

1889.  
NEW ZEALAND.

# MARINE DEPARTMENT

(ANNUAL REPORT FOR 1888-89).

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

MY LORD,—

Marine Department, Wellington, 26th August, 1889.

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.

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

I have, &c.,

H. A. ATKINSON.

The ASSISTANT-SECRETARY to the Hon. the MINISTER having charge of the MARINE DEPARTMENT.

SIR,—

Marine Department, Wellington, 13th June, 1889.

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

*Lighthouses.*—The number of lighthouses under the control of the department remains unchanged. No extensive repairs have been executed during the year; but the dwellings at Centre Island and Puysegur Point will require a somewhat extensive overhaul before long. Four light-keepers have left the service, the services of two having been dispensed with on the ground of failing health rendering them no longer fit to carry out their duties, and two having resigned their appointments. The measures taken to destroy the rabbits on the Cape Campbell Reserve have proved successful, but constant steps have to be taken to prevent their again becoming a serious nuisance. Considerable trouble has been experienced during the year with some of the lamp-glasses imported to replenish the stocks at the lighthouses; after they have been in use but a little time, they became incrustated with some substance to such an extent as to impair the efficiency of the light. No means have been found successful to prevent this; but the authorities at Home have been written to with the view of ascertaining what is the cause of the incrustation, and whether any means can be found to prevent it. No accident of any importance took place at any of the lighthouses, but one of the panes of glass at the Brothers Lighthouse was cracked by an earthquake on the 23rd of October last, and the machine-rope at Cape Maria van Diemen came adrift on the morning of the 2nd November, and the weight fell to the bottom of the tower, necessitating the machine being turned by hand until the rope was put in proper order. The light on the French Pass Beacon was blown out on four occasions—namely, on the 3rd October, when it was out from 3 to 10 a.m.; on the 6th November from 6 to 6:30 p.m. and again from 6:45 to 7 p.m., and on the 11th November from 1 to 5 a.m.

*New Lighthouses.*—The cast-iron tower for Cuvier Island, for the manufacture of which a contract was let last year to Mr. A. Beaney, of Auckland, has been completed and landed on the island. A working party under the charge of Mr. D. Scott, the overseer attached to the department, was landed on the island in August last, and the necessary houses for keepers, stores, crane, tramways, &c., have been put in hand. The lantern has also been landed. The works have been so far advanced that it is anticipated that the light will be ready for exhibition about the month of September next, unless the erection of the lantern is delayed by bad weather. Correspondence has taken place between the Government of this colony and the Government of Victoria relative to the erection of a lighthouse on the Snares, the result being that the New South Wales Government promised to contribute towards the cost of the erection and maintenance of the proposed lighthouse, if the other Australian Colonies and Great Britain shared proportionately in the expense. The South Australian Government was not disposed to contribute. The Queensland Government considered that as its shipping is not interested in the proposed undertaking it would not be justified in committing the colony to any expenditure in connection therewith. The Tasmanian Government was prepared to contribute towards this undertaking, but at the same time raised the

question of the obligations of the several Governments to contribute towards other lights from which colonial shipping, other than Tasmanian, would derive benefit, and towards the expenses of which it contends assistance might fairly be asked from other colonies. Under these circumstances, it appears hardly likely that united action will be taken by the Australasian Colonies to erect this light. Indeed, considering that the light would be almost entirely for the use of sailing-vessels, more particularly those bound from Australian ports round the Horn, and that steamers are supplanting sailing-vessels, it appears somewhat questionable whether it would be worth while to go to the expense of erecting it. Reference was made last year to the necessity for the erection of a light on Stephens Island, Cook Strait; I would again draw attention to this matter, as I believe that its erection would be of very great value both to vessels engaged in the over-sea trade bound through Cook Strait, and also to the numerous vessels which pass through the Strait in connection with the West Coast coal trade.

*Harbours.*—The flagstaff for signalling to vessels has been moved from the Port Hill to near the lighthouse on the Boulder Bank, at Nelson, and the lighthouse has been connected by telephone to the town-telephone system. Arrangements have been made whereby the lighthouse is kept in constant communication with the Harbourmaster's house during the hours when the Telephone Exchange is closed. This telephone has been found to be of great service; and, in the event of any accident happening to a vessel crossing the bar at night, it would probably be the means of saving both lives and property. The services of Captain Wing, the Harbourmaster and Pilot at Manukau, were dispensed with on the 30th April, 1888, on the ground of failing health, and he died soon afterwards. He was one of the oldest traders to Manukau, and also one of the senior Harbourmasters in New Zealand, and I desire to place on record the appreciation of the department of the services rendered by him in both Provincial and General Government services for a period of over thirty-one years. Applications were invited for the vacant appointment, and Captain John Robertson was selected from the candidates. He entered on his duties on the 1st May last. Plans of a new beacon for Manukau South Head have been prepared, but its construction has been deferred for the present. The port-charges fixed at Wairau having, owing to increased traffic, been found to considerably exceed the expenditure, they were on the 8th May, 1888, reduced to a rate that was estimated to cover the working expenses of the port. The buoys and beacons at the various ports under the charge of the department have been attended to when required by the s.s. "Stella."

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

- April 9, 1888. Vesting Tauranga Wharf in Tauranga Borough Council.
- April 24. Approving plans of slipway, Bluff Harbour.
- April 24. Approving of Thames Harbour Board licensing J. H. Smith to occupy portion of foreshore.
- May 1. Approving plans of additions, &c., Victoria Wharf, Auckland.
- May 1. Approving plans of extension of wharf at Devonport, Auckland.
- May 8. Fixing new pilotage-rate for Wairau.
- May 16. Vesting Marsden Point Wharf in Whangarei County Council.
- May 22. Validating election of Chairman of Waitara Harbour Board.
- May 29. Approving of Greymouth Harbour Board altering rolling-stock to work new cranes.
- May 29. Approving plans of Stewart and Co.'s timber staging or Slip, Te Aro, Wellington.
- May 29. Approving plans of J. Fraser's boatshed, Oriental Bay, Wellington.
- May 29. Approving plans of J. McKirdy's boatshed, Clyde Quay, Wellington.
- May 29. Approving plans of Allan Maguire's bridge or staging over boat-harbour, Wellington.
- June 5. Approving plans of G. Parker's boatshed, Oriental Bay, Wellington.
- June 12. Approving plans of additions and alterations to Greymouth Harbour Works.
- June 19. Approving plans of groins for protection of Napier from heavy seas.
- July 10. Prescribing dues and rates for Akaroa wharves.
- July 24. Approving plans of extension of breakwater at Wanganui by fascine-work.
- July 31. Prescribing dues and rates for Wainui Wharf, Akaroa.
- August 22. Approving of Greymouth Harbour Board procuring additional rolling-stock.
- September 11. Approving of Westport Harbour Board procuring additional rolling-stock.
- September 11. Approving plans of sea-water pipes of H. Sankey, at Rahopara Point.
- September 11. Licensing H. Sankey to occupy foreshore at Rahopara Point for laying down pipes for salt-works.
- September 11. Approving plans of J. Murdoch's wharf, Oban, Stewart Island.
- September 11. Licensing J. Murdoch to occupy foreshore at Oban, Stewart Island, as a site for wharf.
- September 11. Approving plans of D. Christie's boatshed, Clyde Quay, Wellington.
- September 25. Approving plans of Town of Raglan, and Whaingaroa Road Boards wharf, Raglan Harbour.
- September 25. Licensing Town of Raglan and Whaingaroa Roads Boards, to occupy foreshore, Raglan Harbour, as site for wharf.
- October 2. Authorising Greymouth Harbour Board to construct two goods-sheds on wharf.
- October 9. Authorising Westport Harbour Board to construct siding in station-yards.
- October 23. Approving plans of borough baths, near Cemetery Point, Akaroa Harbour.
- October 23. Licensing Akaroa Borough Council to occupy foreshore, Akaroa Harbour, as a site for baths.
- October 30. Approving plans of foundation for 35-ton crane, Wellington.
- November 3. Approving plans of modification of extension of Wanganui Breakwater by fascines.
- November 27. Authorising Greymouth Harbour Board to make additional sidings.

November 27. Approving plans of North British and Hawke's Bay Freezing Company's wharf and groins, Napier.

December 18. Approving plans of Lane and Brown's wharf, Totara North, Whangaroa.

December 18. Licensing Messrs. Lane and Brown to occupy foreshore at Totara North, Whangaroa, as site for wharf.

December 28. Approving plans of C. McKeegan's boatshed, Clyde Quay, Wellington.

December 28. Approving plans of crib-work extension for beach-protection, The Spit, Napier.

January 15, 1889. Approving plans of J. Muir's boatshed, Oriental Bay, Wellington.

January 15. Fixing dues and making regulations for Kaikoura Wharf.

January 15. Declaring Birkenhead Borough Council to join with Northcote Road Board in electing member of Auckland Harbour Board.

January 29. Approving plans of extension of J. Dunning's Wharf, Devonport, Auckland.

February 12. Authorising Westport Harbour Board to procure drilling- and punching-machines, lathe, engine, &c.

February 19. Approving plans of John Webster's Wharf, Opononi, Hokianga.

February 19. Licensing John Webster to occupy foreshore at Opononi, Hokianga, as a site for wharf.

February 19. Approving plans of Greymouth flood-wall.

March 5. Approving plans of County Wharf at Ohiwa.

March 5. Licensing Whakatane County Council to occupy foreshore at Ohiwa as site for wharf.

March 5. Vesting Waipipi and Waiuku Wharves in Waipipi Road Board.

March 12. Approving plans of public hall on foreshore at Kohu Kohu, Hokianga.

March 12. Licensing A. C. Yarborough and W. A. Gilfillan to occupy foreshore at Kohu Kohu as site for public hall.

March 12. Authorising Westport Harbour Board to construct sheep-pen.

*Notices to Mariners.*—Thirty-two Notices to Mariners were issued during the year, of which fifteen related to matters within the colony. The following is a list of them:—

Timaru Harbour: Alteration in lights on extreme north end of breakwater (two notices).

Nelson Harbour: Signal-staff removed to Boulder Bank.

Wellington Harbour: Position of mine-field.

Greymouth Harbour: Masters of vessels not to take the bar inwards when outer red light obscured or when a vessel is on the bar.

Nelson Harbour: Light altered, and light on Bell Buoy exhibited.

Greymouth Harbour: Position of wreck of s.s. "Gerda."

Westport Harbour: Colour of bar- and danger-signals altered.

Timaru Harbour: Lights on North Mole exhibited.

New Plymouth Harbour: Formation of sandbank across entrance. Sailing directions for entering.

Holmes' Distress Signals and Life-buoy Rescue Lights: Necessity of keeping them dry.

Manukau Harbour: Change in banks at entrance.

Oamaru Harbour: Dredging operations.

Westport Harbour: Light-signals altered.

Board of Trade: Summaries of notices received. Where copies may be seen in the colony.

*Light-dues.*—The sum of £13,463 0s. 11d. was received for light-dues. This includes the sum of £2,365 8s. 3d. paid by the Post and Telegraph Department in respect of dues remitted on the San Francisco, New Zealand Shipping, and Shaw-Savill and Albion Co.'s steamers; but of this amount, owing to an error, the sum of £637 7s. 11d. was omitted to be paid until after the end of the financial year. It has, however, for statistical purposes, been included in the receipts, and it will not appear in the receipts of the current year as shown by this department. The light-dues include the sum of £3,717 0s. 9d. paid in respect of coasting-vessels.

*Government Steamers.*—The "Stella" has been employed on her usual work in attending to the lighthouses, buoys, beacons, &c. She made a trip to the Antipodes, Bounty, Campbell, and Auckland Islands in October last, and also to the Kermadecs in August. The various dépôts for castaways were examined and replenished where necessary; new dépôts being established on Macaulay, Curtis, and L'Esperance Islands, being islands in the Kermadec Group. A flaw was discovered in the "Stella's" shaft in November last, and metal clamps were made and fixed in position. A new shaft to replace the defective part is being made in the Railway Shops at Christchurch. During the year the "Stella" steamed 23,462 miles, was 2,838 hours under steam, burnt 835 tons coal, carried 340 passengers, and landed 996 tons cargo. The "Hinemoa" has not been in commission during the year. A contract was let to Messrs. W. Cable and Co. to put in the new boilers, to make a new donkey-boiler, and to give the machinery a thorough overhaul, making such alterations as were deemed necessary owing to the increased pressure in her boilers. This work was nearly finished at the end of the financial year.

*Examination of Masters, Mates, and Engineers.*—Eighty-five candidates passed their examination for certificates of competency, and twenty-seven failed. Of those who passed fifty-eight were masters, mates, and engineers of sea-going vessels, and twenty-seven were masters and engineers of river-steamers. Three candidates failed to pass the colour-test; being the same number as in the previous year. Only three certificates of service were issued during the year, each as master—one being for the Home trade and two for the foreign trade; one of these latter being a renewal in lieu of a previous certificate which had been lost.

*Relief of Distressed Seamen.*—During the past year the sum of £104 6s. 11d. has been disbursed on account of the relief of distressed seamen. Of this amount, £2 11s. has been paid for passages of

the crew of the "Julia Pryce," from Rarotonga, and £3 10s. 6d. to the Victorian Government for passage of one of the crew of the "Lurline." £10 11s. 6d. has been expended in replenishing the dépôts for the castaways in the Auckland, Campbell, and Antipodes Islands, and £87 13s. 11d. in establishing similar dépôts in the Kermadec Group. There has also been expended £61 1s. for passages of the crews of the "Shannon" and "Electra," both of London; but this amount has been refunded by the Board of Trade.

*Wages and Effects of Deceased Seamen.*—During the year the estates of twenty-eight deceased seamen have been dealt with: £35 4s. 5d. has been paid to relatives or creditors, and £43 4s. 10d. paid into the Public Account in accordance with the provisions of section 87 of "The Shipping and Seamen's Act, 1877."

*Survey of Steamers and Inspection of Machinery.*—Certificates of survey under "The Shipping and Seamen's Act, 1877," have been issued to 185 steamers, of 30,302 aggregate tonnage, and 10,690 horse-power, as against 202 steamers of 31,640 aggregate tonnage, and 10,548 horse-power in the previous year. Certificates of exemption 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," were issued during the year for the under-mentioned steamers: "Waitangi" and "Fairlight," both being exempted from employment of certificated masters.

I would draw attention to the remarks made in last year's report as to the first-class steamers being only surveyed once a year. The new Marine Board Act in Victoria makes provision for this, and I would therefore recommend, in order to make the practice in this colony the same as elsewhere, that the Shipping and Seamen's Act of 1877 be amended, so as to enable this to be done here. It would be desirable at the same time to provide that small steam-launches not carrying passengers should not be compelled to carry certificated masters.

The reports of the Inspectors of Machinery will be found at the end of the report. Owing to the revival of trade, and more especially to the large increase of flax-mills, 273 more boilers have been inspected than last year. The work has been getting into arrears owing to the Inspectors being unable to cope with it. For instance, the Napier District could not be done during the last year: instead of the Inspector going there in February, he was unable to do so until quite recently. Another Inspector should be appointed as soon as possible, and when this is done the work will be able to be kept in hand, unless any large increase of the number of boilers used should take place.

*Wrecks and Casualties.*—The accompanying table shows an analysis of the casualties reported. Those on the coast of the colony number 50, representing tonnage amounting to 10,024 tons as against 54 casualties affecting 16,420 tons in the previous year. There is a decrease in the number of total wrecks within the colony; 14 vessels of 2,991 aggregate tonnage being lost as against 19 vessels of 5,120 aggregate tonnage in the previous year. There is also a decrease in the number of lives lost during the year, being 31 as against 33 in the previous year; those lost in the colony being 19 as against 31 last year. Of the lives lost on or near the coasts of the colony, 4 were lost from the s.s. "Kahu," 3 in the "Colonist," 4 in the "Mimiha," 2 in the "Lizzie Guy," 3 in the "Coquette," and 1 each from the "Lizzie Guy," s.s. "Iona," and "Nellie." Of those lost beyond the colony, 8 were lost in the "Celestia," and 1 each from the "Selene," "Glenlora," "Chili," and "Turakina."

*FISHERIES.*—*Oysters:* The oyster-beds in the bays in Tory Channel have been closed until the 31st January, 1892, and the close season for rock-oysters in Coromandel, Hauraki Gulf, and Bay of Islands has been further extended until the 31st December next. Proceedings have been taken from time to time against persons infringing the regulations relative to close seasons. In order to preserve the rock-oyster beds from destruction it would be most desirable to have power to lease for a term of years parts of the foreshore on which rock-oysters are found, these leases to be subject to strict conditions as to maintaining the beds in a proper manner.

*Imported Fish.*—A sum of money having been voted for the introduction of salmon-ova, the Government asked the Otago and Southland Acclimatisation Societies whether they would undertake to hatch such ova out, and place all the fry in the Aparima River, Southland, this river being considered a very suitable one for salmon; it also being considered desirable, in accordance with the views of eminent pisciculturists, to place as many fry as possible in the one river with the view of ascertaining definitely, if possible, whether the acclimatisation of salmon can be made a success in our waters. This the societies agreed to. Accordingly, an order was sent Home to the Agent-General to expend £500 in sending salmon-ova, the result being that 150,200 were sent in the "Arawa," and 482,650 in the "Aorangi." The first shipment proved remarkably successful, but those in the "Aorangi" were not in so good condition. Correspondence on the subject of this importation will be laid before Parliament.

In connection with placing the salmon-fry in the Aparima River, steps were taken by Order in Council to prohibit any net-fishing in this river; a petition was received from the men who had been engaged in fishing at Riverton, complaining of this action, and Messrs. Bain and Denniston were asked by the Government to report on the matter at issue. They recommended that netting should continue to be prohibited, and that the sum of £150 should be paid to the fishermen as compensation. Their report has been adopted, and (since the close of the financial year) the money has been paid as recommended. In connection with their inquiry, an examination was made to see if the salmon-fry placed in the Aparima some time before were still there, the result being that a large number of parr were seen, and several captured. Some of them appeared to be assuming the smolt attire. The main point, however, is, will these fish, which should have gone down to sea in the autumn, return from the sea. Judging from analogy, they should return as grilse in January or February next. I recommend that steps be taken to ascertain, if possible, whether they do return, for if they do the acclimatisation of salmon may be considered a success, and steps should at once be taken to stock other rivers.

The acclimatisation societies have done useful work in distributing fish. In reply to a circular issued replies have been received from sixteen societies, who report that some 874,000 trout of various kinds (including 103,000 American brook trout (*Salvelinus fontinalis*), have been distributed during the year.

It has been reported that the whitefish placed in Lake Rotoiti have thriven well; but, as far as I understand, no specimens have been actually received. It would be desirable to ascertain whether this is so, with a view, if they have matured, of securing ova for distribution amongst our other cold-water lakes. The Lakes District Society is not confident as to the success of the whitefish-ova sent to them; but a partial success may be hoped for, having in view that a whitefish over 11in. long was recently found in a pond at Clinton, in which some fry had been placed. This fish, which was accidentally killed, has been mounted, and I understand placed in the museum at Dunedin.

*Returns.*—The report by the Marine Engineer on works carried out, reports by Inspectors of Machinery, the usual annual returns, and wreck-chart will be found appended hereto.

I have, &c.,

LEWIS H. B. WILSON,

Assistant-Secretary.

Hon. the Minister having charge of Marine Department.

## ANNUAL REPORT, ON LIGHTHOUSE WORKS, ETC.,

BY THE ASSISTANT ENGINEER-IN-CHIEF (ACTING MARINE ENGINEER).

The ASSISTANT ENGINEER-IN-CHIEF to the SECRETARY, MARINE DEPARTMENT.

SIR,—

Marine Department, 31st March, 1889.

I have the honour to report that the only works undertaken by this department during the past year have been in connection with the erection of Cuvier Island Lighthouse.

The cast-iron tower referred to in last year's report was satisfactorily manufactured by Mr. A. Beaney, of Archhill, Auckland, at a cost of £704.

Early in August a party of men were landed under the charge of Mr. Scott, the foreman of works attached to the department, and the work of constructing the necessary roads, tramways, and buildings was commenced. The iron tower and lantern were landed successfully in February, and it is hoped that the light will be ready for exhibition early in September next.

Plans for a new beacon at Manukau Heads have been prepared, with the view of having it constructed during next summer.

I have, &c.,

W. N. BLAIR,

Assistant Engineer-in-Chief.

The Secretary, Marine Department.

RETURN showing the Total Ordinary Expenditure of the Marine Department during the Financial Year ended the 31st March, 1889.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
	£ s. d.	£ s. d.	£ s. d.
<b>HEAD OFFICE:—</b>			
Assistant Secretary .. .. .	404 3 4		
Senior Clerk .. .. .	231 13 4		
Clerk .. .. .	190 0 0		
Marine Engineer .. .. .	75 0 0		
Draughtsman .. .. .	24 0 0		
Nautical Adviser .. .. .	300 0 0		
		1,224 16 8	
<b>HARBOURS:—</b>			
Manukau,—			
Salaries .. .. .	311 13 4		
Contingencies .. .. .	78 12 10		
Russell,—		390 6 2	
Salaries .. .. .	174 0 0		
Contingencies .. .. .	13 8 6		
Whangarei,—		187 8 6	
Repairs to wharf .. .. .	26 1 0		
Contingencies .. .. .	0 15 0		
Hokianga,—		26 16 0	
Salaries .. .. .	274 0 0		
Contingencies .. .. .	5 6 6		
Kaipara,—		279 6 6	
Salaries .. .. .	611 13 4		
Contingencies .. .. .	74 17 1		
Opunake,—		686 10 5	
Salary (2 months) .. .. .	4 3 4		
Contingencies .. .. .	2 16 9		
Foxton,—		7 0 1	
Salary .. .. .	191 13 4		
Contingencies .. .. .	45 5 10		
		236 19 2	
Wangawehi light .. .. .	..	10 0 0	
Tauranga,—			
Contingencies .. .. .	..	2 19 6	
Wairau,—			
Salary .. .. .	145 0 0		
Contingencies .. .. .	40 4 5		
Picton,—		185 4 5	
Contingencies .. .. .	..	5 7 6	
Nelson,—			
Salaries .. .. .	899 3 4		
Removal and re-erection of flagstaff .. .. .	63 9 4		
Telephone line to flagstaff .. .. .	201 15 1		
Contingencies .. .. .	77 13 4		
Riwaka,—		1,242 1 1	
Salary .. .. .	..	6 10 0	
Waitapu,—			
Salary .. .. .	25 0 0		
Maintenance of leading-lights .. .. .	50 0 0		
Contingencies .. .. .	1 8 0		
Collingwood,—		76 8 0	
Salary of lightkeeper .. .. .	25 0 0		
Removing snags .. .. .	12 18 6		
Contingencies .. .. .	5 4 6		
Karamea,—		43 3 0	
Signalman .. .. .	26 0 0		
Contingencies .. .. .	12 2 0		
Mokihinui,—		40 2 0	
Removal of rocks and survey of bar .. .. .	90 17 6		
Contingencies .. .. .	12 11 8		
Nile River,—		103 9 3	
Signalman .. .. .	..	17 5 0	
Okarito,—			
Salary .. .. .	50 0 0		
Contingencies .. .. .	32 12 6		
Okura River,—		82 12 6	
Signalman .. .. .	..	6 0 0	
Akaroa,—			
Salary .. .. .	25 0 0		
Contingencies .. .. .	0 6 0		
		25 6 0	
Report on Gisborne harbour-works .. .. .	..	119 2 6	
General harbour contingencies .. .. .	..	165 2 0	
			3,944 19 7
Carried forward .. .. .	..	..	

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 .. .. .	..	..	..	..	..	..	..	..	..
<b>LIGHTHOUSES :—</b>									
Salaries of keepers .. .. .	7,971	3	11						
Travelling-expenses of keepers .. .. .	34	2	2						
Oil .. .. .	1,338	15	9						
Stores and contingencies .. .. .	1,288	0	2						
Pension of Mrs. Deck .. .. .	24	0	0						
Lighthouse artificer .. .. .	66	13	4						
							10,722	15	4
“Stella,” s.s.,—									
Wages, stores, provisions, &c. .. .. .	4,816	16	9						
Less amount earned by steamer .. .. .	373	16	0						
							4,443	0	9
									4,443 0 9
Departmental travelling-expenses .. .. .	..	..	..				16	5	4
Sundries .. .. .	..	..	..				35	10	6
Charts .. .. .	..	..	..				27	4	7
Inquiries into wrecks and casualties .. .. .	..	..	..				187	4	6
Relief of distressed seamen .. .. .	..	..	..				104	6	11
Administration of Fisheries Acts .. .. .	..	..	..				76	17	4
Compensation to Lightkeeper Robson for loss of office in addition to amount under Civil Service Act .. .. .	..	..	..				127	10	2
Survey of unseaworthy ships .. .. .	..	..	..				4	4	0
									579 3 4
<b>Inspection of Machinery and Survey of Steamers,—</b>									
Salaries of Inspectors .. .. .	1,900	0	0						
Travelling-expenses .. .. .	745	2	6						
Contingencies .. .. .	80	9	7						
							2,725	12	1
									2,725 12 1
<b>Examination of Masters and Mates,—</b>									
Salaries .. .. .	450	0	0						
Contingencies .. .. .	80	18	8						
							530	18	8
									530 18 8
“Hinemoa,” s.s.,—									
Expenses when laid up .. .. .	167	8	7						
New boilers, repairs, and alterations .. .. .	2,409	6	10						
							2,576	15	5
									2,576 15 5
<b>Introduction of salmon ova .. .. .</b>							58	6	4
									58 6 4
<b>Guaranteed interest to Wellington Patent Slip Company .. .. .</b>							2,450	0	0
									2,450 0 0
									29,256 8 2
Less amount of credits to votes .. .. .	..	..	..	..	..	..	..	..	417 17 7
<b>Total .. .. .</b>	..	..	..	..	..	..	..	..	£29,838 10 7

## RETURN showing the Number of Masters, Mates, and Engineers examined during the Year ended the 31st March, 1889, 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	11	10	21	6	..	6	6	3	9	17	..	17	..	..	..	40	13	53
Home-trade masters and mates	..	..	..	..	4	4	1	..	1	..	..	..	2	..	2	3	4	7
River-steamer masters	..	4	4	8	2	1	3	..	..	..	1	..	1	..	1	8	5	13
Sea-going engineers ..	..	2	..	2	9	2	11	..	..	..	4	..	4	..	..	15	2	17
River-steamer engineers ..	..	6	..	6	3	1	4	1	..	1	..	1	8	2	10	19	3	22
<b>Totals .. .. .</b>	23	14	37	20	8	28	8	3	11	23	..	23	11	2	13	85	27	112

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 .. .. .	9,953	19 5
Cape Maria van Diemen .. .. .	7,023	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
Cost of telegraph cable to Tiri-Tiri .. .. .	1,085	19 6
Miscellaneous and unallocated .. .. .	1,322	2 2
Total .. .. .	£150,895	11 8

\* 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, 1889.

Port.	Amount collected.	
	£	s. d.
Auckland .. .. .	3,265	8 1
Onehunga .. .. .	74	0 11
Whangarei .. .. .	52	10 11
Whangaroa .. .. .	10	0 5
Russell .. .. .	123	3 0
Mongonui .. .. .	1	13 0
Hokianga .. .. .	9	19 9
Kaipara .. .. .	360	13 1
Thames .. .. .	47	11 9
Tauranga .. .. .	27	6 9
Poverty Bay .. .. .	156	1 11
Napier .. .. .	424	1 1
New Plymouth .. .. .	104	12 1
Waitara .. .. .	6	10 2
Wanganui .. .. .	58	17 9
Patea .. .. .	4	15 4
Wellington .. .. .	2,427	0 2
Wairau .. .. .	27	14 11
Picton .. .. .	117	8 8
Nelson .. .. .	285	10 9
Westport .. .. .	140	14 2
Greymouth .. .. .	169	19 11
Hokitika .. .. .	21	6 3
Lyttelton .. .. .	1,734	1 7
Timaru .. .. .	343	18 3
Oamaru .. .. .	265	17 1
Dunedin .. .. .	1,770	11 7
Invercargill .. .. .	18	10 3
Bluff .. .. .	1,373	1 4
Totals .. .. .	£13,463	0 11

RETURN showing the Amount of Pilotage, Port  
Charges, &c., collected during the Year ended  
the 31st March, 1889.

Name of Port.	Pilotage.		Port Charges, &c.		Total.	
	£	s. d.	£	s. d.	£	s. d.
Auckland* .. .. .	357	12 7	1,519	3 6	1,876	16 1
Onehunga .. .. .	..	..	143	6 2	143	6 2
Whangarei .. .. .	..	..	60	19 8	60	19 8
Mongonui .. .. .	..	..	40	19 9	40	19 9
Hokianga .. .. .	6	0 3	..	..	6	0 3
Kaipara .. .. .	255	3 2	465	2 3	720	5 5
Thames* .. .. .	97	7 0	..	..	97	7 0
Gisborne* .. .. .	59	11 8	442	10 3	502	1 11
Wairoa* .. .. .	75	15 4	4	1 6	79	16 10
Napier* .. .. .	1,668	10 4	801	13 7	2,470	3 11
New Plymouth* .. .. .	56	17 6	48	17 6	105	15 0
Waitara* .. .. .	65	2 11	19	3 3	84	6 2
Wanganui* .. .. .	342	17 9	..	..	342	17 9
Patea* .. .. .	19	11 0	3	17 0	23	8 0
Foxton .. .. .	47	14 2	..	..	47	14 2
Wellington* .. .. .	686	19 10	3,285	7 8	3,972	7 6
Wairau .. .. .	295	1 2	..	..	295	1 2
Nelson .. .. .	1,135	15 9	1	0 11	1,136	16 8
Hokitika* .. .. .	5	12 4	..	..	5	12 4
Lyttelton* .. .. .	3,904	18 0	2,558	14 8	6,463	12 8
Timaru* .. .. .	..	..	841	5 2	841	5 2
Oamaru* .. .. .	729	13 5	640	10 2	1,370	3 7
Dunedin* .. .. .	4,106	16 10	3,404	15 0	7,511	11 10
Invercargill* .. .. .	13	6 0	25	16 3	39	2 3
Bluff* .. .. .	1,304	3 0	769	12 8	2,073	15 8
Riverton* .. .. .	..	..	30	8 1	30	8 1
Totals .. .. .	15,234	10 0	15,107	5 0	30,341	15 0

\* Harbour Board revenue.

RETURN showing Expenditure on New Light-  
houses, &c., out of Public Works Loan,  
during the Year ended the 31st March,  
1889.

Nature of Expenditure.	Amount.
	£ s. d.
Cuvier Island Lighthouse .. .. .	2,504 2 1

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.

Nature of Receipts.	Amount.
	£ s. d.
Shipping and Seamen's Act—	
Fees for shipping and discharge of sea-	
men, and sale of forms .. .. .	858 2 9
Survey of steamers .. .. .	1,150 9 0
Examination of masters, mates, and	
engineers .. .. .	115 0 0
Light-dues .. .. .	13,463 0 11
Merchant Shipping Act .. .. .	82 16 6
Inspection of Machinery Act .. .. .	3,443 0 0
Pilotage and port charges .. .. .	2,451 3 3
Sundry receipts under Harbours Acts .. .. .	91 10 0
Sundries .. .. .	59 16 6
Totals .. .. .	21,714 18 11



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, 1889.

Name of Seaman.	Balance to Credit of Estate on 31st March, 1888.	Amount received.	Amount paid.	Balance to Credit of Estate on 31st March, 1889.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Charles Johnson .. .. .	1 6 8	..	1 6 8	..
Neil Carmichael .. .. .	1 6 8	..	1 6 8	..
Robert Smith .. .. .	1 6 8	..	1 6 8	..
W. Eagle .. .. .	1 6 8	..	1 6 8	..
C. H. Hansen .. .. .	3 2 0	..	3 2 0	..
David John Hannah .. .. .	12 14 2	..	12 14 2	..
William Prisk .. .. .	0 8 0	..	0 8 0	..
A. Poon .. .. .	5 16 0	..	5 16 0	..
Charley .. .. .	3 11 0	..	3 11 0	..
Bill .. .. .	3 11 0	..	3 11 0	..
Harry Coffey .. .. .	3 11 0	..	3 11 0	..
G. Minhardt .. .. .	5 5 0	..	5 5 0	..
Christian Svensen .. .. .	11 9 0	..	11 9 0	..
James Gunning .. .. .	6 13 4	12 18 11	..	19 12 3
Frank McHugh .. .. .	1 0 0	..	1 0 0	..
Charles Brown or Fitzgerald .. .. .	..	6 3 0	..	6 3 0
Henrich Hansen .. .. .	..	3 9 10	3 0 0	0 9 10
James Shaw .. .. .	..	4 9 1	4 9 1	..
David Borthwick .. .. .	..	1 16 4	1 16 4	..
John Jones .. .. .	..	4 0 0	4 0 0	..
James Murrison .. .. .	..	3 8 4	..	3 8 4
James Watson .. .. .	..	8 6 6	0 2 3	8 4 3
C. McCarthy .. .. .	..	9 5 0	2 14 0	6 11 0
J. Clarke .. .. .	..	6 6 0	..	6 6 0
D. Bruce .. .. .	..	7 9 0	6 13 9	0 15 3
Robert Messiah .. .. .	..	2 18 10	..	2 18 10
Jimmy .. .. .	..	29 11 10	..	29 11 10
David Rintoul .. .. .	..	9 1 11	..	9 1 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 Tiri-Tiri ..	1st order dioptric	Flashing	10"	White .. ..	Stone	Timber	18 June, 1883
	2nd ..	Fixed	..	White, with red arc over Flat Rock	Iron	..	1 Jan., 1865
Ponui Passage Cuvier Island ..	5th ..	..	..	White and red ..	Timber	..	29 July, 1871
	1st ..	Revolving	30"	White .. ..	..	..	Building
Portland Island	2nd ..	..	30"	.. .. ..	..	..	10 Feb., 1878
	..	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 Heads ..	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 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, 1889.

Name of Lighthouse.	Salaries.	Oil.		Stores and Contingencies.	Totals.
		Gallons consumed.	Value.		
Cape Maria van Diemen .. .. .	£ s. d. 361 13 4	811	£ s. d. 60 16 6	£ s. d. 76 0 11	£ s. d. 498 10 9
Moko Hinou .. .. .	365 14 0	815	61 2 6	46 1 3	472 17 9
Tiri-Tiri .. .. .	250 0 0	525	39 7 6	27 16 4	317 3 10
Bean Rock .. .. .	150 0 0	*72	6 6 0	6 15 0	163 1 0
Ponui Passage .. .. .	170 0 0	76	5 14 0	4 5 0	179 19 0
Portland Island .. .. .	374 6 0	642	48 3 0	73 19 4	496 8 4
Napier Bluff .. .. .	36 0 0	Gas	21 4 0	0 19 0	58 3 0
Pencarrow Head .. .. .	267 10 0	871	65 6 6	48 15 3	381 11 9
Somes Island .. .. .	144 6 8	206	15 9 0	32 8 1	192 3 9
Cape Egmont .. .. .	274 3 4	486	36 9 0	37 10 10	348 3 2
Manukau Head .. .. .	249 3 4	509	38 3 6	38 4 4	325 11 2
Manukau South Head leading-lights .. .. .	.. .. .	140	10 10 0	.. .. .	10 10 0
Manukau North Head leading-lights .. .. .	125 0 0	212	15 18 0	21 3 9	162 1 9
Kaipara Heads .. .. .	260 0 0	559	41 18 6	57 4 5	359 2 11
Brothers .. .. .	494 1 2	662	49 13 0	†74 4 3	617 18 5
Tory Channel leading-lights .. .. .	90 0 0	170	12 15 0	6 15 6	109 10 6
Cape Campbell .. .. .	260 7 11	507	38 0 6	85 6 8	383 15 1
Godley Head .. .. .	260 0 0	497	37 5 6	23 1 7	320 7 1
Akaroa Head .. .. .	270 0 0	634	47 11 0	35 9 0	353 0 0
Moeraki .. .. .	269 3 4	528	39 12 0	44 11 5	353 6 9
Taiaroa Head .. .. .	268 5 0	567	42 10 6	36 3 4	346 18 10
Cape Saunders .. .. .	272 10 0	520	39 0 0	40 0 5	351 10 5
Nugget Point .. .. .	280 0 0	919	68 18 6	45 11 9	394 10 3
Waipapapa Point .. .. .	273 3 9	512	38 8 0	23 3 2	334 14 11
Dog Island .. .. .	368 2 9	809	60 13 6	77 14 7	506 10 10
Centre Island .. .. .	361 0 0	905	67 17 6	58 14 8	487 12 2
Puysegur Point .. .. .	360 16 8	966	72 9 0	88 0 8	521 6 4
Hokitika .. .. .	15 0 0	Gas	21 1 3	.. .. .	36 1 3
Cape Foulwind .. .. .	290 0 0	540	40 10 0	45 17 7	376 7 7
Farewell Spit .. .. .	330 0 0	502	37 13 0	73 16 2	441 9 2
Nelson .. .. .	280 16 8	230	17 5 0	50 4 11	348 6 7
French Pass .. .. .	200 0 0	123	9 4 6	8 1 0	217 5 6
Totals .. .. .	7,971 3 11	15,515	1,206 15 9	1,288 0 2	10,465 19 10

\* Kerosene.

† Of this amount, £38 18s. 2d. was for provisions.

RETURN of Steamers to which Certificates of Survey were issued in New Zealand during the Year ended the 31st March, 1889.

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	" .. .. .	" ..	" ..	
Alexandra .. .. .	73	30	Non-condensing	Paddle ..	River ..	
Antrim .. .. .	35	30	" .. .. .	" ..	" ..	
Aorere .. .. .	44	16	Compound ..	Screw ..	Sea-going	
Arawata .. .. .	623	300	" .. .. .	" ..	" ..	
Australia .. .. .	260	77	" .. .. .	" ..	" ..	
Awarua .. .. .	100	80	" .. .. .	Paddle ..	" ..	Tug.
Awahina .. .. .	5	50	" .. .. .	Screw ..	" ..	" ..
Barstow .. .. .	..	24	Non-condensing	Paddle ..	River ..	
Beautiful Star .. .. .	146	30	Condensing ..	Screw ..	Sea-going	
Bella .. .. .	12	12	Non-condensing	" ..	Extended river	
Bellinger .. .. .	134	46	Compound ..	" ..	Sea-going ..	Left the colony.
Ben Lomond .. .. .	33	15	" .. .. .	" ..	River ..	
Birkenhead .. .. .	55	16	Non-condensing	Paddle ..	" ..	
Blanche .. .. .	18	9	" .. .. .	Screw ..	" ..	
Britannia .. .. .	108	40	" .. .. .	Paddle ..	" ..	
Canterbury .. .. .	..	24	" .. .. .	Screw ..	Extended river	Launch.
Charles Edward .. .. .	140	60	Compound ..	" ..	Sea-going	
Chelmsford .. .. .	70	24	" .. .. .	" ..	" ..	
City of Cork .. .. .	42	46	Non-condensing	Paddle ..	River ..	
Clansman .. .. .	336	98	Compound ..	Screw ..	Sea-going	
Colleen .. .. .	33	18	" .. .. .	Paddle ..	River ..	
Coromandel .. .. .	67	25	" .. .. .	Screw ..	Extended river	
Daphne .. .. .	..	2	Non-condensing	" ..	River ..	New launch.
Douglas .. .. .	53	30	Condensing ..	" ..	Sea-going	
Durham .. .. .	53	30	Compound ..	" ..	Extended river	
Eagle .. .. .	138	70	" .. .. .	Paddle ..	River ..	
Echo .. .. .	..	3	Non-condensing	Screw ..	" ..	
Edina .. .. .	9	6	" .. .. .	" ..	" ..	Late "Sappho."

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.
Effort .. .. .	13	12	Compound ..	Paddle ..	River ..	Launch.
Elsie .. .. .	..	8	" ..	Screw ..	Extended river	"
Enterprise .. ..	61	32	" ..	Paddle ..	" ..	"
Erin .. .. .	..	4	" ..	Screw ..	River ..	Launch.
Fairy .. .. .	32	15	Non-condensing	" ..	Extended river	"
Fingal .. .. .	22	13	Condensing ..	" ..	" ..	"
Gairloch .. .. .	187	85	Compound ..	Twin-screw	Sea-going	"
Gerda .. .. .	340	60	" ..	Screw ..	" ..	Wrecked (German vessel).
Gleaner .. .. .	8	8	Non-condensing	" ..	River ..	Launch.
Glenelg .. .. .	156	75	Compound ..	" ..	Sea-going	"
Grafton .. .. .	297	123	" ..	Twin-screw	" ..	"
Hauroto .. .. .	1,276	253	" ..	Screw ..	" ..	"
Herald .. .. .	356	85	" ..	" ..	" ..	"
Hinemoa .. .. .	..	3	Non-condensing	" ..	River ..	Launch.
Hokianga .. .. .	..	7	" ..	" ..	" ..	"
Huia .. .. .	..	6	" ..	" ..	" ..	"
Huia .. .. .	90	25	Compound ..	" ..	Sea-going	"
Ida .. .. .	12	10	Non-condensing	" ..	River ..	"
Invercargill .. ..	123	50	Compound ..	" ..	Sea-going	"
Iona .. .. .	159	65	" ..	" ..	" ..	"
Jane Douglas .. ..	75	20	" ..	" ..	" ..	"
Kahu .. .. .	93	40	" ..	" ..	" ..	"
Kakanui .. .. .	57	22	" ..	" ..	" ..	"
Kanieri .. .. .	115	20	" ..	" ..	" ..	"
Kate .. .. .	..	5	Non-condensing	" ..	River ..	Launch.
Katikati .. .. .	27	8	Condensing ..	" ..	" ..	"
Kawatiri .. .. .	286	70	Compound ..	" ..	Sea-going	"
Kawau .. .. .	..	10	" ..	" ..	Extended river	Steam-yacht, formerly "Jubilee."
Kennedy .. .. .	138	50	" ..	Twin-screw	Sea-going	"
Kina .. .. .	39	15	" ..	Screw ..	River ..	"
Kiwi .. .. .	132	30	" ..	" ..	Sea-going	"
Kopuru .. .. .	28	20	Non-condensing	" ..	River ..	"
Koputai .. .. .	5	120	Compound ..	Paddle ..	Sea-going	Tug.
Koranui .. .. .	301	80	" ..	Screw ..	" ..	"
Kotuku .. .. .	41	40	Non-condensing	Three screws	Extended river	"
La Buona Ventura ..	4	4	" ..	Screw ..	River ..	"
Lady Barkly .. ..	39	18	Compound ..	" ..	Sea-going	"
Lilie .. .. .	10	10	Non-condensing	Paddle ..	River ..	"
Lily .. .. .	20	10	" ..	Twin-screw	" ..	"
Little George .. ..	..	4	" ..	Screw ..	" ..	Launch.
Lyttelton .. .. .	39	80	Compound ..	Paddle ..	Sea-going	Tug.
Mahinapua .. .. .	205	80	" ..	Twin-screw	" ..	"
Mahinapua .. .. .	..	10	Non-condensing	Stern-wheel	River ..	"
Mahu .. .. .	4	5	" ..	Screw ..	" ..	New launch.
Maitai .. .. .	163	55	Compound ..	" ..	Sea-going	"
Mana .. .. .	51	25	" ..	" ..	River ..	"
Manapouri .. .. .	1,020	300	" ..	" ..	Sea-going	"
Manawatu .. .. .	112	40	" ..	" ..	" ..	"
Manukau .. .. .	45	15	" ..	" ..	River ..	"
Maori .. .. .	118	60	Condensing ..	" ..	Sea-going	"
Maori .. .. .	17	8	Non-condensing	" ..	Extended river	"
Mararoa .. .. .	1,248	530	Triple expansion	" ..	Sea-going	"
Matau .. .. .	50	40	Non-condensing	Stern-wheel	River ..	"
Matuku .. .. .	..	3	" ..	Screw ..	" ..	Launch.
Mawhera .. .. .	340	75	Compound ..	" ..	Sea-going	"
May .. .. .	..	3	Non-condensing	" ..	River ..	Launch.
Minnie Casey .. ..	43	25	Compound ..	" ..	" ..	"
Miranda .. .. .	..	4	Non-condensing	" ..	" ..	Launch.
Moa .. .. .	110	25	Compound ..	" ..	Sea-going	"
Moss Rose .. .. .	..	8	Non-condensing	" ..	Extended river	Launch.
Mountaineer .. ..	66	25	Compound ..	Paddle ..	River ..	"
Moutoa .. .. .	..	5	Non-condensing	Screw ..	" ..	Launch.
Murray .. .. .	78	13	Condensing ..	" ..	Sea-going	"
Napier .. .. .	48	24	Compound ..	" ..	" ..	"
Nautilus (yacht) ..	32	18	" ..	" ..	Extended river	"
Neptune .. .. .	44	18	" ..	" ..	Sea-going	"
Nile .. .. .	21	19	Non-condensing	Paddle ..	" ..	"
Noko .. .. .	15	9	" ..	Screw ..	Extended river	Launch.
No. 121 .. .. .	394	100	Compound ..	Twin-screw	" ..	Dredge.
No. 222 .. .. .	502	120	" ..	" ..	Sea-going	"
Ohau .. .. .	411	92	" ..	Screw ..	" ..	"
Omapere .. .. .	352	160	" ..	" ..	" ..	"
Orawaiti .. .. .	283	120	" ..	" ..	" ..	"
Oreti .. .. .	138	43	" ..	" ..	" ..	"
Osprey .. .. .	138	80	" ..	Paddle ..	River ..	"
Patiki .. .. .	37	22	Non-condensing	" ..	" ..	"
Pearl .. .. .	9	7	" ..	Screw ..	Extended river	Launch.
Pelorus .. .. .	18	12	" ..	" ..	River ..	"
Penguin .. .. .	442 <sup>2</sup>	180	Compound ..	" ..	Sea-going	"
Phoenix .. .. .	10	4	Non-condensing	" ..	Extended river	Launch.
Picton .. .. .	7	8	" ..	" ..	" ..	"
Planet .. .. .	13	8	" ..	" ..	" ..	"
Plucky .. .. .	29	40	Compound ..	" ..	Sea-going	Tug.

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.
Pukaki .. .. .	850	750	Compound ..	Screw ..	Sea-going ..	New vessel.
Result .. .. .	18	14	Non-condensing	" ..	Extended river	
Result .. .. .	..	4	" ..	" ..	River ..	Launch.
Reynolds .. .. .	..	14	" ..	" ..	" ..	"
Richmond .. .. .	475	105	Compound ..	" ..	Sea-going	
Ringarooma .. .. .	623	300	" ..	" ..	" ..	
Rosamond .. .. .	462	90	" ..	" ..	" ..	
Rose Casey .. .. .	99	40	" ..	" ..	Extended river	
Rotoiti .. .. .	17	15	Non-condensing	Twin-screw	" ..	
Rotomahana .. .. .	864	450	Compound ..	Screw ..	Sea-going	
Rotomahana .. .. .	139	45	Condensing ..	" ..	" ..	
Rotorua .. .. .	576	172	Compound ..	" ..	" ..	
Rowena .. .. .	74	30	" ..	" ..	" ..	
Ruby .. .. .	32	14	" ..	" ..	Extended river	
Scotchman .. .. .	30	10	Non-condensing	" ..	River ..	
Shag .. .. .	31	27	" ..	" ..	Sea-going	
Snark .. .. .	..	6	" ..	" ..	River ..	Launch.
Southern Cross .. .. .	139	50	Compound ..	" ..	Sea-going	
Spray .. .. .	..	3	Non-condensing	" ..	River ..	Launch.
Staffa .. .. .	40	25	Condensing ..	" ..	Sea-going	
Stormbird .. .. .	137	40	Compound ..	" ..	" ..	
Suva .. .. .	177	55	" ..	" ..	" ..	Wrecked.
Sylph .. .. .	..	4	Non-condensing	" ..	River ..	Launch.
Tainui .. .. .	41	22	" ..	Paddle	" ..	
Takapuna .. .. .	370	163	Compound ..	Screw ..	Sea-going	
Takapuna .. .. .	57	20	Non-condensing	Paddle	River ..	
Tam O'Shanter .. .. .	22	12	" ..	Screw ..	Extended river	
Tangihua .. .. .	20	15	" ..	" ..	River ..	
Taniwha .. .. .	..	16	" ..	" ..	" ..	Dredge.
Tarawera .. .. .	1,269	250	Compound ..	" ..	Sea-going	
Taupo .. .. .	408	92	" ..	" ..	" ..	
Tawhara .. .. .	..	10	Non-condensing	" ..	River ..	Launch.
Tay .. .. .	..	5	" ..	" ..	" ..	"
Te Anau .. .. .	1,028	250	Compound ..	" ..	Sea-going	
Tekapo .. .. .	1,544	270	" ..	" ..	" ..	
Terrier .. .. .	..	3	Non-condensing	" ..	River ..	Launch.
Terror .. .. .	..	10	" ..	" ..	Extended river	
Te Wae .. .. .	..	16	" ..	Twin-screw	River ..	Dredge.
Theodore .. .. .	35	25	" ..	Paddle	" ..	
Timaru .. .. .	279	70	Compound ..	Screw ..	Sea-going ..	Left the colony.
Titan .. .. .	21	55	Condensing ..	Paddle	" ..	Tug.
Tongariro .. .. .	62	25	" ..	" ..	River ..	
Torea .. .. .	9	18	Compound ..	Screw ..	Extended river	
Tuhua .. .. .	..	23	Non-condensing	Stern-wheel	River ..	
Vesta .. .. .	3	5	" ..	Screw ..	" ..	Launch.
Victoria .. .. .	93	40	" ..	Paddle	" ..	
Vivid .. .. .	16	14	" ..	Screw ..	Extended river	
Waihi .. .. .	63	20	Compound ..	" ..	Sea-going	
Waihora .. .. .	1,269	265	" ..	" ..	" ..	
Waikato .. .. .	61	20	Non-condensing	Paddle	River ..	
Wainui .. .. .	391	95	Compound ..	Screw ..	Sea-going	
Waipara .. .. .	70	13	Non-condensing	Twin-screw	" ..	
Wairarapa .. .. .	1,023	292	Compound ..	Screw ..	" ..	
Wairoa .. .. .	48	16	Condensing ..	" ..	Extended river	
Waitangi .. .. .	..	5	Non-condensing	" ..	River ..	Launch.
Waitapu .. .. .	40	16	Compound ..	" ..	Sea-going	
Waitara .. .. .	26	16	Non-condensing	" ..	Extended river	
Waitara .. .. .	11	15	" ..	" ..	" ..	
Waitoa .. .. .	27	16	" ..	Twin-screw	" ..	
Waiwera .. .. .	..	8	" ..	Screw ..	River ..	Launch.
Waiwera .. .. .	6	10	Compound ..	" ..	Extended river	
Wakatipu .. .. .	1,157	256	" ..	" ..	Sea-going	
Wakatu .. .. .	75	30	" ..	" ..	" ..	
Wanaka .. .. .	278	120	" ..	" ..	" ..	
Wareatea .. .. .	288	70	" ..	" ..	" ..	
Waverley .. .. .	76	25	" ..	Twin-screw	" ..	
Whamoa .. .. .	1,109	185	" ..	Screw ..	" ..	
Weka .. .. .	53	20	" ..	" ..	" ..	
Wellington .. .. .	279	80	" ..	" ..	" ..	
Westland .. .. .	35	60	Condensing ..	Paddle	" ..	Tug.
Yankee Doodle .. .. .	..	12	Non-condensing	" ..	River ..	Launch.
Zephyr .. .. .	..	12	" ..	Screw ..	" ..	"

## RETURN showing the Certificates of Service issued to Masters, Mates, and Engineers during the Year ended the 31st March, 1889.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
James Malcolmson .. .. .	Master .. .. .	Home trade .. .. .	25 April, 1888 .. .. .	2548
William Anglem .. .. .	" .. .. .	Foreign trade .. .. .	2 March, 1889 .. .. .	2549
Alexander Campbell (renewal) .. .. .	" .. .. .	" .. .. .	26 " " .. .. .	2550

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st March, 1889.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Joseph William Holdercroft	Only Mate	Foreign trade	3 April, 1888	568
Gilbert Laurensen	Second Mate	"	9 " " "	569
John Mill	First Mate	"	16 " " "	552
Kenneth Bligh Skeet	Second Mate	"	16 " " "	570
William Shephard	Only Mate	"	17 " " "	571
John Bollons	"	"	19 " " "	572
Francis Harris	Second Mate	"	25 " " "	573
Frank Wilson Arbon	"	" (renewal)	8 May, " "	574
George Bell	Master Ordinary	" (renewal)	25 June, " "	575
Alexander Robinson	"	"	16 July, " "	439
William Walker	Second Mate	"	7 Aug., " "	576
Harald Syvertsen Molvig	Only Mate	"	21 " " "	577
Israel Quick Gregory	Master Ordinary	"	6 Sept., " "	239
Vivian Charles White-Parsons	Second Mate	"	6 " " "	578
Edwin George Derbidge	"	"	13 " " "	579
Charles Gustaf Hollmen	Master Ordinary	"	17 " " "	318
George Melville Ruxton	Second Mate	"	17 Oct., " "	580
Alexander Smith	"	"	19 " " "	581
William Barber	Only Mate	"	19 " " "	582
William McLean	Master Ordinary	"	26 " " "	79
Robert Swayne Hinton	Second Mate	"	31 " " "	583
Charles Henry Hyde	First Mate	"	12 Nov., " "	348
Richard McAvoy	Second Mate	"	16 " " "	584
William Paton	Master Ordinary	"	19 " " "	585
Charles Henry Hyde	"	"	19 " " "	348
Anton Petersson	First Mate	"	26 " " "	586
Herrmann Karl Max Spittka	Master Ordinary	"	26 " " "	587
John McMaster Stewart	"	"	1 Dec., " "	455
Thomas Basire	Master Extra	"	17 " " "	588
Henry James Williams	Second Mate	"	27 " " "	589
Peter Palleson	Master Ordinary	"	27 " " "	590
Thomas William Brown	Second Mate	"	9 Jan., 1889	591
Foster James Tackaberry	"	"	21 " " "	592
James Cooper Walker	First Mate	"	21 " " "	593
Adam Coutts	Second Mate	"	1 Feb., " "	594
William Robertson	Master Ordinary	"	8 " " "	595
Edward Stott	First Mate	"	11 " " "	596
John Henry Clements	Master Ordinary	"	11 " " "	597
Peter Dunbar	First Mate	"	11 " " "	598
George Graves	"	"	11 " " "	599
Charles Edward Pyke	Only Mate	" (renewal)	16 " " "	600
Thomas James Chaplin	Master Ordinary	"	19 " " "	601
John Thomas Rolls	"	"	19 March, " "	602
William Ross	"	" (renewal)	26 " " "	603
William Bonar	Master	Home trade(renewal)	16 April, 1888	5,329
Raymond Burns	"	"	17 Sept., " "	5,304
Charley Olsen	Mate	"	2 March, 1889	5,330
Christian Theodor Julius Andersen	"	"	25 " " "	5,331
John William Fowler	Master	River trade	3 April, 1888	3,158
Robert John Scott	"	"	26 " " "	3,159
William Tinney	"	"	22 June, " "	3,160
David Cremen	"	"	2 July, " "	3,161
Charles Utting Penny	"	"	23 " " "	3,162
Alexander Trindle Thompson	"	"	6 Sept., " "	3,163
William Rowley Entwistle	"	"	26 Oct., " "	3,164
Hugh Clark	"	"	26 Nov., " "	3,165
Alexander McArthur	"	"	27 Dec., " "	3,166
John Mitchell	1st Class Engineer	Foreign trade	14 June, " "	182
Louis Martin	2nd Class Engineer	"	24 July, " "	183
Andrew McFarlane	"	"	24 " " "	184
Arnold Augustus Gladwin Lewis	"	"	27 " " "	185
James Smith	1st Class Engineer	"	7 Aug., " "	123
William Alexander McGregor	"	"	11 Sept., " "	140
Robert Knox	2nd Class Engineer	"	9 Oct., " "	186
William Smart	1st Class Engineer	"	19 Nov., " "	94
John George Seed	"	"	10 Dec., " "	108
Alexander William Bethune	"	"	17 " " "	169
Thomas Cargill	"	"	11 Jan., 1889	138
James Moses Ferguson	"	"	11 " " "	168
John Cook Buchanan	2nd Class Engineer	"	23 " " "	187
Alexander McNair	1st Class Engineer	"	2 March, " "	146
John Benson	2nd Class Engineer	"	15 " " "	188
Archibald Hill	Engineer	River trade	16 April, 1888	1,560
William Henry Martin	"	"	9 May, " "	1,561
Joseph Alexander Fleming	"	" (renewal)	26 " " "	1,562
Samuel Millbank	"	"	6 June, " "	1,563
William James Wilson	"	"	11 " " "	1,564
Henry Duston	"	"	18 " " "	1,565
Robert Richard Auty	"	"	5 July, " "	1,566
Alfred Latimer	"	"	24 " " "	1,567
William McKirdy	"	"	1 Aug., " "	1,568
James Duncan McNab Harris	"	"	30 " " "	1,569
Willy Gustav Adolf Siebert	"	"	30 " " "	1,570
Alexander Trindle Thompson	"	"	6 Sept., " "	1,571
Colin James McDonald	"	"	6 " " "	1,572
Samuel Livingston Chandler	"	"	5 Oct., " "	1,573
James Begg	"	"	1 Dec., " "	1,574
William Frederick Bell	"	"	3 " " "	1,575
Peter Rentoul	"	" (renewal)	17 " " "	1,576
Thomas Chapman	"	"	7 Jan., 1889	1,577
James Durrant	"	"	11 " " "	1,578
Henry Duston	"	"	8 Feb., " "	1,579
William Conyers	"	"	8 March, " "	1,580

## RETURN of WRECKS and CASUALTIES to SHIPPING reported to the Marine Department from the 1st April, 1888, to the 31st March, 1889.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Registered 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.		
1887. May 3 (since)	Celestia, 35 yrs.	Barque..	225	8	..	Timber..	Supposed foundered; total loss	On voyage from Russell to Hobart	..	..	Vessel left Russell on the 3rd May, 1887, for Hobart, and has not since been heard of. Supposed to have foundered at sea, with loss of all hands	Robert H. Offord.
1888. April 7	Tangihua, s.s., 10 years	Cutter ..	20	..	..	..	Collision; partial loss	Off Village of Newport, Waioa River, Kaipara	..	Calm ..	"Durham," s.s., collided with "Tangihua," during a fog, while the latter was at anchor in the river	Joseph Seymour.
"	Durham, s.s., 13 years	Schooner	54	7	8	General	Collision; no damage	One mile south of Ohau River, Wanganui Bight, Cook Strait	N.W.	Strong breeze	Strong current from westward sets into Wanganui Bight; that no mention is made of this current in the <i>New Zealand Pilot</i> , and the master did not know of its existence	James Pearce.
"	Weathersfield, 23 years	Barque..	1047	20	..	Ballast..	Stranded; total loss				Note.—The Marine Department does not agree with the finding of the Court with regard to the existence of such current.	Robert Sherris.
"	Coulhakyle, 26 yrs.; Al Lloyd's	Barque..	589	14	..	Copra and tallow	Stranded; partial loss	Vavau Harbour	E.	Fresh ..	Anchor caught in coral patch, which caused vessel to bring up, and then drift on to reef	Henry John Atwooll
May 8	Julia Pryce, 17 years	Schooner	41	5	..	Copra and limejuice	Stranded; total loss	Reef off Aitutaki, Cook Group	N.E.	Strong ..	Casualty caused through variable current ..	Alfred Clark.
"	Kiwi, s.s., 13 yrs.	Schooner	133	16	1	General	Propeller-shaft broken	Two miles south-west of Baring Head, near Wellington Harbour	E.	Light ..	Propeller-shaft broke close up to the boss of the propeller, but from what cause was not apparent, as there was not shock or strain upon it	James Campbell.
"	Chelmsford, s.s., 2 years	Schooner	70	10	..	Live-stock	Stranded; partial loss	Bar of Opotiki River ..	E.	..	Stranding caused through there being insufficient water	Charles Hopkins.
"	Wairui, s.s., 2 years	Schooner	391	29	3	General	Stranded; partial loss	Black Rocks to west of Cape Palliser	S.W.	Light ..	Casualty caused through master being mistaken as to his distance from shore when running down coast; mistake being partly due to state of atmosphere and fog. Master and first officer alert and vigilant; but should have had a man on look-out. Master's certificate suspended for one month, and he was ordered to pay costs of inquiry	William Cro-marty.
June 5	Sophia R. Luhrs, 14 years	Barque..	661	17	..	Ballast..	Stranded; total loss	North Spit, entrance to Kaipara Harbour	S.E.	Moderate breeze	Vessel went ashore through cable parting while lying at anchor, the cause of the parting being probably a faulty link. Evidence not clear as to whether cable parted during watch of first or second officer, each officer being quite certain that it did not occur during his watch. Whilst at anchor, reliance was mainly placed on the lead, and the compass was not in such a position as to permit a prompt determination of the bearings of the shore-lights. No evidence to show that any person was to blame	George Alfred Marks.

June	Sarah and Mary, 23 years	Brightine	145	7	..	Coal	..	Deck swept by heavy seas; partial loss	..	Lat. 46° S., long. 166° 20' E., on voyage from Newcastle to Inver- cargill	S.	Strong gale	While hove-to in heavy gale, vessel shipped a heavy sea, which carried away port bulwarks and stanchions, smashed starboard bulwarks and boat, and stove in main hatch	Walter Steele.
"	7 Kennedy, s.s., 23 years	Schooner	124	17	..	General	6	Stranded; par- tial loss	..	North Spit, entrance to Hokitika River	S.W.	Light ..	Heavy sea struck vessel and brought her broad- side on to strong current, which threw her on to the sandspit before she had time to recover her position	Mark Furneaux..
"	11 Nellie, 3½ years	Cutter ..	41	4	..	Timber..	..	Stranded; par- tial loss	..	Whangapoua Harbour	S.	Light ..	The wind having failed when vessel was leaving Whangapoua, the sea drove her on to the beach	Joseph Goomes.
"	12 Hawes, s.s., 13 years	Schooner	462	38	..	General	13	Stranded; total loss	..	Inside breakwater and wharf, New Plymouth	N.W.	Strong breeze	Vessel struck several times when entering the harbour, but whether on rock or hard sand, or other substance, no evidence to show; but Court was satisfied from evidence that she did not strike on her own anchor. Master was not to blame, as he took all proper pre- cautions for the safety of the vessel in bring- ing her in	Joseph Harsby.
"	18 Coulnakyle, 26 years	Barque..	589	15	..	Copra and tallow	..	Sprung a leak; partial loss	..	Lat. 41° 45' S., long. 165° W., on voyage from Auckland to Lisbon	N.E.	Gale ..	When about 1,000 miles from port, vessel sprung a leak in heavy gale and sea, and put back to Auckland for repairs	Henry Atwood.
"	19 Lizzie Guy, 17 years	Schooner	85	6	1	Produce	..	Loss of life only	1	Between East Cape and Hicks Bay, on voyage from Okamaru to Auck- land	S.	Fair ..	James Shaw, who was at the wheel at 2.15 a.m., on being spoken to by David Jones as to the course he was steering, let go the wheel, and, in stepping backwards, stumbled and fell overboard, and was drowned	James Stevens.
"	21 Selene, 9 years	Ship ..	996	..	..	General	..	Loss of life only	1	Lat. 37° 12' S., long. 17° 30' W., on voyage from London to Wel- lington	..	..	An O.S. named Henry F. Prall, when engaged aloft in loosing the fore upper-topgallant sail, fell from the yard to the deck, and was killed instantaneously	Edmund Eng- land.
"	23 Gerda, s.s., 5 years	Schooner	340	17	..	Sundries	..	Stranded; total loss	..	On North Breakwater, Grey-mouth	W. and S.W.	Fresh ..	Heavy seas struck vessel when in the Narrows, and carried her on to the North Break- water	Claus Erichsen.
"	25 Rosamond, s.s., 4 years	Schooner	462	17	..	Coal ..	4	Collision; no damage	..	Alongside of Queen's Wharf, Wellington	..	Calm	"Rosamond" was coming up to the wharf, alongside which "Spec" was lying without lights, and the former, having too much way on her, ran in to the latter	James Lowe.
"	28 Spec, 26 years	Schooner (coal-hulk)	32	..	..	..	..	Collision; par- tial loss	..	Lat. 39° 30' S., long. 1° 30' E.	S.	Strong breeze	An O.S. named Fred. Hennessey, while en- gaged aloft, on a thick dark night, making fast topgallant staysail, fell overboard, and was not seen again	Alfred Haynes Sargent.
July	7 Glenlora, 24 yrs.	Ship ..	774	16	1	General	..	Loss of life only	1	On South Beach, about 1¼ miles from break- water, Westport	N.	Fresh ..	Vessel struck when crossing the bar outwards, and then drove along the shore until she stranded	Charles William Todd.
"	10 Suva, s.s., 11 yrs.	Schooner	177	22	..	Coal ..	2	Stranded; total loss	..	Two miles north-west of White Bluff, Cloudy Bay, Cook Strait	S.S.E.	Moderate gale	Seeing that night was coming on, with hazy weather, and that he was standing in for the land, master should have taken cross-bear- ings to determine his position, and soundings should have been taken at short intervals. Master's certificate was suspended for three months, and he was ordered to pay costs of inquiry	William Moore.
Aug.	9 Kate Tatham, 25 years	Barquen- tine	275	9	..	Coal ..	..	Stranded; par- tial loss	..					

RETURN OF WRECKS AND CASUALTIES TO SHIPPING reported to the Marine Department, &c.—continued.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	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.		
1888. Aug. 11	Iona, s.s., 13½ years	Schooner	159	15	8	Oysters, &c.	Loss of life only	Near Old-man Rock, Hole-in-the-wall, on voyage from Mercury Bay to Auckland	N.E.	Light air	A passenger named George Connor fell overboard and was drowned	Frank Amodeo.
"	Charles Edward, s.s., 24 years	Schooner	123	17	2	General	Stranded; no damage	Mouth of Hokitika River	N.E.	Light ..	Vessel grounded through being a little too far to the south	Thomas Whitwell.
"	South Carolina, 14 years	Cutter ..	27	5	..	Firewood	Foundered; total loss	Between Pigeon Rock and Flat Island, Hau-raki Gulf	S.W.	Squally	Gangway-board carried away. Vessel put round for Tryphena Harbour; but, squall increasing, vessel would not rise to waves, and sank in 22 fathoms water	Mannel Ignacio Soares.
"	Colonist, 20 yrs.	Schooner	43	4	..	Produce	Stranded; total loss	Rocks off old Pilot-station, entrance to Wellington Harbour	S.W.	Gale ..	The rudder broke off short when vessel was about off Cape Campbell, and she drifted before gale on to the rocks	Edward A. Bayley.
"	Three Brothers, 26 years	Ketch ..	24	3	..	Ballast ..	Stranded; total loss	Turehau, 13 miles north of Gisborne	S.E.	Gale ..	Heavy gale came on while vessel at anchor, and she had to run ashore to save life	Thos. Christian Christensen.
"	Mimiha, 3 years	Schooner	54	4	..	Ballast ..	Supposed foundered; total loss	Supposed at sea between Motuman Island and Kākōura	S.W.	Gale ..	Vessel left Lyttelton for Havelock, and is supposed to have foundered in a gale	James Sinclair.
Sept. 22	Hero, 24 years	Cutter ..	29	4	..	Firewood	Stranded; total loss	N.W. corner of Le Bon's Bay, Banks Peninsula	S.W.	Gale ..	Vessel parted her cable in a heavy gale and drove ashore	John Frederick Reese.
"	Kahu, s.s., 2 yrs.	Schooner	93	13	..	General	Loss of life only	Cape Turnagain ..	..	Light air	While engaged landing cargo from the steamer in a boat, at Cape Turnagain, the boat capsized in the surf and four of the crew were drowned	George Romeril.
Oct. 7	Chili, 11 years	Barque..	678	..	..	Ballast ..	Loss of life only	Lat. 39° 14' S, long. 172° 49' W., on voyage from Newcastle, N.S.W., to Wellington	S.	Gale ..	An A.B. named John Stribley, while engaged furling sail, fell from the maintop-sail yard into the sea and was lost	Donald McKenzie.
"	Nellie, 2 years	Schooner	12	3	..	Fish ..	Stranded; total loss	Seven miles south-west of South-west Point, Foveaux Strait	W.S.W.	Strong gale	Heavy sea broke over vessel, threw her on her beam-ends, and washed the master overboard. Crew then tried to beach vessel on Dog Island, but failed, and were then taken off by the lighthouse boat. The vessel drifted away, and a portion of her was afterwards found ashore at Waiapapa Point	James Young.
"	Waitemata, 5 years	Schooner	59	3	..	Logs ..	Collision; no damage	Off False Watchman ..	W.S.W.	Strong, squally	"Waitemata," being on a wind on port tack, wind being about S.W., came into collision with "Gipsy" on starboard tack, well up on wind	Frank Wilson.
"	Gipsy, 3½ years	Cutter ..	27	3	..	Sawn timber	Collision; partial loss		..	Fresh, squally	An O.S. named John Thurgood, while engaged aloft assisting to take in sail, fell overboard and was lost	Paul Arnaud.
"	Turakina, 20 years	Ship ..	1189	..	..	General	Loss of life only	Lat. 40° 6' N, long. 17° 51' W., on voyage from London to Wellington	..	Light ..	Wind failed when vessel in breakers on bar, and she became unmanageable and drifted on to beach	Robert Powell.
"	Lizzie Ellen, 1 year	Schooner	43	3	..	Sawn timber	Stranded; partial loss	Quarter-mile west of entrance to Mataura River	N.	Light ..		James Dawson.



Oct. 25	Lake St. Clair, 12½ years	Schooner	24	2	..	..	Collision; slight damage	..	Off Judge's Bay, Auek- land	S.W.	Fresh breeze	Casualty caused through "Lake St. Clair" going about instead of holding on her course	James Elworth.
" 25	Coromandel, s.s., 9½ years	Schooner	68	9	15	..	Collision; no damage	..	Oamaru Harbour	..	Variable	Vessel struck on her anchor when entering the harbour	Thomas Scott. Joseph John Hammon.
" 29	Opawa, 12 years	Ship	1075	34	..	..	Stranded; par- tial loss	..	Waitara River	S.W.	Strong breeze	Accident caused by losing steerage-way through touching the bar	Finlay McArthur.
Nov. 2	Gairloch, s.s., 4 years	Schooner	211	17	..	..	Stranded; no damage	..	Small outlying rocks off Pinnacle Rock, Wel- lington Harbour	S.	..	Accident caused through vessel getting off her course by steersman mistaking light at pilot- station for Some Island light	Samuel Plumley.
" 4	Shag, s.s., 13 years	Schooner	31	5	..	..	Stranded; slight damage	..	Two cables off breast- way Wharf, Wellin- ton Harbour	..	Calm	"Clairmont" when in tow of s.s. "Rotorna" ran into "Girola," which was lying at anchor without lights, and sank her	John Lewth- waite.
" 4	Clairmont, 12 years	Barque	755	..	..	..	Collision; no damage	..	One-mile Spit, Lake Wakaipū	..	Calm	Vessel ran on sandbank	Thomas Henry Richards.
" 5	Mountaineer, p.s., 9 years	..	66	11	118	..	Stranded; no damage	..	Te Karikau Point, 8 miles north of Cape Palliser	..	..	Casualty caused through master not giving Cape Palliser a sufficiently wide berth	James Stevens.
" 10	Lizzie Guy, 17 years	Schooner	85	6	..	2	Stranded; total loss	..	Napierroadstead, 1 mile off Inner Harbour	S.S.E.	Fresh gale	Fire originated among cargo in hold, but no evidence of cause	John Carvosso Tonkin.
" 12	Langstone, 20 years	Barque	658	18	..	..	Fire on board; partial loss	..	Bar of Waitara River	..	Calm	Vessel struck on bar, and lost rudder and rudder-post	Thomas Eckford.
" 19	Neptune, s.s., 5 years	Ketch	44	7	2	..	Stranded; par- tial loss	..	Pa Point, north-east part of Banks Penin- sula, 3 miles from Le Fon's Bay	S.E.	Gale	An attempt was made to sail from Lyttelton to Akaroa Regatia with incompetent hands to manage the boat; and being caught in a heavy gale the boat was broken in half and foundered, and the three lads forming the crew were lost	Percy Nalder.
Dec. 14	Coquette	Private pleasure- boat	about 4	3	..	3 (all hands)	Foundered; total loss	..	Entrance to Inner Har- bour, Napier	..	..	Collision caused by "Maid of the Mill" putting about just ahead of the "Maitai"	William Darling Dawson.
" 15	Maitai, s.s., 3 years	Schooner	163	..	..	..	Collision; no damage	..	North beach, near en- trance of Waitara River	S.W.	Fresh breeze	Casualty caused through tow-rope breaking	Robert Thomp- son. William Came- ron.
" 15	Maid of the Mill, 23 years	Ketch	26	4	..	..	Collision; par- tial loss	..	Alongside wharf at Hokitika	S.W.	..	Apparently caused through spontaneous com- bustion in the starboard bunker	William Hya- cynth Lambert.
" 16	Reliance, 13 years	Ketch	65	4	..	..	Stranded; slight damage	..	Steeple's Rocks, near Cape Foulwind	..	Calm	Course was altered at 4.30 p.m. when weather was clear but beginning to cloud over, and from 6 to 8 p.m. it became thick. At 9.15 p.m. the Steeple's Rocks were sighted on star- board bow, and the ship was at once put full speed astern, but she almost imme- diately struck lightly forward once. A good look-out was kept, and prompt measures were taken to save the vessel; but it would have been more prudent for the master in thick weather, when he could not see Cape Foul- wind light, to have taken soundings. He was ordered to pay the costs of the inquiry.	John George Gilbertson.
" 27	Aorere, s.s., 2 years	Ketch	45	8	..	..	Fire on board; partial loss	..	..	S.W.	..	..	..
1889. Jan. 17	Oreti, s.s., 12 years	Schooner	138	15	..	..	Stranded; par- tial loss	..	..	..	..	..	..

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

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register	Number of		Nature of		Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew	Passengers.	Cargo.	Casualty.		Direction.	Force.		
1889. Jan. 30	Rakaia, 15 years	Barque ..	1022	22	5	General	Collision; slight damage	Gladstone Pier, No. 9 Shed, Lyttelton Harbour	S.W.	Fresh gale	Pilot was endeavouring to swing vessel with her anchor, which not holding, her stem struck the Gladstone Pier, damaging herself to slight extent, and damaging wharf and shed	George William Banks.
Feb. 2	Invercargill, s.s., 3 years	Schooner	123	11	40	Ballast ..	Stranded; no damage	Close to Mokomoko Jetty, New River estuary	..	Calm ..	Vessel touched aft, and remained fast until the next flood-tide	Charles Frederick Sundstrom.
" 6	Ada C. Owen, 11½ years	Brigantine	183	8	..	Box timber	Stranded; total loss	On a reef S.W. coast of Tabiti	..	..	Casualty caused through wind failing ..	Robert Owens.
" 13	Australia, s.s., 4 years	Schooner	260	24	13	General	Stranded; partial loss	One mile S.E. of Oreti Point, near Cape Runaway	..	Calm ..	Vessel grounded on a sunken rock, the existence of which was not known to the master, who, however, erred in judgment in going so near inshore without keeping the lead going, especially as he was aware that the bottom was foul and rocky in parts. Master was ordered to pay costs of inquiry	Alfred Labruyere Kemp.
" 19	Blackwall, 23 years	Barge ..	26	3	..	Firewood	Foundered; total loss	Off Le Bon's Bay, Banks Peninsula	E.	Strong gale	Vessel when on trip from Akaroa to Lyttelton was caught in a heavy gale, and before she could get into shelter capsized and foundered	Peter Nelson.
" 20	Waitara, s.s. ..	Schooner	15	6	..	10 tons auriferous quartz	Stranded; partial loss	Pinnacle Rock reef, entrance to Port Nicholson	..	Calm ..	Master was totally unacquainted with Wellington Harbour, and took for granted that the first white light he sighted was the Somes Island light; and in steering for this light, which appears to have been one on Point Gordon, the vessel struck on the Pinnacle Rock. Master's certificate was suspended for six months, and he was ordered to pay the costs of the inquiry	Alex. Trindle Thompson.



## ANNUAL REPORTS ON WORK DONE.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1889.

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 ...	21	54	28	134	32	154	423	£ 748
Taranaki ...	1	9	5	11	15	11	52	99
Hawke's Bay ...	...	2	...	3	...	10	15	19
Wellington ...	4	45	29	51	70	80	279	586
Marlborough ...	7	32	5	12	8	13	77	143
Nelson North ...	3	21	6	32	15	10	87	143
Nelson South ...	...	9	13	22	11	26	81	153
Westland ...	...	16	11	25	7	12	71	125
Canterbury ...	34	183	4	101	31	64	417	707
Otago ...	44	159	16	136	59	126	540	886
Totals ...	114	530	117	527	248	506	2,042	3,609

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

SIR,—

Auckland, 9th April, 1889.

I have the honour to forward for your information the annual report on the boilers and machinery inspected in the Auckland District for the year ended the 31st March, 1889.

During the above period 423 boiler and 37 machinery inspections have been made, making a total of 460 inspections, 140 of which were done by Mr. Blackwood. Twenty-two new boilers have been brought into use, 15 of which were imported from Great Britain, and 7 made in this colony—1 brought from Canterbury and 1 from Otago Districts. Thirteen have extended and 2 short-dated certificates; 42 have been repaired. Nos. 1,337, 1,509, 1,269, 1,003, and 1,415, which were found in a dangerous state, have been thoroughly repaired, and are now in good working-order. It is satisfactory to be able to state that there are no accidents to life or limb from boilers to report, although cases occasionally occur of the water in the boilers being allowed to get too low. In one instance, the furnace-crown of a Cornish boiler was brought down, but fortunately without any serious result. As there are many inexperienced men employed attending to boilers, who are liable to get deceived with a false water-level showing in the water-gauge glass, I consider it should be made compulsory to have the crowns of furnaces and tops of fire-boxes fitted with fusible plugs, which would reduce the risk considerably.

I regret having to report accidents with machinery which are of an unpreventible description, particulars of which are given in the returns.

The appended returns give the number and description of the boilers 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.

I have, &c.,

The Assistant Secretary, Marine Department.

W. J. JOBSON.

RETURN showing the NUMBER and DESCRIPTION of BOILERS, &c., INSPECTED, and FEES payable, in the AUCKLAND DISTRICT during the Year ended the 31st March, 1889.

Nature of Boiler.	Number.			Fees.	Remarks.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.		
Portable boilers ...	...	3	1	£ s. d.	(Employed at 37 establishments; fees at £5 each.
Stationary boilers ...	10	1	97		
Locomotive boilers ...	...	...	1	558 0 0	(Charged for at per horse-power of each boiler.
Portable boilers ...	19	47	22		
Stationary boilers ...	124	31	57	558 0 0	(Charged for at per horse-power of each boiler.
Locomotive boilers ...	2	4	4		
Total ...	155	86	182		
Machinery inspections (5, £1 each; 32, no fee)				5 0 0	
Total for year...				748 0 0	

RETURN of DEFECTS found in BOILERS and FITTINGS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1889.

Description.	Dangerous.	Ordinary.	Total.
Collapsed furnace-flues ... ..	1	...	1
Tops of fire-boxes bulged ... ..	...	2	2
Corrosion, internal ... ..	...	5	5
Corrosion, external ... ..	3	9	12
Blistered plates... ..	...	2	2
Fractured plates ... ..	1	6	7
Fractured angle-iron on furnace-flue ... ..	...	1	1
Joints sprung ... ..	...	3	3
Tubes defective ... ..	...	5	5
Stays defective ... ..	...	5	5
<b>Total defects found in boilers</b> ... ..	<b>5</b>	<b>38</b>	<b>43</b>
Defective fittings—			
Safety-valves... ..	...	2	2
Pressure-gauges ... ..	...	5	5
Water-gauges and test-cocks ... ..	...	15	15
Steam-pipes ... ..	...	2	2
Feed-pipes ... ..	...	1	1
Spring-balances ... ..	...	2	2
Blow-off cocks and pipes ... ..	...	6	6
Omissions—			
Boilers without sludge-holes ... ..	...	3	3
Boilers without test-cocks ... ..	...	2	2
<b>Gross total</b> ... ..	<b>5</b>	<b>66</b>	<b>71</b>

RETURN of MACHINERY INSPECTED in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1889.

Description of Machinery.	Steam.	Water.	Gas.	Description of Machinery.	Steam.	Water.	Gas.
Assaying ... ..	1	...	...	Joineries ... ..	2	...	...
Boiling-down ... ..	5	...	...	Laundries ... ..	2	...	...
Bakeries ... ..	2	...	...	Lifts or elevators ... ..	3	30	3
Breweries ... ..	9	...	...	Leadworks ... ..	1	...	...
Boat-building ... ..	1	...	...	Mortar-mills ... ..	8	...	...
Brickworks ... ..	2	...	...	Malt-mills ... ..	1	...	...
Block and pump works ... ..	1	...	...	Maize-mills ... ..	2	...	...
Bone-mills ... ..	3	...	...	Meat-canning factories ... ..	2	...	...
Boot factory ... ..	1	...	...	Oil-springs ... ..	2	...	...
Butter-box factory ... ..	1	...	...	Oil, soap, and candle works ... ..	2	...	...
Coach factories ... ..	2	...	...	Pumping ... ..	16	...	...
Chair factory ... ..	1	...	...	Pumping and winding ... ..	4	...	...
Cartridge factory ... ..	1	...	...	Printing ... ..	2	...	...
Confectionery works ... ..	1	...	...	Potteries ... ..	2	...	...
Chemical works ... ..	2	...	...	Pile-driving ... ..	1	...	...
Cement works ... ..	6	...	...	Phormium-dressing ... ..	9	...	...
Cordial works ... ..	5	...	...	Road-roller ... ..	1	...	...
Chaff-cutting ... ..	28	...	...	Ropeworks ... ..	1	...	...
Coffee-mill ... ..	1	...	...	Saw-mills ... ..	39	...	...
Dairy factories and creameries... ..	22	...	...	Sash and door factory ... ..	1	...	...
Dredging ... ..	2	...	...	Soapworks ... ..	1	...	...
Docks ... ..	1	...	...	Sugarworks ... ..	1	...	...
Flour-mills ... ..	5	1	...	Stone-breaking ... ..	2	...	...
Flock-mill ... ..	1	...	...	Ship-building ... ..	3	...	...
Fellmongeries ... ..	3	...	...	Sausage-machines ... ..	4	...	...
Freezing works ... ..	2	...	...	Tanneries ... ..	4	...	...
Fruit-preserving works ... ..	4	...	...	Tinplate works ... ..	1	...	...
Fish-preserving works ... ..	2	...	...	Tallow and manure works ... ..	1	...	...
Firewood-cutting ... ..	15	...	...	Threshing and chaffcutting ... ..	18	...	...
Fire-engine ... ..	1	...	...	Tobacco factory ... ..	1	...	...
Gasworks ... ..	2	...	...	Varnish works ... ..	1	...	...
Hoisting ... ..	19	...	...	Wool-dumping ... ..	2	...	...
Hauling ... ..	9	...	...	Winding ... ..	14	...	...
Ironworks and foundries ... ..	22	...	...	Waterworks ... ..	2	...	...
				Woollen-mill ... ..	1	...	...

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1888.		
April 11 ...	Portable ...	Dog-stays refitted to top of fire-box.
April 18 ...	Cornish ...	New pressure-gauge to be fitted.
April 28 ...	Cornish ...	New plate to furnace-flue, and four gusset-stays to boiler-end.
May 3 ...	Portable ...	Patch to be fitted to fire-box, and three stays in ditto renewed.
May 12 ...	Vertical flue ...	Patch to be fitted to blow-off.
May 12 ...	Cylindrical ...	One plate in bottom to be renewed.
May 14 ...	Cornish ...	Three plates in furnace-flue to be renewed.
May 18 ...	Vertical flue ...	New pressure-gauge fitted, and two sludge-holes cut and doors fitted.
May 25 ...	Portable ...	Two patches to be fitted to fire-box.
June 12 ...	Cylindrical ...	New blow-off cock and pipe fitted.
June 12 ...	Cylindrical ...	New blow-off cock and pipe fitted.
June 23 ...	Longitudinal tubular ...	Sludge-hole to be cut in shell, and door fitted.
July 6 ...	Portable ...	Fore-and-aft stays adjusted, and new pressure-gauge fitted.
July 23 ...	Longitudinal tubular ...	Patch to be fitted to bottom.
Aug. 9 ...	Cornish ...	Part of the angle-iron on end of furnace-flue to be renewed.
Aug. 10 ...	Portable ...	Two corners of fire-box repaired, and four stays in it renewed.
Aug. 11 ...	Cornish ...	Three new plates fitted to furnace-flue.
Aug. 13 ...	Locomotive ...	Two fore-and-aft stays fitted to tube-plates, and patch to fire-box.
Sept. 7 ...	Vertical flue ...	Cap to be fitted to top end of vertical flue.
Sept. 18 ...	Longitudinal tubular ...	To be retubed.
Oct. 23 ...	Vertical flue ...	Vertical flue to be repaired.
Nov. 20 ...	Vertical tubular ...	New pressure- and water-gauges fitted.
Nov. 20 ...	Portable ...	Dog-stay fitted to top of fire-box.
Nov. 22 ...	Cornish ...	The bottom renewed.
Nov. 27 ...	Vertical tubular ...	To be retubed.
Dec. 17 ...	Cylindrical ...	Two seams pared and caulked.
1889.		
Jan. 21 ...	Longitudinal tubular ...	Part of one plate in bottom renewed.
Jan. 25 ...	Portable ...	Patch fitted to side of fire-box.
Feb. 4 ...	Portable ...	Lower parts of fire-box repaired.
Feb. 12 ...	Lancashire ...	One plate in furnace-flue renewed.
Feb. 14 ...	Vertical tubular ...	To be retubed.
Feb. 19 ...	Vertical tubular ...	To be retubed, and vertical stay fitted.
Feb. 23 ...	Vertical flue ...	Two patches fitted to lower part of the shell.
Mar. 11 ...	Vertical flue ...	Vertical flue renewed.
Mar. 25 ...	Longitudinal tubular ...	Part of two seams in bottom re-riveted.
Mar. 25 ...	Longitudinal tubular ...	Part of two seams in bottom re-riveted.
Mar. 30 ...	Portable ...	Fore tube-plate repaired.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Notice.	Description of Machinery.	Parts of Machinery to be fenced, &c.
1888.		
April 13 ...	Hydraulic lift ...	The gear of safety-catch to be taken asunder and overhauled.
April 18 ...	Hydraulic lift ...	The gear of safety-catch to be taken asunder and overhauled.
May 5 ...	Tinplate works ...	Engine-crank and connecting-rod.
May 7 ...	Brickworks ...	Two pairs of spur- and pinion-wheels of brick-making machines, and engine-crank and connecting-rod.
May 12 ...	Saw-mill ...	Two lengths of main shafting, one coupling on ditto, and emery-wheel.
May 17 ...	Saw-mill ...	Fly-wheel of breaking-down saw, emery-wheel, and two lengths of shafting.
June 5 ...	Saw-mill ...	Belt of circular saw.
June 12 ...	Saw-mill ...	Four connecting-rods of two breaking-down saw-frames.
July 7 ...	Chaff-cutter ...	Driving-belt and pulley of chaff-cutter.
July 9 ...	Woollen-mill ...	Six pairs of wheels of tentering-machine, three ditto of balling-machine.
July 23 ...	Saw-mill ...	Belt of planing-machine, goose-saw, and one length of shafting.
Aug. 2 ...	Furniture factory ...	Emery-wheel.
Aug. 22 ...	Ropeworks ...	Two wheels of reeling-machine, and space between two draw-frames.
Nov. 20 ...	Chaff-cutter ...	Guard to be fitted over the knives.
Nov. 22 ...	Pumping machinery ...	Engine-beam.
Dec. 5 ...	Saw-mill ...	Emery-wheel, two couplings on main shaft, and three belts of planing-machine.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in AUCKLAND DISTRICT—*contd.*

Date of Notice.	Description of Machinery.	Parts of Machinery to be fenced, &c.
1888.		
Dec. 10 ...	Saw-mill ...	Two goose-saws, two belts of planing-machine, belt of surfacing-machine, and emery-wheel.
Dec. 15 ...	Oil and soap works	Engine-crank and connecting-rod, belt of fan-blast, and knives of chaff-cutter.
Dec. 27 ...	Saw-mill ...	Feed-gear of circular saw, and belts of planing-machine and cross-cut and rip saws.
Dec. 27 ...	Steam lift...	Gear of safety-catch to be overhauled.
Dec. 28 ...	Sugar refinery	The safety-gear of four hydraulic lifts to be overhauled. *
1889.		
Jan. 9 ...	Ironworks	Pair of wheels of roll-lathe, engine fly-wheel, and crank.
Jan. 16 ...	Saw-mill ...	Breaking-down saw-frame and belt of planing-machine.
Jan. 17 ...	Quartz-reduction works	Fly- and spur-wheels of engine, two lengths of pan-and-settlers shafting, and one belt.
Feb. 11 ...	Flour-mill	One pair of wheels and two lengths of shafting.
Feb. 20 ...	Winding-machinery	Engine fly-wheel.
Mar. 22 ...	Maize-mill	Two belts of maize-crusher.
Mar. 25 ...	Flour-mill	Main driving-belt and belts of bran-conveyer, fan-blast, and lift.

## 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, 1889.

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.
John Smyth, Mount Eden	Saw-mill ..	Alfred Turner, aged 14 years	Right leg broken, 11th November, 1888	Not	It appears he was amusing himself by trying to push off the grinding-stone belt with his foot, when his right leg became entangled with the belt, and was broken near the ankle. I may state that he was not employed in the mills, and was on the premises without permission.
William Chadwick, Pahi, Kaipara	Saw-mill ..	George H. Martin, aged 15 years	Both legs broken, and left arm severed from the body, 7th February, 1889	Fatal	The grinding-stone in the mill is driven by a belt, which passes through the floor and on to a pulley below. It appears one of the men employed in the mill was putting the belt on the top pulley, when, hearing a crash below, he proceeded to ascertain the cause, when the deceased was found fearfully injured by the belt, and died about three hours afterwards. It is not known how the accident occurred. The deceased had nothing to do with the belt, or with any of the machinery, which, I may state, is protected as far as practicable: his duty was to wheel out the saw-dust. At the inquest a verdict of Accidental death was returned.
Whauwhau Coal Company, Whangarei	Hauling-winch	Alexander Love, aged 52 years	Right arm crush'd, 14th February, 1889	Not	He was attending a hauling-winch. It appears the rope commenced to ride; he reached over to clear it; his arm was caught by the rope and drawn in between the drum and cross-stay, and severely crushed. The attendant should have gone round to the front of the winch to adjust the rope.
Kennedy and Mann, Buckland	Threshing-machine	John Kennedy, aged 35 years	Right leg severely crushed, 15th March, 1889	Not	He was working a threshing-machine, when he inadvertently pushed the grain into the feeding-aperture with his foot, which was drawn in. The leg, being severely injured above the ankle, was afterwards amputated. This is a case of sheer carelessness.
Kauri Timber Company, Port Albert	Saw-mill ..	William J. Turner, aged 32 years	Internal injury, 27th March, 1889	Fatal	The deceased was employed as tailman at a circular saw. It appears a slab was thrown by the saw backwards, which struck the deceased on the chest. He died the following day, from internal injuries. At the inquest a verdict of Accidental death was returned. The injury sustained was purely accidental.

The INSPECTOR of MACHINERY, WELLINGTON DISTRICT, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Wellington, 23rd May, 1889.

I have the honour to forward for your information my annual report on the boilers and machinery in the Wellington, Marlborough, Nelson North, Taranaki, Hawke's Bay, Nelson South, and Westland Districts during the financial year ended the 31st March, 1889.

Six hundred and sixty-two boilers have been inspected, and 646 certificates issued, 16 of the above being idle. Eighty-three boilers are new—40 colonial-made and 43 imported—and 39 old ones have been sent from other districts. The number of boilers still remaining to be inspected on the 31st March last was—Hawke's Bay, 91; Wellington, 100: total, 191.

The flax industry has caused a number of the boilers that were idle last year to be put to work.

No accidents have been reported to boilers during the year; but two have been reported as occurring to persons employed about machinery. In each case the men acknowledge that they themselves only were to blame in attempting to fix belts without first stopping the machinery.

Boilers generally have been found in good order, small repairs only being required.

Appended are returns showing the class of boilers, their horse-power, number inspected, and fees payable; number of notices given to fence dangerous parts of machinery; the number and description of machines inspected; also return of accidents to persons employed about machinery.

I have, &c.,

H. A. MCGREGOR,  
Inspector of Machinery.

The Assistant Secretary, Marine Department, Wellington.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1889.

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*	4	45	29	51	70	80	279	£ 586
Marlborough†	7	32	5	12	8	13	77	143
Nelson North‡	3	21	6	32	15	10	87	143
Taranaki§	1	9	5	11	15	11	52	99
Hawke's Bay	...	2	...	3	...	10	15	19
Nelson South¶	...	9	13	22	11	26	81	153
Westland**	...	16	11	25	7	12	71	125
Totals	15	134	69	156	126	162	662	1,268

The following boilers are included in maximum fees:—

* Thirty-four over 10 h.p., and one over 5 h.p.	..	..	..	..	..	..	35
† Five over 10 h.p.	..	..	..	..	..	..	5
‡ Two over 10 h.p.	..	..	..	..	..	..	2
§ Seven over 10 h.p.	..	..	..	..	..	..	7
¶ Fifteen over 10 h.p.	..	..	..	..	..	..	15
** Thirty-four over 10 h.p.	..	..	..	..	..	..	34
							98

The following boilers are idle, but have been inspected:—

† One over 10 h.p., and one over 5 h.p.	..	..	..	..	..	..	2
‡ Two over 10 h.p., one over 5 h.p., and four under 5 h.p.	..	..	..	..	..	..	7
§ Two over 5 h.p.	..	..	..	..	..	..	2
¶ One under 5 h.p.	..	..	..	..	..	..	1
** One over 10 h.p., and three under 5 h.p.	..	..	..	..	..	..	4
							16

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY.

District, and Date of Notice.	Description of Machinery.	Nature of Fencings.
WELLINGTON. 1888.		
August 2	Engineers' shop	The fly-wheel of engine.
August 2	Flour-mill	The fly-wheel of engine.
August 4	Saw-mill	The main driving-belt.
August 6	Saw-mill	The counter-shaft and pulleys.
August 13	Saw-mill	The crank of engine.
August 14	Planing-mill	Main driving-belt.
August 17	Saw-mill	Main driving-belt.



RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1889.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
Arthur Chaytor Upper Moutere, Nelson	Flax-mill ..	Thomas East ..	Compound fracture of the arm	Not ..	The hand was caught in the belt while in the act of shifting it from one pulley to another without stopping the machinery. Unless the belt is fitted with shifting-gear the machinery should always be stopped to shift the belt.
The Gear Meat-Preserving and Freezing Company of New Zealand, Wellington	Fellmongery	H. Hall ..	Compound fracture of the arm, and the shoulders and legs bruised	Not ..	The hand was caught by the belt when attempting to clear it after it had slipped off the pulley. This should never have been attempted until the machinery was stopped.

RETURN of MACHINERY INSPECTED during the Financial Year ended the 31st March, 1889.

Description of Machinery.	Wellington.				Marlborough.			Nelson North.		Taranaki.			Hawke's Bay.		Nelson South.		Westland.		Total.
	Steam.	Steam and Water.	Water.	Gas.	Steam.	Steam and Water.	Water.	Steam.	Water.	Steam.	Steam and Water.	Wind.	Steam.	Water.	Steam.	Water.	Steam.	Water.	
Phormium-dressing ..	5	..	..	..	12	1	2	4	2	5	..	1	..	..	..	..	..	..	32
Printing ..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	5
Flour-mills ..	10	1	1	5	..	..	3	4	4	1	3	..	2	..	..	..	..	..	34
Saw-mills ..	23	..	..	..	14	1	..	25	2	8	1	1	16	..	9	..	13	..	118
Sash and door factories	9	..	..	..	3	..	..	5	..	2	..	1	4	..	1	..	2	..	27
Foundries ..	7	..	..	..	1	..	..	2	..	1	..	..	2	..	1	..	2	..	16
Quartz-crushing ..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	9	3	..	..	14
Threshing-machines ..	7	..	..	..	13	..	..	6	..	4	..	..	27	..	..	..	..	..	57
Soap and candle works ..	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	3
Cordial factories ..	4	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	1	..	8
Boiling-down establishments	10	..	..	..	3	..	..	..	..	3	..	..	..	..	..	..	..	..	16
Brick-making machines	6	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	7
Biscuit factories ..	2	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	4
Chaff-cutting machines	8	..	..	..	3	..	..	7	..	..	..	..	..	..	..	..	..	..	18
Breweries ..	9	..	..	..	1	..	..	4	..	2	..	..	..	..	1	..	6	..	23
Drain-pipe machines ..	4	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	5
Hoisting-machinery ..	13	..	..	..	1	..	..	1	..	..	1	..	..	..	19	..	8	..	42
Dredging-machines ..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	4
Pumping-machinery ..	1	..	..	..	3	..	..	..	..	..	..	..	..	..	2	..	1	..	7
Coffee- and spice-mills ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Tanneries ..	3	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	5
Wool-dumping machines	2	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	5
Sausage machines ..	5	..	..	..	3	..	..	2	..	..	..	..	..	..	..	..	..	..	10
Tobacco-cutting machine	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Traction-engines ..	4	..	..	..	6	..	..	2	..	1	..	..	..	..	..	..	1	..	14
Gasworks ..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	3
Mortar-mills ..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2
Machine shops ..	6	..	1	..	..	..	..	2	..	..	..	..	..	..	2	..	1	1	13
Meat-preserving works ..	3	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	6
Locomotives ..	14	..	..	..	1	..	..	1	..	2	..	..	..	..	10	..	8	..	36
Refrigerating-machines ..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	4
Hydraulic lifts ..	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
Wool-scouring machines	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
Electric-light machine ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Turneries ..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
Woollen-mill ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hauling-machinery ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	4	..	1	..	7
Road-roller ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Winding-machinery ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	..	3	..	15
Dairies ..	1	..	..	..	..	..	..	2	..	6	..	..	..	..	..	..	..	..	9

One hydraulic lift, new, in Wellington, £1 fee.

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

Christchurch, 29th April, 1889.

I have the honour to forward the annual report of boilers and machinery inspected by me during the financial year ended 31st March, 1889.

The total number of boilers inspected is 417. Of this number, 43 are new, 8 stationary boilers of colonial make, and 6 imported; also there are 11 new portable engines and 18 new traction-engines, all imported.

A great many old portable engines have left my district for various parts of the colony, and before long the work in the agricultural districts, including the greater part of the road-

traffic, will be done by traction-engines. Some of these engines are constructed to work at a pressure as high as 140lb. per square inch, and I regret to say they are often in the hands of very incompetent men.

I have unfortunately to report a large list of accidents for the year. The first occurred at a planing-machine, and can only be set down as an accident that all are liable to meet with who are engaged with this class of machinery.

The second one is of very little importance.

The third one is a very serious one; the poor lad lost his life in such a simple way, and the slightest caution on his part would have prevented it even had his duties required him to be there.

The fourth is also a very sad one, as Metherall left a wife and family but poorly provided for. He had added the flax-dressing to his flour-mill, also a portable engine. And the first intimation I had was a newspaper report of the accident. I immediately visited the place, and found the erections of the most flimsy description, and so badly erected that the belts would not stop on, and nearly the whole power of the engine was absorbed driving the empty machinery.

The last accident is an extraordinary one, as there is little or no danger of such an accident occurring, and how the lad came to be there cannot be explained easily. It appears he was in the habit of setting traps for rats in various parts of the store, and it is supposed he was on this errand when the accident happened.

There appears to be a revival in trade in this district, and some fresh industries are in progress.

I have, &c.,

The Secretary, Marine Department, Wellington.

GEORGE CROLL.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

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 ... ..	34	183	4	101	31	64	417
Totals ... ..	34	183	4	101	31	64	417

RETURN showing FEES payable for the INSPECTION of BOILERS and MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

Name of District.	Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Total.
Canterbury ... ..	£ s. d. 707 0 0	£ s. d. Nil	£ s. d. 707 0 0
Totals ... ..	707 0 0	Nil	707 0 0

NOTE.—There are 13 maximum fees, including 35 boilers over 10 h.p. and 2 over 5 h.p.

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Accident.	Owner's Name and Address.	Nature and Cause of Accident.
1888. April 11 ...	J. R. Rosewarne, Spreydon	Building burnt down. Boiler and vat been hot. Examined and tested with hydraulic pressure; required recaulking and new mountings.
Dec. 4 ...	W. C. Clark, Ohoka ...	Reported shell of boiler appeared thin. Found plate laminated. (First inspection.)
Dec. 15 ...	Talbot and Co., Lyttelton	Reported cylinder of hydraulic press burst. Found bottom blown out, and sides split up; caused by over-pressure.
1889. Jan. 11 ...	W. and B. Moody, Kaiapoi	Reported portable engine under repairs. Found cracks in sides of fire-box. Had bad parts cut out, new plates properly fitted, screwed on by countersunk screws, and screwed stays through. Caused by dirt in water-spaces.
Mar. 29 ...	A. E. Turton, Papanui	Reported boiler leaking in furnace. Found two cracks; so ordered new fire-box. Caused by dirt in water-spaces.

RETURN of MACHINERY INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

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	...	...	...
Biscuit factory ...	1	...	...	...	Landing-service ...	1	...	...	...
Bacon factories ...	2	...	...	...	Locomotive (contractors) ...	1	...	...	...
Breweries ...	7	...	...	...	Laundry ...	1	...	...	...
Brick and tile factories ...	6	...	...	...	Meat-preserving ...	1	...	...	...
Brush-making ...	1	...	...	...	Nail-making ...	1	...	...	...
Baths ...	1	...	...	...	Printing ...	2	...	...	2
Bone-mill ...	2	...	...	...	Pumping ...	*3	...	...	...
Boiling-down ...	12	...	...	...	Road-roller ...	1	...	...	...
Cabinet-making ...	6	...	...	...	Refrigerating works ...	2	...	...	...
Carriage factories ...	3	...	...	...	Saw-mills ...	28	...	...	...
Chaff-cutting ...	27	...	...	...	Sausage-chopping ...	23	...	...	...
Coal-mining ...	1	...	...	...	Soap-boiling ...	3	...	...	...
Coffee works ...	2	...	...	...	Seed-cleaning ...	3	...	...	...
Cooperage ...	3	...	...	...	Stone-sawing ...	1	...	...	...
Cordial factories ...	3	...	...	...	Threshing-machines ...	82	...	...	...
Chemical works ...	2	...	...	...	Traction-engines ...	56	...	...	...
Dock and slip ...	2	...	...	...	Tanneries ...	3	...	...	...
Dredging (Priestman's) ...	1	...	...	...	Tramway-engines ...	7	...	...	...
Electric lighting ...	2	...	...	...	Water-lifts ...	2	...	...	...
Fire-engines ...	2	...	...	...	Wool-washing ...	5	...	...	...
Firewood-sawing ...	7	...	...	...	Wool-dumping ...	3	...	...	...
Flock-mill ...	1	...	...	...	Woollen-mills ...	3	...	...	...
Flax-mills ...	4	2	...	...	Winches and cranes ...	16	...	...	...
Flour-mills ...	9	2	2	...	Well-sinking ...	1	...	...	...
Foundries and ironworks	23	...	...	...					

\* Waterworks, 2; drainage, 1.

RETURN of NOTICES given to REPAIR BOILERS in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Notice.	Description of Boiler.	Notice.	Repairs ordered.
1888.			
May 6 ...	Portable ...	Verbal ...	New pressure-gauge.
June 14 ...	Tram-engine ...	Verbal ...	Seven new screwed stays in fire-box.
June 21 ...	Tram-engine ...	Verbal ...	Thirty new screwed stays in fire-box.
June 22 ...	Tram-engine ...	Verbal ...	Recaulk fire-box seams.
July 2 ...	Tram-engine ...	Verbal ...	Renew fire-box.
July 2 ...	Cornish ...	Verbal ...	Back end of boiler and flue recaulked, and blow-off pipe rejoined.
July 25 ...	Vertical ...	Verbal ...	Tubes to be expanded.
July 26 ...	Semi-tubular ...	Verbal ...	New furnace, and several plates in shell at bottom.
Aug. 31 ...	Semi-tubular (three boilers)	Verbal ...	Remove brick from midfeather wall so that the chairs may carry weight of boilers, and recaulk seams where leaking.
Sept. 8 ...	Portable ...	Verbal ...	Renew four tubes, and thoroughly clean boiler.
Sept. 14 ...	Vat ...	Verbal ...	Renew top-plates, 2ft. of side-plates, also top end of stays.
Sept. 18 ...	Portable ...	Written ...	Cut out cracked plate in fire-box and rivet on new plate, and renew stays.
Oct. 8 ...	Vat ...	Written ...	Remove present stay, properly close holes, and fit three new stays.
Oct. 23 ...	Portable ...	Written ...	New stay-tube and rejoin longitudinal stays. (While repairing, more serious defects were disclosed, so condemned.)
Oct. 26 ...	Vat ...	Written ...	Renew stays, and fit plate-washers.
Dec. 14 ...	Vat ...	Verbal ...	Top angle-iron and top ends of stays to be renewed.
1889.			
Jan. 16 ...	Portable ...	Verbal ...	Repair longitudinal stay (broken).
Jan. 16 ...	Portable ...	Verbal ...	New pressure-gauge.
Jan. 16 ...	Portable ...	Verbal ...	New pressure-gauge.
Jan. 28 ...	Portable ...	Verbal ...	Repair longitudinal stay (broken).
Jan. 29 ...	Portable ...	Verbal ...	Repair longitudinal stay (broken).
Feb. 19 ...	Portable ...	Written ...	New fire-box.
Feb. 19 ...	Portable ...	Written ...	New set of tubes and new crown-plate.
Feb. 22 ...	Vertical ...	Verbal ...	New set of tubes and new crown-plate.

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1889.

Description of Defects.	Dangerous.	Ordinary.	Total.
Cracks and thin plates in up-takes ... ..	2	1	3
Crown of fire-box down, from overheating ... ..	2	2	4
Fire-box thin, and screwed stays wasted ... ..	2	...	2
Furnaces out of round ... ..	1	1	2
Leakage at riveted joint in furnace ... ..	...	4	4
Laminated plates... ..	...	3	3
Longitudinal stays broken ... ..	3	...	3
Leakage on bottom in flues ... ..	...	2	2
Patches in fire-box ... ..	1	3	4
Pressure-gauge bad ... ..	...	3	3
Tubes wasted at ends ... ..	2	5	7
Rivet-cracks in furnace ... ..	2	5	7
Vats wasted inside at top, also stays ... ..	3	3	6
Wasted at doors from leakage ... ..	...	6	6
Wasted externally from exposure ... ..	...	2	2
Total ... ..	18	40	58

Of the above, 6 have been condemned, 22 have been repaired, and the remainder are either working at a reduced pressure or are now out of use.

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, 1889.

Name and Address of Owner.	Description of Machinery.	Name and Age of Person injured.	Nature and Date of Accident.	Fatal or not.	Cause of Accident, and Remarks.
James Goss, Christchurch	Saw and planing machinery (steam)	Francis Stace, aged 22 years	The whole of the fingers of right hand cut off, 3rd May, 1888	Not	This accident was caused by the revolving knives of planing-machine, but, as no one saw the accident, the exact manner cannot be given. Owner reports Stace a very steady and careful man; he had been in his employ for five years, and was well accustomed to work any of the machines in the mills.
Lightband and Allan, Christchurch	Leather-roller in boot factory (gas engine)	—Hamilton, age not given	Thumb of the right hand crushed	Not	Hamilton was employed passing sole-leather through the rollers, and kept his hold of it too long. This is a trifling accident, but, as I always impress upon owners not to neglect reporting any accident, I received a report from Lightband and Allan, and so report it here.
Edwin Thomas, Wakanui	Flour-mill (water power)	Samuel Kennedy, aged 19 years	Entangled with belt of grindstone, November, 1888	Fatal	Kennedy was engaged on Thomas's farm, and no part of his duty took him in the mill. No one saw the accident, but it is supposed, the day being wet, he was idle, and must have gone into a shed attached to the side of mill, where the grindstone stood, with the intention of sharpening an adze found there, and in his attempt to put on the belt of grindstone he must have been caught by it, dragged through a very narrow space, and wound round driving-shaft.
Henry Metherall, Amberley	Flour-and flax-mill (water and steam)	Henry Metherall, aged 31 years	Entangled with belt of stripper	Fatal	Metherall, the owner, was himself the victim in this case. The flax-mill and steam had been added since my inspection on the 30th November, 1887. I had no notice of the addition. The machinery was very imperfectly erected, and I learn the belts were a great source of trouble, and particularly so on this particular day, when a feed-belt came off, and was being wound round the shaft. He passed round the stripper, and by some reason unexplained got his leg through the loop of the belt, and was wound round the shaft, breaking and crushing his leg, rendering amputation necessary. He sank and died under the operation.
Talbot and Co., Lyttelton	Hydraulic press for wool (steam)	Joseph Gardner, aged 20 years	Fall of plate, December 10, 1888	Fatal	This young man was employed about wool store. On the date named a press cylinder burst, when the weight of the plate and wool, as well as the great force stored up in the compressed wool, sent the plate down with great force, breaking the plate. When the workmen went underneath the platform to repair, they were surprised to find deceased under the broken plate. The cause was overpressure, although the same pressure had been used for several years.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended 31st March, 1889.

Date of Notice.	Description of Machinery.	Notice.	Parts required to be fenced.
1888. Oct. 1 ...	Flour-mill ...	Verbal ...	To protect first driving-belt from engine, also driving-belts in mill.
Dec. 3 ...	Flax-mill ...	Verbal ...	To protect lying-shaft and all driving-belts. (Saw this put in hand.)
Dec. 7 ...	Flax-mill ...	Verbal ...	To protect driving-belt, also to reduce mouth of scatcher in size.
1889. Feb. 22 ...	Flax-mill ...	Written ...	To protect first driving-belt.

The INSPECTOR of MACHINERY, OTAGO DISTRICT, to the SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Dunedin, 26th April, 1889.

I have the honour to forward to you the annual report of inspection of boilers and machinery in the Otago District for the financial year ended the 31st March, 1889, contained in the accompanying tables, numbered 1 to 13 inclusive.

In forwarding this report I am pleased to be able to state that the district is in a much better state than it has been for some time. The mining and flax industries have both increased materially, and promise to continue. Saw-milling has not improved, although a great amount of timber has been cut. The iron trade on the whole has been better than the preceding year.

In the summary of inspections, the number of inspections was: Boilers, 540; water, 5; gas, 1: total, 546. Of this number, Mr. Blackwood inspected—boilers, 164; water, 3: total, 167.

Fifty-three boilers have been added to the official number for the year ended March, 1889. At the end of March there still remained a considerable number of inspections to be done, and unless more assistance be granted the work cannot be done efficiently.

In the return of defects, tear-and-wear stands foremost. Two or three cases of carelessness have taken place, but nothing of any consequence.

In the return of repairs to boilers there is nothing of much importance. One boiler has been condemned, being worn out.

Accidents to Boilers.—This accident need not have taken place, as I warned the proprietors that this was likely to occur if due care was not exercised in cleaning out, the water used being very bad.

Fencing.—There was not much new work requiring fencing during the past year.

Dangerous Machinery.—No notice has been required to remove any parts of machinery. One case has taken place, but has been done voluntarily. The ropeworks here, on making an addition to their premises, have spread out their frame machines, allowing more room in the passages between the machines, which is certainly a great improvement.

Accidents to Life and Limb.—I am sorry to have to report these two accidents; but at the same time they were both quite accidental and quite unavoidable, and could not have been prevented by any foresight as far as fencing is concerned.

I have, &c.,

ALEXANDER CRAWFORD,

Inspector of Machinery.

The Secretary, Marine Department, Wellington.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			Total.
	5 h.p. and under.	5 to 10 h.p.	Over 10 h.p.	5 h.p. and under.	5 to 10 h.p.	Over 10 h.p.	
Otago ... ..	44	159	16	136	59	126	540

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Accident.	Name and Address of Owners.	Nature and Cause of Accident.
1888. Aug. 29 ...	Smellie Brothers, Burnside	Longitudinal tubular boiler fired externally; plate over fire at back end cracked through accumulation of dirt.

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Name of District, &c.	Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Total.
OTAGO.	£ s. d.	£ s. d.	£ s. d.
Portable ... ..	360 0 0	...	886 0 0
Stationary ... ..	520 0 0	...	
Machinery ... ..	...	6 0 0	

RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.	Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.
Aërated water ... ..	1	...	...	...	Graving-dock ... ..	1	...	...	...
Ammonia works ... ..	1	...	...	...	Hedge-knife maker ... ..	1	...	...	...
Agricultural-implement works	6	...	...	...	Hoists ... ..	15	...	...	...
Air-compressor ... ..	1	...	...	...	Ironworks (rolling-mills)...	1	...	...	...
Bacon factory ... ..	1	...	...	...	Ironworks (bridge) ... ..	1	...	...	...
Bakeries ... ..	3	...	...	...	Hydraulic lift ... ..	1	...	...	...
Baths ... ..	1	...	...	...	Joinery ... ..	1	...	...	...
Barbed-wire factory ... ..	1	...	...	...	Lapidary ... ..	1	...	...	...
Boiling-down ... ..	6	...	...	...	Lathmaker ... ..	1	...	...	...
Bone-mills ... ..	5	...	...	...	Laundries ... ..	3	...	...	...
Brass, copper, and lead works	2	...	...	...	Lead-pipe works ... ..	2	...	...	...
Brass-shop plumbing ... ..	1	...	...	...	Locomotives ... ..	8	...	...	...
Breweries ... ..	10	...	...	...	Machine shops ... ..	6	...	...	...
Brick and tile works ... ..	5	...	...	...	Meat-preserving ... ..	3	...	...	...
Beehive factory ... ..	1	...	...	...	Mat factory (fancy) ... ..	2	...	...	...
Cabinet-making ... ..	3	...	...	...	Oil-mill ... ..	1	...	...	...
Cementworks ... ..	1	...	...	...	Parchment works ... ..	1	...	...	...
Chaff-cutters ... ..	18	...	...	...	Packing-case factory ... ..	1	...	...	...
Chemical works ... ..	1	...	...	...	Paper-mills ... ..	2	...	...	...
Cooperage ... ..	1	...	...	...	Poudrette works ... ..	1	...	...	...
Cocoa factory ... ..	1	...	...	...	Potteries ... ..	2	...	...	...
Confectionery ... ..	5	...	...	...	Pipe-clay works ... ..	1	...	...	...
Cooking ... ..	2	...	...	...	Printing-papers ... ..	6	...	...	...
Collieries ... ..	9	...	...	...	Pumping water... ..	3	...	...	...
Condensed milk ... ..	1	...	...	...	Refrigerating works ... ..	4	...	...	...
Corn-crushers ... ..	2	...	...	...	Ropeworks ... ..	1	...	...	...
Coffee and spice works ... ..	2	...	...	...	Sausage-machines ... ..	7	...	...	...
Cranes ... ..	12	...	...	...	Saw-mills ... ..	26	...	...	...
Creameries ... ..	2	...	...	...	Seed-dressing ... ..	1	...	...	...
Dairy factories (cheese) ... ..	14	...	...	...	Seed-drying ... ..	1	...	...	...
Dairies (butter) ... ..	2	...	...	...	Soapworks ... ..	3	...	...	...
Dredgers (gold)... ..	2	...	...	...	Soap and candle works ... ..	2	...	...	...
Dyeworks ... ..	1	...	...	...	Soda, washing ... ..	1	...	...	...
Elevator ... ..	...	...	...	1	Standard works ... ..	2	...	...	...
Engine-shops ... ..	6	...	...	...	Starchworks ... ..	1	...	...	...
Engine-shops and foundries	7	...	...	...	Stone-crushing ... ..	7	...	...	...
Foundries ... ..	4	...	...	...	Stone-dressing ... ..	4	...	...	...
Floating-dock ... ..	1	...	...	...	Straw-pressing ... ..	1	...	...	...
Fellmongeries ... ..	2	...	...	...	Tanneries ... ..	3	...	...	...
Flour-mills ... ..	11	5	3	...	Traction-engines ... ..	11	...	...	...
Flock-mills ... ..	3	...	...	...	Threshing-machines ... ..	128	...	...	...
Fruit-preserving ... ..	3	...	...	...	Turnery (wood) ... ..	2	...	...	...
Fire-grate and range works	3	...	...	...	Venetian-blind-making ... ..	2	...	...	...
Firewood-cutting ... ..	2	...	...	...	Vinegar works ... ..	1	...	...	...
Gold-mining ... ..	5	...	2	...	Wool-pressing ... ..	5	...	...	...
Gasworks ... ..	3	...	...	...	Wool-scouring ... ..	1	...	...	...
					Woollen-factories ... ..	4	...	...	...
					Woodworking factories ... ..	9	...	...	...

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Description.	Dangerous	Ordinary.	Total.
Pressure-gauges bad ...	...	2	2
Test-cocks in bad order ...	...	4	4
Scale on top of fire-box ...	2	4	6
Up-takes getting thin ...	...	4	4
Leaky tubes ...	...	5	5
Fire-boxes bulged ...	1	2	3
Crack in crown of fire-box (traction) ...	...	1	1
Longitudinal stays gone ...	...	3	3
Fire-box getting thin ...	2	1	3
Bottom of shell bulged at back end ...	...	3	3
Manhole weak ...	...	1	1
Tube-plate bulged ...	...	1	1
Corrosion ...	...	3	3
Crack in bottom of shell ...	...	1	1
Screwed stays wasted ...	1	...	1
Blow-off bad ...	...	1	1
Patches leaky ...	...	3	3

RETURN of NOTICES given to REPAIR BOILERS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1888.		
May 9 ...	Vertical ...	New pressure-gauge to be got.
May 25 ...	Cornish ...	New pressure-gauge to be got.
June 5 ...	Portable ...	Crown-plate underneath cylinder to be strengthened by $\frac{1}{4}$ in. plate bolted on.
June 29 ...	Longitudinal tubular	Patch on bottom of shell over fire of $\frac{5}{16}$ in.-plate, 2ft. x 16in.
Aug. 4 ...	Longitudinal tubular	New set of water-gauge fittings.
Aug. 5 ...	Locomotive ...	New steel fire-box.
Aug. 6 ...	Vertical ...	Official No. 5,759. Condemned.
Sept. 13 ...	Portable ...	New set of water-gauge fittings.
Nov. 6 ...	Lancashire ...	Patch in furnace to be renewed.
Nov. 17 ...	Longitudinal tubular	Seams on top of shell to be caulked.
Nov. 19 ...	Digester ...	Tee angle-iron of $3\frac{1}{2}$ in. to be fixed on end.
Nov. 19 ...	Vertical ...	To be retubed.
1889.		
Jan. 25 ...	Longitudinal tubular	To be retubed.
Jan. 25 ...	Portable ...	To be retubed.
Jan. 28 ...	Vertical ...	New up-take.
Feb. 1 ...	Longitudinal tubular	Sheathing at water-level, and retubing.
Feb. 25 ...	Digester ...	New doubling-plate, and four stays renewed.
Feb. 25 ...	Digester ...	One new stay.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1889.

Date of Notice.	Class of Machinery.	Parts requiring to be fenced.
1888.		
April 26 ...	Woodworking ...	Main driving-belt; belt for circular saw; belt for sash-moulder.
May 12 ...	Bakery ...	Wheel and pinion of biscuit-machine.
Nov. 17 ...	Saw-mill ...	Swing-saw; pulleys for firewood saw; main driving-belt; belt for planing-machine.
Nov. 21 ...	Bone-mill ...	Wheel and pinion.
Nov. 26 ...	Saw-mill ...	Counter-shaft for planing-machine.
1889.		
Jan. 31 ...	Pumping-engines ...	Fly-wheel of engines and pumping-gear.

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, 1889.

Name and Address of Owners.	Description of Machinery.	Name of Person Injured.	Nature and Date of Accident.	Fatal or not.	Cause of Accident, and Remarks.
McPhee and Co., Catlins' River	Saw-mill swing-saw	Malcolm McPhee upwards of 70 years of age	Head cut with saw, 9th November, 1888; died 17th November	Fatal	It appears that the deceased was engaged at a swing-saw, cutting firewood; this saw was put in operation by the foot pressing on a lever, causing the saw to come forward to meet the wood. It is supposed that a small piece of timber had got on to the lever, so that when he put his foot on the lever he slipped, falling forward on to the saw with his head, getting the skull cut from the crown of the head to the forehead, the wound extending 6½ in., the skull being completely sawn through for 4 in. without touching the brain.
Donaghy and Co., Dunedin	Rope-works ..	Charles Hendrick, aged 14 years, Octo- ber, 1888	Thumb on right hand taken off, 23rd November, 1888	Not ..	It seems this boy was attending the winding-machine when he got his thumb entangled in the yarn, resulting in getting it taken off at the first joint. I called at the works on the 4th December, and examined the machine, but nothing can be done to prevent an accident like this occurring.

SUMMARY of INSPECTIONS, OTAGO DISTRICT, for the Financial Year ended the 31st March, 1889.

Number of boiler inspections	...	...	...	540
Number of water-engine inspections	...	...	...	5
Number of gas-engine inspections	...	...	...	1
				— 546
Number of machines inspected	...	...	...	465
Number of defects found on the inspection of boilers and fittings	...	...	...	45
Number of notices given for repairs	...	...	...	18
Number of accidents to boilers and machinery reported	...	...	...	1
Number of notices given to fence dangerous parts of machinery	...	...	...	6
Number of accidents to life and limb	...	...	...	2

[Approximate Cost of Paper.—Preparation, nil; printing (1,500 copies), £34 5s.]

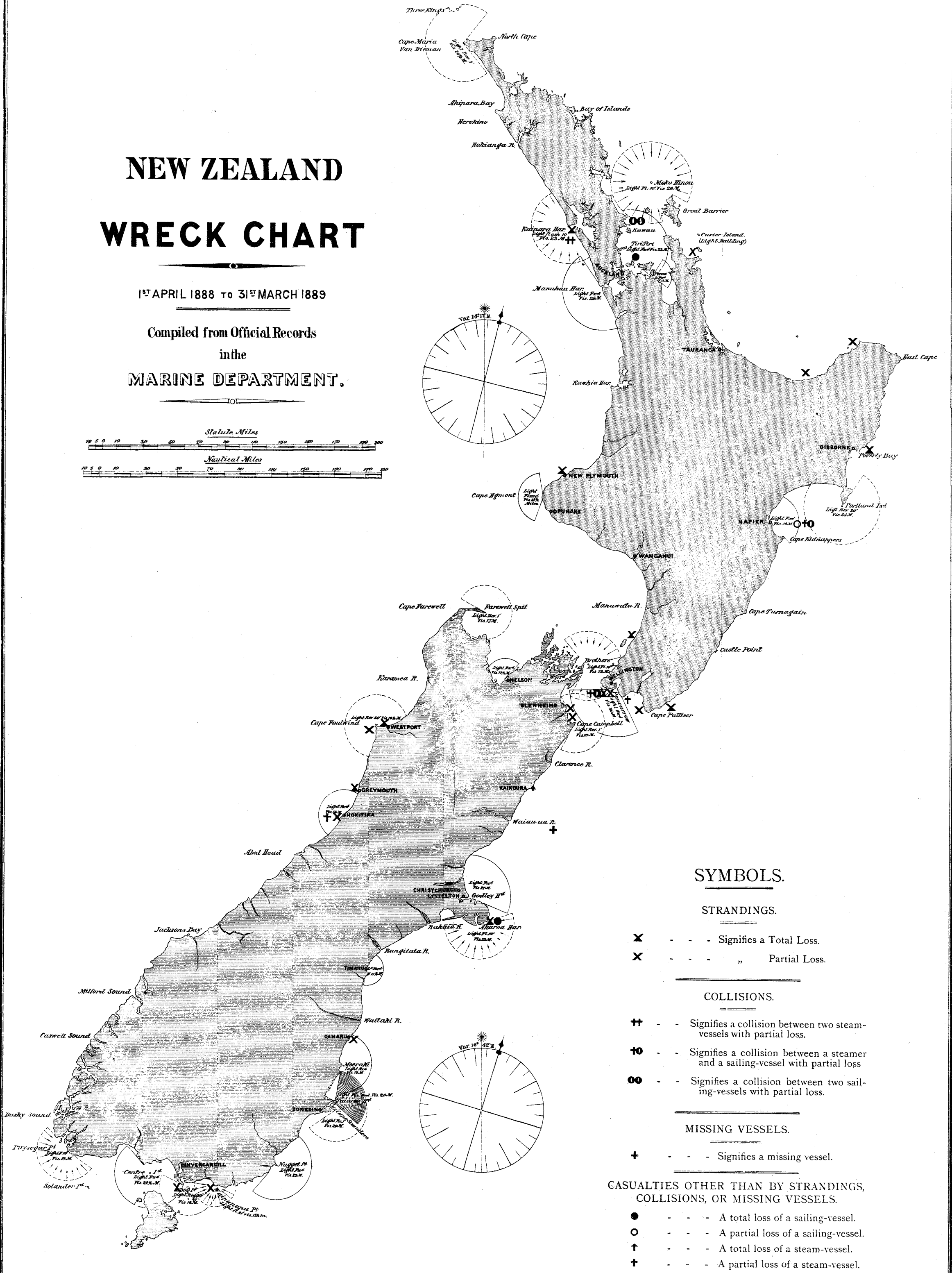
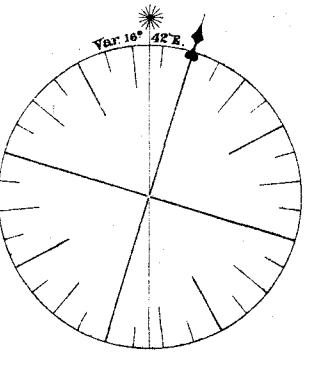
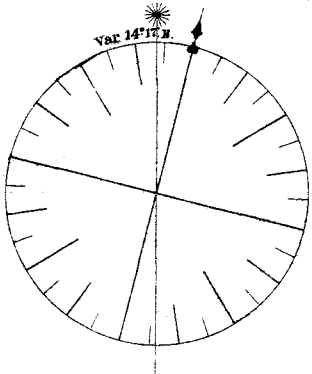
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# NEW ZEALAND WRECK CHART

1<sup>ST</sup> APRIL 1888 TO 31<sup>ST</sup> MARCH 1889

Compiled from Official Records  
in the  
MARINE DEPARTMENT.



## SYMBOLS.

### STRANDINGS.

- X - - - Signifies a Total Loss.
- X - - - " Partial Loss.

### COLLISIONS.

- ++ - - - Signifies a collision between two steam-vessels with partial loss.
- +0 - - - Signifies a collision between a steamer and a sailing-vessel with partial loss.
- 00 - - - Signifies a collision between two sailing-vessels with partial loss.

### MISSING VESSELS.

- + - - - Signifies a missing vessel.

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

- - - - A total loss of a sailing-vessel.
- - - - A partial loss of a sailing-vessel.
- ↑ - - - A total loss of a steam-vessel.
- † - - - A partial loss of a steam-vessel.

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

