

1892.

NEW ZEALAND.

MARINE DEPARTMENT.

(ANNUAL REPORT FOR 1891-92.)

Presented to both Houses of the General Assembly by Command of His Excellency.

MY LORD,—

Marine Department, Wellington, 31st August, 1892.

I do myself the honour to transmit herewith, for your Excellency's information, the report of the Marine Department of this colony for the financial year ended on the 31st March last.

I have, &c.,

R. J. SEDDON,

Minister having charge of the Marine Department.

His Excellency the Right Honourable the Earl of Glasgow, &c.,
Governor of New Zealand.

The ASSISTANT SECRETARY to the MINISTER of MARINE.

SIR,—

Marine Department, Wellington, 2nd August, 1892.

I have the honour to submit the following report of this department for the year ended the 31st of March last:—

Lighthouses.—The only accident that happened to any of the lighthouses was at Portland Island, where the screw of the collar which held up the pinion of the clutch of the machine became loose, and fell through the weight-hole, which caused the light to become stationary for about ten minutes on the night of the 26th September last. The light on French Pass Beacon was not extinguished during the year. At Pencarrow Head several panes of glass were renewed, as they had become yellow through age; a further supply of spare panes has been procured from England, and the remainder will be renewed as soon as convenient; this glass has been in the lantern since 1859. New dormant panes were fitted to Nugget Point Lighthouse, and a small store erected in Roaring Bay, to the south of the lighthouse, so that that bay may be used when the ordinary landing is impracticable. Repairs were effected to Farewell Spit Lighthouse, but it was found that the whole structure was so much decayed that it would probably be cheaper to build a new iron lighthouse than to put the present structure, which was built of timber in 1868-69, in a thorough state of repair. In anticipation of this a new lantern has been ordered from England, so that when the new tower is erected the exhibition of the light may be impeded for as short a time as possible. The question of the re-erection of the tower is standing over until the Engineer-in-Chief has an opportunity of visiting the station. The dwellings at several of the stations will shortly require repairs of a more or less extensive nature; several have now been erected for upwards of twenty years, and so repairs are required owing to the natural decay of the materials of which they were constructed. One lightkeeper resigned during the year owing to the state of his wife's health. At the request of the Government, Mr. T. Perham made an examination of and reported on the various landings at the lighthouses with the view of ascertaining what could be done to improve them. This question is, of course, principally a matter of expenditure. The attention of the department has been called to a new oil called mineral colza, which, it is believed, could be procured at a less cost than the oil now used. A trial of a sample was made with fair results, and a small shipment has been procured with a view of making an extended trial. The saving of cost would arise principally through the fact that this oil would be procured from the United States, the freight from New York on mineral oil being only about one-half that from the United Kingdom.

New Lighthouses.—A lantern and apparatus have been ordered for Stephen's Island Lighthouse. The apparatus will be of the first order—revolving, showing a double flash every half minute. The lamp will be a five-wick lamp, and will burn paraffin oil, that illuminant being now consumed in all the coastal lighthouses. This will be the first "double-flashing" light erected in the colony. Since the end of the financial year a working party has been sent to Stephen's Island to get the tramway, landing-place, &c., ready to begin the work of constructing the lighthouse-keepers' dwellings, &c. It is proposed to construct the tower of cast-iron on the same pattern as

Cuvier Island Lighthouse. No further steps have been taken in connection with the Snares Lighthouse, the Government of Victoria having questioned the suitability of the site on the main island, which was selected by the delegates in January, 1891. It has now been decided that the Engineer-in-Chief shall visit the islands as soon as convenient, with the view of reporting on the various sites, and furnishing an estimate of the cost of construction of the light on each site.

Harbours.—A survey and report on the River Mokau was made by Mr. Perham with the view of ascertaining what works would be required to improve the navigation of the river, having regard to the possibility of a large coal-trade. Mr. Perham also reported on the protection of the river banks and improvement of the channel at Wanganui. At Nelson, arrangements were made to acquire the site of the leading beacons at a cost of £200. No repairs or alterations of importance were undertaken at any of the harbours under the control of this department. General harbour regulations relative to the carriage of gunpowder in lighters, to the speed of steamships having ships in tow, and to the passing of dredges at work, were made in February last. A sum of £3,000 voted for dredging at New Plymouth is being expended under the direction of the Public Works Department.

Orders in Council.—The following Orders in Council, under the provisions of the Harbours Acts, have been issued during the year:—

- May 26, 1891. Approves plans of berthages for dredging-plant at Westport.
- May 26. Approves plans of gridiron at Westport.
- June 1. Approves plans of extension of wharf at Mercury Bay.
- June 1. Licenses Kauri Timber Company (Limited) to occupy foreshore at Mercury Bay for wharf-extension site.
- June 9. Fixes license-fees for watermen's boats, &c., in Manukau Harbour.
- June 16. Validates examination and allowance of accounts of Westport Harbour Board.
- June 30. Approves plans of ferry jetty off Quay Street, Auckland.
- June 30. Approves plans of wharf at Okain's Bay.
- June 30. Licenses Okain's Bay Road Board to occupy foreshore at Okain's Bay for wharf site.
- June 30. Approves plans of wharf at Little Akaloa.
- June 30. Licenses Okain's Bay Road Board to occupy foreshore at Little Akaloa for wharf site.
- June 30. Amends Raglan Wharf dues and regulations.
- July 7. Approves plans of low-level breastwork, Lyttelton.
- July 7. Approves plans of wharf on Turanga Creek, Auckland.
- July 7. Licenses Turanga Road Board to occupy foreshore on Turanga Creek for wharf site.
- July 21. Approves plans of extension of main wharf, Bluff Harbour.
- July 21. Approves plans of M. Clatworthy's boat-building shed, Clyde Quay, Wellington.
- July 21. Appoints members of Greymouth Harbour Board.
- July 21. Appoints members of Westport Harbour Board.
- September 23. Approves plans of G. J. Black's yacht-slip, Akaroa.
- September 23. Licenses G. J. Black to occupy foreshore at Akaroa as site for yacht-slip.
- September 23. Revokes dues for Mangawai Wharf, and fixes others.
- September 23. Revokes authority to St. Helier's Land, Building, and Investment Company to build wharf, Auckland.
- October 2. Approves of Thames foreshore license to T. A. Dunlop.
- October 2. Approves of Thames foreshore license to G. and W. Lovatt.
- October 2. Approves plans of Leyland, O'Brien and Company's timber-log booms, Auckland.
- October 10. Appoints member of Westport Harbour Board.
- November 6. Approves plans of repairs to Russell Wharf.
- November 13. Approves plans of Wanganui River-bank protection works.
- December 21. Appoints member of Westport Harbour Board.
- January 6, 1892. Makes regulations for election of members of Harbour Boards by local bodies, &c.
- February 1. Approves plans of removal of solid abutment, approach to Bluff wharves.
- February 1. Makes and amends General Harbour Regulations.
- February 15. Appoints member of Greymouth Harbour Board.
- March 16. Approves plans of sheet-piling face-work at coal staiths, Westport.
- March 16. Approves plans of overfall weir at Orawaiti Overflow, Westport.
- March 22. Approves plans of boat-landing at Bright Street, Westport.
- March 22. Fixes dues and rates for Okain's Bay Wharf.
- March 22. Fixes dues and rates for Little Akaloa Wharf.
- March 31. Approves plan of site of W. and G. Turnbull and Company's fishing establishment at Picton.
- March 31. Licenses W. and G. Turnbull and Company to occupy foreshore at Picton as site for fishing establishment.
- March 31. Approves plan of site of A. Davidson's goods-shed at Wairoa, Hawke's Bay.
- March 31. Licenses A. Davidson to occupy foreshore at Wairoa, Hawke's Bay, as site for goods-shed.

Light Dues.—The sum of £16,217 16s. 7d. was received for light-dues for the year, as against £15,794 14s. 9d. in the preceding year, thus showing an increase of £423 1s. 10d.

Government Steamers.—The "Stella" is still laid up. The work of the Government is still carried out by the "Hinemoa," by which vessel all the lighthouses are attended to, buoys and beacons on the coast or in harbours under the control of the department are overhauled and painted, besides which regular trips have been made to the outlying islands of the colony. A considerable quantity of cargo has been carried for other departments, including railway-plant for the Railway Commissioners. During the year the "Hinemoa" steamed 31,451 miles, was 3,434 hours under

steam, burnt 1,547 tons of New Zealand coal, landed 2,557 tons of cargo, and cleaned and overhauled 218 buoys.

Examination of Masters, Mates, and Engineers.—One hundred and seventeen candidates passed their examination for certificates of competency, and twenty-seven failed. Of those who passed seventy-two were masters, mates, and engineers of sea-going vessels; and forty-five were masters and engineers of river-steamers. There were no failures to pass the colour-test examination reported during the year. Four certificates of service were issued during the year, two being for the Home and two for the foreign trade. New regulations for the examination of masters, mates, and engineers were made in conformity with the latest regulations made by the Board of Trade. The principal alteration in those for masters and mates is that candidates are required to have served at sea a certain time within a limited number of years.

Relief of Distressed Seamen.—The sum of £112 14s. 9d. has been expended during the year on account of the relief of distressed seamen belonging to New Zealand vessels. Of this amount £1 16s. was paid for the conveyance of the crew of the "Awarua" from Rarotonga, and £1 19s. for C. L. Olsen, one of the crew of the "Ryno." £108 19s. 9d. was paid for the replenishing of the depôts for castaways on the Auckland, Bounty, and Kermadec Islands. A sum of £334 12s. 11d. was paid for the conveyance of the shipwrecked crew of the "Compadre" from the Auckland Islands to the Bluff, and for their clothing and maintenance. The amount of compensation payable to the owners and crew of the sealing schooner "Janet Ramsay," which brought them to the Bluff, was determined after due inquiry by a commission consisting of Messrs. Feldwick and Carswell. It is satisfactory to know that the depôts established at the Auckland Islands by the Government proved of inestimable service to the shipwrecked crew of this vessel.

Wages and Effects of Deceased Seamen.—During the year the estates of thirty-five deceased seamen have been dealt with. Two estates, amounting to £76 0s. 9d., have been transferred to the Public Trustee; £83 13s. 1d. has been paid to relatives, and £32 15s. 4d. paid into the Public Account in accordance with the provisions of section 87 of "The Shipping and Seamen's Act, 1877." Twenty-five new estates were received during the year.

Survey of Steamers.—Certificates of survey under "The Shipping and Seamen's Act, 1877," have been issued to 197 steamers, of 32,288 aggregate tonnage and 9,841 horse-power, as against 201 steamers, of 29,924 aggregate tonnage and 9,887 horse-power last year. Certificates of exemption from the employment of certificated master and engineer have been issued under the provisions of section 201 of "The Shipping and Seamen's Act, 1877," and subsection (2) of section 2 of "The Shipping and Seamen's Act 1877 Amendment Act, 1885," for the s.s. "Ivy" for so long as she is plying on the Manawatu River without passengers, and for the s.s. "Tainui" for so long as she is plying within Queen Charlotte Sound and Tory Channel in the fishing trade.

Wrecks and Casualties.—The accompanying table shows an analysis of the casualties reported. Those on the coast of the colony number 33, representing 17,650 tons, as against 35 casualties, affecting 12,936 tons, in the previous year. The number of total wrecks within the colony was 4 vessels, of 4,453 aggregate tonnage, as against 3 vessels, of 830 aggregate tonnage in the previous year. There is a large decrease in the number of lives lost during the year; being 8, as against 121 in the previous year. Only 1 life was lost on or near the coasts of the colony—namely, from the "Sardhana." Of the 7 lost beyond the colony, 1 each was lost from the s.s. "Hauroto," s.s. "Tongariro," "Alice Muir," "Taranaki," "Waitangi," "Lindores Abbey," and "Auriga."

Of the miscellaneous casualties reported, 2 were of a serious character—viz., those to the "Castor" and "Everest," fire having broken out in the holds of each of these vessels. The "Castor" was loading wool at the time of the casualty. The "Everest," laden with shale, which had put into Lyttelton for repairs in dock, is supposed to have been wilfully set on fire.

Notices to Mariners.—Forty-five notices to mariners were issued during the year, of which eighteen related to matters within the colony. The following is a list of them:—

- Russell Harbour: Harbour establishment abolished.
- Auckland Harbour: Defines man-of-war anchorage.
- French Pass: Position of buoy.
- Timaru Harbour: Alteration in harbour lights.
- Bay of Islands: Position of Whale Rock buoy.
- Waikato River: Leading beacons carried away.
- Queen Charlotte Sound Entrance: Rock reported off White Rocks.
- New River Harbour: Reduction of harbour staff.
- Auckland Harbour: Alteration in lights, outer western tee, Queen Street Wharf.
- Koreho (or Brown's) Island: Position of buoy.
- Lyttelton Harbour: Dredging operations.
- New River Harbour: Channel narrowed as far up as Bombay Rock.¹
- Westport Harbour: Alteration in position of two leading river beacons.
- Greymouth Harbour: Dredge signals.
- Nelson Harbour: Red flag on Haulashore Island during blasting operations.
- Taukupu River: Position of beacons erected.
- Foveaux Strait: Rock reported off Dog Island.
- Napier Harbour: Red light exhibited on end of breakwater to show progress of work.

FISHERIES.—*Oysters.* It is proposed to introduce a Bill this session of Parliament to consolidate and amend the laws relating to oyster fisheries. On the 6th October last an Order in Council was made prohibiting the export of rock, shore, drift, or mangrove oysters, but so much of the Order as related to shore or mangrove oysters was revoked by Order in Council dated the 1st February last. The quantity of oysters exported during the financial year amounted to: From ports in the North Island (Auckland, Russell, and Wellington), 1,077,480 dozen; and from the South Island (Bluff), 374,091 dozen. So large a drain on the oyster-beds of the colony will, I am afraid, before long almost deplete them.

Imported Fish.—Some specimens of fish caught in the Aparima River were examined by experts in the colony, and pronounced to be grilse; but some sent to London were examined by Dr. Gunther, one of the leading experts of the day in fish, and he stated that “The specimens are most assuredly not salmon (*S. salar*), neither are they brown trout (*S. fario*). They are a kind of sea trout (*S. trutta*) looking extremely like the Irish white trout. But the different kinds of migratory sea-trout are so closely allied to each other that it is almost a matter of impossibility to give an opinion on artificially-reared fish or their offspring.” This opinion is interesting, inasmuch as no sea trout have ever, as far as I am aware of, been placed in either the Aparima or any other river within many miles of it. It would appear that the climate of New Zealand is developing a new kind of *salmonidæ* resembling in many respects the salmon of Europe. In any case I submit that it would be desirable to continue the prohibition to fish in the Aparima, at all events for another season. By the end of the year the question of whether the acclimatisation of salmon has been successful or not should be determined. The Otago and Southland Acclimatisation Societies have made a recommendation that a further supply of salmon ova should be procured from the United Kingdom. This application is still under the consideration of the Government. The acclimatisation societies are still doing good work in distributing trout ova and fry in the various streams in the colony—the greatest number having been sent out by the Otago Society (879,800), and the Wellington Society (425,291).

A proposal has been submitted to Mr. W. H. Spackman to write a small book on trout fishing in New Zealand, and arrangements have been made to have the work printed in the Government Printing Office. A work of this nature should be most interesting, and be most valuable to the colony—showing as it will do the extraordinary number and size of the trout that can be caught here, and so I have no doubt will attract a considerable influx of disciples of the “gentle craft.” Several difficulties having arisen as to the boundaries of acclimatisation districts in the South Island, a conference of acclimatisation societies was held at Oamaru on the 17th March last, when the following resolutions were passed:—

- “1. That in the interest of acclimatisation the societies remain separate as at present.
- “2. That the opening of the fishing season throughout the South Island be the 1st of October.
- “3. That the close of the fishing season throughout the South Island be the 15th of April.
- “4. That the Government be requested to gazette uniform regulations applicable to the whole of the east coast of the South Island and the Fiord and Lake Counties.
- “5. That the question of the price of licenses be referred to the Government to draw up a scale to be submitted to the societies prior to gazetting.
- “6. That the Government be requested to draft regulations for netting the lakes in the various districts, and submit them to the societies interested.
- “7. That with respect to netting at the mouths of rivers no recommendation be made.
- “8. That the Government be requested to place a sum of money on the estimates to introduce salmon ova during the ensuing season, and continue the introduction of ova yearly until salmon are acclimatised in New Zealand rivers, or it is proved that salmon cannot be acclimatised in them.
- “9. That, seeing the Fiord Country appears to be under the control of no society at the present time, the Government be requested to include that area within the Southland Society’s District.”

I feel sure that such conferences will result in smoothing over any difficulties, and cause the administration of the law relating to acclimatisation societies to be more easily administered.

Inspection of Machinery.—No difficulties have arisen in the working of the Act, but the work is now almost too much for the number of Inspectors engaged. The question of the reduction of the fees for inspection on some of the boilers is one that, I submit, might be favourably considered.

Returns.—The usual returns, wreck chart, &c., are appended hereto.

I have, &c.,

LEWIS H. B. WILSON, Assistant-Secretary.

The Hon. the Minister having charge of the Marine Department, Wellington.

RETURN showing the Total Ordinary Expenditure of the Marine Department during the Financial Year ended the 31st March, 1892.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
	£ s. d.	£ s. d.	£ s. d.
HEAD OFFICE:—			
Assistant Secretary	400 0 0		
Senior Clerk	250 0 0		
Clerk	190 0 0		
Extra Clerk and Draughtsman	142 10 0		
Nautical Adviser	300 0 0		
Marine Engineer	462 10 0		
		1,745 0 0	
HARBOURS:—			1,745 0 0
Manukau,—			
Salaries	406 0 0		
Contingencies	88 13 8	494 13 8	
Russell,—			
Salary	45 0 0		
Contingencies	0 3 3	45 3 3	
Whangarei,—			
Contingencies	6 16 0	6 16 0	
Hokianga,—			
Salaries	284 0 0		
Contingencies	16 14 11	300 14 11	
Kaipara,—			
Salaries	663 0 0		
Contingencies	128 16 9	791 16 9	
Mokau,—			
Survey of river	155 14 2		
Contingencies	5 0 5	160 14 7	
Opunake,—			
Salary	25 0 0	25 0 0	
Foxton,—			
Salaries	252 8 5		
Contingencies	23 10 9	275 19 2	
Rangitikei,—			
Salary	35 0 0		
Contingencies	0 12 3	35 12 3	
Tauranga,—			
Contingencies	16 9 0	16 9 0	
Wairau,—			
Salary	145 0 0		
Contingencies	89 2 3	234 2 3	
Nelson,—			
Salaries	794 0 0		
Beacon sites	200 0 0		
Contingencies	66 18 9	1,060 18 9	
Riwaka,—			
Salary	6 0 0		
Contingencies	0 10 0	6 10 0	
Motupipi,—			
Erection of beacons	9 7 3	9 7 3	
Waitapu,—			
Salary	25 0 0		
Maintenance of leading-lights	25 0 0		
Contingencies	0 13 9	50 13 9	
Collingwood,—			
Salary	25 0 0		
Contingencies	15 19 6	40 19 6	
Karamea,—			
Salary	19 0 0		
Contingencies	18 15 0	37 15 0	
Mokihinui,—			
Salary	23 15 0		
Removing stones from channel	44 8 7		
Contingencies	43 13 5	111 17	
Nile River,—			
Salary	7 10 0	7 10 0	
Okarito,—			
Salary	50 0 0		
Contingencies	16 4 6	66 4 6	
Okuru,—			
Signalling vessels and contingencies	5 0 0	5 0 0	
Akaroa,—			
Salary	6 5 0	6 5 0	
Waikawa,—			
Salary	6 0 0	6 0 0	
Inspecting and reporting on Wanganui River-bank protection and harbour works	213 3 6	213 3 6	
Masthead and side-lights for harbours	154 3 5	154 3 5	
Buoy-chain	105 14 8	105 14 8	
General harbour contingencies	141 16 7	141 16 7	
Pension of J. Heberley	37 10 0	37 10 0	
Dredging New Plymouth Harbour	541 17 0	541 17 0	
LIGHTHOUSES:—			4,990 7 9
Salaries of keepers	8,299 16 0		
Travelling-expenses of keepers	24 14 5		
Oil	1,520 9 10		
Stores and contingencies	1,786 14 10		
Pension of Mrs. Deck	24 0 0		
Carried forward	£11,655 15 1	..	£6,735 7 9

RETURN showing the Total Ordinary Expenditure of the Marine Department—*continued.*

Nature of Expenditure.	Details.			Totals.			Grand Totals.		
	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward	11,655	15	1				6,735	7	9
LIGHTHOUSES—<i>continued.</i>									
Lighthouse artificer	164	10	8						
Stephen's Island Lighthouse (building account)	43	19	10						
Snares Lighthouse (building account)	212	1	0						
				12,076	6	7	12,076	6	7
Survey of unseaworthy ships	4	4	0						
Departmental travelling-expenses	30	11	6						
Sundries	74	2	4						
Charts	87	6	1						
Inquiries into wrecks and casualties	157	18	6						
Administration of Fisheries Acts	43	10	1						
Relief of distressed New Zealand seamen	112	14	9						
Costs of relief of crew of barque "Compadre"	334	12	11						
				845	0	2	845	0	2
Inspection of Machinery and Survey of Steamers,—									
Salaries of Inspectors and Engineer Surveyors	2,254	3	4						
Travelling-expenses	941	5	1						
Sundries	115	14	5						
				3,311	2	10	3,311	2	10
Examination of Masters and Mates—Salaries	425	0	0						
Contingencies	100	18	10						
				525	18	10	525	18	10
Weather Reporting—Salary							300	0	0
"Stella," s.s.,—									
Expenses while laid up							134	10	1
"Hinemoa," s.s.,—									
Wages, stores, provisions, &c.							7,942	8	7
Less amount earned by vessel							382	6	11
							7,560	1	8
Guaranteed interest to Wellington Patent Slip Company							2,114	15	9
Survey of Poverty Bay							170	17	8
							33,774	1	4
Less amount of credits to votes							397	4	5
Total							£33,376	12	11

RETURN showing the Cost of Maintenance of the New Zealand Lighthouses, and the Quantity of Oil consumed at each, during the Year ended the 31st March, 1892.

Name of Lighthouse.	Salaries.	Oil.		Stores and Contingencies.	Totals.
		Gallons consumed.	Value.		
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Cape Maria van Diemen	410 0 0	909	70 1 4	103 14 2	583 15 6
Moko Hinou	350 0 0	807	62 4 1	63 3 8	475 7 9
Tiri-Tiri	290 0 0	520	40 1 8	37 15 9	367 17 5
Bean Rock	160 0 0	72	4 12 0	8 3 9	172 15 9
Ponui Passage	150 0 0	76	5 17 2	11 18 5	167 15 7
Cuvier Island	375 0 0	1,297	99 11 10	149 12 3	624 4 1
Portland Island	340 16 8	682	52 11 5	74 10 6	467 18 7
Napier Bluff	22 13 4	Gas	13 14 5	1 14 0	38 1 9
Pencarrow Head	257 10 0	860	66 5 10	108 14 10	432 10 8
Somes Island	159 6 8	220	16 19 2	33 17 6	210 3 4
Cape Egmont	240 0 0	564	43 9 6	46 16 2	330 5 8
Manukau Head	250 0 0	513	39 10 10	38 12 0	328 2 10
Manukau South Head leading-lights		138	10 12 9		
Manukau North Head leading-lights	120 0 0	171	13 3 7	23 15 7	167 11 11
Kaipara Head	255 0 0	559	43 1 9	70 18 8	369 0 5
Brothers	512 4 11	700	53 19 2	69 6 9*	635 10 10
Tory Channel leading-lights	90 0 0	168	12 19 0	5 0 0	107 19 0
Cape Campbell	281 5 0	526	40 10 11	46 17 1	368 13 0
Godley Head	249 3 4	537	41 7 10	61 3 6	351 14 8
Akaroa Head	261 13 4	643	49 11 3	38 19 1	350 3 8
Moeraki	280 0 0	569	43 17 2	31 0 10	354 18 0
Taiaroa Head	270 0 0	577	44 9 6	29 3 4	343 12 10
Cape Saunders	250 0 0	580	44 14 2	28 13 0	323 7 2
Nugget Point	290 0 0	926	71 7 7	111 14 6	473 2 1
Waipapapa Point	260 0 0	523	40 6 3	27 7 11	327 14 2
Dog Island	350 0 0	737	56 16 2	59 1 1	465 17 3
Centre Island	320 16 8	886	68 5 11	59 13 3	448 15 10
Puysegur Point	362 7 9	871	67 2 9	94 6 6	523 17 0
Hokitika	9 0 0	Gas	14 15 0	12 7 6	36 2 6
Cape Foulwind	278 15 0	558	43 0 3	47 15 0	369 10 3
Farewell Spit	359 3 4	534	41 3 3	231 3 6†	631 10 1
Nelson	295 0 0	221	17 0 8	36 13 10	348 14 6
French Pass	200 0 0	124	9 11 2	23 0 11	232 12 1
Totals	8,299 16 0	17,068	1,342 15 4	1,786 14 10	11,429 6 2

* Includes cost of provisions, £40 13s. 5d.

† Includes repairs to tower, £158 3s. 3d.

RETURN showing the Cost of Erection of the
New Zealand Coastal Lighthouses.

Name of Lighthouse.	Cost of Erection.	
	£	s. d.
Pencarrow Head	6,422	0 4
Nelson	2,824	8 9
Tiri-Tiri	5,747	7 2
Mana Island*	5,513	0 1
Taiaroa Head	4,923	14 11
Godley Head	4,705	16 4
Dog Island	10,480	12 8
Farewell Spit	6,139	11 8
Nugget Point	6,597	3 7
Cape Campbell	5,619	2 6
Manukau Head	4,975	2 4
Cape Foulwind	6,955	9 1
Brothers	6,241	0 0
Portland Island	6,554	14 5
Moeraki	4,288	13 2
Centre Island	5,785	19 0
Puysegur Point	9,958	19 5
Cape Maria van Diemen	7,028	14 8
Akaroa Head	7,150	6 5
Cape Saunders	6,066	6 3
Cape Egmont†	3,353	17 11
Moko Hinou	8,186	5 0
Waipapapa Point	5,969	18 11
Ponui Passage‡ .. .. .	..	..
Kaipara Head	5,571	8 0
French Pass	1,427	17 5
Cuvier Island	7,406	16 11
Cost of telegraph cable to Tiri-Tiri	1,085	19 6
Miscellaneous and unallocated	1,322	2 2
Total	£158,302	8 7

* Light discontinued; moved to Cape Egmont.

† Cost of iron tower, lantern, and apparatus, which were removed from Mana Island, is not included in this.

‡ Built by Provincial Government of Auckland; cost not known in Marine Department.

RETURN showing the Amount of Light-dues
collected during the Year ended the 31st
March, 1892.

Port.	Amount collected.	
	£	s. d.
Auckland	3,734	12 6
Onehunga	103	16 10
Whangarei	37	1 11
Whangaroa	5	10 10
Russell	91	8 1
Mongonui	10	8 0
Hokianga	55	4 5
Kaipara	288	10 0
Thames	62	17 1
Coromandel	11	4 4
Tauranga	27	5 1
Poverty Bay	187	17 8
Napier	586	6 7
New Plymouth	88	14 9
Waitara	28	12 11
Wanganui	121	1 8
Patea	7	1 2
Wellington	3,719	9 4
Wairau	12	18 2
Pictou	186	12 4
Nelson	325	13 7
Westport	290	17 5
Greymouth	159	2 8
Hokitika	15	10 2
Lyttelton	1,842	16 9
Timaru	320	11 11
Oamaru	182	0 5
Dunedin	1,755	18 6
Bluff and Invercargill	1,958	11 6
Total	£16,217	16 7

RETURN showing the Expenditure on New Light-
houses, &c., during the Year ended the 31st
March, 1892.

Nature of Expenditure.	Amount.	
	£	s. d.
The Snares lighthouse	212	1 0
Stephen's Island lighthouse	43	19 10
Total	256	0 10

RETURN showing the Amount of Pilotage, Port
Charges, &c., collected during the Year ended
the 31st March, 1892.

Name of Port.	Pilotage.		Port Charges, &c.		Total.	
	£	s. d.	£	s. d.	£	s. d.
Auckland*	366	15 11	2,771	14 10	3,138	10 9
Onehunga	10	17 10	101	1 11	111	19 9
Whangarei .. .. .	..	..	48	11 11	48	11 11
Hokianga	42	13 0	..	..	42	13 0
Kaipara	103	6 8	512	16 11	616	3 7
Thames*	68	19 10	..	..	68	19 10
Gisborne*	37	0 2	586	12 9	623	12 11
Wairoa*	94	2 6	4	13 9	98	16 3
Napier*	2,319	10 8	1,030	4 6	3,349	15 2
New Plymouth*	30	9 4	25	11 3	56	0 7
Waitara*	83	5 3	115	16 3	199	1 6
Wanganui*	353	14 10	..	..	353	14 10
Patea*	28	6 7	8	18 6	37	5 1
Foxton	112	9 4	..	..	112	9 4
Wellington*	794	2 2	5,288	8 5	6,082	10 7
Wairau	128	11 0	..	..	128	11 0
Nelson	1,489	6 1	..	..	1,489	6 1
Hokitika*	5	12 4	..	..	5	12 4
Lyttelton*	4,594	10 4	3,224	16 2	7,819	6 6
Timaru*	532	9 2	1,693	8 2	2,225	17 4
Oamaru*	648	13 6	616	12 7	1,265	6 1
Dunedin*	4,829	14 2	3,978	17 9	8,808	11 11
Invercargill* .. .. .	..	..	12	2 3	12	2 3
Bluff*	2,325	0 8	1,160	15 4	3,485	16 0
Riverton* .. .. .	..	..	8	6 6	8	6 6
Totals	18,999	11 4	21,189	9 9	40,189	1 1

* Harbour Board revenue.

RETURN showing the Fees, &c., received under
the Shipping and Seamen's Act, the Merchant
Shipping Act, the Inspection of Machinery
Act, and for Pilotage and Port Charges,
&c., during the Year ended the 31st March,
1892.

Nature of Receipts.	Amount.	
	£	s. d.
Shipping and Seamen's Act:—		
Fees for shipping and discharge of sea- men, and sale of forms	994	3 6
Survey of steamers	1,049	10 0
Measurement of ships	4	15 0
Examination of masters, mates, and engineers	144	10 0
Light-dues	16,217	16 7
Merchant Shipping Act	88	3 2
Inspection of Machinery Act	3,570	0 2
Pilotage and port charges	2,549	14 8
Sundry receipts under Harbours Acts	50	5 0
Sundries	22	19 10
Total	24,691	17 11

DESCRIPTIVE RETURN of New Zealand Coastal Lighthouses.

Name of Lighthouse.	Order of Apparatus.	Description.	Period of Revolving Light.	Colour of Light.	Tower built of	Dwellings built of	Date first lighted.
Cape Maria van Diemen	1st order dioptric	Revolving	1'	White	Timber	Timber	24 Mar., 1879
	..	Fixed	..	Red, to show over Columbia Reef			
Moko Hinou	1st order dioptric	Flashing	10"	White	Stone	Timber	18 June, 1883
Tiri-Tiri..	2nd "	Fixed	..	White, with red arc over Flat Rock	Iron	"	1 Jan., 1865
Ponui Passage	5th "	"	..	White and red ..	Timber	"	29 July, 1871
Cuvier Island	1st "	Revolving	30"	White	Iron	"	22 Sept., 1889
	2nd "	"	30"	"	Timber	"	10 Feb., 1878
Portland Island	..	Fixed	..	Red, to show over Bull Rock			
Pencarrow Head	2nd order dioptric	"	..	White	Iron	Timber	1 Jan., 1859
Cape Egmont	2nd "	"	..	"	"	"	1 Aug., 1881
Manukau Head	3rd "	"	..	"	Timber	"	1 Sept., 1874
Kaipara Head	2nd "	Flashing	10"	"	"	"	1 Dec., 1884
	2nd "	"	10"	"	"	"	24 Sept., 1877
Brothers ..	..	Fixed	..	Red, to show over Cook Rock			
Cape Campbell	2nd order dioptric	Revolving	1'	White	Timber	Timber	1 Aug., 1870
Godley Head	2nd "	Fixed	..	"	Stone	Stone	1 April, 1865
Akaroa Head	2nd "	Flashing	10"	"	Timber	Timber	1 Jan., 1880
Moeraki ..	3rd "	Fixed	..	"	"	"	22 April, 1878
Taiaroa Head	3rd "	"	..	Red	Stone	Stone	2 Jan., 1865
Cape Saunders	2nd "	Revolving	1'	White	Timber	Timber	1 Jan., 1880
Nugget Point	1st "	Fixed	..	"	Stone	Stone	4 July, 1870
Waipapapa Point	2nd "	Flashing	10"	"	Timber	Timber	1 Jan., 1884
Dog Island	1st order catadioptric	Revolving	30"	"	Stone	Stone	1 Aug., 1865
Centre Island	1st order dioptric	Fixed	..	White, with red arcs over inshore dangers	Timber	Timber	16 Sept., 1878
Puysegur Point	1st "	Flashing	10"	White	"	"	1 Mar., 1879
Cape Foulwind	2nd "	Revolving	30"	"	"	"	1 Sept., 1876
Farewell Spit	2nd "	"	1'	White, with red arc over Spit end	"	"	17 June, 1870
Nelson ..	4th "	Fixed	..	White, with red arc to mark limit of anchorage	Iron	"	4 Aug., 1862
French Pass	6th "	"	..	Red and white, with white light on beacon	"	"	1 Oct., 1884

RETURN of Steamers to which Certificates of Survey were issued in New Zealand during the Year ended the 31st March, 1892.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Ahuriri ..	31	17	Compound ..	Screw ..	Extended river	
Akaroa ..	43	28	" ..	" ..	" ..	
Albany ..	8	8	Non-condensing	" ..	River "	[Gleaner. Launch, formerly Launch.
Alert (yacht)	..	5	" ..	" ..	" ..	
Alexandra	73	30	" ..	Paddle ..	" ..	
Alice ..	3	4	" ..	Screw ..	" ..	Launch.
Alpha ..	36	20	" ..	Paddle ..	Extended river	Formerly dredge
Antrim ..	36	30	" ..	" ..	River	
Aorere ..	45	16	Compound ..	Screw ..	Home-trade	
Argyle ..	129	45	" ..	" ..	" ..	
Australia	260	77	" ..	" ..	" ..	
Avonia ..	..	16	Non-condensing	Stern-wheel ..	River ..	New vessel.
Awarua ..	100	80	Compound ..	Paddle ..	Home-trade ..	Tug.
Barstow ..	32	24	Non-condensing	Stern-wheel ..	River	
Beatrice	8	10	Compound ..	Screw ..	Extended river	Formerly Kawau
Beautiful Star	146	30	" ..	" ..	Home-trade	
Bella ..	12	12	Non-condensing	" ..	Extended river	
Ben Lomond	33	15	Compound ..	" ..	River	
Birkenhead	55	16	Non-condensing	Paddle ..	" ..	
Blanche ..	18	9	" ..	Screw ..	" ..	
Britannia	108	40	" ..	Paddle ..	" ..	
Brunner ..	333	95	Triple-expansion	Screw ..	Home-trade	
Canterbury	..	24	Non-condensing	Twin-screw ..	Extended river	
Charles Edward	123	60	Compound ..	Screw ..	Home-trade	
Chelmsford	70	24	" ..	" ..	" ..	
Clansman	336	99	" ..	" ..	" ..	
Clematis	5	4	Non-condensing	Stern-wheel ..	River	
Coromandel	68	25	Compound ..	Screw ..	Extended river	
Cygnat ..	3	3	Non-condensing	" ..	River ..	Launch.
Despatch	24	20	Compound ..	" ..	Extended river	
Dingadee	393	80	" ..	Twin-screw ..	Home-trade	

RETURN of Steamers to which Certificates of Survey were issued—*continued*.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Douglas	60	20	Condensing ..	Screw ..	Home-trade	
Durham	54	30	Compound ..	" ..	Extended river	
Eagle	138	70	" ..	Paddle ..	River	
Echo	9	3	Non-condensing	Screw ..	" ..	Launch.
Edina	9	6	" ..	" ..	" ..	"
Effort	13	12	Compound ..	Paddle ..	Extended river	
Elsie	15	8	Non-condensing	Screw ..	" ..	
Enterprise	61	30	" ..	Paddle ..	River	
Erin	4	4	" ..	Screw ..	" ..	Launch.
Ethel J.	6	6	" ..	" ..	" ..	Late Despatch.
Fairy	33	15	" ..	" ..	Extended river	
Fingal	23	11	Condensing ..	" ..	" ..	
Freetrader	95	30	Non-condensing	Stern-wheel	River ..	
Gairloch	211	85	Compound ..	Twin-screw	Home-trade	
Glenelg	156	75	" ..	Screw ..	" ..	
Grafton	297	123	" ..	Twin-screw	" ..	
Hauroto	1,276	250	" ..	Screw ..	Foreign trade	
Heathcote	94	35	" ..	" ..	River ..	Hopper-barge.
Herald	370	85	" ..	" ..	Home-trade	
Hestia	6	6	Condensing ..	" ..	River ..	Launch.
Hinemoa	3	3	Non-condensing	" ..	" ..	
Huia	90	25	Compound ..	" ..	Home-trade	
Huia	6	6	Non-condensing	" ..	River ..	
Ida	12	10	" ..	" ..	" ..	
Invercargill ..	123	50	Compound ..	" ..	Home-trade	
Iona	159	65	" ..	" ..	" ..	
Jane Douglas ..	75	22	" ..	" ..	" ..	
Janet Nicoll ..	496	90	" ..	" ..	Foreign-trade	
John Anderson ..	24	24	" ..	" ..	Extended river	New steamer.
Kahu	99	40	" ..	" ..	Foreign-trade	
Kaituna	4	4	" ..	" ..	River ..	Launch.
Kate	5	5	" ..	" ..	" ..	"
Katikati	27	8	Condensing ..	" ..	Extended River	
Kawai	24	24	Non-condensing	" ..	River ..	Dredge.
Kawatiri	286	70	Compound ..	" ..	Home-trade	
Kawau	31	15	" ..	" ..	Extended river	New yacht.
Kennedy	124	43	" ..	Twin-screw	Home-trade	
Kina	52	15	" ..	Screw ..	River ..	
Kiwi	133	30	" ..	" ..	Home-trade	
Kopuru	28	20	Non-condensing	" ..	River ..	
Koputai	5	120	Compound ..	Paddle ..	Home-trade ..	Tug.
Kotuku	41	40	Non-condensing	Three screws	River ..	
La Buona Ventura	4	4	" ..	Screw ..	" ..	Launch.
Lady Barkly ..	39	20	Compound ..	" ..	Extended river	
Lily	20	12	Non-condensing	Twin-screw	" ..	
Lily	1	1	" ..	Screw ..	River ..	New launch.
Little George ..	4	4	" ..	" ..	" ..	Launch.
Lyttelton	39	80	Compound ..	Paddle ..	Home-trade ..	Tug.
Macandrew	5	5	Non-condensing	Screw ..	River ..	Launch.
Mahinapua	205	80	Compound ..	Twin-screw	Home-trade	
Mana	51	25	" ..	Screw ..	Extended river	
Mana	51	90	" ..	Paddle ..	Home-trade ..	Tug.
Manaia	55	15	" ..	Screw ..	" ..	
Manapouri	1,020	300	" ..	" ..	Foreign-trade	
Manawatu	112	38	" ..	" ..	Home-trade	
Manukau	45	15	" ..	" ..	River ..	
Maori	17	8	Non-condensing	" ..	Extended river	
Maori	118	60	Condensing ..	" ..	Foreign-trade	
Mararoa	1,248	530	Triple-expansion	Screw ..	" ..	
Matau	50	40	Non-condensing	Stern-wheel	River ..	
Matuku	3	3	" ..	Screw ..	" ..	Launch.
Mawhera	340	75	Compound ..	" ..	Home-trade.	
May	3	3	Non-condensing	" ..	River ..	Launch.
Minnie Casey ..	48	25	Compound ..	" ..	" ..	
Moa	110	33	" ..	" ..	Home-trade	
Mohaka	20	17	" ..	" ..	Extended river	
Moss Rose	8	8	Non-condensing	" ..	" ..	Launch.
Mountaineer ..	66	60	Compound ..	Paddle ..	River ..	
Moutoa	5	5	Non-condensing	Screw ..	" ..	
Murray	90	25	Compound ..	" ..	Home-trade	
Napier	48	30	" ..	" ..	" ..	
Nautilus (yacht) ..	32	18	" ..	" ..	Extended river	
Neptune	44	18	" ..	" ..	Home-trade.	
Nile	21	20	Non-condensing	Paddle ..	" ..	
Noko	15	9	" ..	Screw ..	Extended river	Launch.
No. 121	394	100	Compound ..	Twin-screw	Foreign-going	Dredge.
No. 222	502	120	" ..	" ..	Home-trade ..	"
Ohau	411	92	" ..	Screw ..	" ..	
Ohinemuri	73	26	" ..	" ..	" ..	New steamer.
Olga	4	5	Non-condensing	" ..	River ..	Launch.
Onapere	352	80	Compound ..	" ..	Home-trade	
Onslow	20	14	" ..	Twin-screw	River ..	
Orawaiti	283	70	" ..	Screw ..	Home-trade	
Oreti	138	50	" ..	" ..	" ..	
Osprey	138	70	" ..	Paddle ..	River ..	

RETURN of Steamers to which Certificates of Survey were issued—*continued.*

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Ovalau	767	75	Quadruple - expansion	Screw	Foreign-trade	New steamer.
Paeroa	45	16	Compound ..	"	Extended river	
Pearl	9	7	Non-condensing	"	River	
Pelorus	18	12	"	"	"	
Penguin	442	180	Compound ..	"	Home-trade	
Phoenix	6	6	Non-condensing	"	Extended river	Launch.
Pioneer	5	5	"	"	River	"
Planet	13	8	"	"	Extended river	
Plucky	29	40	Compound ..	"	Home-trade	
Poherua	749	128	Triple-expansion	"	Foreign-trade	[vessel.
Prince of Wales ..	487	21	Condensing ..	"	Home-trade ..	Meat-freezing
Progress	200	50	Compound ..	"	"	Dredge.
Pukaki	850	110	"	"	Foreign-trade	
Queenie .. .. .	..	1	Non-condensing	"	River	Launch.
Queen of the South	121	40	Compound ..	"	Home-trade	
Result	13	10	Non-condensing	Paddle	Extended river	
Result	18	23	"	Screw	"	
Richmond	495	105	Compound ..	"	Foreign-trade	
Ripple .. .. .	..	7	Non-condensing	"	River	Launch, formerly "Te Uira."
Rosamond	462	90	Compound ..	"	Home-trade	
Rose Casey	99	109	"	"	Extended river	
Rotoiti	17	15	Non-condensing	Fore-and-aft-screws	"	
Rotokino	1,263	135	Quadruple - expansion	Screw	Foreign-trade	New steamer.
Rotomahana	139	45	Condensing ..	"	Home-trade	
Rotomahana	864	450	Compound ..	"	Foreign-trade	
Rotorua	576	172	"	"	Home-trade	
Rowena	74	30	"	"	"	
Ruby	19	24	"	"	Extended river	
Sea-gull .. .. .	..	6	Non-condensing	"	River	Launch.
Scotchman	30	10	"	"	Extended river	
Snark	12	10	"	"	"	Launch.
Southern Cross ..	158	50	Compound ..	"	Home-trade	
Spray	3	3	Non-condensing	"	River	Launch.
Staffa	40	20	Condensing ..	"	Extended river	
Stormbird	137	40	Compound ..	"	Home-trade	
Sumner	94	35	"	"	River	Hopper-barge.
Sylph	5	4	Non-condensing	"	"	Launch.
Taieri	1,071	155	Triple-expansion	"	Foreign-trade	
Tainui .. .. .	..	8	Non-condensing	"	Extended river	
Tainui	47	22	"	Paddle	River	
Takapuna	370	165	Compound ..	Screw	Home-trade	
Takapuna	58	20	Non-condensing	Paddle	River	
Talune	1,284	255	Triple-expansion	Screw	Foreign-trade ..	First N.Z.survey.
Tam O'Shanter ..	22	12	Non-condensing	"	River	
Tangihua	20	15	"	"	"	
Taniwha .. .. .	..	16	"	"	"	Dredge.
Tarawera	1,269	250	Compound ..	"	Foreign-trade	
Tarewai .. .. .	..	12	Non-condensing	"	River	New steamer.
Tawhara .. .. .	..	10	"	"	"	Launch.
Tay .. .. .	..	5	"	"	"	"
Te Anau	1,028	250	Compound ..	"	Foreign-trade	
Te Aroha	50	14	Non-condensing	Paddle	Extended river	
Tekapo	1,544	270	Compound ..	Screw	Foreign-trade	
Te Kapu	50	25	"	"	Extended river	
Terranora	199	94	Condensing ..	Paddle	Home-trade	
Tongariro	63	25	"	"	River	
Torea	9	18	Compound ..	Screw	Extended river	
Tuna .. .. .	..	14	"	Twin-screw	"	
Victoria	93	50	Non-condensing	Paddle	River	
Vivid	6	14	"	Screw	Extended river	
Waihi	63	20	Compound ..	"	Home-trade	
Waikato	56	20	Non-condensing	Paddle	River	
Wainui	391	95	Compound ..	Screw	Foreign-trade	
Waipara	70	30	Non-condensing	Twin-screw	Home-trade	
Wairarapa	1,023	292	Compound ..	Screw	Foreign-trade	
Wairere .. .. .	..	80	Non-condensing	Paddle	River	New steamer.
Wairoa	48	20	Condensing ..	Screw	Extended river	
Waitangi .. .. .	..	5	Non-condensing	"	River	Launch.
Waitapu	40	16	Compound ..	"	Home-trade	
Waitara	26	16	"	"	Extended river	
Waitara .. .. .	..	12	Non-condensing	"	River	
Waitoa	27	16	Compound ..	Twin-screw	Extended river	
Waiwera .. .. .	..	8	"	Screw	River	Launch.
Waiwera	6	15	"	"	Extended river	
Wakatipu	1,158	256	"	"	Foreign-trade	
Wakatu	95	30	"	"	Home-trade	
Waverley	77	25	"	Twin-screw	"	
Wellington	262	90	"	Screw	"	
Westland	35	64	Condensing ..	Paddle	"	
Yankee Doodle ..	6	12	Non-condensing	"	River	Launch.
Zephyr	8	12	"	Screw	"	"

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st March, 1892.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
James Mill	Master Ordinary ..	Foreign trade ..	17 April, 1891 ..	469
Francis Augustine Binuie .. .	Second Mate ..	" ..	17 " " ..	669
Charles Harold Rookes .. .	First Mate ..	" ..	28 " " ..	670
William Walker .. .	" ..	" ..	1 May, " ..	576
David James Watson .. .	" ..	" ..	6 " " ..	671
Arthur Henry Austen .. .	Master Ordinary ..	" (renewal) ..	19 " " ..	672
William Herbert Johnson .. .	Second Mate ..	" ..	19 " " ..	673
Dan Savident .. .	Master Ordinary ..	" ..	21 " " ..	674
Johan Abraham Bergquist .. .	" ..	" ..	26 " " ..	675
Johan Mathias Rondahl .. .	" ..	" ..	28 " " ..	531
Henry Ernest Maunsell .. .	Second Mate ..	" ..	28 " " ..	676
Frederick Ferdinand Nilsson .. .	Master Ordinary ..	" ..	9 June, " ..	636
Kenneth Bligh Skeet .. .	First Mate ..	" ..	7 July, " ..	570
Joseph William Holdcroft .. .	Master Ordinary ..	" ..	27 " " ..	568
Frederick William Joslin .. .	" ..	" (renewal) ..	4 Aug., " ..	677
Murdoch MacPherson .. .	" ..	" ..	26 " " ..	629
Edward Alfred Stenbeck .. .	Only Mate ..	" ..	26 " " ..	678
William Douglas Reid .. .	Master Ordinary ..	" ..	31 " " ..	607
John Hollinwood .. .	Second Mate ..	" ..	4 Sept., " ..	679
Arthur William Hill .. .	" ..	" ..	12 " " ..	680
Sidney Stringer .. .	First Mate ..	" ..	16 Oct., " ..	544
Alfred Feast .. .	Master Ordinary ..	" ..	16 " " ..	202
Alexander Perry .. .	" ..	" ..	16 " " ..	400
Robert Stewart .. .	Second Mate ..	" ..	16 " " ..	681
George Allan Broad .. .	" ..	" ..	16 " " ..	682
Thomas McMillan .. .	First Mate ..	" ..	16 " " ..	683
Peter John Ewing .. .	Master Ordinary ..	" ..	16 " " ..	684
Robert McKinlay .. .	Only Mate ..	" ..	2 Nov., " ..	685
James White .. .	Second Mate ..	" ..	5 " " ..	686
Claud Augustus Moore .. .	" ..	" ..	5 " " ..	687
Orry Andrew de Lissa Cowin .. .	" ..	" ..	10 " " ..	688
Thomas Charles William Ancell .. .	Master Ordinary ..	" ..	23 " " ..	612
Daniel McCallum .. .	First Mate ..	" ..	23 " " ..	634
Joseph Parker Jordan .. .	Second Mate ..	" ..	11 Dec., " ..	689
Archibald Allan Thomson .. .	" ..	" ..	23 " " ..	690
Arthur William Wightman .. .	First Mate ..	" ..	23 " " ..	691
Norman Henry Wight .. .	Second Mate ..	" ..	11 Jan., 1892 ..	692
Donald Campbell .. .	" ..	" ..	19 " " ..	693
Coll McDonald .. .	First Mate ..	" ..	28 " " ..	610
William Gilmer .. .	" ..	" ..	5 Feb., " ..	632
Isaac Thompson .. .	Second Mate ..	" ..	5 " " ..	694
Herbert Charles Frazer Godwin .. .	First Mate ..	" ..	5 " " ..	695
Edward Anderson .. .	Master Ordinary ..	" ..	3 March, " ..	651
Ludwig Peter Friedrich Fretwurst .. .	" ..	" ..	19 " " ..	696
Frank Gray .. .	Second Mate ..	" ..	28 " " ..	697
Henry Arthur Rutter .. .	Master ..	Home trade ..	15 April, 1891 ..	5,347
Hugh McGilvray .. .	Mate ..	" ..	17 " " ..	5,348
Christian Svendsen .. .	" ..	" ..	11 May, " ..	5,349
Niel Taylor Robertson .. .	Master ..	" ..	20 June, " ..	5,350
Martin Jensen .. .	" ..	" ..	7 July, " ..	5,161
Gabriel Gabrielsen .. .	Mate ..	" ..	6 Aug., " ..	5,351
William Tinney .. .	" ..	" ..	17 Sept., " ..	5,352
Edward Shaw .. .	Master ..	" ..	28 Nov., " ..	5,333
Robert Read .. .	Mate ..	" ..	4 Dec., " ..	5,353
Frithiof Wilhelm Hultgren .. .	" ..	" ..	3 March, 1892 ..	5,354
Duncan Cameron .. .	" ..	" ..	3 " " ..	5,355
John Robinson .. .	Master ..	River trade ..	2 April, 1891 ..	3,201
George Nicholas Homand .. .	" ..	" ..	2 " " ..	3,202
Thomas Christian Christiansen .. .	" ..	" ..	1 May, " ..	3,203
Thomas Bright .. .	" ..	" ..	28 " " ..	3,204
William Frederick Bines .. .	" ..	" ..	28 " " ..	3,205
Joseph Corich .. .	" ..	" ..	7 July, " ..	3,206
Solomon Finey .. .	" ..	" ..	20 " " ..	3,207
Edward Joseph Adlam .. .	" ..	" ..	24 " " ..	3,208
John White .. .	" ..	" ..	26 Aug., " ..	3,209
Jacob Edwin Stevens .. .	" ..	" ..	26 " " ..	3,210
William Reid .. .	" ..	" ..	26 Sept., " ..	3,211
George Wilson .. .	" ..	" ..	1 Oct., " ..	3,212
James Williamson .. .	" ..	" ..	1 " " ..	3,213
John Hodgkinson .. .	" ..	" ..	14 Jan., 1892 ..	3,214
Robert Johnson .. .	" ..	" ..	4 Feb., " ..	3,215
Alexander McKenzie .. .	" ..	" ..	19 March, " ..	3,216
William Robertson .. .	1st Class Engineer ..	Foreign trade ..	15 April, 1891 ..	193
Alexander Helmbrecht .. .	" ..	" ..	17 " " ..	96
James Hambleton .. .	2nd Class Engineer ..	" ..	17 " " ..	226
Harry Montague Langridge .. .	1st Class Engineer ..	" ..	22 " " ..	170
James McFarlane .. .	" ..	" ..	24 " " ..	227
Joseph Low .. .	2nd Class Engineer ..	" ..	18 June, " ..	228
James Ure Russell .. .	1st Class Engineer ..	" ..	2 July, " ..	191
Edward William Titchener .. .	" ..	" ..	2 " " ..	133
Patrick James Hickey .. .	2nd Class Engineer ..	" ..	22 Aug., " ..	229
Charles Richard Massey .. .	1st Class Engineer ..	" ..	9 Sept., " ..	124
George Robertson Croll .. .	2nd Class Engineer ..	" ..	16 Oct., " ..	230
Harry William Budge .. .	" ..	" ..	26 Nov., " ..	231
William Henry Tizard .. .	" ..	" ..	11 Dec., " ..	232

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st March, 1892—*continued.*

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
George Watters Penman	2nd Class Engineer	Foreign trade ..	11 Dec., 1891 ..	233
Robert McIntyre	"	" ..	26 Jan., 1892 ..	234
Peter John Shea	"	" ..	5 Feb., " ..	235
William Hancock	"	" ..	3 March, " ..	236
Henry William Louis Fuller	1st Class Engineer	" ..	19 " ..	218
Henry Harold Batchelor	Engineer ..	River trade ..	2 April, 1891 ..	1,631
Thomas Basil Stewart	" ..	" ..	15 " ..	1,632
Amos McKegg, junr.	" ..	" ..	11 May, " ..	1,633
William Thwaites	" ..	" ..	19 " ..	1,634
Joseph Corich	" ..	" ..	11 June, " ..	1,635
Moss DeCosta	" ..	" ..	23 " ..	1,636
Francis Scott	" ..	" ..	2 July, " ..	1,637
George Augustus Avey	" ..	" ..	2 " ..	1,638
John James Jackson	" ..	" ..	7 " ..	1,639
David Mochan	" ..	" ..	4 Aug., " ..	1,640
John Taylor	" ..	" ..	22 " ..	1,641
Thomas Latham	" ..	" ..	2 Sept., " ..	1,642
John Arthur Barraclough	" ..	" ..	1 Oct., " ..	1,643
William King	" ..	" ..	5 " ..	1,644
Henry McDonald	" ..	" ..	6 " ..	1,645
Alfred Bruce Coghlan	" ..	" ..	20 " ..	1,646
Joel Stubbs	" ..	" ..	21 " ..	1,647
Charles Stubbs	" ..	" ..	2 Nov., " ..	1,648
James Lisle	" ..	" ..	3 " ..	1,649
James Power	" ..	" ..	6 " ..	1,650
Isaac Fisk	" ..	" ..	10 " ..	1,651
William Duncan Campbell	" ..	" ..	10 " ..	1,652
Arthur Edward Moss	" ..	" ..	24 " ..	1,653
Harry Child	" ..	" ..	1 Dec., " ..	1,654
Donald McLean	" ..	" ..	14 " ..	1,655
Frederic William Pressley	" ..	" ..	22 " ..	1,656
Thomas Holder	" ..	" ..	30 " ..	1,657
Charles Havelock Agar	" ..	" ..	11 Jan., 1892 ..	1,658
Samuel Harris	" ..	" ..	5 Feb., " ..	1,659
Thomas Martin	" ..	" ..	3 March, " ..	1,660
John Meffin	" ..	" ..	28 " ..	1,661
Alexander René Joseph Cogé	" ..	" ..	31 " ..	1,662

RETURN showing the Certificates of Service issued to Masters, Mates, and Engineers during the Year ended the 31st March, 1892.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Charles Bonner	Mate ..	Foreign trade ..	24 June, 1891 ..	2,556
George Bernard Holland*	" ..	" ..	2 September, 1891 ..	2,557
Andrew Donovan*	Master ..	Home trade ..	26 October, 1891 ..	2,558
Edward Wakefield Penney	" ..	" ..	19 March, 1892 ..	2,559

* Renewals.

RETURN showing the Number of MASTERS, MATES, and ENGINEERS examined during the Year ended the 31st March, 1892, distinguishing the Number of Successful and Unsuccessful Candidates.

Class of Certificate.	Auckland.			Wellington.			Lyttelton.			Dunedin.			Other Places.			Totals.		
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.
Foreign-going masters and mates	12	2	14	6	..	6	5	1	6	21	2	23	..	..	..	44	5	49
Home-trade masters and mates	1	..	1	3	..	3	2	2	4	1	..	1	3	..	3	10	2	12
River-steamer masters	6	1	7	5	4	9	..	..	..	..	..	..	3	..	3	14	5	19
Sea-going engineers ..	5	1	6	3	4	7	1	..	1	8	..	8	1	..	1	18	5	23
River-steamer engineers	14	2	16	3	1	4	3	..	3	7	6	13	4	1	5	31	10	41
Totals	38	6	44	20	9	29	11	3	14	37	8	45	11	1	12	117	27	144

RETURN of ESTATES of DECEASED SEAMEN received and administered in pursuance of the Provisions of "The Shipping and Seamen's Act, 1877," during the Year ended the 31st March, 1892.

Name of Seaman.	Balance to Credit of Estate on 31st March, 1891.	Amount received.	Amount paid.	Balance to Credit of Estate on 31st March, 1892.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Edmund Watts Houghton	58 8 9	..	58 8 9	..
W. Hansen, <i>alias</i> E. W. P. Peterson	2 18 4	..	2 18 4	..
James McClellan	1 6 9	..	1 6 9	..
Frederick Augustus Yates	0 8 9	..	0 8 9	..
Edward Jarvis	0 5 9	..	0 5 9	..
G. Duke	0 3 0	..	0 3 0	..
James Hall	1 16 6	..	1 16 6	..
William Beard	25 2 9	..	25 2 9	..
James Moore	0 13 6	..	0 13 6	..
Joseph Emmanuel Leon Bouis	3 0 0	..	3 0 0	..
Joseph Oakley .. .. .	..	19 5 1	19 5 1	..
James Henry Briggs .. .. .	..	10 6 2	10 6 2	..
Charles Gustaf Hollmen .. .. .	..	11 2 8	..	11 2 8
John Blackie .. .. .	..	6 16 0	6 16 0	..
D. Ericksen .. .. .	..	7 17 0	..	7 17 0
Hugh Montgomery .. .. .	..	6 10 4	..	6 10 4
William Henry Thomas .. .. .	..	6 10 4	6 10 4	..
William Cooper Pickard .. .. .	..	7 17 0	7 17 0	..
William John McNeill .. .. .	..	3 18 0	3 18 0	..
J. Ward .. .. .	..	3 18 0	3 18 0	..
John Humphrey .. .. .	..	10 19 9	..	10 19 9
Victor Ferdinand Person .. .. .	..	17 12 0	17 12 0	..
Ernest Muirhead .. .. .	..	2 8 0	2 8 0	..
Alfred Bliss .. .. .	..	2 16 0	2 16 0	..
John Carl Schuthe .. .. .	..	1 16 0	1 16 0	..
J. W. Foster .. .. .	..	8 16 0	..	8 16 0
Alexander Grant .. .. .	..	8 16 0	8 16 0	..
William Newman .. .. .	..	8 16 0	..	8 16 0
William Mackay .. .. .	..	7 14 0	..	7 14 0
W. Stewart .. .. .	..	6 12 0	..	6 12 0
George Frederick Marsden .. .. .	..	6 6 6	6 6 6	..
Charles Monk .. .. .	..	8 16 3	..	8 16 3
Philip Marriott .. .. .	..	0 2 0	..	0 2 0
Alexander McDonald .. .. .	..	4 1 4	..	4 1 4
George Laurenson .. .. .	..	9 0 0	..	9 0 0

RETURN of WRECKS and CASUALTIES to SHIPPING reported to the Marine Department from the 1st April, 1891, to the 31st March, 1892.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Registered Tonnage	Number of		Nature of		Number of Lives lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew	Passengers.	Cargo.	Casualty.			Direction.	Force.		
1891. April 2	Wanaka, s.s., 15 years	Schooner	278	26	8	General	Stranded; total loss	..	About 2 miles north of Waikakiho Stream, Taranaki Bight	S.E.	Light ..	Master was probably justified in running his vessel as he did up to 3 a.m. (the casualty occurred at 3.55 a.m.), but from that hour up to the time he discovered he was close to the rocks he failed to take such precautions as would have insured, beyond any doubt, the safety of his vessel. The Waitara lights had not been picked up; the land could not be seen; and as the master was in doubt as to his actual position, he should have put the ship's head to a known safe point to the westward, or he should have slackened speed and taken soundings along his altered course. The master was ordered to pay the costs of the inquiry.	James Meades.
"	10 Mahinapua, s.s., 9 years	Schooner	205	24	16	General	Stranded; no damage	..	About 100 yards inside Western Breakwater, Westport	S.W.	Light air	Casualty caused by vessel taking bar at low water in defiance of signals	James M. Richardson.
"	16 Manaia, s.s., 17 years	Schooner	55	5	..	Timber..	Stranded; no damage	..	Bar of Waitara River	S.W.	Fresh breeze	Vessel attempted to leave Waitara too early on the tide	John Botham.
"	19 Ocean Ranger, 24 years	Barquentine	234	9	..	Coal ..	Stranded; slight damage	..	Manukau Bar	S.	Light ..	Vessel struck on bar when entering Manukau Harbour	William Woobling.
"	20 Hauroto, s.s., 8 years	Schooner	1276	..	..	General	Loss of life only	1	On voyage from Newcastle, N. S. W., to Dunedin	..	..	An A.B. named Joseph Oakley, while engaged washing the blocks of the port lifeboat, fell overboard and was drowned	Robert Huddleston Neville.
"	28 Lawrence, s.s., 7 years	Schooner	246	15	3	Coal ..	Stranded; total loss	..	South Entrance, Mokihinui River	..	Calm ..	Casualty caused by striking on a ridge just outside Mokihinui Bar	James Leys.
May	2 Flying Scud, 30 years	Schooner	119	7	1	Coal ..	Stranded; partial loss	..	Inner Harbour, Napier	S.W.	Strong ..	Vessel grounded on shingle-bank when entering Inner Harbour, Napier	Thomas James Moore Corlett.
"	5 Tongariro, s.s., 8 years, Al 100 Lloyds	Barque	2657	106	84	General	Loss of life only	1	On voyage from London to Wellington, lat. 38° 30' N., long. 11° 55' W.	..	..	An A.B. named Thomas George Bartlett, while engaged aloft bending the maintopgallant sail, fell to the deck and died from the injuries received.	John Bone.
"	15 Opotiki, 20 years	Schooner	38	3	..	Grass-seed and wool	Stranded; slight damage	..	Entrance to Inner Harbour, Napier	E. to N.E.	Strong gale	Vessel stranded when entering Napier Harbour	Thomas Jarvis Blackwell.
"	16 Presto, 29 years	Barque..	354	10	..	Coal ..	Damaged by hurricane; partial loss	..	On voyage from Newcastle, N. S. W., to Auckland; lat. 32° 29' S., long. 172° 45' E.	E. to W.N.W.	Hurricane	Vessel fell in with a hurricane, which caused considerable damage to sails and hull	John McKenzie.
"	23 Queen of the South, s.s., 14 years	Schooner	121	11	..	Coal ..	Stranded; partial loss	..	Bar of Mokihinui River	E.	Light ..	The propeller touched the stones when crossing the bar, and broke the propeller-shaft	Edward John Harvey.
"	28 Ohau, s.s., 7 years	Schooner	411	23	3	Coal ..	Stranded; slight damage	..	Off Jackson's Head, Cook Strait	..	..	When passing through channel between beacon and rock, tide caused vessel to graze slightly on beacon rock	Andrew Anderson.

May 31	Menshikoff, 44 years	Barque..	223	10	..	Timber..	Loss of boats, butwarks, &c. Propeller-shaft broke	..	At sea, about 12 miles abreast of Oamaru Off Pandora Bank	S. to S.S.E. S.W.	Hurricane Strong ..	Casualty caused by very heavy gale coming on suddenly	John Barnard.
June 8	Fukaki, s.s., 4 years; Al at Lloyd's	Schooner	850	29	..	Ballast..	Propeller-shaft broke	..	Off Pandora Bank	S.S.E. S.W.	Strong ..	Propeller-shaft broke while on a voyage from Auckland to Westport. Vessel put back to Russell under sail, and was then towed to Auckland for repairs	Alexander Stuart Ewan.
" 9	Alice Muir, 16 years	Barque..	480	10	..	Coal ..	Loss of life only	1	On voyage from Sydney to Kaipara; lat. 36° 30' S., long. 171° 43' E.	S.	Moderate breeze	An A.B. named John Humphrey, while engaged furling maintop-gallant sail, fell overboard and was drowned. The foot-rope on which he was standing previous to the accident was found to have parted	Edward Yarnall.
" 14	Huon Belle, 27 years	Ketch ..	42	4	..	Timber..	Stranded; partial loss	..	Bar of Waimakariri River	S.W.	Light ..	Stranding caused by wind suddenly falling when vessel on bar	Charles Neilson.
July 10	Sarah Pile, 27 years	Brigantine	115	7	..	Timber..	Stranded; partial loss	..	Tairua Harbour	S.	Light ..	Vessel touched the bar when being towed out, and, tug not being powerful enough, the vessel canted on to the rocks	Bror Albert Wiking.
" 12	Christina, 17 years	Schooner	59	4	..	Coal ..	Collision; slight damage	..	Auckland Harbour	S.E.	Light ..	"Christina" was going up the harbour, apparently without a look-out, when she ran into the "Southern Cross," which was at anchor with her light burning	John Tyloa.
" "	Southern Cross, s.s., 17 years	Schooner	124	11	..	General	Collision; slight damage	..	Pembroke Wharf, Lake Wanaka, Otago	..	..	Casualty caused through vessel being improperly moored	Martin Huggett.
" 23	Theodore, p.s., 10 years	Cutter ..	35	3	..	Nil ..	Sunk at mooring	..	Bar of Waitara River	S.W.	Light breeze	Casualty caused through master taking bar too late on tide	Elijah Charlton Hedditch.
Aug. 7	Mania, s.s., 17 years	Schooner	55	6	..	Nil ..	Stranded; slight damage	..	Rocks between Mid-channel Rock and Hunter's Point, entrance to Bluff Harbour	W.	Light ..	Casualty caused through vessel leaving centre of channel during strong flood-tide to avoid fishing-smack which was entering the harbour	Thomas Fraser.
" 12	Industry, s.s., 4 years	Schooner	1189	21	..	Grain ..	Stranded; partial loss	..	On voyage from London to Dunedin	N.E.	Gale ..	The carpenter, William Mathew, while engaged aloft in making fast the main upper-topsail, fell from the weather-yardarm into the sea and was lost	Frederick Marshall.
" 29	Taranaki, 14 years	Ship ..	1130	..	..	General	Loss of life only	1	Lat. 48° 13' S., long. 50° 33' E.	S.W.	Moderate	The boatswain, James Cocks, went on the port rail, just abaft the fore-rigging, to clear some of the gear, the vessel rolling a good deal, when he fell overboard and was lost	Horatio Gordon.
Sept. 11	Waitangi, 17 years; Al at Lloyd's	Ship ..	1128	25	1	General	Loss of life only	1	Lat. 48° 13' S., long. 50° 33' E.	S.W.	Moderate	The boatswain, James Cocks, went on the port rail, just abaft the fore-rigging, to clear some of the gear, the vessel rolling a good deal, when he fell overboard and was lost	John Simolair.
" 29	Elizabeth, 25 years	Ketch ..	33	3	..	Ballast..	Stranded; partial loss	..	1/4-mile from West Wanganui Inlet, South Head, West Coast	S.W.	Light ..	Casualty caused through wind dropping when vessel was on bar	Robert Porter Westripp.
Oct. 18	Northern Star, 16 years	Barque..	327	10	..	Bricks and sugar	Vessel strained, and sprung a leak	..	North-east of Hen and Chickens	N.E.	Gale ..	Very bad weather caused vessel to spring a leak, when she returned to Auckland	Gregory Seymour Norris.
Nov. 6	Lindores Abbey, 14 years; Al	Barque..	863	19	..	Rice and cornsacks	Deck swept by heavy seas	1	On voyage from Rangoon to Talcahuano, Chili; lat. 51° S., long. 159° E.	W.	Gale ..	Heavy sea pooped vessel, when she rounded to and lay on her beam-ends, and one of the apprentices was carried overboard and lost	Samuel Milligan Nelson.
" 8	Castor, 5 years	Barque..	2005	31	..	Wool	Fire on board; partial loss	..	Napier roadstead	..	..	Fire broke out between decks twenty-eight hours after hatches had been put on.	Frank Richard Whitson
" 8	Duke of Buckingham, s.s., 11 years	4-masted	2020	52	..	General	Stranded; partial loss	..	Flint Reef, Kalkoura	S.E.	Breeze ..	Master was blamed for not taking greater precautions when it was reported to him that ship was drawing into land. He was also blamed for leaving deck when close to land, the night being thick and wind squally. His certificate was suspended for three months from the 27th November, 1891, and he was ordered to pay cost of inquiry*	John George Groombridge.

* On the 5th January, 1892, the Governor, in exercise of the powers conferred upon him by "The Shipping and Seamen's Act, 1877," directed the return of the master's certificate to him.

RETURN OF WRECKS and CASUALTIES to SHIPPING reported to the Marine Department—continued.

Date of Casualty.	Name of Vessel, Age and Class.	Rig.	Register Tonnage	Number of		Nature of		Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew	Passengers.	Cargo.	Casualty.		Direction.	Force.		
1891. Nov. 9	Brazilleira, 25 years	Barque..	296	10	1	Timber..	Stranded; no damage	One mile inside Buller River, Westport	S.W.	Light air	Vessel attempted to enter against signal "Keep to sea," and anchored inside Western Slip-head. Hopper-dredge "Heathcote" towed her up river, when she took a sheer and grounded being dead-weight	Augustus Skillen.
Dec. 3	Everest, 13 years	Ship ..	1680	20	1	Shale ..	Vessel strained and leaking	Thirty miles S.E. by S. from Sydney Heads, and again 200 miles S. by W. from New Zealand on voyage from Sydney to Liverpool	S.W.	Gale ..	Straining caused by bad weather and cargo being dead-weight	Charles Hibbert.
"	Rebecca, 23 years	Barque..	413	10	..	Timber..	Stranded; partial loss	Mary Catherine Bank, Kaipara	..	Calm ..	Vessel grounded through attempt being made to tow vessel out without knowledge of depth of water	Bruno McIsaac.
"	Auriga, 22 years	Barque..	518	..	..	Sugar ..	Loss of life only	On voyage from Mauritius to Dunedin	W.S.W.	Gale ..	An A.B., John Petersen, while engaged aloft losing the foretop-sail, fell overboard and was lost. He is supposed to have been knocked off the yard by the flap of the sail during a heavy roll of the ship	George Essex Stone.
"	Ahuriri, s.s., 5 years	Schooner	31	5	..	Ballast..	Collision; slight damage	Entrance to the Iron Pot, Napier Inner Harbour	W.	Strong breeze	Collision caused by "Ahuriri" not answering her helm, owing to chain getting jammed in block of steering-gear	John Carvossion Tonkin. Donald McAllister.
"	Fairy, s.s., 18 years	Ketch ..	33	4	..	Wool ..	Collision; partial loss	..	..	..	..	..
1892. Jan. 4	Ryno, 19 years	Brigantine	85	8	1	Stores and provisions	Stranded; total loss	Flint Island, South Pacific	E.N.E.	Moderate, but fell calm	Casualty caused by wind falling ..	Arthur Tribe.
"	Everest, 14 years	Ship ..	1680	19	..	Shale ..	Fire on board; partial loss	Graving Dock, Lyttelton Harbour	..	..	Ship believed to have been set on fire ..	Charles Hibbert.
Feb. 6	Star of Erin, 80 years, A.A.I., Lloyds	Barque..	949	19	..	Wool and grain	Stranded; total loss	Near Otarau Point, Otago	E.S.E.	Gale ..	Casualty caused by over-confidence of Master in estimating distance from Waipapa Point light, instead of paying more strict attention to chart, courses, and distances made	Edward Lovett Hopkins.
"	Janet Ramsay, 21 years	Schooner	41	3	..	Timber..	Collision; partial loss	300 yards S.E. of wharf, Half-moon Bay, Stewart Island	S.S.W.	Gentle breeze	When leaving the wharf the stern of the s.s. "Awarua," fouled the bow of the "Janet Ramsay"	Mello Schenkel.
"	Aorere, s.s., 6 years	Ketch ..	44	9	..	General	Stranded; slight damage	West Spit, Bar of Patea River	S.E.	Strong breeze	Casualty caused by vessel touching on bar when entering the river	William A. Wildman.
Mar. 3	Parsee, 24 years	Ship ..	1281	18	..	Ballast..	Stranded; no damage	Off Outer Reef, Patiti Point, Timaru	S.E.	Strong breeze	Vessel touched the ground when at anchor	William Aiken Bailey.
"	Elginshire, s.s., 5 months	Schooner	2380	51	5	Frozen meat, wool, tallow, and N.Z. produce	Stranded; total loss	Northern by, about 4 miles south of Timaru	N.E.	Light ..	Dense fog came on, totally obscuring the land. Lead was kept going, but, at 7 a.m., when land was seen, breakers heard, and course altered to N.E. Master committed error of judgment in not altering course to East, so as to go out to sea at right angles to his former course. Master was ordered to pay costs of inquiry. More complete survey of coast between Timaru and Oamaru should be made	William A. Wildman. William Aiken Bailey. William Anderson Miller.
"	Sardhana, 7 years, A.I. 100	Barque..	1118	21	..	Ballast..	Loss of life only	About 2-mile off Otago Heads	..	..	The master and a boat's crew of five men went ashore for orders, but, when returning to the ship, the boat capsized in the choppy sea and an A.B., named Gustaf Headlund, was drowned. The remainder of the men were rescued by the pilot-boat which put off from shore	William Jones.

SUMMARY of CASUALTIES to SHIPPING and SEAMEN reported to the Marine Department during the Financial Year ended the 31st March, 1892.

Nature of Casualties.	Casualties on or near the Coasts of the Colony.						Casualties outside the Colony.						Total Number of Casualties reported.										
	Steamers.			Sailing-vessels.			Total within Colony.			Steamers.			Sailing-vessels.			Total outside Colony.			Total Number of Casualties reported.				
	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.		
Strandings,—																							
Total wrecks	3	3,504	..	1	949	..	4	4,453	..	1	85	..	5	4,538	..	5	4,538	..	5	4,538	..	..	..
Partial loss	3	3,330	..	5	722	..	8	4,052	..	..	..	..	..	..	..	8	4,052	..	8	4,052	..	..	..
Slight damage	2	455	..	2	272	..	4	727	..	..	..	..	..	..	..	4	727	..	4	727	..	..	..
No damage	3	315	..	2	1,577	..	5	1,892	..	..	..	..	..	..	..	5	1,892	..	5	1,892	..	..	..
Total strandings	11	7,604	..	10	3,520	..	21	11,124	..	..	..	..	..	..	..	22	11,209	..	22	11,209	..	..	..
Collisions,—																							
Partial loss	1	33	..	1	41	..	2	74	..	..	..	..	..	..	..	2	74	..	2	74	..	..	..
Slight damage	2	155	..	1	59	..	3	214	..	..	..	..	..	..	..	3	214	..	3	214	..	..	..
Total collisions	3	188	..	2	100	..	5	288	..	..	..	..	..	..	..	5	288	..	5	288	..	..	..
Miscellaneous, including damage by heavy seas or fire to hull and cargo, loss of boats, &c., and breakdown of machinery	2	885	..	4	4,235	..	6	5,120	..	..	..	..	..	..	..	3	2,927	1	9	8,047	1	..	
Total casualties to shipping	16	8,677	..	16	7,855	..	32	16,532	..	..	..	..	..	..	..	4	3,012	1	36	19,544	1	..	
Less of life only	..	..	..	1	1,118	..	1	1,118	..	1	1,118	..	2	3,933	..	4	3,256	4	7	8,907	7	..	
Total number of casualties reported	16	8,677	..	17	8,973	1	33	17,650	1	2	3,933	2	8	6,268	5	10	10,201	7	43	27,851	8	..	

ANNUAL REPORTS ON WORK DONE.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1892.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			Totals.	
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Boilers.	Fees.
Auckland ...	26	87	30	148	62	202	555	£ 819 5 0
Taranaki ...	3	25	5	13	11	13	70	106 10 0
Hawke's Bay ...	...	...	...	...	...	...	...	...
Wellington ...	13	109	30	79	71	127	429	677 0 0
Marlborough ...	6	18	4	10	6	8	52	73 5 0
Nelson North ...	4	27	7	26	18	7	89	121 10 0
Nelson South ...	...	8	13	22	13	28	84	132 5 0
Westland ...	1	13	10	16	4	4	48	69 15 0
Canterbury ...	31	167	4	105	30	68	405	536 0 0
Otago ...	35	205	13	143	56	174	626	863 0 0
Totals ...	119	659	116	562	271	631	2,358	3,398 10 0

The INSPECTOR of MACHINERY, Auckland District, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Auckland, 16th April, 1892.

I have the honour to submit to you the annual report on land boilers and machinery inspected in the Auckland District during the financial year ended the 31st March, 1892.

During the above period 565 boilers and machinery attached, 26 digesters, and 56 machinery (motive-power other than steam) have been inspected, making a total of 647 inspections for the year, 332 of which were done by Mr. L. Blackwood. It is satisfactory to be able to state that there have been no accidents to life or limb with boilers to report, more especially so when the large number of inexperienced men attending to them is taken into consideration.

During the year 54 boilers have changed owners, extended certificates have been issued for 5, making a total of 41 now in force. One boiler was brought from Otago, 2 from Canterbury, 1 from Wellington, and 1 taken to that district; 42 have been repaired, and 39 new ones have been put to work, 23 of which were imported, and 16 made here. The latter were inspected at intervals during construction, and afterwards tested with hydraulic pressure to 100 per cent. over the working-pressure. Repairs to boilers have also been attended to, and when the repairs were large the boiler was afterwards proved, the test being regulated in accordance with age, &c.

Apart from this, considerable time is taken up with surveys of and repairs to steamers, engineer examinations, inspecting dentists' vulcanizing boilers, and attending to sailing-vessels *re* life-saving appliances.

I regret having accidents with machinery to report: they are of that description which may be classified as not preventible, particulars of which are given in the returns.

The appended returns give the number and description of the boilers and machinery inspected, fees payable, defects found in boilers and machinery, notices to repair boilers and protect dangerous parts of machinery, and accidents to life and limb in this district.

The Assistant Secretary, Marine Department.

I have, &c.,
W. J. JOBSON.

RETURN showing the NUMBER and DESCRIPTION of the BOILERS, &c., INSPECTED and FEES PAYABLE.

Nature of Boiler.	Number.			Fees.	Remarks.	
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.			
Portable boilers ...	...	...	...	£ s. d.	Employed at 14 establishments; fees, £5 each.
Stationary boilers ...	...	2	55	70 0 0	
Locomotive boilers	749 5 0		Charged for at per horse-power of each boiler.
Portable boilers ...	26	83	25			
Stationary boilers ...	148	60	147			
Locomotive boilers ...	...	4	5		
Total ...	174	149	232			
Machinery inspections (15, 15s. each)...	...	...	...	11 5 0	
" " (41, nil)	...	...	...	...
Digesters (26, nil)	...	...	...	...
Total fees for the year ...	...	...	...	830 10 0	

The above return includes 117 boilers and 12 digesters inspected in Hawke's Bay, but not 10 boilers inspected in public buildings owned by Government.

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1891.		
April 17 ...	Vertical flue ...	New spring-coil to be fitted to safety-valve.
April 22 ...	Portable ...	Top of fire-box renewed, and dog-stays refitted.
April 25 ...	Portable ...	New fire-box to be fitted and retubed.
May 5 ...	Portable ...	Three new stays fitted, and other small repairs to fire-box.
May 18 ...	Longitudinal tubular	Blow-off cock removed from the front to back end of boiler, and check-valve from front to top of boiler.
May 20 ...	Portable ...	Screw-patch to be fitted to corner of fire-box.
June 4 ...	Digester ...	Four stays to be renewed, and safty-valve overhauled.
July 2 ...	Portable ...	Top of fire-box set up or renewed, and new girder-stays fitted.
July 27 ...	Cornish ...	Defective part in front end cut out, and riveted patch fitted.
July 28 ...	Cornish ...	The bottom cut out and renewed.
July 30 ...	Portable ...	Patch fitted to fore tube-plate, and at corner of fire-box.
Aug. 14 ...	Vertical tubular ...	Vertical stay and patch fitted to the top tube-plate.
Sept. 25 ...	Vertical tubular ...	Retubed, and new tube-plate fitted.
Oct. 4 ...	Cornish ...	Two strengthening straps fitted to shell below the dome.
Oct. 31 ...	Longitudinal tubular	The nuts burned off stay-tubes at firing end. The tubes to be headed over, and new blow-off fitted.
Oct. 31 ...	Cornish ...	One plate in furnace taken out and renewed.
Nov. 2 ...	Digester ...	Very much reduced by internal corrosion (condemned).
Nov. 20 ...	Longitudinal tubular	New blow-off to be fitted.
Dec. 10 ...	Portable ...	Nuts burned off stay-tubes, fire-box end; the tubes to be headed over.
Dec. 11 ...	Portable ...	Top of fire-box renewed and girder-stays refitted.
Dec. 14 ...	Portable ...	Two patches fitted to lower part of fire-box.
Dec. 29 ...	Scott's patent	Two stays fitted to the leg.
1892.		
Jan. 8 ...	Vertical tubular ...	New uptake to be fitted.
Jan. 23 ...	Vertical tubular ...	Screw-patch fitted to shell at sludge-hole.
Jan. 27 ...	Longitudinal tubular	Patch fitted to the bottom, and two joints pared and caulked.
Feb. 4 ...	Vertical tubular ...	Patch fitted to uptake, retubed, and water-gauge shifted higher.
Feb. 16 ...	Longitudinal tubular	New safety-valve to be fitted.
Feb. 22 ...	Portable ...	Patch to be fitted on fire-box at mud-hole.
Feb. 23 ...	Cornish ...	One plate taken out of shell and renewed.
Mar. 16 ...	Tubular ...	Sheathing patch to be fitted to bottom, and one on back end at sludge-door.
Mar. 16 ...	Semi-portable	Fire-box restayed, holes tipped $\frac{1}{8}$ in. larger, and stays made accordingly.
Mar. 16 ...	Vertical ...	Patch to be fitted over thin part of fire-box.

RETURN of DEFECTS found in BOILERS and FITTINGS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1892.

Description.	Dangerous.	Ordinary.	Total.
Fire-boxes out of shape ... ..	...	3	3
Fractured plates	1	...	1
Blistered plates... ..	...	2	2
Corrosion, internal	1	5	6
Corrosion, external	1	15	16
Joints sprung in bottom of boiler ... ..	...	2	2
Tubes defective ... ..	...	8	8
Stays defective ... ..	...	7	7
Total defects found in boilers	3	42	45
Defective fittings—			
Safety-valves ... ..	...	5	5
Feed-valves ... ..	...	2	2
Stop-valves ... ..	...	1	1
Pressure-gauges ... ..	...	11	11
Water-gauges ... ..	...	8	8
Spring-balances ... ..	...	5	5
Blow-off cocks and pipes ... ..	...	2	2
Fusible plugs in furnace-crowns ... ..	...	2	2
Feed-pipes ... ..	...	3	3
Omissions—			
Boilers without test-cocks ... ..	...	3	3
Gross total	3	84	87

RETURN of MACHINERY INSPECTED in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1892.

Description of Machinery.	Steam.	Water.	Gas.	Description of Machinery.	Steam.	Water.	Gas.
Ammunition factory	1	...	...	Gasworks	4	...	...
Air-compressor	1	...	...	Glueworks	1	...	...
Assaying	1	...	...	Hauling	7	...	...
Baths	1	...	...	Hoisting	29	...	...
Breweries	13	...	...	Ironworks and foundries	15	...	...
Boiling-down and bone-mills	11	...	...	Joineries	2	...	...
Butter-box factory	1	...	...	Lifts or elevators (2 hand)	4	34	3
Biscuit factories	3	...	...	Lime-works	5	...	...
Boot factory	1	...	...	Mortar-mills	4	...	...
Block- and pump-works	1	...	...	Maize-mill	1	...	...
Brick-works	5	...	...	Oil-, soap-, and candle-works	2	...	...
Blacksmiths	6	...	...	Plumber and copper-smiths	2	...	...
Collieries	4	...	...	Pumping and winding	2	...	...
Cooperage	1	...	...	Pumping	5	...	...
Chaff-cutting	26	...	...	Potteries	2	...	...
Coffee-mills	2	...	...	Printing	3	...	...
Clothing factory ... ..	...	...	1	Quartz-crushing batteries	6	1	...
Condensed-milk factory	1	...	...	Rope-works	1	...	...
Coach-factories	2	...	...	Road-roller	1	...	...
Confectionery-works	2	...	...	Sash and door factories	2	...	...
Cordial-works	5	...	...	Ship-building yards	6	...	...
Chemical manure-works	1	...	...	Stone-breaking	2	...	...
Dairy factories and creameries... ..	20	...	...	Sulphur-works	1	...	...
Dredgers	2	...	...	Sugar refinery	1	...	...
Docks	2	...	...	Sausage-machines	6	...	...
Electric-lighting	1	...	...	Tanneries	6	...	...
Flax-mills	32	3	...	Tinplate-works	1	...	...
Flour-mills	10	1	...	Threshing- and chaff-cutting-machines	7	...	...
Flock-mill	1	...	...	Threshing-machines (only)	3	...	...
Freezing-works	7	...	...	Tobacco factory	1	...	...
Fish-preserving works	3	...	...	Varnish-works... ..	1	...	...
Fruit-preserving works	2	...	...	Waterworks	3	...	...
Fellmongeries	5	...	...	Winding	14	...	...
Firewood-cutting	44	...	1	Wool-dumping	5	...	...
Fire-engine	1	...	...	Woollen-mill	1	...	...
Furniture factory	1	...	...		

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Description of Machinery.	Parts of Machinery to be fenced, &c.
1891.		
May 12 ...	Saw-mill ...	Belt of circular-saw, breaking-down saw frame and fly-wheel, and pair of wheels of log-winch.
May 13 ...	Saw-mill ...	Intermediate and feed-gear belts, crosshead gear of german-saw, belt of No. 2 circular, belt and pair of wheels of No. 2 planing-machine.
May 28 ...	Saw-mill ...	Pulley of breaking-down saw, emery-wheel, and belt of circular-saw.
July 2 ...	Firewood cutting ...	Five flaws in circular-saw (condemned).
July 22 ...	Flax-mill ...	Main shafting, spindle end of scutcher, and feeding aperture of ditto, reduced to 1½ in. in width.
July 23 ...	Flax-mill ...	Three pairs of pinion-wheels on three strippers, coupling on shaft, and engine fly-wheel.
July 29 ...	Quartz reduction-works	Two pulleys and belt of wiped shaft, and bevel-gearing of buddles.
Aug. 2 ...	Hydraulic lift	New chain to be fitted.
Aug. 22 ...	Saw-mill ...	Two belts of planing-machine, one belt of drag-bench, one length of shafting and coupling.
Sept. 15 ...	Saw-mill ...	Fly-wheel of breaking-down saw, pulley and belt of circular-saw, two couplings and pair of bevel-wheels on main shaft.
Oct. 20 ...	Brewery ...	Pair of wheels of malt-crusher, two belts of hoisting-gear, one belt of masher.
Oct. 22 ...	Saw-mill ...	Belt of breaking-down saw, two belts of planing-machine.
Oct. 23 ...	Flax-mill ...	Four belts, one pair of pinion-wheels, and two set-bolts of two strippers.
Oct. 29 ...	Flax-mill ...	Scutcher mouth made to look upwards, and reduced to 1½ in.
Oct. 29 ...	Flax-mill ...	Scutcher mouth made to look upwards, and reduced to 1½ in.
Nov. 4 ...	Flax-mill ...	Scutcher mouth made to look upwards, and reduced to 1½ in.
Nov. 13 ...	Cement works	Fly and driving-wheels of pulverizer, and fly-wheel of pug-engine.
Nov. 14 ...	Saw-mill ...	Two connecting-rods of breaking-down saw, and emery-wheel.
Dec. 7 ...	Gas-engine	Main driving-belt to be covered in at outside of building.
Dec. 8 ...	Gas-engine	Fly-wheel and main driving-belt to be fenced in.
Dec. 11 ...	Flax-mill ...	Two belts of stripper, and feeding aperture reduced to 1½ in. in width.
1892.		
Jan. 5 ...	Steam-engine	Fly-wheel fenced, and under-side of driving-belt.
Jan. 6 ...	Flax-mill ...	Fence to protect main driving-belt and fly-wheel.
Jan. 16 ...	Flax-mill ...	Belt of stripper fenced, and opening in scutcher reduced to 1½ in. in width.
Feb. 18 ...	Flax-mill ...	Main driving-belt guarded, scutcher mouth made to look upwards and reduced to 1½ in. wide.
Feb. 23 ...	Quartz - crushing battery	Six pulleys and belts of wiped shafts, pan and intermediate shafts protected, and four pairs of bevel-wheels on settlers' shaft.
Mar. 11 ...	Quartz - crushing battery	Two engine fly-wheels and two pulleys of amalgamating-pans.
Mar. 21 ...	Hydraulic lift	New steel-ropes to be fitted.
Mar. 28 ...	Oil and soap works and bone-mill	Three pairs of wheels on shafting of oil-mill and driving-belt of bone-mill.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with LAND BOILERS and MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1892.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature and Date of Accident.	Fatal or not.	Cause of Accident, and Remarks.
Pūhipūhi Prospectors Company	Quartz-crushing works	John Clark, aged 45 years	Collarbone broken, 13th June, 1891	Not	It appears Clark was brushing a chip from the belt of the pulveriser, when by some means he became entangled with the belt, breaking his collarbone. The machine ought to have been stopped.
Manukau Timber Company	Saw-mill	David Foster, aged 40 years	Four fingers of right hand, 3rd July, 1891	Not	After adjusting a planing-machine, Foster started it to ascertain if all was right; when finding a piece of board which was passing through, his right hand was knocked against the knife-barrel, which resulted in four fingers being cut off. The machine is protected as far as practicable.
Henry Cook, Auckland	Cabinet-making factory	Edward Tement, aged 22 years	Two fingers of right hand, 6th October, 1891	Not	He was working at a planing-machine, and was, it appears, guiding a short piece of wood, when it slipped, his hand coming in contact with the cutters; two fingers were taken off. He had been previously warned against putting short pieces of wood through the machine.
Onehunga Iron-works Company	Iron-works	Joseph Worthington, aged 13 years	Right arm severely crushed, 21st October, 1891	Not	The lad was not employed at the works, but had taken his father's supper, and remained amusing himself where his father was working at the forge rolls. It appears he slipped, and in falling threw out his arms to save himself; his right arm was drawn into the rolls and severely crushed. It was afterwards amputated.
Joseph Coulthard, Te Awamatu	Saw-mill	Joseph Coulthard, aged 47 years	Left hand cut off, 17th November, 1891	Not	He was employed at a saw-bench. It appears he was adjusting the guide for turning the sawn pieces of timber off the bench (the saw being in motion), when his left hand came in contact with the saw, and was cut off. The saw ought to have been stopped while adjusting the guide.

The INSPECTOR of MACHINERY, Wellington District, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Wellington, 14th June, 1892.

I have the honour to forward for your information the annual report on the inspection of boilers and machinery in the Wellington, Marlborough, Nelson North, Taranaki, Nelson South, and Westland Districts, for the financial year ended 31st March, 1892. During the above period 772 boiler-inspections and 651 machinery-inspections have been made. Included in the above numbers are 378 boiler and 300 machinery-inspections by Mr. Mowatt. Although a larger number of boilers in connection with flaxmills have been idle during this year than last, there is still, owing to the increase by new boilers and boilers from other districts, almost the same number of inspections as last year.

We continue to find that the bulk of the repairs required in connection with boilers is due to the want of knowledge on the part of the person in charge; as instance, several otherwise good boilers were found in such a state from the accumulation of mud that they could scarcely generate sufficient steam to drive the machinery empty, the man in charge being quite unable to account for the loss of power. In some cases the tubes had to be drawn before the boiler could be thoroughly cleaned; but, even where this has been found necessary, it is difficult to induce the owners to procure appliances for properly washing their boilers out. The danger of accident to persons employed about boilers that are tended as I have pointed out will continue to increase as higher pressures are used. The employment of better-trained engine-drivers would in a great measure overcome the difficulty, and insure economy in fuel and repairs.

The opportunity has been taken to inspect as many of the idle boilers as could be conveniently done while in their neighbourhood, with the object of being able to issue certificates for them should they be put to work before next inspection. Twenty-eight fresh boilers have been added to the district during the year, 9 of which have been made in the colony, 13 were imported, and 6 are from other districts. Written or verbal notices have been given to effect repairs to boilers and boiler mountings, as also to fence dangerous parts of machinery.

No accidents to life or limb have been reported as having taken place in connection with boilers or machinery during the year, nor have any accidents occurred to boilers during that time.

Appended are returns showing the number and class of boilers inspected, and for which certificates have been issued, together with the fees payable; the number and class of machines inspected; the number of notices given to repair defects in boilers; and number of notices given to fence dangerous parts of machinery.

I have, &c.,

The Assistant-Secretary, Marine Department, Wellington.

H. A. MCGREGOR,
Inspector of Machinery.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1892.

Name of District.	Portable.			Stationary.			Totals.	
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Boilers.	Fees.
Wellington* ...	13	109	30	79	71	127	429	£ s. d. 677 0 0
Marlborough† ...	6	18	4	10	6	8	52	73 5 0
Nelson North ...	4	27	7	26	18	7	89	121 10 0
Taranaki ...	3	25	5	13	11	13	70	106 10 0
Nelson South‡ ...	...	8	13	22	13	28	84	132 5 0
Westland ...	1	13	10	16	4	4	48	69 15 0
Totals ...	27	200	69	166	123	187	772	1,180 5 0

The following boilers are included in the above totals :—

* Seven over 10 h.p., each included in two maximum fees	..	..	..	7
† Three over 10 h.p., each included in one maximum fee	..	..	..	3
‡ Ten over 10 h.p., each included in three maximum fees	..	..	..	10
Also three boilers over 10 h.p. and two over 5 h.p. free of charge for the Government	..	..	..	5

25

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Description of Machinery.	Written or Verbal.	Parts of Machinery to be fenced, &c.
WELLINGTON.			
1891.			
Aug. 8 ...	Saw-mill ...	Written ...	Fly-wheel of engine, and main driving-belts.
Aug. 14 ...	Saw-mill ...	Written ...	Driving-belts of circular-saws and vertical saws.
1892.			
Jan. 1 ...	Chaff-cutting	Verbal ...	Engine and main driving-belt.
Feb. 2 ...	Flax-mill ...	Written ...	Mouth of scutcher to be dressed up and reduced in width 3in. at each end; depth to be 1½in.
Feb. 23 ...	Cutting fire-wood	Verbal ...	Driving-belt, where passing the stoking-space, to be boxed in.
March 4 ...	Flax-mill ...	Written ...	Upper lip of scutcher to be renewed, and a strong upright fitted to divide the width of opening in two.
March 4 ...	Flax-mill ...	Written ...	Fly-wheel of engine, counter-shaft, and main driving-belts and pulleys.
TARANAKI.			
1891.			
Dec. 12 ...	Flour-mill ...	Written ...	Vertical driving-belt where it passes through each floor, and a hand-rail on the lower flight of stairs.
Dec. 13 ...	Stone-crusher	Written ...	Main driving-belt from engine to crusher.
Dec. 19 ...	Dairy factory	Written ...	Fly-wheel of engine and main driving-belt.
Dec. 21 ...	Stone-crushing	Written ...	Fly-wheel, and main driving-belt from engine to crusher.
MARLBOROUGH.			
1891.			
Sept. 9 ...	Chaff-cutting	Verbal ...	Fly-wheels of engine and main driving-belt.
Sept. 9 ...	Flax-mill ...	Written ...	Main driving-belt from engine to counter-shaft; also counter-shaft and pulleys, and main driving-belt of scutcher.
Sept. 17 ...	Sash and door factory	Written ...	All main driving-belts above the floor.

RETURN of BOILERS INSPECTED during the Financial Year ended the 31st, March, 1892.

Description of Machinery.	Wellington.				Marlborough.			Nelson North.		Taranaki.			Nelson South.		Westland.		To al.
	Steam.	Steam and Water.	Water.	Gas.	Steam.	Steam and Water.	Water.	Steam.	Water.	Steam.	Water.	Wind.	Steam.	Water.	Steam.	Water.	
Air-compressing .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bark-mill .. .. .	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Boiling-down establishments ..	16	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	21
Bone-mills	2	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	4
Biscuit factories	4	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	7
Brick-making machines	10	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	11
Breweries	9	..	..	..	1	..	..	4	..	3	..	..	4	..	4	..	25
Brush factory	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Bacon-curing	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Cement-mixing .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cordial factories	7	..	..	..	2	1	..	1	..	..	..	..	..	..	1	..	12
Cabinet-making	3	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	6
Chaff-cutting machines	31	..	..	..	3	..	..	10	..	1	..	..	..	..	..	..	45
Coffee- and spice-mills	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	3
Coach factories	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Cooperages	5	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	6
Dye-works	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Dairies	4	..	..	..	..	..	..	2	..	10	..	..	..	..	..	..	16
Dredging-machines	2	..	..	..	..	..	..	..	1	..	..	..	5	..	..	..	8
Electric-light machines .. .. .	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Flour-mills	10	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	15
Foundries	7	..	..	..	1	..	..	2	..	..	..	..	..	..	2	..	12
Fire-engines	1	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	4
Fire-wood cutting	11	..	..	..	..	..	..	4	..	1	..	..	..	..	..	..	16
Gasworks	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	3
Hauling-machinery	2	..	..	..	..	..	..	1	..	..	..	..	8	..	1	..	12
Hoisting-machinery	15	..	..	..	..	..	..	..	..	2	..	..	17	..	2	..	36
Hydraulic lifts	1	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Jam factories .. .. .	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Locomotives	16	..	..	..	1	..	..	1	..	2	..	..	9	..	7	..	36
Laundries	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Machine-shops	6	..	..	..	1	..	..	..	2	..	..	..	1	..	1	..	11
Meat-preserving works	6	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	9
Phormium-dressing	17	..	..	..	10	1	..	3	..	4	..	..	1	..	1	..	37
Printing	4	..	..	..	..	..	..	2	..	1	..	..	1	..	1	..	9
Pumping-machinery	1	..	..	..	1	..	..	..	..	..	..	..	8	..	1	..	11
Quartz-crushing .. .. .	..	..	..	..	..	..	..	1	..	..	..	..	6	..	..	..	7
Refrigerating-machines	7	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	9
Road-roller	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Saw-mills	49	..	..	..	6	..	..	24	..	9	..	..	6	..	17	..	111
Sash and door factories	13	..	..	..	2	..	..	4	..	3	..	..	1	..	1	..	24
Sheep-shearing	7	..	..	..	3	..	..	1	..	..	..	..	..	..	..	..	11
Soap and candle-works	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Soap-works .. .. .	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
Stone-crushing	1	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	5
Steaming	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	6
Sausage-machines	3	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	7
Tanneries	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	4
Threshing-machines	22	..	..	..	2	..	..	4	..	7	..	..	..	..	..	..	35
Tobacco-cutting .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Traction-engines	6	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	9
Tomato-sauce factory .. .. .	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Vinegar factory .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Venetian-blind factory	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Wool-dumping	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	4
Wool-scouring machines	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Woollen mill	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Well-sinking	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Winding-machinery .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	9	..	..	..	9
Patent fuel	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Blood-drying	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Totals*	330	..	5	..	47	2	..	86	..	61	..	..	76	..	44	..	651

* Included in the above totals are five hydraulic lifts, for which fees have been charged at the rate of 15s. each.

RETURN of NOTICES given to REPAIR BOILERS during the Financial Year ended the 31st March, 1892.

District and Date of Notice.	Description of Boiler.	Written or Verbal Notice.	Nature of Repairs ordered.
WELLINGTON. 1891.			
April 6 ...	Multi-tubular ...	Verbal ...	Boiler to be retubed.
April 9 ...	Portable ...	Written ...	Crack in tube-plate pinned up and two extra stays fitted.
April 9 ...	Multi-tubular ...	Verbal ...	Patch on shell below flange of check-valve.
April 13 ...	Vertical ...	Written ...	Six vertical stays fitted from crown of fire-box to top of boiler.
April 16 ...	Multi-tubular ...	Written ...	Blow-off fitted, and plug-hole made for examination.
June 15 ...	Cornish ...	Verbal ...	New patch below blow-off cock-flange, and new cock fitted.
July 23 ...	Portable ...	Verbal ...	Fire-box repaired, and several new stays fitted.
July 27 ...	Portable ...	Written ...	Extra wash-out plugs fitted.
August 6 ...	Semi-tubular ...	Verbal ...	Several new rivets in the furnace, and landings caulked.
August 11 ...	Portable ...	Verbal ...	Mud-door renewed, and plate-patch round the opening.
August 27 ...	Portable ...	Verbal ...	Skirt of fire-box caulked, and plate-patches round mud-holes.
August 28 ...	Cylindrical shell	Written ...	Longitudinal stay fitted, and larger safety-valve.
August 30 ...	Vertical ...	Written ...	New fire-box.
September 1 ...	Cornish ...	Verbal ...	New furnace.
September 1 ...	Cornish ...	Verbal ...	New furnace.
September 11 ...	Lancashire ..	Written ...	New furnace.
December 22 ...	Multi-tubular ...	Written ...	Longitudinal stays fitted to dome.
December 30 ...	Multi-tubular ...	Verbal ...	Patch on upper part of shell.
December 30 ...	Portable ...	Written ...	Crack in fire-box pinned up, and two extra stays fitted.
1892.			
January 7 ...	Multi-tubular ...	Verbal ...	Patch over fire, on the bottom, renewed.
January 13 ...	Portable ...	Written ...	New tubes and seating for fusible plug fitted.
January 14 ...	Vertical ...	Verbal ...	Patch round mud-hole opening, and under flange of blow-off cock.
January 14 ...	Locomotive ...	Written ...	The bottom plates of barrel, new tubes and palm-stays.
January 16 ...	Portable ...	Verbal ...	Skirt of fire-box landing to be pared and caulked.
January 20 ...	Portable ...	Verbal ...	New longitudinal stay in steam-space.
January 27 ...	Portable ...	Written ...	Three extra stays in lower part of tube-plate, and new mud-hole door.
January 27 ...	Portable ...	Verbal ...	The fire-box ends of tubes fitted with ferrules.
February 1 ...	Portable ...	Written ...	The tubes to be removed, boiler cleaned, and tubes replaced.
February 1 ...	Portable ...	Verbal ...	New diagonal stay fitted in steam-space.
February 2 ...	Cornish ...	Verbal ...	Longitudinal stays rearranged, and patch fitted under the flange of blow-off cock.
February 2 ...	Semi-tubular ...	Verbal ...	New patch under flange of blow-off cock.
February 3 ...	Multi-tubular ...	Verbal ...	Longitudinal stays fitted.
February 3 ...	Portable ...	Written ...	New fire-box, and all stays renewed.
February 12 ...	Portable ...	Verbal ...	New safety-valve and spring-balance to be fitted.
February 18 ...	Multi-tubular ...	Verbal ...	Patch on bottom of shell renewed.
February 20 ...	Vertical-tubular	Verbal ...	Two new tubes fitted.
March 2 ...	Portable ...	Written ...	Crack in tube-plate pinned up, and new stay fitted.
March 3 ...	Portable ...	Verbal ...	New stud in hand-hole door, and new dog fitted.
March 4 ...	Portable ...	Verbal ...	To be retubed.
March 4 ...	Portable ...	Written ...	The tubes to be drawn, the boiler cleaned, and tubes replaced.
March 8 ...	Portable ...	Written ...	Two extra dog-stays fitted on crown of fire-box.
March 9 ...	Portable ...	Verbal ...	Two extra wood plugs fitted.
March 12 ...	Vertical ...	Verbal ...	Patch on side of fire-box.
MARLBOROUGH. 1891.			
April 9 ...	Portable ...	Written ...	Crack in tube-plate pinned up, and two extra stays fitted.
September 28 ...	Portable ...	Verbal ...	Skirt of fire-box sheathed, and new tubes fitted.
September 29 ...	Portable ...	Written ...	Set of new tubes fitted.
October 3 ...	Portable ...	Verbal ...	New longitudinal stays fitted.

RETURN of NOTICES given to REPAIR BOILERS—*continued.*

District and Date of Notice.	Description of Boiler.	Written or Verbal Notice.	Nature of Repairs ordered.
1891.			
NELSON SOUTH.			
May 11 ...	Marine type ...	Written ...	Four additional girders and stays on combustion chamber.
May 20 ...	Cylindrical tubular	Written ...	Combustion chamber girders renewed.
June 4 ...	Cornish ...	Written ...	New furnace-crown.
June 4 ...	Water tube ...	Verbal ...	New neck-tubes.
June 15 ...	Portable ...	Written ...	New man-hole door.
NELSON NORTH.			
October 1 ...	Vertical ...	Written ...	Bottom of shell repaired.
October 2 ...	Vertical ...	Written ...	New dog for man-hole door.
October 16 ...	Cornish ...	Written ...	Patches on front plate for blow-off and mud-door.
November 5 ...	Multi-tubular ...	Written ...	Compensating-ring round man-hole.
November 5 ...	Cornish ...	Verbal ...	Crack in furnace repaired.
November 3 ...	Cornish ...	Written ...	New gauge-mountings fitted.
October 8 ...	Multi-tubular ...	Verbal ...	New patch on shell over the fire.
WESTLAND.			
May 25 ...	Portable ...	Verbal ...	To be retubed.
May 25 ...	Multi-tubular ...	Verbal ...	To be retubed.
May 25 ...	Portable ...	Written ...	Two additional dog-stays on crown of furnace.
June 25 ...	Vertical tubular	Written ...	New fire-box, and bottom of shell renewed.
TARANAKI.			
November 12 ...	Portable ...	Verbal ...	New studs in blow-off cock gland.
November 20 ...	Multi-tubular ...	Verbal ...	The corroded part of plate round mud-hole cut away and new door fitted.
November 24 ...	Portable ...	Written ...	New plate top of shell, patch in fire-box, and new fusible plug.
November 24 ...	Vertical ...	Written ...	Skirt of fire-box and shell of boiler sheathed.
November 26 ...	Multi-tubular ...	Written ...	One new tube fitted and the others made tight.
December 12 ...	Portable ...	Verbal ...	New longitudinal stay in steam-space, and hand-hole cut.
December 17 ...	Multi-tubular ...	Verbal ...	New doubling-plate round opening of man-hole
December 18 ...	Portable ...	Written ..	New spring-balance to be fitted.

The INSPECTOR of MACHINERY, CANTERBURY DISTRICT, to the SECRETARY, Marine Department.
SIR,—

Christchurch, 13th April, 1892.

I have the honour to forward annual report of boilers and machinery inspected by me in the Canterbury District during the financial year ended the 31st March, 1892, which contains all particulars in the same form as usual.

The number of inspections and amount of fees are nearly the same as last year, but there are a small number of boilers I have not been able to inspect for want of time; also some small boilers used only for chaff-cutting for about six months in the year I have been obliged to pass, in order to get time for the more important inspections of those used for threshing.

Besides my ordinary surveys of local steamers, much of my time has been taken up with marine work such as the repairs to the s.s. "Industry" and the s.s. "Duke of Buckingham," both of which required extensive repairs.

I regret having so many accidents to report for the year. In the case of George Knapp, the owner of mill states he had all protected, but the protection to end of shaft had been removed by Knapp himself. This mill is now used only as a flour-mill.

During the year, 51 new boilers have been inspected for the first time; 35 of these, equal to 254-horse power, are imported boilers, and 16 boilers, equal to 156-horse power, are colonial-made. Of the imported boilers 27 are traction-engines, and are used for threshing. The makers of these engines are increasing in number. The engines and boilers are mostly strongly and carefully constructed, but I regret to say comparatively few of the owners take any care of them, and trust them in the hands of drivers totally incompetent.

There have been no collapses of furnaces during the year, showing that the precautions taken to prevent such accidents have been successful.

Should any further information be required I shall be happy to supply it.

I have, &c.,

GEORGE CROLL,

Inspector of Machinery.

The Secretary, Marine Department, Wellington.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Name of District.	Portable.			Stationary.			Total.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	
Canterbury	31	167	4	105	30	68	405

RETURN showing FEES payable for the INSPECTION of BOILERS and MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Name of District.	Fees payable in respect of Boilers.			Fees payable in respect of Machinery.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Canterbury	536	0	0	Nil.			536	0	0

NOTE.—There are seven maximum fees, including twenty-four boilers over 10 h.p., and 1 boiler under 10 h.p.

GEORGE CROLL,
Inspector of Machinery.

RETURN of MACHINERY INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Description of Machinery.	Steam.	Steam and Water.	Water.	Gas and Steam.	Description of Machinery.	Steam.	Steam and Water.	Water.	Gas and Steam.
Asphalt-works	1	...	...	...	Gasworks	2	...	...	...
Baths	2	...	...	...	Goods-lifts ... ..	...	...	...	5*
Biscuit factories	2	...	...	...	Laundry	1	...	...	...
Boiling-down	9	...	...	...	Locomotive	1	...	...	...
Bone-mills	3	...	...	...	Meat-preserving	1	...	...	...
Boot factories ... ..	...	...	...	1*	Oatmeal-mills	2	...	...	...
Brush factory	1	...	...	...	Potteries	2	...	...	...
Blind factory	1	...	...	...	Printing	2	...	...	1*
Bicycle factories	3	...	...	1*	Pumping	3	...	...	...
Breweries	9	...	...	...	Road-roller	1	...	...	...
Brick- and tile-works	2	...	...	...	Road-haulage	1	...	...	...
Carriage factories	2	...	...	...	Refrigerating-works	3	...	...	...
Chemical-works	1	...	...	...	Sausage-chopping	26	...	...	...
Cooking and warming	1	...	...	...	Saw-mills	23	...	...	...
Collieries	4	...	...	...	Seed-cleaning	2	...	...	...
Coffee-mills	2	...	...	...	Sheep-shearing	3	...	...	...
Cooperage	3	...	...	...	Soap-works	5	...	...	...
Chaff-cutting	23	...	...	...	Stone-breaking	2	...	...	...
Cordial factories	4	...	...	1*	Stone-sawing	1	...	...	...
Cabinet-works	8	...	...	...	Tanneries	5	...	...	...
Dairy factories	3	...	...	...	Threshing, portable engines	26	...	...	...
Dock and slip	2	...	...	...	" traction-engines	76	...	...	...
Electric lighting	2	...	1	...	Tram-engines	7	...	...	...
Fire-engines	4	...	...	...	Well-sinking	2	...	...	...
Firewood-sawing	8	...	...	...	Winches and cranes	16	...	...	...
Flax-mills	5	2	3	1†	Wool-washing	6	...	...	...
Flour-mills	12	4	4	...	Wool-dumping	4	...	...	...
Flock-mill	1	...	...	...	Woollen-mills	2	...	...	...
Foundries and ironworks	26	...	...	...		

* Gas.

† Electricity.

RETURN of DEFECTS found on INSPECTION of BOILERS and FITTINGS in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Description of Defects.	Dangerous.	Ordinary.	Total.
Cracks in crown-plate	1	...	1
Cracks in furnace... ..	3	2	5
Cracks in neck of uptake	2	...	2
Cracks in bottom of shell	1	...	1
Crown of fire-box down	1	1	2
Crown of furnace burnt (low water)	1	...	1
Grooving in neck of angle-iron ... ..	...	2	2
Lamination ... ..	...	1	1
Longitudinal stay broken	1	...	1
Pressure-gauge incorrect ... ..	...	1	1
Patches in fire-box ... ..	...	10	10
Screwed stays to renew ... ..	...	3	3
Spring balance incorrect	1	...	1
Tubes thin or pitted ... ..	...	6	6
Tube-plates thin, also side-plates of fire-box	2	...	2
Wasted from leakage	2	3	5
Wasted from damp seating ... ..	...	2	2
Wasted in shell	2	1	3
Wasted in fire-box	1	...	1
Totals	18	32	50

NOTE.—Of the above boilers five are now out of use; the remainder have been repaired, or are working at reduced pressure.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Description of Machinery.	Notice.	Particulars.
1891.			
June 3 ...	Vertical drill ...	Verbal ...	To protect gearing with sheet-iron cover.
July 30 ...	Boot factory ...	Verbal ...	To protect fly-wheel of gas-engine, shafting, and gearing on ends of rollers.
Aug. 7 ...	Passenger-hoist ...	Written ...	To fit safety-catch on chair. (This chair was used to hoist passengers on cathedral spire.)
Sept. 33 ...	Goods-lift ...	Written ...	To fit safety-catches on cage.
Sept. 23 ...	Goods-lift ...	Written ...	To fit safety-catches on cage.
Oct. 19 ...	Flax-mill ...	Verbal ...	To fit safety-mouthpiece to water-scutching-machine.
Oct. 20 ...	Wool-washing ...	Verbal ...	To cover in gearing of drying-machine.
Nov. 3 ...	Roller flour-mill ...	Verbal ...	To protect shafting and gearing as pointed out.
Nov. 17 ...	Stone flour-mill ...	Verbal ...	To protect shafting and gearing as pointed out.
Nov. 17 ...	Roller flour-mill ...	Verbal ...	To protect shafting and gearing as pointed out.
Nov. 17 ...	Flax-mill ...	Verbal ...	To straighten shafting and adjust bearings.
Nov. 17 ...	Stone flour-mill ...	Verbal ...	To box round upright shaft, also to erect sides to bridge over water-race.
Nov. 25 ...	Flax-mill ...	Verbal ...	To box over shaft from water-wheel.
Nov. 30 ...	Flax-mill ...	Verbal ...	To protect end of counter-shaft and feed-rollers.
Dec. 11 ...	Flax-mill ...	Written ...	To fence side of water-wheel, box over counter-shaft, and readjust bearings of counter-shaft.
Dec. 11 ...	Flax-mill ...	Written ...	To fit safety-mouthpiece to scutching-machine.
Dec. 28 ...	Goods-lift ...	Verbal ...	To shift safety-catch on cage.
Dec. 31 ...	Printing ...	Verbal ...	To protect shaft, driving-pulleys, and belt.
1892.			
Jan. 14 ...	Flax-mill ...	Verbal ...	To protect or cut off end of counter-shaft.
Jan. 14 ...	Flax-mill ...	Verbal ...	To fit safety-mouthpiece to scutching-machine.
Jun. 23 ...	Roller flour-mill ...	Verbal ...	To protect shafting, gearing on rollers, and belts as pointed out.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with BOILERS and MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Name and Address of Owner.	Description of Machinery.	Name and Age of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
Jabez Rhodes, Christch'ch	Wool-teasing machine, steam power	Levi Blood, aged 14 years	Loss of right hand	Not	This machine is fed by a travelling webbing on which the wool is spread and carried forward to feed-rollers; Blood was standing on a box attending to this; the box tipped, and he fell forward, thrusting his hand into the machinery. Mr. Rhodes states the lad had no business there. The lad told me it was his own fault.
G. J. F. Lublow, Ashburton	Flax-mill, water power	George Knapp aged 21 years	Loss of right arm	Not	Knapp was engaged carrying out the hanks of flax from scutching-machine when the end of the hank got entangled on end of shaft, thus twisting his arm so badly that it was found necessary to amputate at the shoulder. This mill had been originally a flour-mill, and had not been inspected since erection of flax-dressing machinery. The machinery was not sufficiently protected; but the accident was caused more by the floor being littered with timber and spare machinery.
Thomas Wreaks, Christch'ch	Chaff-cutting steam power	James Purker, aged 40 years	Loss of right hand	Not	Purker was engaged feeding the chaff-cutter; his right hand got caught in feed-rollers, and before he recovered presence of mind to reverse the rollers his hand was chopped off to the wrist. He had fed the same machine for ten years.
The Christchurch Meat Company, Islington	Wool-drying machine, steam power	Robert Benjamin, aged 19 years	Two fingers crushed	Not	The engineer reports Benjamin's duty was to attend to filling and emptying machine, but he overstepped his duty, and removed the cover of gearing, and commenced cleaning and oiling while the machinery was in motion. The oiling is attended to by the engineer, and only when the machinery is stopped.
Peter Chalmers, Chertsey	Threshing-machine, steam power	James Chalmers, middle aged	Leg taken off in drum	Fatal	The unfortunate victim in this case was brother to the owner. Whilst engaged feeding the machine his foot rolled on a sheaf, and he slipped into the drum. Every effort was made to save his life, but to no purpose. When I inspected this machine just one month previous to accident it was then fitted with a self-feeder, which is a sure protection for mouth of drum. On subsequent inquiry I find it had been removed for alteration, and they continued threshing meantime; it was then the accident happened. Although the self-feeder is only in the experimental stage, yet nearly every machine in Canterbury is fitted with one, so far with good results.

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Accident.	Owner's Name and Address.	Nature and Cause of Accident.
1891. Sept 23 ...	William Cuddon, Fendalton	Cornish boiler. Crown of furnace leaking. Caused by water too low in boiler.
Dec. 1 ...	H. Harrison, Rakaia	Traction-engine. Leaking in fire-box. Caused by water-spaces having been full of mud.
1892. Jan. 18 ...	Thomas York, Woolston	Tubular boiler. Bottom of boiler leaking; plate cracked. Cause not discovered. Within a few days was reported leaking again. Found new plate cracked same as previous one. Had plate renewed, and lowered furnace-bars 4in. Results so far satisfactory.
Mar. 25 ...	Bowron Brothers, Woolston	Hydraulic press worked by hand. Top plate broken. Cause, overpressure.
Mar. 26 ...	Tramway Company	Boiler of tram-engine. Copper fire-box thin in places. Caused by the gas-coke used for fuel.
Mar. 31 ...	Tramway Company	Boiler of tram-engine. Copper fire-box thin. Caused by the gas-coke used for fuel.

RETURN of NOTICES given to REPAIR BOILERS in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1892.

Date.	Description of Boiler.	Notice.	Particulars of Repairs.
1891. April 10 ...	Vertical ...	Verbal ...	To shift up foundation-ring, and cut away bad part of plate in fire-box.
April 28 ...	Portable ...	Verbal ...	To renew spring-balance of safety-valve.
May 6 ...	Portable ...	Verbal ...	To tap plug in at end of rivet-cracks in order to prevent crack extending.
May 16 ...	Portable ...	Verbal ...	To renew spring-balance of safety-valve.
May 16 ...	Vertical ...	Verbal ...	To renew crown-plate, also strengthening ring at man-hole.
May 25 ...	Vertical ...	Verbal ...	To stay sides of fire-box (is now out of use).
May 23 ...	Portable ...	Verbal ...	To shift up foundation-ring, and cut away bad part of plates in fire-box.
July 15 ...	Tram-engine ...	Verbal ...	To renew patch in fire-box, and twelve stays.
July 15 ...	Portable ...	Verbal ...	To tap plugs in at end of rivet-cracks to prevent cracks extending, also renew pressure-gauge.
July 18 ...	Tram-engine ...	Verbal ...	To renew tube-plate (is now out of use).
July 18 ...	Tram-engine ...	Verbal ...	To renew ten screwed stays.
July 30 ...	Portable ...	Verbal ...	To repair corners of fire-box, and renew tubes.
Aug. 7 ...	Tram-engine ...	Verbal ...	To renew fire-box.
Sept. 11 ...	Vertical ...	Written ...	To renew uptake.
Sept. 23 ...	Cornish ...	Verbal ...	To renew injured plates over fire.
Nov. 17 ...	Vertical ...	Written ...	To renew bottom plates of shell.
Nov. 18 ...	Portable ...	Verbal ...	To renew longitudinal stay broken.
Dec. 1 ...	Traction ...	Verbal ...	To cut out cracked plate and fit new plate.
1892. Jan. 13 ...	Vertical ...	Written ...	To renew skirt of boiler-shell.
Jan. 25 ...	Portable ...	Written ...	To renew fire-box and tubes.
Feb. 12 ...	Portable ...	Written ...	To cut out cracked plate, and fit new plate.
Feb. 12 ...	Portable ...	Written ...	To renew fire-box.
Feb. 24 ...	Portable ...	Written ...	To renew fire-box, tubes, and pressure-gauge.
Mar. 16 ...	Portable ...	Verbal ...	To cut out cracked plate and fit new plate.

ANNUAL REPORT ON WORK DONE.

SIR,—

Office of Inspector of Machinery, Dunedin, 5th May, 1892.

I have the honour to forward you the annual report of inspection of boilers and machinery in the Otago District for the financial year ended the 31st March, 1892, contained in the accompanying tables.

In forwarding this report I am very sorry to state that trade in all branches in this province has been very bad. I think that the iron trade seems to have suffered most of all; and, as you

will see, the number of boilers added to the official numbers—namely, 47—is a great decrease this year to what it has been of late years.

At the end of March there were still a number of inspections remaining to be done; and, with the increase of marine work here and the time taken up in the examinations of engineers, I cannot see that the work can all be overtaken.

Possibly if you can see your way to fix a special time for examinations—say, about the beginning of each month—this, I think, would be the means of saving much time, and also enable candidates to look forward to a fixed time.

Remarks on Tables.

The defects found on inspection of boilers and machinery have been of the usual character, and repairs have been all more or less executed according to notice served.

Notices to repair have been in many cases verbal, where only small repairs were required. The only really dangerous one was on the 3rd April, 1891, where, if the plate had given way, no doubt the whole dredge would have been ruined, accompanied with loss of life.

There has not been much fencing required, as there has not been much new machinery put up during the year.

Accident to Boiler reported.—There has been only one accident, the bottom of shell coming down twice.

Notice to remove Dangerous Parts of Machinery.—There has been no occasion for any removal.

Accidents to Life and Limb.—There have been altogether four accidents reported. In the first case the accident took place through the removal of the fencing or protection which was on it. Had this been left on, the accident would not have occurred.

This accident (R. Miller), although terminating fatally, was not due altogether to the original accident, but to what took place afterwards.

Accident at Hydraulic Lift.—This accident (— Kerr), as reported in the table, could not in any way be prevented.

Accident at Twining Machine.—This accident (J. Grey), as already explained, occurred through inadvertence, and could not be guarded against.

I have, &c.,

ALEXANDER CRAWFORD,
Inspector of Machinery.

Lewis H. B. Wilson, Esq., Assistant Secretary, Marine Department, Wellington.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Inspected by	Number of Portable Boilers.			Number of Stationary Boilers.			Total.	Minimum Fees.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.		
Alexander Crawford	15	65	7	60	25	99	271	£ s. d. 393 15 0
Robert Duncan ...	20	140	6	83	31	75	355	469 5 0

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Description of Boilers, &c.	Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Total.
	£ s. d.	£ s. d.	£ s. d.
Portable	330 0 0	...	} 863 0 0
Stationary	533 0 0	...	
Machinery ... ..	...	...

RETURN showing the NUMBER of STEAM-DIGESTERS and HYDRAULIC LIFTS INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Inspected by	Steam-digesters.	Hydraulic Lifts.
Alexander Crawford	6	16
Robert Duncan	14	18
Totals	20	34

2.—RETURN OF DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Description.	Dangerous.	Ordinary.	Total.	Remarks.
Portable (17/4/91)	...	2	2	Through bar-stays corroded.
Tubular (20/4/91)	...	1	1	Four new stays and gear.
Portable (22/4/91)	No steam-gauge.
Tubular (23/4/91)	Patch on bottom.
Tubular (24/4/91)	Two patches on bottom.
Portable (25/4/91)	No steam-gauge.
Portable (28/4/91)	Crack in fire-box to be drilled out ; two mud-holes to be patched up ; new bottom-cock gauge- glass.
Portable (19/5/91)	
Portable "	
Portable "	
Traction (25/5/91)	1	...	...	Two pieces to be cut out of fire- box and patched.
Cornish tubular (25/5/91)	Ring round furnace tubes.
Cornish (25/5/91)	Manhole to be made larger.
Portable (26/5/91)	Mudhole to be cut to get at crown of portable.
Portable (28/5/91)	Two mud-doors to be fitted to portable.
Portable vertical (4/6/91)	Patch at bottom of outer D shell.
Portable vertical (5/6/91)	Patch at feed drum.
Cornish (8/6/91)	Patch in furnace mouth.
Portable (25/6/91)	Patches at two mudholes.
Tubular (11/7/91)	Patch on bottom at blow-off.
Portable (13/7/91)	Mudholes all to be patched.
Portable (16/7/91)	No steam-gauge.
Longitudinal tubular (20/7/91)	New dog-stay.
Traction (23/7/91)	New steam-gauge.
Tubular (25/7/91)	Patch on bottom.
Vertical (13/8/91)	Fore-part of fire-box renewed.
Portable (29/8/91)	Two mudholes to be patched.
Vertical (26/10/91)	Patch at feed-check and on mud- hole.
Portable (13/11/91)	Patch at mudhole.
Portable (8/1/92)	Bar-stay in steam-space; crack in fire-box to be drilled out.
Portable (9/1/92)	Extra dog across crown of fire-box.
Tubular (14/1/92)	New gauge-glass.
Portable (19/1/92)	New steam-gauge ; new bar-stay to steam-space.
Portable (22/1/92)	One new bar-stay in steam-space.
Portable (26/1/92)	Two patches in fire-box, new tubes, and new steam-gauge.
Tubular (29/1/92)	Two new tube-plates.
Portable (8/2/92)	New steam-gauge to be got.
Portable (18/2/92)	One mudhole to be patched.
Portable, No. 5758 (25/4/91)	Cylinder-saddle and blow-off to be repaired.
Vertical, No. 5773 (6/7/91)	Mudholes to be repaired.
Portable, No. 5494 (18/8/91)	Ring round manhole.
Portable, No. 5682 (20/8/91)	Water-gauges all bad.
Vertical tubular, No. 6019 (31/8/91)	Ash-pit bad, to be repaired.
Portable, No. 5108 (16/9/91)	Crack in fire-box repaired.
Tubular, No. 5993 (17/2/92)	Mudhole cut ; two new rows of tubes.
Egg-end, No. 5316 (27/2/92)	Small patch at end.
Tubular, No. 5945 (3/4/91)	1	...	1	Bottom of shell out, flue come down 1½ in., and showing frac- ture through oil.
Tubular, No. 5329 (24/10/91)	Found joints all blowing-out ; top of boiler and rivets leaking.
Vertical tubular, No. 5562 (26/10/91)	1	...	1	Tube-plate cracked, and has been repaired.
Longitudinal tubular, No. 5308 (28/10/91)	1	...	1	Found two plates with lamination, two pieces to be cut out and plate renewed.
Vertical tubular, No. 5147 (12/11/91)	1	...	1	New tube-plate put in and new new set of tubes.
Portable, No. 5351 (23/2/92)	...	1	1	New set of tubes.
Portable, No. 5364 (23/2/92)	...	1	1	Water-gauges all bad.

RETURN showing the NUMBER of DENTISTS' BOILERS INSPECTED during the Financial Year ended the 31st March, 1892.

Inspected by					Total.
Robert Duncan	...	...	...	...	7

1.—RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.	Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.
Agricultural-implem- works	3	...	...	...	Hoists	28	...	...	...
Bacon factory	1	...	...	...	Hydraulic lifts	...	...	34	...
Bakeries	5	...	...	...	Joineries	4	...	...	...
Barrel staves factory	1	...	...	...	Lathmaker	1	...	...	...
Blacking factory	1	...	...	...	Laundries	3	...	...	...
Bone-mills	4	...	...	...	Lead-pipe works	2	...	...	...
Box factory	1	...	...	...	Locomotives	5	...	...	...
Breweries	11	...	...	...	Machine-shops	2	...	...	...
Brass-, copper-, and lead- works	2	...	...	...	Meat-preserving	4	...	...	...
Brick- and tile-works	10	...	...	...	Oil-mills	1	...	...	...
Cable tramways	2	...	...	...	Parchment-works	1	...	...	...
Cabinetmakers	3	...	...	...	Poudrette-works	2	...	...	...
Cement-works	1	...	...	...	Paper-mills	1	1	...	...
Chaff-cutters	33	...	...	...	Potteries	3	...	...	...
Collieries	16	...	...	...	Printing works	4	...	...	...
Coffee- and spice-works	3	...	...	...	Pumping water...	5	...	...	...
Chemical-works	1	...	...	...	Plumbing	1	...	...	...
Condensed milk factory	1	...	...	...	Refrigerating-works	5	...	...	...
Cooperage	1	...	...	...	Rope-works	1	...	...	...
Cocoa factory	1	...	...	...	Rolling-mills	1	...	...	...
Chicory factory	1	...	...	...	Sausage-skins	1	...	...	...
Cooking	3	...	...	...	Sausage-machines	9	...	...	...
Confectionery	6	...	...	...	Saw-mills	63	1	...	...
Corn-crushers	2	...	...	...	Soap-works	3	...	...	...
Dairy factories	8	...	...	...	Soap- and candle-works	1	...	...	...
Dredges, harbour	3	...	...	...	Soda-crystal works	2	...	...	...
Dredges, gold	26	...	...	...	Sheep-dip	1	...	...	...
Dye-works	6	...	...	...	Starch-works	1	...	...	...
Engine-shops	16	...	...	...	Standard-works	2	...	...	...
Foundries	16	...	...	...	Stone-crushers	8	...	...	...
Fellmongeries	3	...	...	...	Stone-cutting	5	...	...	...
Flour-mills	12	3	...	...	Tallow-factory	2	...	...	...
Flax-mills	26	...	...	...	Threshing-machines	124	...	...	...
Flock-mills	2	...	...	...	Turning, wood	2	...	...	...
Fruit-preserving	3	...	...	...	Twine-spinning...	3	...	...	...
Fish-preserving	1	...	...	...	Venetian-blinds	1	...	...	...
Firewood-cutting	3	...	...	...	Woollen mills	4	...	...	...
Fire-grate and range works	2	...	...	...	Wool-scouring	4	...	...	...
Gasworks	3	...	...	...	Wool-mat factories	3	...	...	...
Gold-mining	1	...	...	...	Wood-working	14	...	...	...
Hedge-knife works	1	...	...	...	Wire-working	1	...	...	...
					Wool-pressing	5	...	...	...
					Wheelwright	2	...	...	...

4.—RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Class of Machinery.	Parts requiring to be fenced.
1891. April 30	Scutcher for dressing flax	Opening in drum to be reduced to 1½ in.
May 29	Gas-engine	Fly-wheel to be protected by a guard at passage. Besides a number of verbal orders for small parts.

3.—RETURN of NOTICES given to REPAIR BOILERS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1891.		
April 3 ...	Tubular ...	New plate to be put in bottom of shell.
April 20 ...	Tubular ...	Four new stays in tube-plate.
April 24 ...	Tubular ...	Two patches on shell.
April 30 ...	Portable ...	Ring round man-hole.
May 23 ...	Traction ...	Two pieces to be cut out of fire-box, and patched.
May 24 ...	Cornish tubular ...	Ring to be put round furnace tube.
May 25 ...	Cornish ...	Man-hole to be enlarged for inspection.
Oct. 24 ...	Tubular ...	Several seams to be reriveted.
Oct. 28 ...	Tubular ...	Two pieces to be cut out, and patched in bottom of shell.
1892.		
Jan. 8 ...	Portable ...	Bar-stay to be put in steam shoe.
Jan. 19 ...	Portable ...	Bar-stay to be put in steam shoe.
Jan. 26 ...	Portable ...	Two patches in fire-box.

5.—NATURE of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Accident.	Name and Address of Owners.	Nature and Cause of Accident.
1891.		
Aug. 7 ...	Miller's Creek Gold-dredging Company	Plate over fire come down 1 $\frac{3}{4}$ in., and showing signs of fracture through oil getting into boiler.
Dec. 16 ...	Miller's Creek Gold-dredging Company	This same boiler, after having the new plate put in bottom of shell, has been reported as having come down again for about $\frac{3}{4}$ in. I can only attribute this to the use of mineral oil getting into the boiler.

6.—RETURN of NOTICES to REMOVE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Date of Notice.	Name and Address of Owner.	Nature of Machinery and Cause of Removal.
Nil ...	Nil ...	Nil.

7.—RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with LAND-BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1892.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
Thomas Bustor, Makarewa	Brick-and-tile-making machinery	Alfred Bustor, aged 16 years	Left arm taken off, 16th April, 1891	Not	This accident happened at the bevil wheels, which are there for transmitting the power from the engine to the pug-mill. These wheels and shafts were all properly boxed in, by my orders, years ago; but it seems they had taken the boxing off for some purpose, and in the meantime the young lad got his left hand caught in the bevil-gearing, necessitating the amputation of his left arm. This accident, of course, could not have occurred had the boxing been allowed to remain on the machinery.

RETURN of ACCIDENTS to LIFE and LIMB—*continued.*

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
William Ross & Co., Tyne and Nith Streets, Invercargill	Scutcher for dressing flax	Robert Miller, aged 34 years	Left arm broken, 20th August, 1891	Not; fatal	It seems that this accident was caused through putting a large hank of flax in through the opening, when it got hold of the hackle-plate, and tore off a piece of wood by which the hackle-plate was attached, and on the drum turning round it got jammed at the mouth-piece and burst it out (a plank 2in. thick, which he was leaning up against at the time), the force of the blow breaking his arm. It seems he was doing well enough after this; but, being subject to epileptic fits, in one of these he smashed his arm about, after which the case terminated fatally.
Bank of New Zealand, Dunedin	Hydraulic lift	Kerr, aged about 16 years	Head injured, 29th September, 1891	Not	This lift is used to go up to the different flats of the bank for household purposes. It seems this lad Kerr was delivering a parcel to the house up on the upper flat. The cage, when down, is level with the back-yard, and can be worked either above or below. It is supposed that, in lowering the cage, he had stopped in the recess too long, and in springing out his foot slipped, and, falling back, the cage came down on his head, holding him there; but, as he will tell nothing as to how it happened, this is only supposition. He was taken to the hospital, but was discharged long ago, all well.
Phoenix Company, Limited, McLagan Street, Dunedin	Pinning-machine, or machine with rollers for breaking dough for confectionery	James Grey, aged 14 years	Right hand lacerated & one finger broken, 26th January, 1892	Not	It appears that this lad was standing by the pinning-machine, and put his hand on the roller (which is of brass, working on a brass plate); and, seeing the roller revolving, round and bright and smooth, put his hand on top. Another lad called out to him that if he did not take care he would lose his fingers, and he, in turning round to speak to him, inadvertently shifted his hand from the top to the bottom of the roller, when his hand was drawn in, with the above result—loss of one finger.

[Approximate Cost of Paper.—Preparation, nil; printing (1,350 copies), £35.]

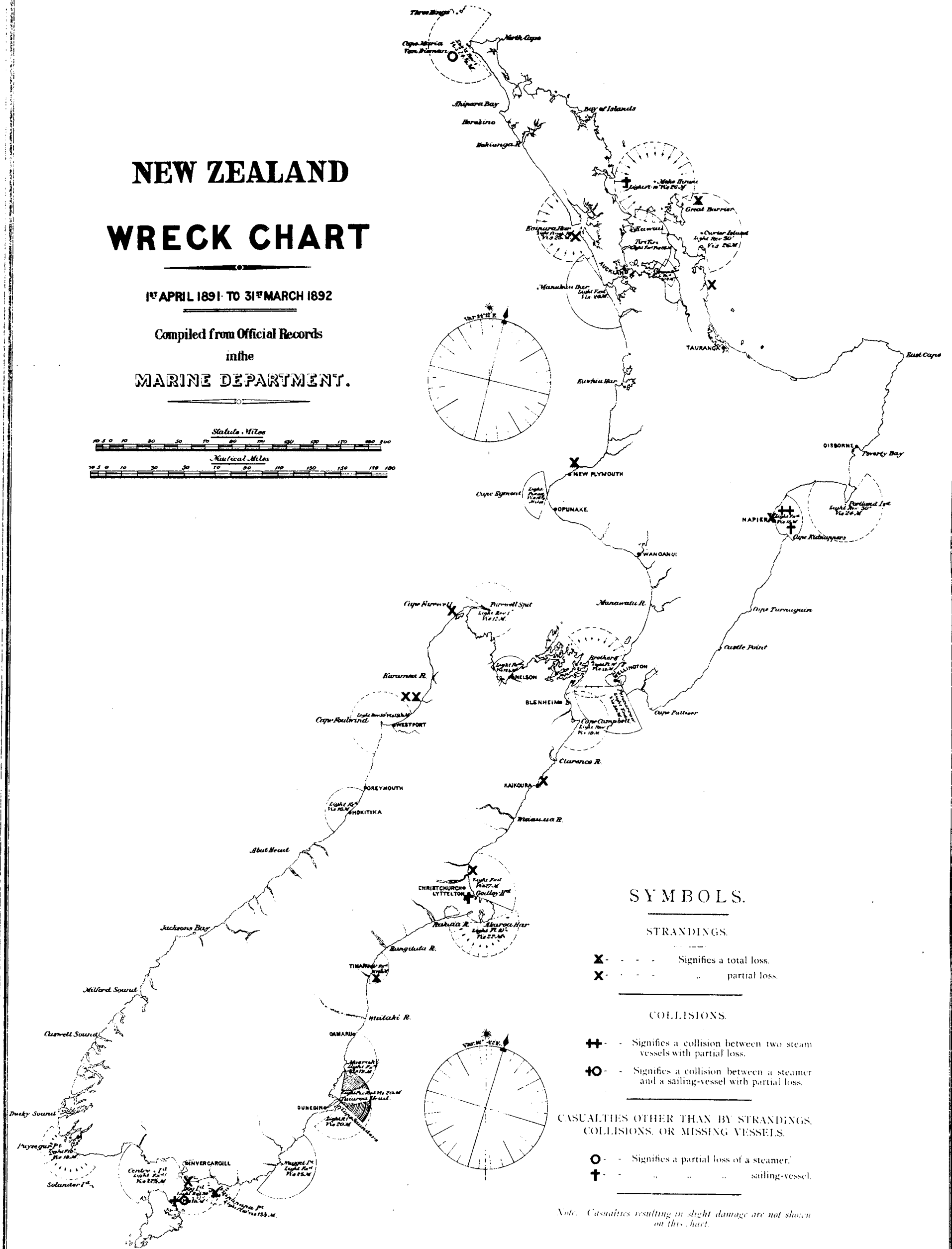
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Price, 1s.]

NEW ZEALAND WRECK CHART

1st APRIL 1891 TO 31st MARCH 1892

Compiled from Official Records
in the
MARINE DEPARTMENT.



SYMBOLS.

STRANDINGS.

- X - - - Signifies a total loss.
- X - - - Signifies a partial loss.

COLLISIONS.

- ⊕ - Signifies a collision between two steam vessels with partial loss.
- ⊙ - Signifies a collision between a steamer and a sailing-vessel with partial loss.

CASUALTIES OTHER THAN BY STRANDINGS, COLLISIONS, OR MISSING VESSELS.

- - Signifies a partial loss of a steamer.
- ⊕ - Signifies a partial loss of a sailing-vessel.

Note. Casualties resulting in slight damage are not shown on this chart.

