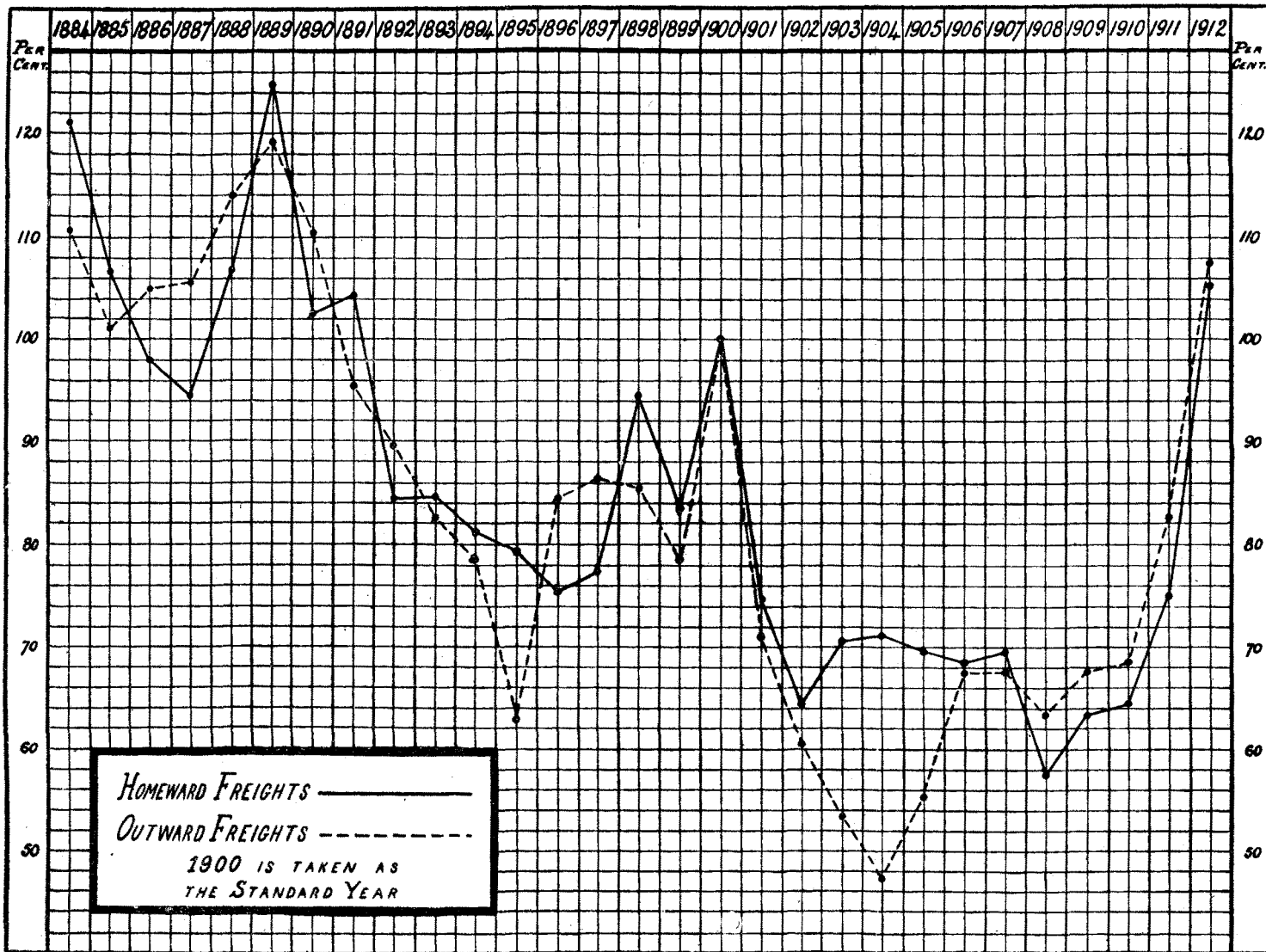
-  ..... London via Suez.  
 ..... London via Panama.  
 ..... New York via Suez.  
 ..... New York via Panama.

*Diagram of Distances showing the Effect of the Panama Route.*  
**(3) THE FAR EAST.**



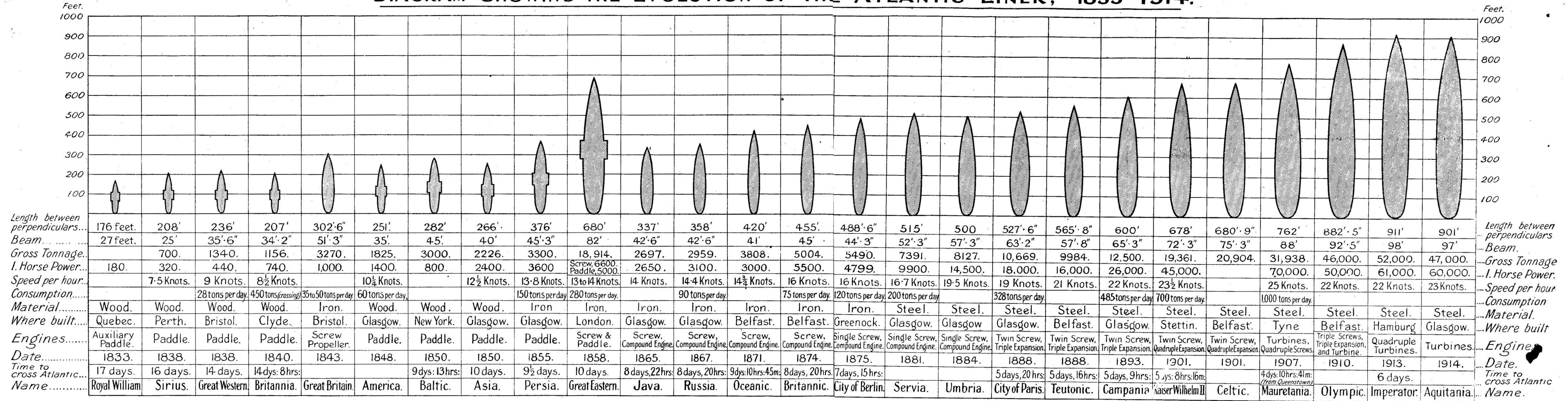
.....London via Suez.  
 .....New York via Panama.  
 .....New York via Suez.

FLUCTUATIONS IN MEAN YEARLY FREIGHT RATES, 1884 TO 1912.



NOTE.—During the year 1913, mean homeward freights dropped to 89. Mean outward freights dropped to 91.

# DIAGRAM SHOWING THE EVOLUTION OF THE ATLANTIC LINER, 1833-1914.





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