

SESS. II.—1887.  
NEW ZEALAND.

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# MARINE DEPARTMENT.

(ANNUAL REPORT OF DEPARTMENT FOR 1886-87.)

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

SIR,—

Marine Department, Wellington, 25th July, 1887.

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

I have, &c.,

W. J. M. LIARNACH,

Minister having charge of the Marine Department.

His Excellency Sir W. F. Drummond Jervois, G.C.M.G., &c.,

Governor of New Zealand.



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# MARINE DEPARTMENT.

(ANNUAL REPORT OF DEPARTMENT FOR 1886-87.)

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

SIR,—

Marine Department, Wellington, 17th May, 1887.

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

**LIGHTHOUSES.**—No addition has been made to the number of coastal lighthouses, but leading-lights have been erected on the north and south sides of the entrance to Manukau Harbour to guide vessels over the bar. The lighthouses have been maintained in good order. The following accidents to the lights have been reported. At Taiaroa Head the light was blown out by a sudden gust of wind, but it was lighted again in a few seconds. At Tory Channel a glass broke and nearly extinguished the light on the 6th July last. At the Brothers the keeper on watch allowed the light to become stationary on two occasions: he was dismissed from the service as soon as the fact was reported. At French Pass the light on the beacon, which is kept burning day and night, was blown out on nine different occasions; but, with the exception of one night when the boat could not go off, it was always lighted again as soon as the tide would allow, and the whole time that the light was out after sunset, with the exception of the night above referred to, was under two hours. No complaints in respect of any of these accidents were received from mariners.

Although the lighthouses and other buildings connected therewith are at present in good order, there are some that will soon require considerable repairs; this applies more particularly to the galvanized-iron roofing, which, in the case of lighthouse premises, is, owing to their proximity to the sea, liable to deterioration. It is probable that the boat-shed at French Pass will have to be shifted shortly, as the present site is likely to be covered by a slip. The repairs referred to in last year's report as having been carried out at Puysegur Point have had the effect of considerably strengthening the tower, which is now perfectly water-tight. The tower has during the past year been stayed with four galvanized wire-rope stays, which have added considerably to its stability. A wire-rope tramway has been erected by Captain Fairchild, of the s.s. "Hinemoa," at Cape Maria van Diemen, between the island on which the lighthouse is built and the main land. This tramway will enable the keepers to get their mails, fresh meat, &c., without incurring the risk of crossing the passage in a boat.

During the year one assistant-keeper has resigned, one has been dismissed from the service, and the services of one have been dispensed with on the ground of ill-health, and he has been paid compensation for loss of office. A new set of instructions to light-keepers, based on the most recent instructions published by the Northern (Scottish) Board of Lighthouses, with such additions and alterations as were considered necessary to adapt them to the requirements of the New Zealand lighthouses, have been issued for the use and guidance of light-keepers. These regulations provide for the maintenance of a circulating library, a boon which, it is believed, is much appreciated by the light-keepers. Advantage was taken of the issue of these instructions to revise the scale of salaries paid, which now range from £80 a year, in the case of a probationer, to £150 in the case of a principal keeper of ten years' standing in that rank. Owing to the exigencies of the service the work of inspection has only been partially carried out during the past year. I need hardly impress upon you the great necessity that exists for a thorough periodical inspection of all lighthouses and lighthouse premises, both to see that the light-keepers are carrying out their duties properly, and that the apparatus, machinery, and buildings are kept in good order and proper repair. The large quantity of valuable property at lighthouses, without considering the very grave responsibility that rests on the department to see that the lights are properly exhibited, requires this to be done; and I trust that arrangements will be made in future to insure that the work of inspection shall be thoroughly carried out.

**Cuvier Island.**—The apparatus and lantern for this lighthouse have been received in the colony. The lamp is constructed to burn five concentric wicks, being the first of this description that has been imported into the colony. It is proposed to proceed with the erection of this lighthouse during August or September next.

**Kaikoura.**—A sum of money was voted for the survey of a site for a lighthouse at this place; but, owing to a pressure of other work, nothing has yet been done in the matter.

*Jackson's Head Beacon.*—This beacon was practically completed by the end of the financial year. It consists of a solid tower of concrete, surmounted by a cage of wrought-iron, the top being 49ft. above high-water mark. The total cost of the concrete beacon was £2,488 11s. 1d. The bad weather experienced during its construction added very considerably to the cost.

*HARBOURS.*—It having been decided by the Government that, in all cases where Harbour Boards are established, the Boards should be required to pay the cost of maintaining the harbour establishments, notice was given to all Boards who received contributions from or whose staff was paid by the Government that such payments would no longer be made. This notice affected the Wairoa, Hokitika, Riverton, and Waimakariri Harbour Boards. The trade at Opunake, Tauranga, Picton, Catlin's River, Fortrose, and Kaikoura not appearing to justify the continuance of the maintenance of harbour establishments, they have all been abolished. At Russell arrangements have been made for the harbourmaster to act as Officer in Charge of Customs.

*Kaipara.*—A re-survey of the Galatea Channel and the channels and banks at the entrance to the Wairoa, Otamatea, Oruawharu, and Kaipara Rivers has been made by Lieutenant G. F. Smith, R.N., of this department; and a copy of the result of the survey has been sent to the Hydrographer to the Admiralty, in order that the existing charts of Kaipara may be corrected.

*Hokianga.*—Material for the erection of a new signal-house was supplied by the department, and it was erected by the pilot staff. A new boat was also supplied to this station.

*Mokau River.*—A further sum of £500 having been voted for continuing the snagging of this river, Mr. Perham and a working party were despatched there in January last; and the work, in so far as the vote lasted, was completed in a satisfactory manner shortly after the termination of the financial year.

*Mokihinui.*—A sum of £100 was expended, under the direction of the Buller County Council, in improving the channel at this river. The work was nearly all completed during the previous financial year, but the money was not paid until the year in respect of which this report is written.

*Hokitika.*—When the harbour staff was taken over by the Harbour Board arrangements were made whereby the light should be maintained by the Government; but in the meantime arrangements were made for the Harbour Board to continue to maintain the light, the Government paying the Board £100 per annum for so doing. It is now proposed shortly to terminate this agreement, and to bring the charge of the light under the direct control of the department, by which a further saving will be effected.

*Wairau.*—A sum of £200 was expended, under the direction of the Lower Wairau River Board, in improving the navigation of this river. The work was nearly completed during the previous year.

*Collingwood.*—A vote having been taken for the improvement of the channel to the coal-wharf at Ferntown, petty contracts were let under the direction of the officers of the Public Works Department, and the work has progressed favourably. Out of the £300 voted £100 had been paid at the end of the financial year.

*Akaroa.*—A subscription having been raised for the establishment of a lifeboat at this port, a sum of £50 towards same was contributed out of the vote of this department.

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

April 16: Approving plans of booms on Kaeo and Pupuke Rivers, Whangaroa.

April 16: Licensing Whangaroa Rafting Company to occupy foreshore, Kaeo and Pupuke Rivers, for booms.

April 16: Approving plans of wharf and tramway at Stewart's Bay, Kaiwaka River.

April 16: Licensing F. Mander and others to occupy foreshore, Stewart's Bay, Kaiwaka River, for wharf.

April 16: Approving plans of bridge across Grey River at Cobden.

April 16: Approving plans of wharf extension and cranes at Greymouth.

April 16: Vesting wharves at Mahurangi Heads, Matakana Sandspit, Upper Matakana, Puhoi, and Warkworth in Rodney County Council.

May 12: Approving plans of Hobson Street Wharf, Auckland.

May 12: Approving plans of concrete buttresses and rubble apron in front of Quay Street wall, Auckland.

May 19: Approving plans of extension of south breakwater, Greymouth.

June 1: Approving plans of further extension of Awhitu Wharf, Manukau.

June 15: Approving plans of bridge across Waihou River, Hokianga.

June 15: Approving plans of breastwork in Iron Pot, Napier.

June 15: Approving plans of Mr. Sim's wharf, Kaiapoi.

July 13: Approving plans of Taruheru Footbridge, and authorising erection of same.

July 20: Declaring that Devonport Borough Council shall return member to Auckland Harbour Board in lieu of Devonport Road Board.

July 27: Approving plans of wharf, Wairoa South.

July 27: Licensing Rutland Turner to occupy foreshore, Wairoa River South, for wharf.

August 14: Approving plans of wharf at Kohukohu.

August 14: Licensing Hokianga County Council to occupy foreshore at Kohukohu for wharf.

August 14: Approving construction of fifty railway-wagons for Westport Harbour Board.

August 20: Approving plans of dolphin for swinging vessels, Evans Bay, Wellington.

August 20: Approving siding at Brunner Railway-station for Westport Colliery Company.

September 1: Approving plans of wharf, Kaipara River.

September 1: Licensing Alfred Buckland to occupy foreshore, Kaipara River, for wharf.

September 14: Approving plans of wharf, Motueka.

- September 14: Licensing Waimea County Council to occupy foreshore, Motueka, for wharf.  
 September 14: Approving plans of new graving dock at Port Chalmers.  
 September 14: Approving plans of breakwater and other works at Napier (antedated to 1st December, 1884).  
 September 28: Approving plans of rubble embankment, Freeman's Bay, Auckland.  
 October 19: Approving plans of additions to Queen's Wharf, Wellington.  
 October 19: Approving plans of goods-shed on Greymouth Wharf.  
 October 26: Approving plans of alteration in direction of North Breakwater, Greymouth.  
 October 26: Approving of Thames Harbour Board licensing T. H. Crawford to use portion of foreshore for working tailings.  
 November 4: Approving plans of wharf in steamers' basin, Dunedin.  
 November 29: Approving plans of Harbour Board's repairing-shed, Westport.  
 November 29: Approving plans of spar-booms, Wanganui River.  
 December 14: Approving plans of wharf, Limestone Island, Whangarei.  
 December 14: Licensing Rutherford and Company to occupy foreshore, Limestone Island, Whangarei, for wharf.  
 December 14: Approving plans of cargo wharf, New Plymouth Breakwater.  
 December 14: Approving construction of railway from Buller to Cape Foulwind.  
 December 21: Approving plans of Harbour Board bridge across Buller River.  
 December 21: Approving plans of portion of Coal Creek Training Bank, Greymouth.  
 December 21: Approving plans of extension of crib-work protection, the Spit, Napier.  
 January 17, 1887: Approving plans of Naval Artillery boatskids, Wellington.  
 January 17: Approving construction by Greymouth Harbour Board of twelve goods trucks for Brunner Railway.  
 January 17: Declaring that Waipawa and Patangata County Councils shall unite to elect two members of Napier Harbour Board.  
 January 18: Approving plans of boom, Tairua River.  
 January 18: Licensing Union Steam Saw Moulding, Sash, and Door Company, Limited, to occupy foreshore, Tairua River, for boom.  
 January 18: Approving plans of cattle wharf, New Plymouth.  
 February 1: Approving plans of wharf, Wairoa, Kaipara.  
 February 1: Licensing Thomas Stirrup Webb to occupy foreshore, Wairoa River, Kaipara, for wharf.  
 February 24: Approving of Greymouth Harbour Board procuring fifty coal wagons.  
 March 15: Approving plans of beacon on Rangitoto Reef, Auckland.  
 March 15: Approving plans of wharf at entrance to Hillyer's Creek, Auckland.  
 March 15: Approving plans of repairs and addition to Queen Street Wharf, Auckland.  
 March 30: Approving of Westport Harbour Board lighting wharves, yard, &c., with gas.  
*Notices to Mariners.*—Fifty-three Notices to Mariners were issued during the year, of which twenty-one related to matters within the colony. The following is a list of them:—  
 Hydra Rock.—Position of.  
 Westport Harbour.—Light on half-tide wall discontinued.  
 Auckland Harbour.—Position of rock, High Channel.  
 Timaru Harbour.—Position of wreck of ship "Lyttelton" (two notices).  
 Picton Harbour.—Position of harbour light altered.  
 Westport Harbour.—Red light on western breakwater.  
 George Sound.—Position of rocks.  
 Greymouth Harbour.—White light on dredge.  
 Thames River.—Telegraph cable laid.  
 Greymouth Harbour.—White light on west end of half-tide wall, north side of Grey River.  
 Gisborne Harbour.—Red beacon and light, Waikanae Beach.  
 Greymouth Harbour.—Position of beacons altered.  
 French Pass.—Position of wreck of s.s. "Lyttelton."  
 Wellington Harbour.—Position and character of Queen's Wharf lights altered.  
 Manukau Harbour.—Leading lights exhibited.  
 Tutukaka.—Sunken rock reported off.  
 Greymouth Harbour.—Red light on contractor's staging, wharf extension.  
 Wellington Harbour Entrance.—Position of wreck of "Tui."  
 French Pass.—Removal of wreck-buoy, s.s. "Lyttelton."  
 Otago Harbour.—Lights on mole, North Head.  
 Copies of these notices have been distributed to Harbour Boards, Harbourmasters, and Collectors of Customs in the colony, and to the various marine authorities in Australasia, &c.  
*Light-dues.*—The sum of £7,264 8s. was collected as light-dues during the year, being £168 18s. less than was collected during the previous year. In addition, a sum of £1,479 1s. 8d. was paid to the credit of light-dues by the Post and Telegraph Department in respect of light-dues remitted on steamers carrying English mails for three-quarters of the year; including the fourth quarter (which has since been paid) the total amount remitted amounted to £2,035 2s., which would raise the total revenue from light-dues to £9,299 10s. The question of imposing a light-due on coasting vessels (which have been relieved from the payment of any since the 1st April, 1880) having been considered by the Government, it was decided, by way of a beginning, to levy a due of  $\frac{1}{4}$ d. per ton from the 1st April, 1887, and an Order in Council providing for this was issued. The light-due imposed on coasting vessels prior to 1880 was 1d. per ton at the principal and  $\frac{1}{2}$ d. per ton at the out ports.  
*Government Vessels.*—The "Hinemoa" has been employed on the general service of the Govern-

ment, and has at various times carried a large quantity of cargo for other departments, more especially the Railway and Defence Departments. She also made one trip round the North Island lighthouses when the "Stella" was under repair. Her boilers being nearly worn out, materials for the construction of two cylindrical boilers with corrugated furnaces were imported from England. The plates are the best quality boiler-steel. A contract has been let to Messrs. W. Cable and Co. to make these boilers, at a cost of £858.

The "Stella," except when laid up for repairs, has been regularly employed in attending to lighthouses, buoys, &c., and has also carried out the quarterly mail service to the West Coast bays and sounds. She also made a trip to the Antipodes and Bounty Islands in March last. It was found that the provision dépôt that had been erected at the Bounty Islands had been carried away—probably by a very heavy sea, and only a few fragments of it were found; owing to the inaccessibility of these islands, or rather rocks, and the impossibility of existing on them, it was determined not to re-establish the dépôt. The new boiler referred to in last report as having been contracted to be made by Messrs. Luke and Sons was satisfactorily completed by that firm, and a contract was subsequently let to Messrs. Cable and Co. to place the boiler in position and to execute sundry other repairs, &c., including a new donkey-boiler, new pistons fitted with Buckley's patent springs, cylinders re-bored, new bearings where required, new deck, &c. This contract was completed at the end of December. The new boiler is slightly larger than the old one, and is worked at a pressure of 80lb. to the square inch. The increased pressure has resulted in a considerable saving of fuel, the same number of revolutions being obtained with a decreased consumption of coal, fully 1cwt. less per hour being burnt. During the nine months and a half the "Stella" was running she steamed 16,340 miles, was 2,161 hours under steam, burnt 620 tons coal (nearly all native coal), landed 844 tons cargo, and carried 327 passengers.

The schooner "Kekeno" was unfortunately wrecked at the Bluff on the 24th September last, and recommended by the Surveyors, Captains Tyson and Pengelly, to be sold. The wreck was, by your direction, handed over to the Bluff Naval Volunteers conditionally on their getting her off the rocks and repairing her, and holding her at service of Government on special occasions, and the vessel is now in their possession. The "Kekeno" had, prior to her wreck, made her usual trips to the Auckland and Campbell Islands in connection with the protection of the seal fisheries.

*Examination of Masters, Mates, and Engineers.*—One hundred and fifty-two candidates passed their examination for certificates of competency, and 37 failed. Of those who passed, 107 were masters, mates, and engineers of sea-going vessels, and 45 masters and engineers of river steamers. Three candidates failed to pass the colour test. To one of these a certificate was issued with this fact noted on the face, this being provided by the regulations in cases where a candidate already held a certificate; no certificates were issued to the others. Two candidates were reported to have been examined and passed in the colour test only. Only six new certificates of service were issued during the year, two being for the foreign trade, three for the home trade, and one as engineer.

*Relief of Distressed Seamen.*—During the past year the sum of £22 3s. 6d. has been paid to the Board of Trade in respect of the expenses in connection with the relief of the crew of the "Ransom," wrecked at the Marshall Group on the 4th July, 1885, and £10 4s. 3d. in respect of the crew of the "Mazeppa," wrecked at the Caroline Group on the 13th July in the same year. A sum of £49 5s. 6d. has also been paid in the colonies in respect of the relief of the crew of the "Rapido," wrecked in Cambridge Gulf on the 1st October, 1886: a further claim for £136 has been received, but payment thereof has been resisted, on the ground that the charges for passages are in excess of the scale authorised by the Board of Trade.

In connection with the relief of the crew of the "Rapido," it appears to me that, in case of colonial vessels wrecked in the colonies, it would be sufficient if the relief of the crew terminated on arrival at one of the principal ports of any of the colonies, and that it is not necessary that they should be sent back to the colony to which the vessel belongs. It may often occur that the men really belong to or have been shipped in another colony.

*Wages and Effects of Deceased Seamen.*—During the year the estates of 56 deceased seamen have been dealt with. £185 2s. 11d. has been paid to relatives or creditors, and £200 9s. 3d. has been transferred to the Public Trustee, who was dealing with other property belonging to the estates.

*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 30,649 aggregate tonnage and 10,059 horse-power, being two steamers less than were surveyed last year, but an increase in the tonnage of 970 tons, and 157 in the horse-power. One hundred and forty-eight certificates were issued to sea-going and the same number to river steamers. As anticipated in last year's report, the Board of Trade have recognised certificates of survey issued by this department to steamers trading between this colony and the United Kingdom and intermediate ports. This was done by Her Majesty's Order in Council of the 26th November last, which, with the accompanying despatch, was published in the *New Zealand Gazette* of the 3rd March last. This is a high testimony of, and speaks well for, the standard of the surveys made by the officers of this department. The annual reports of the Inspectors of Machinery are attached hereto. In December last Mr. J. Nancarrow, Chief Inspector of Machinery—a valued officer of the department—who was the first engineer surveyor appointed under the old Steam Navigation Act, retired on a pension. It has not been found necessary as yet to appoint a new Chief Inspector but an additional Inspector (Mr. W. M. Mowatt) was appointed, after applications had been publicly invited for the appointment.

The surveys of steamers, hitherto done by Mr. Nancarrow, have been done by the local inspectors, assisted, when necessary, by a temporary transfer of an inspector from another place. At present there is one inspector stationed in Auckland, two in Wellington, one in Christchurch, and two in Dunedin.

The districts of Nelson South (West Coast) and Westland have been detached from Christchurch,

and are now worked from Wellington. Some other arrangements of the districts are in contemplation, with a view of carrying out the work in an efficient and economical manner.

*Wrecks and Casualties.*—The accompanying table shows an analysis of the casualties reported. Those on the coast of the colony number 60, representing tonnage amounting to 11,417 tons, as against 65 casualties affecting 25,908 tons in the previous year.

The number of total wrecks shows a considerable increase, being, within the colony, 22 of 2,676 tons as against 10 of 1,368 tons the previous year. There is also a large increase in the number of lives lost during the year, being 62 as against 36 the previous year; those lost in the colony being 45, as against 9 last year. This increase is accounted for by the unfortunate loss of life at the wreck of the s.s. "Taiaroa." Of the lives lost on or near the coasts of the colony, 30 were in the s.s. "Taiaroa," 5 in the "Pelican" (all hands), 6 in the "Cleopatra" (all hands), and 1 each from the s.s. "Rose Casey," s.s. "Arawata," "Waiapu," and "Mayflower." The number lost in the "Taiaroa" was never definitely ascertained, but thirty was the number reported to this department. Of those lost beyond the colony 10 were lost in the "Nauphante" (all hands), 3 from the "Yolande," and 1 each from the "Isabel," "Sybil," "May," and "Turakina." The attention of the Royal Humane Society of Australasia was drawn to the praiseworthy attempt made by Kai-rangi, a Kanaka, to rescue G. H. Trayte, the master of the "Sybil," who fell overboard from that vessel, and that society awarded him their silver medal.

At the request of the Greymouth Harbour Board, a rocket-apparatus was procured through the Agent-General for that body; and at the same time a similar apparatus was obtained for this department, so that it might be ready for sale to any Harbour Board, or any other local body that might require it.

*FISHERIES.*—*Oysters*: During the year four Orders in Council were issued in respect of oysters—namely, one regulating the apparatus with which rock-oysters might be taken, it being understood that spades were used for this purpose, so destroying many of the smaller oysters; one extending the close season for rock-oysters in the Hauraki Gulf to the 31st March, 1889 (these beds have now been closed for two years; a considerable improvement in the growth of oysters has resulted, and it is anticipated that at the date above specified there will be a large quantity of oysters of marketable size fit to be taken); one extending the close season for mud-oysters at Waimea (Nelson) up to the 31st January, 1888, it having been reported that the oysters there were being rapidly exterminated; and one extending the close season for rock-oysters at Poverty Bay, in order to protect oysters that had been planted there.

Proceedings were taken against several persons for taking oysters in the close season in Auckland, and penalties recovered.

The exportation of rock-oysters being now prohibited, the question has been raised as to whether oysters grown on mangroves are included in that definition. The department contends that such oysters are the same kind as rock-oysters, and that the term "rock" is the name of the oyster, and that it does not necessarily follow that such oysters grow on rocks. Proceedings were taken in several cases, but were decided by the Magistrate against the views of the department. Some action should be taken in the matter, as such a state of affairs only leads to the improper taking of oysters, it being understood that a mangrove-oyster cannot be distinguished from a rock-oyster after it is taken.

Correspondence has taken place relative to an application for the exclusive right to take oysters on a bed said to be discovered by the applicant in the Auckland Provincial District, but the applicant has not as yet taken the formal steps required by "The Oyster Fisheries Act, 1866." It is interesting to note that the specimens of oyster forwarded have been declared by Dr. Hector to be a new variety of the mud-oyster found in the vicinity of Cook Strait, to which he has given the name of "*Ostrea edulis*, var. *squamosa*."

*Salt-water Fish.*—An Order in Council was issued on the 26th October, 1886, defining a close season for mullet in the North Island; but, representations having been made to you on the matter, the Order in Council was cancelled, and a new one issued restricting the close season to a portion of the Kaipara waters.

Returns are now received from light-keepers showing the number and kinds of fish caught at each station, the condition of their ovaries, and the contents of their stomachs. These, when tabulated, will prove useful in connection with ascertaining the breeding-time of the fish.

The regulations provide that nets of less than 5in. mesh are not to be used in Lake Ellesmere, Canterbury; proceedings were taken in several instances against persons for breaches of the regulations, and penalties were recovered.

*Lobsters.*—Inquiries have been made relative to the introduction of the lobster into this colony; but, as far as can be ascertained at present, it is not likely that it could be successfully introduced.

*Herring.*—The experiment relative to the introduction of herring-ova was not repeated last year, but it is proposed to make another attempt this season.

*Introduced Fish.*—The administration of the Salmon and Trout Act has been transferred to this department, and regulations providing for fishing for trout, &c., have been issued. It would appear highly desirable that one set of regulations should, if possible, be made applicable to the whole colony.

A consignment of whitefish-ova was received from America through the courtesy of Professor Spencer F. Baird, the United States Commissioner of Fish and Fisheries. The ova arrived in good condition, and were at once forwarded some to Lake Rotoiti, in Nelson, some to the Otago Acclimatisation Society, and the greater portion to the Lakes Society, at Queenstown. Those sent to Queenstown were delivered there in about three days and a half after arrival at Auckland. The ova, however, did not hatch well. This may probably be accounted for by the temperature of the water, as they, perforce, arrive here in the middle of summer. The correspondence on the subject of the introduction of whitefish- and salmon-ova has been printed, and will be presented to Parliament.

*Salmon-ova*.—Three shipments of salmon- and trout-ova were received during the year—namely, by the steamers “Kaikoura,” “Doric,” and “Tongariro.” The ova shipped amounted to—

Salmon—					
Scotch	...	...	...	...	610,000
Rhine ...	...	...	...	...	100,000
Trout and char—					
<i>Salmo fontinalis</i>	...	...	...	...	30,000
Alpine char	...	...	...	...	25,000
Lochleven trout	...	...	...	...	40,000
Rhine great lake trout	...	...	...	...	25,000
Rhine brook trout	...	...	...	...	25,000

Full particulars as to the condition of these ova, how distributed, &c., will be found in the correspondence referred to above. Following the lines laid down in last report, the major portion of these ova was sent to the Otago and Southland acclimatisation societies, and it was hoped that these societies would have arranged to have placed all the fry in one river, but it would appear that such arrangements have not as yet been made.

The following is a statement of the cost of the various shipments received, including those received last year:—

<i>Whitefish</i> , 1886 (arrived in bad condition, and were not carried beyond Wellington):—				£	s.	d.	£	s.	d.
Expenses in America	...	...	...	23	1	3			
Expenses in colony (distribution)	...	...	...	39	6	10			
							62	8	1
<i>Whitefish</i> , 1887:—									
Expenses in America	...	...	...	53	14	6			
Attendance	...	...	...	5	0	0			
Distribution in colony	...	...	...	48	8	11			
							107	3	5
<i>Salmon-ova</i> , 1886:—									
Expenses in United Kingdom	...	...	...	142	0	5			
Freight and attendance	...	...	...	84	7	10			
Distribution in colony	...	...	...	39	7	8			
							265	15	11
<i>Salmon- and Trout-ova</i> , 1887:—									
Expenses in United Kingdom	...	...	...	888	13	10			
Freight and attendance	...	...	...	506	4	2			
Distribution in colony	...	...	...	32	5	2			
							1,427	3	2

*Seal Fisheries*.—Prior to the wreck of the “Kekeno” she was engaged in making trips to the Auckland and Campbell Islands and West Coast Sounds in the interest of protecting these fisheries. After her wreck you arranged that the schooner “Awarua” should make a trip to the Auckland and Campbell Islands for this purpose. The owner of the vessel, Mr. Hatch, gave the use of her, and the Government paid all expenses in connection with the cruise.

On the 1st June last the close season for seals was extended to the 1st June, 1887, when it will have lasted nearly six years.

No positive information has been obtained as to whether any increase has taken place in the number of fur seals during this close season, but I think there can be little doubt that they have increased; but the number was reduced to so few from indiscriminate slaughter that it will necessarily be some time before any appreciable increase can be observed. I append extracts from Mr. Henry W. Elliott's monograph, “The Seal Islands of Alaska,” a most interesting work, and Mr. J. A. Allan's “History of North American Pinnipeds,” books published by the Government of the United States of America on the subject of the protection and value of the seal fisheries, and the number of seals that used to be procured in these waters:—

“*Possibilities for Protection*.—The Falkland Islands offer natural conditions of protection by land far superior to those found on the Pribylov or Commander Groups. They have beautiful harbours, and they lie in the track of commerce—advantages which are not shared by our islands. At Desolation Island perhaps the difficulties are insuperable, on account of the great extent of coast which is practically inaccessible to men and nearly so to the seals; but the Falkland Islands might have been farmed out by the British Government at a trifling outlay and with exceeding good result, for millions upon millions of the fur seals could rest there to-day, as they did a hundred years ago, and be there to-morrow, as our seals do and are in Bering Sea. But the work is done. There is nothing down there now valuable enough to rouse the interest of any Government. Still, a beginning might be made, which possibly forty or fifty years hence would rehabilitate the scourged and desolated breeding-grounds of the South Seas. We are selfish people, however, and look only to the present; and it is, without question, more than likely that, should any such proposition be brought before the British Parliament, it would be so ridiculed and exaggerated by demagogues and ignorant jesters as to cause its speedy suppression; hence, in our opinion, it is not at all likely that the English Government, or any of the other Governments controlling these many islands of the southern ocean which we have named, will ever take a single step in the right direction as far as the encouragement of the fur seal to live and prosper in those regions is concerned. When we look at our northern waters we speedily recognise the fact that between North America and Europe, across the Atlantic and into the Arctic, there is not a single island or islet or stretch of coast that the fur seal could successfully struggle for existence on” (p. 7, “The Seal Islands of Alaska,” by Henry W. Elliott. Washington, 1882.)



*“Commercial Importance of the Alaska Rookeries.*—To recapitulate. With the exception of these islands of Bering Sea, there are none elsewhere in the world of the slightest importance to-day. The vast breeding-grounds bordering on the Antarctic have been, by the united efforts of all nationalities—misguided, short-sighted, and greedy of gain—entirely depopulated. Only a few thousand unhappy stragglers are now to be seen throughout all that southern area, where millions once were found, and a small rookery, protected and fostered by the Government of a South American State, north and south of the mouth of the Rio de la Plata. When, therefore, we note the eagerness with which our civilization calls for sealskin fur, the fact that, in spite of fashion and its caprices, this fur is and always will be an article of intrinsic value and in demand, the thought at once occurs that the Government is exceedingly fortunate in having this great amphibious stockyard far up and away in the quiet seclusion of Bering Sea, from which it shall draw an everlasting revenue, and on which its wise regulations and its firm hand can continue the seals for ever” (p. 8, *“The Seal Islands of Alaska,”* by Henry W. Elliott. Washington, 1882).

*“Destruction of the Fur Seals for their Peltries.*—Vancouver, at about this date (1800), reported the existence of large numbers of fur seals on the south-west coast of New Holland. Attention was at once turned to this new field, and in 1804 the brig ‘Union,’ of New York, Captain Isaac Pendleton, visited this part of the Australian coast, but not finding these animals there in satisfactory numbers, repaired to Border’s Island, where he secured only part of a cargo (14,000 skins), owing to the lateness of the season. Later, 60,000 were obtained at Antipodes Island. About 1806 the American ship ‘Catharine,’ of New York (Captain H. Fanning), visited the Crozette Islands, where they landed, and found vast numbers of fur seals, but obtained their cargo from Prince Edward’s Island, situated a few hundred miles south-east of the Cape of Good Hope, where other vessels, the same year, obtained full cargoes. . . . So indiscriminate was the slaughter (at the South Shetland Islands) that whenever a seal reached the beach, of whatever denomination, it was immediately killed. Mr. Scott states, on the authority of Mr. Morris, an experienced sealer, that a like indiscriminate killing was carried on at Antipodes Island, off the Coast of New South Wales, from which island alone not less than 400,000 skins were obtained during the years 1814 and 1815. A single ship is said to have taken home 100,000, in bulk, which, through lack of care in curing, spoiled on the way, and on the arrival of the ship in London the skins were dug out of the hold and sold as manure!” (pp. 229 and 230, *“History of North American Pinnipeds;”* by Joel Asaph Allen. Washington, 1880).

When it is known that the revenue obtained from the seal fisheries of Alaska for 1881 was \$317,395 (say, £79,448), the value of these fisheries is apparent. I therefore submit whether it would not be desirable to protect the seal fisheries of this colony and keep them closed until such time as the fur seals have again become numerous, and then lease them under most stringent conditions as to number, age, and sex of those to be killed. It is quite possible that in the course of not many years a very considerable revenue might be obtained from this source.

*Harbour Improvement Plans.*—Only one Harbour Board—namely, Timaru—has forwarded a plan for publication this year. It is appended hereto.

*Returns.*—The usual report by the Marine Engineer on works carried out, Inspectors of Machinery’s annual returns, and wreck chart are attached hereto, as is also a lighthouse-chart, showing the coastal and principal harbour lights in the colony.

I have, &c.,

LEWIS H. B. WILSON,  
For Secretary.

The Hon. W. J. M. Larnach, C.M.G.,  
Minister having charge of the Marine Department, &c.

## SUMMARY of CASUALTIES to SHIPPING and SEAMEN reported to the Marine Department during the Financial Year ended the 31st March, 1887.

Nature of Casualties.	Casualties on or near the Coasts of the Colony.						Casualties outside the Colony.						Total Number of Casualties reported.		
	Steamers.			Sailing-vessels.			Steamers.			Sailing-vessels.			Total outside Colony.		
	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.
Strandings,—															
Total wrecks	6	743	30	11	549	..	17	1,292	30	1	299	..	18	1,591	30
Partial loss	9	1,558	..	9	615	..	18	2,173	..	..	..	..	18	2,173	..
Slight damage	3	795	..	2	232	..	5	1,027	..	..	150	..	6	1,177	..
No damage	1	15	..	2	1,165	..	3	1,180	..	..	..	..	3	1,180	..
Total strandings	19	3,111	30	24	2,561	..	43	5,672	30	2	449	..	45	6,121	30
Foundering,—															
Total loss	1	59	..	1	1,111	..	2	1,170	..	1	365	10	3	1,535	10
Capsized,—															
Total loss	..	..	..	2	157	11	2	157	11	..	..	..	2	157	11
Scuttled and abandoned,—															
Total loss	..	..	..	..	..	..	..	..	..	1	31	..	1	31	..
Collisions,—															
Partial loss	2	854	..	..	..	..	2	854	..	..	..	..	2	854	..
Miscellaneous, including damage to boilers, machinery, hull, yards, sails, &c. ..	2	542	..	5	2,234	..	7	2,776	..	1	1,008	..	8	3,784	..
Total casualties to shipping	24	4,606	30	32	6,063	11	56	10,629	41	5	1,853	10	61	12,482	51
Loss of life only	2	722	2	2	66	2	4	788	4	5	2,321	7	9	3,109	11
Total number of casualties reported	26	5,328	32	34	6,129	13	60	11,417	45	10	4,174	17	70	15,591	62

RETURN showing the Total Ordinary Expenditure of the Marine Department during the Financial Year ended the 31st March, 1887.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
	£ s. d.	£ s. d.	£ s. d.
<b>HEAD OFFICE :—</b>			
Secretary .. .. .	200 0 0		
Chief Clerk .. .. .	390 0 0		
2 Clerks .. .. .	430 0 0		
Marine Engineer .. .. .	300 0 0		
Draftsman (7 months) .. .. .	113 15 0		
Nautical Adviser .. .. .	300 0 0		
		1,733 15 0	
<b>HARBOURS :—</b>			1,733 15 0
<b>Manukau, —</b>			
Salaries .. .. .	708 0 0		
Contingencies .. .. .	64 11 9		
<b>Russell, —</b>		772 11 9	
Salaries .. .. .	306 0 0		
Contingencies .. .. .	8 3 4		
<b>Hokianga, —</b>		314 3 4	
Salaries .. .. .	296 16 8		
Contingencies .. .. .	45 16 3		
<b>Kaipara, —</b>		342 12 11	
Salaries .. .. .	739 10 0		
Survey of harbour .. .. .	190 10 11		
Buoys .. .. .	111 6 5		
Repairs to telephone line .. .. .	39 6 6		
Stores, coal for launch, and contingencies .. .. .	131 8 3		
<b>Opunake, —</b>		1,212 2 1	
Salary .. .. .	..	60 0 0	
<b>Mokau, —</b>		294 12 2	
Snagging river .. .. .	..		
<b>Rangitikei, —</b>			
Cost of signalman visiting port .. .. .	108 3 0		
Contingencies .. .. .	4 19 10		
<b>Foxton, —</b>		113 2 10	
Salaries .. .. .	327 15 0		
Contingencies .. .. .	47 5 2		
<b>Whangarei, —</b>		375 0 2	
Contingencies .. .. .	..	4 12 6	
<b>Tairua, —</b>		3 13 6	
Contingencies .. .. .	..		
<b>Wairoa, —</b>			
Salary .. .. .	100 0 0		
Contingencies .. .. .	5 0 0		
<b>Wangawehi, —</b>		105 0 0	
Maintenance of light .. .. .	..	40 0 0	
<b>Tauranga, —</b>			
Salaries .. .. .	318 0 0		
Contingencies .. .. .	26 6 3		
<b>Wairau, —</b>		344 6 3	
Salary .. .. .	145 0 0		
Removal of snags, &c. .. .. .	200 0 0		
Contingencies .. .. .	54 8 9		
<b>Picton, —</b>		399 8 9	
Salaries .. .. .	129 0 0		
Contingencies .. .. .	11 1 2		
<b>Havelock, —</b>		140 1 2	
Salary .. .. .	18 6 8		
Contingencies .. .. .	19 0 0		
<b>Nelson, —</b>		37 6 8	
Salaries .. .. .	920 0 0		
Contingencies .. .. .	45 18 6		
<b>Riwaka, —</b>		965 18 6	
Salary .. .. .	..	12 0 0	
<b>Waitapu, —</b>			
Salary .. .. .	25 0 0		
Maintenance of leading lights .. .. .	75 0 0		
Contingencies .. .. .	2 19 6		
<b>Collingwood, —</b>		102 19 6	
Salary of light-keeper .. .. .	31 5 0		
Improving channel to coal-mine .. .. .	100 12 6		
Repairing crating, Aorere River .. .. .	18 0 0		
Contingencies .. .. .	20 0 10		
<b>Karamea, —</b>		169 18 4	
Signalman .. .. .	24 0 0		
Contingencies .. .. .	35 9 4		
<b>Nile River, —</b>		59 9 4	
Signalman .. .. .	27 15 0		
Contingencies .. .. .	0 16 0		
<b>Mokihinui, —</b>		28 11 0	
Improving channel .. .. .	..	100 0 0	
<b>Hokitika, —</b>			
Salaries, maintenance of lighthouse, and contingencies .. .. .	..	351 4 0	
<b>Okarito, —</b>			
Salary .. .. .	50 0 0		
Contingencies .. .. .	23 8 6		
		73 8 6	
<b>Carried forward .. .. .</b>		6,422 3 3	1,733 15 0

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

Nature of Expenditure.					Details.	Totals.	Grand Totals.
					£ s. d.	£ s. d.	£ s. d.
Brought forward .. .. .						6,422 3 3	1,733 15 0
HARBOURS— <i>continued.</i>							
Jackson's Bay,—							
Contingencies .. .. .					..	1 7 0	
Okura River,—							
Signalling vessels .. .. .					..	18 0 0	
Catlin's River,—							
Salary .. .. .					125 0 0		
Contingencies .. .. .					2 0 10		
Fortrose,—						127 0 10	
Salary .. .. .					100 0 0		
Contingencies .. .. .					10 0 0		
Riverton,—						110 0 0	
Salary (six months) .. .. .					..	60 0 0	
Akaroa,—							
Salary .. .. .					25 0 0		
Contribution towards lifeboat .. .. .					50 0 0		
Contingencies .. .. .					8 16 0		
Waimakariri,—						83 16 0	
Subsidy to Harbour Board .. .. .					..	120 0 0	
Kaikoura,—							
Salary .. .. .					52 0 0		
Contingencies .. .. .					7 13 6		
General harbour contingencies .. .. .					..	59 13 6	
						243 16 10	7,245 17 5
LIGHTHOUSES :—							
Salaries of keepers .. .. .					7,844 7 2		
Keepers' travelling expenses .. .. .					38 0 2		
Oil .. .. .					1,175 14 8		
Stores and contingencies .. .. .					1,487 16 2		
Pension of Mrs. Deck .. .. .					24 0 0		
Lighthouse artificer .. .. .					108 6 8		
"Stella," s.s.,—						10,678 4 10	
New boiler and repairs .. .. .					2,377 13 10		
Wages, stores, provisions, &c. .. .. .					3,974 6 3		
					6,352 0 1		
Less amount earned by steamer .. .. .					223 13 5		
						6,128 6 8	16,806 11 6
Relief of distressed seamen .. .. .					..	100 18 3	
Inquiries into wrecks and casualties .. .. .					..	217 7 5	
Survey of unseaworthy ships .. .. .					..	2 17 0	
Departmental travelling expenses .. .. .					..	18 5 3	
Charts .. .. .					..	53 9 0	
Coastal buoys and beacons .. .. .					..	38 8 0	
Life-saving apparatus .. .. .					..	208 9 1	
S.s. "Awarua," searching for castaways .. .. .					..	125 0 0	
Sundries .. .. .					..	178 9 11	
Expenses under Fisheries Conservation Act .. .. .					..	60 3 11	
							1,003 7 10
Inspection of Machinery and Survey of Steamers,—							
Salaries of Inspectors .. .. .					2,037 1 11		
Travelling expenses .. .. .					649 8 5		
Cost of collection of fees .. .. .					60 12 0		
Contingencies .. .. .					40 11 8		
						2,787 14 0	
Examination of Masters and Mates,—							
Salaries .. .. .					575 0 0		
Contingencies .. .. .					23 3 6		
						598 3 6	2,787 14 0
Protection of Seal Fisheries,—							
Schooner "Kekeno," wages, stores, &c. .. .. .					363 6 8		
Schooner "Awarua," wages, stores, &c. .. .. .					337 10 11		
						700 17 7	598 3 6
Compassionate allowance to Mrs. Campbell .. .. .					..	..	700 17 7
"Hinemoa," s.s.,—							148 0 0
Wages, coal, stores, provisions, &c. .. .. .					7,487 3 9		
Material for new boiler .. .. .					1,088 14 9		
					8,575 18 6		
Less amount earned by steamer .. .. .					171 3 11		
						8,404 14 7	8,404 14 7
Introduction of fish-ova,—							
Whitefish .. .. .					194 11 3		
Salmon and trout .. .. .					412 14 8		
Herring .. .. .					554 14 5		
						1,162 0 4	1,162 0 4
Less amount of credits .. .. .					..	..	40,591 1 9
							191 4 2
Total .. .. .					..	..	£40,399 17 7

RETURN showing the Amount of Pilotage, Port Charges, &c., collected during the Year ended the 31st March, 1887.

Name of Port.	Pilotage.	Port Charges, &c.	Total.
	£ s. d.	£ s. d.	£ s. d.
Auckland*	595 19 11	2,068 7 7	2,664 7 6
Onehunga	..	183 1 3	183 1 3
Whangaroa	..	3 1 11	3 1 11
Kaipara	100 10 0	281 15 9	382 5 9
Thames*	107 13 2	61 12 4	169 5 6
Russell	9 4 4	..	9 4 4
Mongonui	..	63 6 9	63 6 9
Hokianga	24 14 3	4 18 0	29 12 3
Whangarei	..	15 3 6	15 3 6
Tauranga	5 6 8	..	5 6 8
Gisborne*	91 11 8	142 11 9	234 3 5
Waitara*	99 18 1	33 17 0	133 15 1
New Plymouth*	82 18 6	68 16 10	151 15 4
Wanganui*	445 10 0	..	445 10 0
Foxton	113 5 0	..	113 5 0
Patea*	26 12 7	4 16 3	31 8 10
Wellington*	744 8 7	3,330 5 4	4,074 13 11
Wairoa	49 2 8	3 8 3	52 10 11
Napier*	2,101 7 0	777 13 10	2,879 0 10
Nelson	1,080 14 3	..	1,080 14 3
Hokitika†	10 10 2	..	10 10 2
Lyttelton*	3,308 10 5	2,477 14 11	5,786 5 4
Timaru*	..	840 17 5	840 17 5
Oamaru*	567 11 0	540 1 8	1,107 12 8
Dunedin*	3,993 8 6	3,410 17 11	7,404 6 5
Invercargill*	6 10 0	17 0 9	23 10 9
Bluff*	741 10 7	806 0 0	1,547 10 7
Riverton*	4 2 0	..	4 2 0
Totals	14,310 19 4	15,085 9 0	29,396 8 4

\* Harbour Board revenue. † £5 18s. 6d. Harbour Board revenue.

RETURN showing the Amount of Light-dues collected during the Year ended the 31st March, 1887.

	£ s. d.
Auckland	1,950 7 0
Whangaroa	11 4 8
Kaipara	152 11 0
Thames	25 4 8
Russell	140 8 4
Mongonui	20 7 0
Poverty Bay	25 16 10
New Plymouth	1 11 4
Wanganui	1 17 0
Wellington	1,495 5 4
Napier	145 0 2
Nelson	90 6 2
Lyttelton	888 15 8
Timaru	190 18 8
Oamaru	73 16 0
Dunedin	944 1 10
Bluff	1,106 16 4
Total	£7,264 8 0

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
Puyssegur Point	9,958 19 5
Cape Maria van Diemen	7,028 14 8
Akaroa Head	7,150 6 5
Cape Saunders	6,066 6 3
Cape Egmont†	3,353 17 11
Moko Hinou	8,186 5 0
Waipapapa Point	5,969 18 11
Ponui Passage†	..
Kaipara Head	5,571 8 0
French Pass	1,427 17 5
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 Expenditure on new Light-houses, &c., out of Public Works Loan, during the Year ended the 31st March, 1887.

Nature of Expenditure.	Amount.
	£ s. d.
Cuvier Island Lighthouse	990 9 11
Jackson's Reef Beacon	1,681 5 2
Manukau Leading Lights	600 13 11
Total	£3,272 9 0

RETURN showing the Certificates of Service issued to Masters, Mates, and Engineers during the Year ended the 31st March, 1887.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
George Patrick Dower	Master	Home trade	6 April, 1886	2536
Andrew Cunningham	" (renewal)	Foreign trade	13 " "	2537
Roderick McIver	" (renewal)	"	14 May, "	2538
John Donovan	"	"	3 Aug., "	2539
Alfred Faulkner	"	Home trade	16 Oct., "	2540
Joseph Bradley	Mate (renewal)	"	16 " "	2541
Charles Quintin Pope	"	"	23 Nov., "	2542
William Akersten	Master	Foreign trade	9 Dec., "	2543
Charles Bonner	" (renewal)	"	23 Mar., 1887	2544
McWilliam Job Austin	Engineer	Second class	2 Sept., 1886	1044
Archibald Keith	" (renewal)	"	9 Oct., "	1045

## DESCRIPTIVE RETURN of New Zealand Coastal Lighthouses.

Name of Lighthouse.	Order of Apparatus.	Description.	Period of Revolving Light.	Colour of Light.	Tower built of	Dwellings built of	Date first lighted.
Cape Maria van Diemen	1st order dioptric	Revolving	1'	White .. ..	Timber	Timber	24 Mar., 1879
	..	Fixed	..	Red, to show over Columbia Reef	..	..	..
Moko Hinou	1st order dioptric	Flashing	10"	White .. ..	Stone	Timber	18 June, 1883
Tiri Tiri..	2nd "	Fixed	..	White, with red arc over Flat Rock	Iron	"	1 Jan., 1865
Ponui Passage	5th "	"	..	White and red ..	Timber	"	29 July, 1871
Portland Island	2nd "	Revolving	30"	White .. ..	"	"	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 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, and Sale of Charts, &c.

Nature of Receipts.	Amount.
Shipping and Seamen's Act,—	
Fees for shipping and discharge of seamen, and sale of forms .. ..	£ s. d. 952 6 9
Survey of steamers .. ..	1,153 3 0
Examination of masters, mates, and engineers .. ..	182 0 0
Light-dues .. ..	8,743 9 8
Merchant Shipping Act .. ..	79 16 0
Inspection of Machinery Act .. ..	2,977 0 0
Pilotage and port charges .. ..	1,892 4 3
Sale of charts .. ..	74 1 6
Sundry receipts under Harbours Acts .. ..	123 0 6
Sundries .. ..	5 18 6
Total .. ..	£16,183 0 2

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, 1887.

Name of Seaman.	Balance to credit of Estate on 31st March, 1886.	Amount received.	Amount paid.	Balance to credit of Estate on 31st March, 1887.
Vincent Croll .. ..	£ s. d. 1 8 8	£ s. d. 0 14 6	£ s. d. 2 3 2	£ s. d. ..
Harry Bridge .. ..	19 0 2	..	19 0 2	..
Thomas West .. ..	1 2 3	..	1 2 3	..
Robin Sydney Bing .. ..	13 2 6	..	13 2 6	..
Charles Schultze .. ..	0 4 9	27 0 9	4 10 0	22 15 6
R. G. Lloyd .. ..	..	18 8 10	..	18 8 10

RETURN of Estates of Deceased Seamen, &c.—*continued.*

Name of Seaman.					Balance to credit of Estate on 31st March, 1886.	Amount received.	Amount paid.	Balance to credit of Estate on 31st March, 1887.
					£ s. d.	£ s. d.	£ s. d.	£ s. d.
Charles C. A. Laker	..	..	..	..	6 18 6	10 16 2	17 14 8	
J. Johnson	..	..	..	..	..	1 4 0	..	1 4 0
J. Logan	..	..	..	..	..	1 0 0	..	1 0 0
Tom Fisher	..	..	..	..	..	0 18 0	..	0 18 0
Peter Allen	..	..	..	..	..	0 18 0	..	0 18 0
Richard Dukelow	..	..	..	..	..	1 18 4	..	1 18 4
John Taylor	..	..	..	..	..	22 0 11	..	22 0 11
R. B. Monkman	..	..	..	..	..	52 2 8	52 2 8	..
J. Powell*	..	..	..	..	..	7 7 6	7 7 6	..
Richard Spooner	..	..	..	..	..	2 18 8	2 18 8	..
D. Hill	..	..	..	..	..	3 9 4	3 9 4	..
R. Williamson	..	..	..	..	..	2 11 4	..	2 11 4
Patrick McMillan	..	..	..	..	..	28 19 3	..	28 19 3
Peter Hansen	..	..	..	..	..	2 11 4	..	2 11 4
R. Harrison	..	..	..	..	..	2 11 4	..	2 11 4
John McPhee	..	..	..	..	..	2 11 4	2 11 4	..
E. S. Stratford	..	..	..	..	..	5 17 4	4 15 0	1 2 4
G. McDonough	..	..	..	..	..	3 6 0	..	3 6 0
R. Irvine	..	..	..	..	..	3 6 0	..	3 6 0
R. Morrison	..	..	..	..	..	2 11 4	2 11 4	..
R. Williams	..	..	..	..	..	2 11 4	..	2 11 4
Thomas Delaney	..	..	..	..	..	1 16 8	1 16 8	..
Mrs. Brown (stewardess)	..	..	..	..	..	1 9 4	..	1 9 4
R. Bathgate	..	..	..	..	..	1 9 4	..	1 9 4
F. Gallichan*	..	..	..	..	..	3 13 4	3 13 4	..
William Kellan	..	..	..	..	..	2 4 0	2 4 0	..
W. Whybrow	..	..	..	..	..	2 0 4	..	2 0 4
Peter Glencross*	..	..	..	..	..	6 18 8	6 18 8	..
Alexander Morice	..	..	..	..	..	27 0 0	27 0 0	..
William Barr	..	..	..	..	..	5 13 2	5 13 2	..
Daniel Blackwood*	..	..	..	..	..	182 9 9	182 9 9	..
Wilbert D. Nicoll	..	..	..	..	..	12 0 0	12 0 0	..
T. Brown	..	..	..	..	..	5 4 0	..	5 4 0
A. Ereckson	..	..	..	..	..	4 6 8	1 10 3	2 16 5
T. Olson	..	..	..	..	..	4 6 8	0 4 6	4 2 2
Christian Svensen	..	..	..	..	..	11 9 0	..	11 9 0
Henry Walker	..	..	..	..	..	10 7 4	5 5 0	5 2 4
Ernest Short	..	..	..	..	..	3 8 3	3 8 3	..
J. Williams	..	..	..	..	..	13 0 0	..	13 0 0
G. Smith	..	..	..	..	..	9 0 0	..	9 0 0
D. Barclay	..	..	..	..	..	12 10 0	..	12 10 0
G. Robinson	..	..	..	..	..	12 10 0	..	12 10 0
G. Hayward	..	..	..	..	..	12 10 0	..	12 10 0
Jeremiah Walsh	..	..	..	..	..	5 16 10	..	5 16 10
Henry Rennie	..	..	..	..	..	10 3 8	..	10 3 8
Lawrence Robinson	..	..	..	..	..	20 0 7	..	20 0 7
Richard Rich	..	..	..	..	..	17 16 5	..	17 16 5
Charles Engelke, <i>alias</i> Schultz	..	..	..	..	..	3 3 1	..	3 3 1
John Hannaford	..	..	..	..	..	2 10 4	..	2 10 4
Mathew Tweeney	..	..	..	..	..	2 9 7	..	2 9 7

\* Estate transferred to Public Trustee.

## RETURN of Steamers to which Certificates of Survey were issued in New Zealand during the Year ended the 31st March, 1887.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Akaroa ..	43	28	Compound ..	Screw ..	Extended river	
Alert ..	..	5	Non-condensing	..	River ..	New launch.
Alexandra ..	73	30	"	Paddle ..	"	
Alpha ..	34	13	"	Screw ..	"	New dredge.
Antrim ..	35	30	"	Paddle ..	"	
Aorere ..	44	16	Compound ..	Screw ..	Extended river	New vessel.
Arawata ..	623	300	"	"	Sea-going	
Argyle ..	129	45	"	"	"	
Australia ..	260	77	"	"	"	First survey in colony.
Awarua ..	100	80	"	Paddle ..	"	Tug.
Awhina ..	5	50	"	Screw ..	"	
Balclutha ..	84	50	Non-condensing	Stern-wheel ..	River	
Beautiful Star ..	146	30	Condensing ..	Screw ..	Sea-going	
Bella ..	12	12	Non-condensing	"	Extended river	
Ben Lomond ..	33	15	"	"	River ..	
Birkenhead ..	55	16	"	Paddle ..	"	Late "Jane Williams."
Black Diamond ..	9	20	"	"	"	
Boojum ..	14	12	Compound ..	Screw ..	Extended river	Wrecked.

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

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Britannia .. ..	108	40	Non-condensing	Paddle	River	
Calliope .. ..	11	7	"	Twin-screw	"	Launch.
Canterbury .. ..	..	24	"	"	Extended river	"
Charles Edward .. ..	140	60	Compound ..	"	Sea-going	
Chelmsford .. ..	70	24	"	"	"	New vessel.
Clansman .. ..	336	98	"	"	"	
Colleen .. ..	33	18	Condensing ..	Paddle	River	
Coromandel .. ..	67	25	Compound ..	Screw	Extended river	
Delta .. ..	60	30	Non-condensing	Paddle	River	
Devonport .. ..	24	12	"	"	"	
Diamond of the Avon .. ..	..	10	"	"	"	Launch.
Dispatch .. ..	38	40	Condensing ..	"	Sea-going ..	Tug.
Douglas .. ..	55	30	"	Screw	"	
Durham .. ..	53	30	Compound ..	"	River	
Eagle .. ..	138	70	"	Paddle	"	New vessel.
Echo .. ..	..	3	Condensing ..	Screw	"	Launch.
Effort .. ..	13	12	Compound ..	Paddle	"	
Elsie .. ..	..	8	"	Screw	Extended river	"
Enterprise .. ..	61	32	"	Paddle	"	
Explorer .. ..	171	40	Condensing ..	Screw	Sea-going	
Fairy .. ..	32	15	Non-condensing	"	Extended river	
Fingal .. ..	22	13	Condensing ..	"	"	
Gairloch .. ..	187	85	Compound ..	Twin-screw	Sea-going	
Gleaner .. ..	8	8	Non-condensing	Screw	River	New launch.
Glenelg .. ..	156	75	Compound ..	"	Sea-going	
Go-Ahead .. ..	129	45	"	"	"	
Grafton .. ..	297	123	"	Twin-screw	"	
Hannah Mokau .. ..	35	15	"	Screw	"	Wrecked.
Hauraki .. ..	59	18	"	"	"	"
Hauroto .. ..	1,276	253	"	"	"	
Hawea .. ..	462	160	"	"	"	
Herald .. ..	356	85	"	"	"	
Hokianga .. ..	..	7	Non-condensing	"	River	Launch.
Huia .. ..	90	25	Compound ..	"	Sea-going	
Huia .. ..	..	6	Non-condensing	"	River	Launch.
Ida .. ..	12	10	"	"	"	
Invercargill .. ..	123	50	Compound ..	"	Sea-going	
Iona .. ..	61	45	Non-condensing	Stern-wheel	River	
Iona .. ..	159	65	Compound ..	Screw	Sea-going	
Iron Age .. ..	36	30	Condensing ..	Paddle	River	
Jane .. ..	25	8	Non-condensing	Screw	Extended river	
Janet Nicol .. ..	496	90	Compound ..	"	Sea-going	
Jane Douglas .. ..	75	20	"	"	"	
Kahu .. ..	93	40	"	"	"	New vessel.
Kakanui .. ..	57	22	"	"	"	
Katikati .. ..	27	8	Condensing ..	"	Extended river	
Kawatiri .. ..	286	70	Compound ..	"	Sea-going	
Kennedy .. ..	138	50	"	Twin-screw	"	
Kina .. ..	39	15	"	Screw	River	
Kiwi .. ..	132	30	"	"	Sea-going	
Kopuru .. ..	23	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	Launch.
Lady Barkly .. ..	39	18	Compound ..	"	Sea-going	
Lalla Rookh .. ..	44	15	"	"	River	Wrecked.
Lilie .. ..	10	10	Non-condensing	Paddle	"	
Lily .. ..	20	10	"	Twin-screw	"	
Little George .. ..	..	4	"	Screw	"	Launch.
Lyttelton .. ..	86	25	Condensing ..	"	Sea-going ..	Wrecked.
Lyttelton .. ..	39	80	Compound ..	Paddle	"	Tug.
Macgregor .. ..	163	60	"	Screw	"	
Mahinapua .. ..	205	80	"	Twin-screw	"	
Maitai .. ..	163	55	"	Screw	"	
Mana .. ..	51	25	"	"	River	New vessel.
Manapouri .. ..	1,020	300	"	"	Sea-going	
Manawatu .. ..	112	40	"	"	"	
Manukau .. ..	45	15	Non-condensing	"	River	
Maori .. ..	17	8	"	"	Extended river	
Maori .. ..	118	60	Condensing ..	"	Sea-going	
Mararoa .. ..	1,248	530	"	"	"	New vessel.
Matau .. ..	50	40	Non-condensing	Stern-wheel	River	
Matuku .. ..	..	3	"	Screw	"	New launch.
Minnie Casey .. ..	43	25	Compound ..	"	"	
Moa .. ..	110	25	Condensing ..	"	Sea-going	
Mountaineer .. ..	66	25	Compound ..	Paddle	River	
Murray .. ..	78	18	Condensing ..	Screw	Sea-going	
Nautilus (yacht) .. ..	32	18	Compound ..	"	Extended river	New launch.
Neptune .. ..	44	18	"	"	Sea-going	
Noko .. ..	15	9	Non-condensing	"	River	Launch.
No. 121 .. ..	394	100	Compound ..	Twin-screw	"	New dredge.
No. 222 .. ..	502	120	"	"	Sea-going ..	Dredge.
Ohau .. ..	411	92	"	Screw	"	
Omapere .. ..	352	160	"	"	"	



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

Name of Vessel.	Tons, Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Orawaiti .. ..	283	120	Compound ..	Screw ..	Sea-going	
Oreti .. ..	138	43	" ..	" ..	" ..	
Paiaka .. ..	10	10	Non-condensing	" ..	River	
Patiki .. ..	37	22	" ..	Paddle ..	" ..	
Pearl .. ..	9	7	" ..	Screw ..	Extended river	
Pelham .. ..	228	68	Compound ..	" ..	Sea-going ..	Wrecked.
Penguin .. ..	442	180	" ..	" ..	" ..	
Peninsula .. ..	31	18	Non-condensing	Paddle ..	River	
Phoenix .. ..	10	4	" ..	Screw ..	" ..	Late "Moki."
Piako .. ..	..	6	" ..	" ..	" ..	Launch.
Picton .. ..	7	8	" ..	" ..	Extended river	"
Pioneer .. ..	5	5	" ..	" ..	River ..	"
Planet .. ..	13	8	" ..	" ..	Extended river	"
Plucky .. ..	29	40	Compound ..	" ..	Sea-going ..	Tug.
Progress .. ..	200	50	" ..	" ..	" ..	Hopper-dredge.
Rangiriri .. ..	30	30	Non-condensing	Stern-wheel ..	River	
Result .. ..	13	10	" ..	Paddle ..	Extended river	
Result .. ..	..	4	" ..	Screw ..	River ..	Launch.
Result .. ..	18	14	" ..	" ..	Extended river	
Reynolds .. ..	..	14	" ..	" ..	River ..	Launch.
Rosamond .. ..	462	90	Compound ..	" ..	Sea-going ..	First survey in
Rose Casey .. ..	99	40	" ..	" ..	Extended river	colony.
Rosina .. ..	21	14	Non-condensing	" ..	" ..	
Rotomahana .. ..	864	450	Compound ..	" ..	Sea-going	
Rotomahana .. ..	139	45	Condensing ..	" ..	" ..	
Rotorua .. ..	576	172	Compound ..	" ..	" ..	
Ruby .. ..	32	14	" ..	" ..	Extended river	
Scotchman .. ..	30	10	Non-condensing	" ..	River	
Sea Gull .. ..	..	3	" ..	" ..	" ..	Launch.
Shag .. ..	31	27	" ..	" ..	" ..	
Sir Donald .. ..	29	12	Condensing ..	" ..	Extended river	Wrecked.
Snark .. ..	..	6	Non-condensing	" ..	River ..	Launch.
Southern Cross .. ..	139	50	Compound ..	" ..	Sea-going	
Spray .. ..	..	3	Non-condensing	" ..	River ..	Launch.
Staffa .. ..	40	25	Condensing ..	" ..	Sea-going	
St. Kilda .. ..	174	45	" ..	" ..	" ..	
Stormbird .. ..	137	40	Compound ..	" ..	" ..	
Tainui .. ..	41	22	Non-condensing	Paddle ..	River	
Tainui .. ..	..	8	" ..	Screw ..	Extended river	Launch.
Takapuna .. ..	57	20	" ..	Paddle ..	River	
Tam O'Shanter .. ..	22	12	" ..	Screw ..	Extended river	
Tamsui .. ..	919	160	Compound ..	" ..	Sea-going ..	Left the colony.
Tangihua .. ..	20	15	Non-condensing	" ..	River	
Tarawera .. ..	1,269	250	Compound ..	" ..	Sea-going	
Taupo .. ..	408	92	" ..	" ..	" ..	
Tay .. ..	..	5	Non-condensing	" ..	River ..	New launch.
Te Anau .. ..	1,028	250	Compound ..	" ..	Sea-going	
Te Aroha .. ..	50	14	Non-condensing	Paddle ..	River	
Tekapo .. ..	1,544	270	Compound ..	Screw ..	Sea-going	
Terrier .. ..	..	3	Non-condensing	" ..	River ..	Launch.
Terror .. ..	..	10	" ..	" ..	" ..	
Te Wae .. ..	..	16	" ..	Twin-screw ..	" ..	Dredge.
Theodore .. ..	35	25	" ..	Paddle ..	" ..	
Timaru .. ..	279	70	Compound ..	Screw ..	Sea-going	
Titan .. ..	21	55	Condensing ..	Paddle ..	" ..	Tug.
Tongariro .. ..	39	10	Non-condensing	" ..	Extended river	
Torea .. ..	9	18	Compound ..	Screw ..	" ..	
Triumph .. ..	1,797	400	" ..	" ..	Sea-going	
Tuhua .. ..	..	28	Non-condensing	Stern-wheel ..	River	
Tui .. ..	55	22	Compound ..	Screw ..	Sea-going ..	Wrecked.
Victoria .. ..	93	40	Non-condensing	Paddle ..	River	
Vivid .. ..	16	14	" ..	Screw ..	Extended river	
Waihi .. ..	63	20	Compound ..	" ..	Sea-going	
Waihora .. ..	1,269	265	" ..	" ..	" ..	
Waikato .. ..	61	20	Non-condensing	Paddle ..	River	
Waipara .. ..	70	13	" ..	Twin-screw ..	Sea-going	
Wairarapa .. ..	1,023	292	Compound ..	Screw ..	" ..	
Wairoa .. ..	48	16	Condensing ..	" ..	Extended river	
Waitaki .. ..	228	90	Compound ..	" ..	Sea-going	
Waitara .. ..	11	15	Non-condensing	" ..	River	
Waitoa .. ..	27	16	" ..	Twin-screw ..	" ..	
Waiwera .. ..	..	8	" ..	Screw ..	" ..	Launch.
Waiwera .. ..	6	10	Compound ..	" ..	Extended river	"
Wakatipu .. ..	1,157	256	" ..	" ..	Sea-going	
Wakatu .. ..	75	30	Compound ..	" ..	Sea-going	
Wallabi .. ..	101	25	Condensing ..	" ..	" ..	
Wareatea .. ..	288	70	Compound ..	" ..	" ..	
Waverley .. ..	76	25	" ..	Twin-screw ..	" ..	
Weka .. ..	53	20	" ..	Screw ..	" ..	
Wellington .. ..	279	80	" ..	" ..	" ..	
Westland .. ..	35	60	Condensing ..	Paddle ..	" ..	Tug.
Zephyr .. ..	..	12	Non-condensing	Screw ..	River ..	Launch.

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st March, 1887.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Collin Francis Post .. .. .	Second Mate ..	Foreign trade ..	1 April, 1886 ..	478
Frank Wilson Arbon .. .. .	" ..	" ..	1 " " ..	479
Alexander Craig .. .. .	" ..	" ..	15 " " ..	480
Thomas Albert Ocford .. .. .	" ..	" ..	15 " " ..	481
Henry Thomas Evans .. .. .	" ..	" ..	22 " " ..	482
Hugh Treacy .. .. .	" ..	" ..	22 " " ..	483
William Neagle .. .. .	Master Ordinary ..	" ..	22 " " ..	350
John Sinclair Stuart .. .. .	" ..	" ..	6 May, " ..	414
Ernest Warner Cleveland .. .. .	Only Mate ..	" ..	6 " " ..	438
Henry Charles Ross .. .. .	Master Ordinary ..	" ..	21 " " ..	484
William Smith Hutcheson .. .. .	Second Mate ..	" ..	31 " " ..	485
William Campbell .. .. .	Only Mate ..	" ..	31 " " ..	466
Albert Molkin Andresen .. .. .	Master Ordinary ..	" ..	2 June, " ..	365
George Urquhart Thomson .. .. .	First Mate ..	" ..	4 " " ..	486
Frederick William Joslin .. .. .	Master Ordinary ..	" ..	15 " " ..	298
Grantham Gace .. .. .	First Mate ..	" ..	16 " " ..	487
Alfred Morton .. .. .	Master Ordinary ..	" ..	28 " " ..	488
Henry Thomas Rawnsley .. .. .	First Mate ..	" ..	1 July, " ..	489
Charles Watchlin .. .. .	" ..	" ..	1 " " ..	490
David Spence .. .. .	" ..	" ..	15 " " ..	491
John Duncan McDougall .. .. .	Second Mate ..	" ..	17 " " ..	492
Robert Bulloch .. .. .	First Mate ..	" ..	19 " " ..	493
Walter Smith .. .. .	Master Ordinary ..	" ..	19 " " ..	345
Matthew Irvine .. .. .	Second Mate ..	" ..	28 " " ..	494
Charles Gustaf Hollmen .. .. .	First Mate ..	" ..	3 Aug., " ..	318
John Robertson .. .. .	Master Ordinary ..	" ..	3 " " ..	457
Frederick Payne Gallwey .. .. .	Second Mate ..	" ..	3 " " ..	495
William James Enright .. .. .	Master Ordinary ..	" ..	14 " " ..	496
George Alfred Lobb .. .. .	First Mate ..	" ..	25 " " ..	497
William Stevens .. .. .	Second Mate ..	" ..	31 " " ..	498
Alexander Perry .. .. .	First Mate ..	" ..	31 " " ..	400
Thomas Charles William Ancell .. .. .	" ..	" ..	18 Sept., " ..	499
John Harrison Cullen .. .. .	Master Ordinary ..	" ..	22 " " ..	500
Henry Hamilton Johnston .. .. .	Only Mate ..	" ..	5 Oct., " ..	501
Henry Lewis Walter Cracroft .. .. .	Master Ordinary ..	" ..	5 " " ..	502
Lewis Frederick Drew .. .. .	" ..	(renewal) ..	12 " " ..	503
John William Watkins .. .. .	Second Mate ..	" ..	12 " " ..	504
William Francis Stewart .. .. .	" ..	" ..	18 " " ..	505
Andrew Anderson .. .. .	Master Ordinary ..	" ..	18 " " ..	340
Walter Francis Norbury .. .. .	" ..	" ..	4 Nov., " ..	236
George Alfred Sparks .. .. .	Second Mate ..	" ..	4 " " ..	506
Robert Little Stephen .. .. .	First Mate ..	" ..	23 " " ..	507
Frank Wilson .. .. .	Master Ordinary ..	" ..	25 " " ..	508
Thomas James Chaplin .. .. .	" ..	" ..	29 " " ..	385
Arthur Myrvin Raymond .. .. .	" ..	" ..	7 Dec., " ..	509
George Martin .. .. .	First Mate ..	" ..	9 " " ..	510
Alfred Phillips .. .. .	Master Ordinary ..	" ..	18 " " ..	511
William Palmer Collins .. .. .	First Mate ..	" ..	22 " " ..	512
Thomas William Groves .. .. .	" ..	" ..	30 " " ..	513
Robert Girling .. .. .	Second Mate ..	" ..	30 " " ..	514
Thomas Mahon .. .. .	Master Ordinary ..	" ..	11 Jan., 1887 ..	386
Robert Henry Offord .. .. .	" ..	" ..	11 " " ..	387
George Herbert Keyworth .. .. .	" ..	" ..	14 " " ..	268
Patrick Classon .. .. .	First Mate ..	" ..	17 " " ..	515
William Allison Bowie .. .. .	Second Mate ..	" ..	5 Feb., " ..	516
Robert McQuillan .. .. .	Master Ordinary ..	" ..	5 " " ..	118
Murdoch McRae .. .. .	Only Mate ..	" ..	8 " " ..	517
William James Rawlingson .. .. .	Second Mate ..	" ..	17 " " ..	518
Henry William Wigmore .. .. .	" ..	" ..	22 " " ..	519
William Muir .. .. .	First Mate ..	" ..	22 " " ..	520
Archibald Brown .. .. .	Second Mate ..	" ..	3 March, " ..	521
William Burton .. .. .	Master Ordinary ..	" ..	3 " " ..	321
John Rolph .. .. .	" ..	" ..	9 " " ..	522
John Oscar Berg .. .. .	Only Mate ..	" ..	18 " " ..	523
John Anthony Wilson .. .. .	Second Mate ..	" ..	18 " " ..	524
Philip Escott .. .. .	" ..	" ..	18 " " ..	525
Frederick John Beach .. .. .	Mate ..	Home trade (renewal) ..	13 April, 1886 ..	5,293
John Oscar Berg .. .. .	" ..	Home trade ..	6 May, " ..	5,294
Henry Hayes .. .. .	" ..	" ..	11 " " ..	5,295
Francis Clarence Taylor .. .. .	Master ..	(renewal) ..	25 " " ..	5,296
John Hansen .. .. .	Mate ..	" ..	31 " " ..	5,297
Emanuel Octavius Holst .. .. .	" ..	" ..	26 July, " ..	5,298
William Hugh Ward .. .. .	" ..	" ..	16 Aug., " ..	5,299
Daniel George Gilbertson .. .. .	" ..	" ..	25 " " ..	5,300
Tasman Arthur Gibbons .. .. .	Master ..	" ..	6 Sept., " ..	5,213
Edward Quinlan .. .. .	Mate ..	" ..	13 " " ..	5,301
John McPhee .. .. .	" ..	" ..	18 " " ..	5,302
Ole Paulsen .. .. .	" ..	" ..	22 " " ..	5,303
Raymond Burns .. .. .	" ..	" ..	12 Oct., " ..	5,304
William Bourke .. .. .	" ..	" ..	18 " " ..	5,305
Edwin John Booth .. .. .	" ..	" ..	21 " " ..	5,306
John George Gilbertson* .. .. .	Master ..	" ..	1 Nov., " ..	5,240
Henry Mansfield .. .. .	Mate ..	" ..	18 " " ..	5,307
Charles Thompson .. .. .	" ..	" ..	3 Dec., " ..	5,308

\* Failed in colours.

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued, &c.  
—continued.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Herbert William Farrington .. ..	Mate .. ..	Home trade ..	9 Dec., 1886 ..	5,309
George Dobson .. ..	" .. ..	" .. ..	11 Jan., 1887 ..	5,310
John Oscar Berg .. ..	" .. ..	" (renewal) ..	9 Feb., " ..	5,311
Edward Charles Windsor .. ..	Master .. ..	Home trade ..	22 " " ..	5,177
Edward Graham .. ..	Mate .. ..	" .. ..	25 " " ..	5,312
Neil Campbell .. ..	" .. ..	" .. ..	23 March, " ..	5,313
Henry Maret .. ..	Master .. ..	River trade ..	18 May, 1886 ..	3,124
William Field Porter .. ..	" .. ..	" .. ..	28 July, " ..	3,125
James Charles Braid .. ..	" .. ..	" .. ..	6 Aug., " ..	3,126
John McKenzie .. ..	" .. ..	" .. ..	18 Sept., " ..	3,127
Thorvald Krogh .. ..	" .. ..	" .. ..	30 " " ..	3,128
Charles Grant .. ..	" .. ..	" .. ..	18 Oct., " ..	3,129
Thomas McClatchey .. ..	" .. ..	" .. ..	21 " " ..	3,130
Edwin John Booth .. ..	" .. ..	" .. ..	21 " " ..	3,131
Richard Ker Sinclair .. ..	" .. ..	" .. ..	12 Nov., " ..	3,132
John Herbert Davies .. ..	" .. ..	" .. ..	23 " " ..	3,133
Herbert William Farrington .. ..	" .. ..	" .. ..	9 Dec., " ..	3,134
John Frederick Matthew Waldon .. ..	" .. ..	" .. ..	20 " " ..	3,135
George Adams .. ..	" .. ..	" .. ..	22 " " ..	3,136
Henry James Hansen .. ..	" .. ..	" .. ..	21 Jan., 1887 ..	3,137
James George Wilson .. ..	" .. ..	" .. ..	8 Feb., " ..	3,138
Edward Quinlan .. ..	" .. ..	" .. ..	11 " " ..	3,139
Murdoch Stuart .. ..	" .. ..	" .. ..	17 " " ..	3,140
Samuel Johnson .. ..	1st Class Engineer	Foreign trade ..	3 April, 1886 ..	121
Samuel Dalrymple .. ..	" .. ..	" (renewal) ..	16 " " ..	152
Peter Grant .. ..	2nd Class Engineer	" .. ..	19 " " ..	153
William Westwood .. ..	1st Class Engineer	" .. ..	6 May " ..	110
James Brown .. ..	" .. ..	" .. ..	14 " " ..	154
Alexander Reid Douglas .. ..	" .. ..	" .. ..	21 " " ..	104
John Griffiths .. ..	" .. ..	" .. ..	4 June, " ..	155
David Bett Hood .. ..	2nd Class Engineer	" .. ..	19 " " ..	156
John Stevenson Chapman .. ..	1st Class Engineer	" .. ..	5 July, " ..	100
Duncan Cargil Paton .. ..	" .. ..	" .. ..	10 " " ..	119
Thomas Scott .. ..	2nd Class Engineer	" .. ..	20 Aug., " ..	157
Samuel McDowall .. ..	" .. ..	" .. ..	31 " " ..	158
John McGregor .. ..	" .. ..	" .. ..	20 Sept., " ..	159
John Wishart .. ..	" .. ..	" .. ..	1 Nov., " ..	160
William Marshall Millar .. ..	" .. ..	" .. ..	26 " " ..	161
Donald Stalker .. ..	" .. ..	" .. ..	26 " " ..	162
Cecil Harry Grundy Croll .. ..	" .. ..	" .. ..	3 Dec., " ..	163
James Felix Pleasents .. ..	" .. ..	" .. ..	24 " " ..	164
John James Cormack .. ..	1st Class Engineer	" .. ..	30 " " ..	106
Giles William Johnson .. ..	2nd Class Engineer	" (renewal) ..	7 Jan., 1887 ..	165
James Ewing .. ..	1st Class Engineer	" .. ..	17 " " ..	112
John McDiarmid .. ..	2nd Class Engineer	" .. ..	27 " " ..	166
Charles Lovel Riby .. ..	1st Class Engineer	" .. ..	1 Feb., " ..	122
John Stevenson Chapman .. ..	" .. ..	" (renewal) ..	5 March, " ..	167
Thomas Carter .. ..	Engineer .. ..	River trade ..	13 April, 1886 ..	1,503
Thomas McCune .. ..	" .. ..	" .. ..	15 " " ..	1,504
Adam Gall .. ..	" .. ..	" .. ..	19 " " ..	1,505
James John Jack .. ..	" .. ..	" .. ..	19 " " ..	1,506
Henry Steen .. ..	" .. ..	" .. ..	29 " " ..	1,507
Herbert Smith .. ..	" .. ..	" .. ..	29 " " ..	1,508
William Henry Sykes .. ..	" .. ..	" .. ..	27 July, " ..	1,509
John Rae .. ..	" .. ..	" .. ..	10 Aug., " ..	1,510
Cornelius Stubbs .. ..	" .. ..	" .. ..	16 " " ..	1,511
William Skepper .. ..	" .. ..	" .. ..	16 " " ..	1,512
John Brown .. ..	" .. ..	" .. ..	10 Sept., " ..	1,513
Thomas Child .. ..	" .. ..	" .. ..	18 " " ..	1,514
Benjamin Williams .. ..	" .. ..	" .. ..	9 Oct., " ..	1,515
Thomas Latham .. ..	" .. ..	" .. ..	14 " " ..	1,516
Thomas Moir .. ..	" .. ..	" .. ..	18 " " ..	1,517
William White .. ..	" .. ..	" .. ..	4 Nov., " ..	1,518
Francis Johnston .. ..	" .. ..	" .. ..	20 " " ..	1,519
Edwin John Booth .. ..	" .. ..	" .. ..	3 Dec., " ..	1,520
Henry Creasey .. ..	" .. ..	" .. ..	18 " " ..	1,521
William Faithful .. ..	" .. ..	" .. ..	14 Jan., 1887 ..	1,522
William Frederick Rankin .. ..	" .. ..	" .. ..	25 " " ..	1,523
Joseph Harden .. ..	" .. ..	" .. ..	31 " " ..	1,524
William Albert Andrew .. ..	" .. ..	" .. ..	31 " " ..	1,525
James George Wilson .. ..	" .. ..	" .. ..	1 Feb., " ..	1,526
Henry Joseph Rees .. ..	" .. ..	" .. ..	11 " " ..	1,527
Adolphus John Park .. ..	" .. ..	" .. ..	29 March, " ..	1,528

RETURN showing the Number of Masters, Mates, and Engineers examined during the Year ended the 31st March, 1887, 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	13	8	21	15	7	22	15	4	19	22	4	26	..	..	..	65	23	88
Home-trade masters and mates	7	4	11	10	1	11	1	1	2	..	1	1	4	..	4	22	7	29
River-steamer masters	7	3	10	3	..	3	1	..	1	2	..	2	6	..	6	19	3	22
Sea-going engineers	..	..	..	8	2	10	2	..	2	10	1	11	..	..	..	20	3	23
River-steamer engineers	..	12	..	12	7	..	7	2	1	3	1	..	1	4	..	26	1	27
Totals .. ..	39	15	54	43	10	53	21	6	27	35	6	41	14	..	14	152	37	189

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, 1887.

Name of Lighthouse.	Salaries.	Oil.		Stores and Contingencies.	Totals.
		Gallons consumed.	Value.		
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Cape Maria van Diemen .. ..	359 3 4	848	63 12 0	82 11 4	505 6 8
Moko Hinou .. ..	380 5 4	838	62 17 0	37 11 11	480 14 3
Tiri Tiri .. ..	248 6 8	515	38 12 6	35 12 8	322 11 10
Bean Rock .. ..	150 0 0	80	8 6 8	20 1 9	178 8 5
Ponui Passage .. ..	160 0 0	78	5 17 0	3 6 9	169 3 9
Portland Island .. ..	360 0 0	644	48 6 0	51 0 11	459 6 11
Napier Bluff .. ..	36 0 0	Gas	17 18 0	..	53 18 0
Pencarrow Head .. ..	255 0 0	844	63 6 0	29 1 10	347 7 10
Somes Island .. ..	150 3 4	206	15 9 0	16 12 3	182 4 7
Cape Egmont .. ..	300 0 0	504	37 16 0	38 18 10	376 14 10
Manukau Head .. ..	270 0 0	515	38 12 6	65 1 11	373 14 5
Manukau South Head leading lights*	..	48	3 12 0	..	3 12 0
Manukau North Head leading lights*	73 6 8	75	5 12 6	17 2 9	96 1 11
Kaipara Heads .. ..	250 0 0	531	39 16 6	84 12 7	374 9 1
Brothers .. ..	465 1 10	680	51 0 0	76 13 4	592 15 2
Tory Channel .. ..	90 0 0	175	13 2 6	5 18 5	109 0 11
Cape Campbell .. ..	266 3 4	600	45 0 0	70 18 7	382 1 11
Godley Head .. ..	260 0 0	506	37 19 0	28 4 2	326 3 2
Akaroa Head .. ..	260 0 0	620	46 10 0	30 10 8	337 0 8
Moeraki .. ..	260 0 0	508	38 2 0	25 13 2	323 15 2
Taiaroa Head .. ..	287 10 0	547	41 0 6	48 13 0	377 8 6
Cape Saunders .. ..	260 0 0	491	36 16 6	34 15 7	331 12 1
Nugget Point .. ..	254 3 4	968	72 12 0	58 1 4	384 16 8
Waipapapa Point .. ..	280 0 0	504	37 16 0	45 17 0	363 13 0
Dog Island .. ..	355 16 8	821	61 11 6	79 15 2	497 3 4
Centre Island .. ..	350 0 0	863	64 14 6	54 3 7	468 18 1
Puysegur Point .. ..	357 10 0	852	63 18 0	310 3 1†	731 11 1
Cape Foulwind .. ..	280 0 0	530	39 15 0	54 3 9	373 18 9
Farewell Spit .. ..	335 16 8	497	37 5 6	49 0 8	422 2 10
Nelson .. ..	280 0 0	230	17 5 0	5 0 0	302 5 0
French Pass .. ..	210 0 0	124	9 6 0	28 4 2	247 10 2
Totals .. ..	7,844 7 2	15,242	1,163 7 8	1,487 16 2	10,495 11 0

\* Light

November, 1886.

† £139 14s. 3d. was for repairs.

# RETURN of WRECKS and CASUALTIES to SHIPPING reported to the Marine Department, from the 1st April, 1886, to the 31st March, 1887.

Date of Casualty.	Name of Vessel, Age and Class.	Rig.	Number of		Nature of		Number of Lives lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
			Crew	Passengers.	Cargo.	Casualty.			Direction.	Force.		
1886. Unknown	Nauphante, 30 years	Barque..	10	..	Ballast..	Supposed foundered; total loss	Supposed 10; all hands	On voyage from Amoy to Manila	..	..	Vessel left Amoy, bound to Manila, on the 27th December, 1885, and has not since been heard of	Simon Saunders.
March 31	Sybil, 64 years	Schooner	7	..	General; island produce	Stranded; slight damage	..	Aitutaki, Cook Group..	N.E.	Breeze ..	Vessel touched reef through mate, who was in charge, allowing her to get too close in	George Henry Trayte.
" 31	Kawatiri, s.s., 3 years	Schooner	17	..	Coal ..	Stranded; partial loss	..	Bar of Buller River ..	..	..	Casualty caused through insufficient water on bar. Vessel struck on something hard, supposed to be propeller of s.s. "Grafton," lost some time previously	John Metcalf.
April 11	Taiaroa, s.s., 11 years	Schooner	29	14 or 15	General	Stranded; total loss	30	Waipapa Point, East Coast, Middle Island	S.E.	Strong gale	After the wind increased to a smart gale from S.E. at 5 p.m., the master ought to have hauled out at least another point, as the land was obscured by mist. He must have known that he was near a lee shore, with thick weather, adverse current, wind and sea on the weather bow. As he did not alter his course he should have placed a leadman in the chains until the weather cleared or he had ascertained his position accurately. He ought to have taken cross bearings at Cape Campbell to have ascertained the position of his vessel; and his admission that he did not at any time look at the compass to see how the ship was steered, and the reason given by him for not having done so—namely, that he thought it sufficient to have given the course to the officer in charge of the watch—shows a want of knowledge of his own duties and responsibilities. He ought also to have known whether there was a distress-signal gun and Holmes lights on board. He never did anything whatever to prevent a full-powered steamer being driven by wind and sea bodily to leeward broadside on to a beach 100 miles from the port he was bound to. His certificate was cancelled, and he was ordered to pay the costs of the inquiry. Court recommended that Governor should grant him a mate's certificate, and that a master's certificate should be reissued to him at the end of two years, provided he has been at sea as mate continuously in the interim	George Urquhart Thomson.
April 22	Rose Casey, s.s., 7 years	Schooner	10	15	General	Loss of life only	1	Off Mahurangi Reef, on voyage from Auckland to Waiwera and Mahurangi	E.N.E.	Fresh breeze	A passenger named Samuel Keys was pitched overboard by a sudden lurch of the vessel in a heavy sea, and was drowned	William Somerville.
" 22	Janet Ramsay, 15 years	Schooner	4	..	Ballast..	Stranded; partial loss	..	Dagmar Rocks, Catlin's River	N.E.	Light ..	Casualty caused through wind suddenly falling	Richard Norman
" 28	Taupo, s.s., 2 years	Brigantine	23	7	General	Stranded; slight damage	..	Tua Motu, Poverty Bay	..	..	Master not guilty of negligence, but he erred in thinking vessel was more to eastward than she actually was, and also in taking the light he saw as that of a vessel at anchor	Dugald McColl.
May 5	Arawata, s.s., 10 yrs., Al Lloyd's	Schooner	43	..	Coal ..	Loss of life only	1	Off Moko Hinou Islands, on voyage from Russell to Auckland	W.	Strong breeze	A coal-trimmer named R. Dakelew, while engaged over the side of the vessel clearing the ash-spout, fell into the water, and was drowned	William Lillie Cromarty.
" 8	Norman Macleod, 10 years, 100 Al Lloyd's	Barque..	19	..	Wool, tallow, and grain	Fire; damage, £70	..	Off Lyttelton Heads, near Port Levy Rocks	..	..	Case of rockets exploded in saloon whilst being moved by the cabin-boy	Charles Herbert Lovett.
" 19	Gem, 12 years	Schooner	3	..	Sand and shingle	Stranded; partial loss	..	Rock about three-quarters of a mile off S.W. end of Motu Ihi, Auckland Harbour	N.	..	Error in judgment on part of master in not keeping further out	Frank Harnden.
" 20	Defiance, 6 yrs.	Brigantine	8	..	Timber..	Stranded; slight damage	..	Tory Shoal, Kaipara Harbour.	W.	..	Vessel was run further to leeward in wearing ship than master anticipated	John Mackay.

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.	Registered Tonnage	Number of		Nature of		Number of Lives Lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew.	Passengers.	Cargo.	Casualty.			Direction.	Force.		
1886.													
May 21	Star of the Mersey, 23 years	Brig ..	255	9	..	Timber	Stranded; total loss	..	About half-way between town and breakwater, New Plymouth	W.	Strong gale	Vessel sprung a leak, and ran to New Plymouth for shelter, and there went ashore	John Christian.
" 28	Elsie, s.s., 2 years	Cutter ..	15	3	6	General	Stranded; no damage	..	Wave Point, Haulashore Island, Nelson Harbour entrance	S.W.	Light ..	Casualty caused by incapacity of master owing to effects of drink. Certificate suspended for three months; and he was ordered to pay costs of inquiry	John Johnston.
June 12	Lyttelton, 8 yrs., 100 Al Lloyd's	Ship ..	1111	30	..	Frozen meat & wool	Foundered; total loss	..	Three-quarters of a mile N. by W. from end of breakwater, Timaru Harbour	N.W.	Light air	Loss of vessel mainly attributable to master of "Grafton" while towing "Lyttelton." He was never able to get either his own vessel or the "Lyttelton" under proper control. Pilot committed grave error in judgment in not having starboard anchor shackled on to cable before lifting port anchor, and in not ascertaining with some degree of certainty whether the "Lyttelton" was forging ahead when he let go the port anchor when the steamer cast the vessel adrift. The harbour authorities should not have permitted the harbour tug and harbourmaster to be absent from the port when a large vessel like the "Lyttelton" was ready for sea. Master of "Grafton," H. E. Hill, ordered to pay costs of inquiry	Herbert Wild Boorman.
" 13	Isabel, 6 years	Barque..	350	8	..	General	Loss of life only	1	South Atlantic Ocean, on voyage from New York to Dunedin, sixty days out	..	Gale ..	The second mate, Wilbert D. Nicoll, was washed overboard by a heavy sea, and never seen again	
" 16	Waiaapu, 2 years	Schooner	61	5	1	Colonial produce	Loss of life only	1	Off White Island, on voyage from Gisborne to Auckland	S.W.	Gale ..	Weather becoming bad it was found necessary to reduce sail, and while stowing outer-jib a seaman, William Barr, was washed overboard and drowned	John Nicolas.
" 24 supposed	Pelican, 12 years	Schooner	69	5	..	Timber	Capsized; total loss	Supposed 5; all hands	Supposed Cook Strait, on voyage from Kaipara to Lyttelton	S.E.	Gale ..	Vessel supposed to have capsized during violent squalls on night of 24th June. She was found bottom up on beach about a mile west of mouth of Waitotara River on 28th June	John Devitt.
" 25	Ruby, 17 years	Schooner	36	3	..	Maize and wood	Stranded; total loss	..	Avanui, near Opotiki, N.-E. Coast of N.Z.	W.	Heavy gale	Vessel went ashore through cables parting ..	William Davies.
" 28	Wareatea, s.s., 2 years	Schooner	288	18	..	Coal ..	Stranded; vessel strained; trifling loss	..	North Beach, Buller River	S.W.	Squally	Heavy sea struck vessel, and drove her on to the north beach	A. S. Ewan.
July 3	Wallabi, s.s., 23 years	Schooner	101	12	1	Coal ..	Stranded; partial loss	..	About half-mile north of mouth of Grey River, west coast of N.Z.	E.	Fresh breeze	Succession of heavy seas rendered vessel unmanageable, and drove her on to the beach	James Leys.
" 5	Herald, s.s., 2 years, 100 Al Lloyd's	Schooner	356	21	9	Coal ..	Stranded; partial loss	..	Point Poponga, Manukau Harbour	S.W.	..	Vessel was coming up harbour with flood-tide, and when off Poponga she was taken apparently by an eddy, and driven on to point	Samuel Richard Savory.



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.	Number of		Nature of		Number of Lives Lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
			Register Tonnage	Crew.	Passengers.	Cargo.	Casualty.		Direction.	Force.		
1886.												
Aug. 25	Day's Bay, 4½ years	Cutter ..	19	2	..	Ballast..	Stranded; total loss	..	Reef at N.W. end of Ward Island, Port Nicholson	S.E.	Vessel caught by gale when too close inshore to get away	Andrew Gregor.
"	Victoria, 26 yrs.	Barque..	365	..	..	Timber..	Damage to bulwarks and two boats stove in	..	West entrance, Foveaux Strait	Gale ..	Casualty caused by force of gale	John Simmins.
Sept. 12	Start ..	Cutter ..	27	3	..	Shingle	Stranded; partial loss	..	Chamberlin's Island, Hauraki Gulf	Gale ..	Casualty caused through anchors coming home	Peter Brown.
"	Cleopatra, 19 years	Schooner	88	6	..	Timber..	Capsized and stranded; total loss	6 (all hands)	Near Waikopu, Mahia, Hawke's Bay	Gale ..	Vessel discovered bottom up, completely wrecked, on rocks. Supposed to have capsized at sea during heavy gale, and all hands lost	Charles Heilemeyer.
"	Ruby, s.s., 10 years	Schooner	32	4	3	General	Stranded; partial loss	..	North end of Rangitoto Island, Hauraki Gulf	Calm ..	Casualty caused through man at the wheel going to sleep, and leaving vessel to take her own course	Michael Lennon.
"	Maid of Otago, 16 years	Schooner	50	4	..	General	Stranded; total loss	..	Howell's Rocks, Starling Point, Bluff Harbour	S.E.	Vessel was running into port for shelter in the darkness, and master did not take soundings to verify his position	John Fraser.
"	Kekeno, 7 years	Schooner	37	6	..	Ballast..	Stranded; partial loss	..	Midway between Bluff Wharf and Starling Point, Bluff Harbour	S.S.E.	Chain parted, and vessel went ashore	James Brown Greig.
"	Lyttelton, s.s., 27 years	Schooner	86	11	1	Coal ..	Stranded; total loss	..	Beef Barrels, entrance to French Pass	S.E.	Wreck did not appear to have been caused by want of care or seamanship on the part of the master or other officer	George Forbes.
"	Clyde, 18 years	Ketch ..	41	3	..	Ballast..	Stranded; total loss	..	Central Island, entrance to Croixelles Harbour	N.E.	Casualty caused through wind suddenly falling	Peter Curran.
"	Sovereign of the Seas, 20 years	Ketch ..	31	2	1	Stores ..	Scuttled, abandoned; total loss	..	Port Macquarie, New South Wales	..	Master and accomplice ran away with vessel, after committing a murder on the Great Barrier Island, New Zealand	John Caffrey.
Oct. 1	Rapido ..	Barque..	299	51	..	General	Stranded; total loss	..	Cambridge Gulf, Western Australia	..	Strong tide set vessel on to rocks	A. L. Edgar.
"	Jannett, 17 yrs.	Ketch ..	41	4	..	Timber..	Stranded; total loss	..	North end of reef at Cape Campbell	S.E.	Loss of vessel caused by carelessness of master. Court suspended his certificate for three months, and ordered him to pay costs of inquiry	John Oscar Berg.
"	Jane Douglas, s.s., 11 years	Schooner	75	13	5	General	Stranded; partial loss	..	South-east end of Long Point, Kapiti Island, Cook Strait	N.W.	Master mistook a fire lighted by Natives for a light usually burnt at night in Mr. Field's house when a steamer is expected to call, and approached the land without sufficient caution. His certificate was suspended for one month, and he was ordered to pay costs of inquiry	James William Grant Fraser.
Nov. 1	Tui, s.s., 11 yrs.	Schooner	55	12	9	General	Stranded; total loss	..	Reef about quarter of a mile north of Pencarrow Head Lighthouse, Port Nicholson	N.N.E.	Casualty caused by reckless navigation of master. Master's certificate was cancelled, and he was ordered to pay costs of inquiry	Charles Quintin Pope.



"	3	May, 17 years..	Barquen- time	237	..	..	..	Loss of life only	1	Lat. 10° 20' S., long. 138° 10' E.	..	..	An O.S. named Ernest Short accidentally fell overboard and was drowned	George Robb.
"	6	Australian Maid, 32 years	Schooner	17	2	..	General	Stranded; par- tial loss	..	Boulder Bank, Croixelles Harbour, Blind Bay	N.W.	Gale ..	Casualty caused by being caught in heavy gale while vessel in helpless position on beach	William Paul.
"	7	Hauraki, s.s., 12½ years	Schooner	59	10	..	General	Stranded; par- tial loss	..	Rock half mile off shore, about 4½ miles south of Otumutua Point, Provincial District of Taranaki	N.W.	Strong breeze	The chief officer, John Cooper, was guilty of error in judgment in keeping vessel too close inshore. Court suspended his certificate for one month, and ordered him to pay costs of inquiry	Edward John Harvey.
"	17	Turakina, 8 yrs.	Ship	1189	..	..	General	Loss of life only	1	Lat. 46° 38' S., long. 141° 31' E.	W.	Strong ..	An A.B. named John Sullivan, while engaged in stowing the jib, fell overboard and was drowned	Robert Power.
"	29	Mawhera, s.s., 3 years	Schooner	340	26	19	General	Stranded; par- tial loss	..	North beach, entrance to Port of Greymouth	E.	Fresh breeze	Court found casualty caused by want of care- ful seamanship on part of Captain Hill when he became slack to a great degree at a dangerous stage of the passage of the bar, to stop and he was ordered to pay costs of inquiry.	Henry Edward Hill
Dec.	7	Kawatiri, s.s., 3 years	Schooner	285	18	4	General	Stranded; par- tial loss	..	Rangitoto Island, Cook Strait	N.W.	..	Master displayed gross neglect of duty in not being on deck from Jackson's Head to Stephens Island, the navigation being dan- gerous, and the distance only 23 miles. Chief Officer Henry Abbott guilty of gross care- lessness in not calling master when thick weather came on, in not slowing the engines, and in not taking any precaution to ascertain the distance run. Master's certificate sus- pended for one month, and chief officer's for three months, each to pay half the costs of the inquiry.	John Metcalfe.
"	17	Yolande, 3½ yrs.	Barquen- time	395	11	..	Coal ..	Loss of life only	3	On voyage from New- castle, N.S.W., to Auckland, lat. 30° 35' S., long. 162° 29' E.	E.S.E.	Gale ..	Whilst stowing the jib it burst in hauling down, and the downhaul carried away. Five men were sent out on to the boom to haul it down and stow it. While engaged in the work a heavy sea carried three of them off, and they were lost	Theodore Thos. Watts.
1887.	5	Omapere, s.s., 5 years	Schooner	352	26	..	None ..	Collision; par- tial loss	..	In narrows between Goat and Quarantine Islands, Otago Har- bour	N.E.	Light	Collision occasioned by want of due caution on part of master of dredge in not sufficiently reducing his speed, and in not keeping closer to starboard side of channel, and by master of Omapere in not reducing speed earlier. Each master ordered to pay half costs of inquiry	Richard Smith.
"	5	Dredge No. 222, 5 years	..	502	18	..	None ..	Collision; par- tial loss	..	..	..	..	..	James Stewart.
"	17	Maria Virginia	Brig'n'tine	283	5	..	Coal ..	Stranded; par- tial loss	..	Whangarei River	N.	Light ..	When coming down channel vessel touched on what is supposed to be ballast patch, where she remained fast for some time, partially filled with water	Theodore Wil- liam Hautain.
"	25	Inglewood, 11 years	Barque ..	1043	21	..	Ballast ..	Stranded; no damage	..	Reef off Mayhew Island, Kapiti, Cook Strait	N.	Light and unsteady	Thick weather prevented land being seen until it was too late to avoid the casualty	Charles Beeching
"	27	Penguin, s.s., 23 years	Schooner	442	..	..	General	Propeller-shaft broken	..	At sea, off Cape Camp- bell	N.N.W.	Moderate	Screw shaft broke in the stern tube..	George Allman.
Feb.	5	Norman Mc- Leod, 10 years	Barque ..	834	19	..	Wool and tallow	Collision with wharf; par- tial loss	..	Alongside Timaru wharf, inside breakwater	N.W.	Gale ..	Heavy gale caused damage alongside wharf ..	Chas. H. Lovett.

NOTE.—In exercise of the powers conferred upon him by section 246 of "The Shipping and Seamen's Act, 1877," His Excellency the Governor directed that Captain Hill's certificate should be reissued and returned to him.

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.	Register Tonnage.	Number of		Nature of		Number of Lives Lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew.	Passengers.	Cargo.	Casualty.			Direction.	Force.		
1887. Feb. 5	Awarua, s.s., 3 years, 100 A1 Lloyd's	Schooner	100	8	..	Ballast..	Collision with wharf; partial loss	..	Alongside wharf, Bluff Harbour	N.	Gale ..	Heavy gale caused vessel to be considerably damaged alongside wharf	Albert Tyson.
" 6	Midge, 33 years	Cutter ..	17	2	..	Timber..	Stranded; total loss	..	Outermost point of Boulder Bank, entrance to Nelson Harbour	N.E.	Strong breeze	Casualty caused through master not keeping leading lights in line	Charles McLean.
" 8	Chelmsford, s.s., 1 year	Schooner	70	9	10	General	Stranded; partial loss	..	Inside bar of Opotiki River	Variable	Light ..	Vessel struck when entering river ..	John Cowper.
" 12	Mercury, 16 yrs.	Cutter ..	30	3	..	Timber..	Stranded; partial loss	..	Waikaka Beach, Waipatu, near Gisborne	S.	..	Vessel dragged her anchors and went ashore..	Anders Pederson.
" 28	Hauraki, s.s., 13 years	Schooner	59	10	..	Coal ..	Foundered; total loss	..	About 23 miles N.N.W. of Cape Farewell	N.W.	Fresh ..	Vessel foundered through having sprung a leak, the cause of which there was no evidence to show	Edward John Harvey.
March 17	Wangarei, 21 years	Cutter ..	31	3	..	Ballast..	Stranded; total loss	..	Between Flat Island and Great Barrier, Hauraki Gulf	W. to S.W.	..	Vessel went ashore owing to some of her gear giving way and disabling one of the men	Peter Peterson.

Compiled by the  
**MARINE DEPARTMENT**

FIXED LIGHT  
FLASHING LIGHT 10 SECONDS  
REVOLVING LIGHT 30 SECONDS  
REVOLVING LIGHT 1 MINUTE

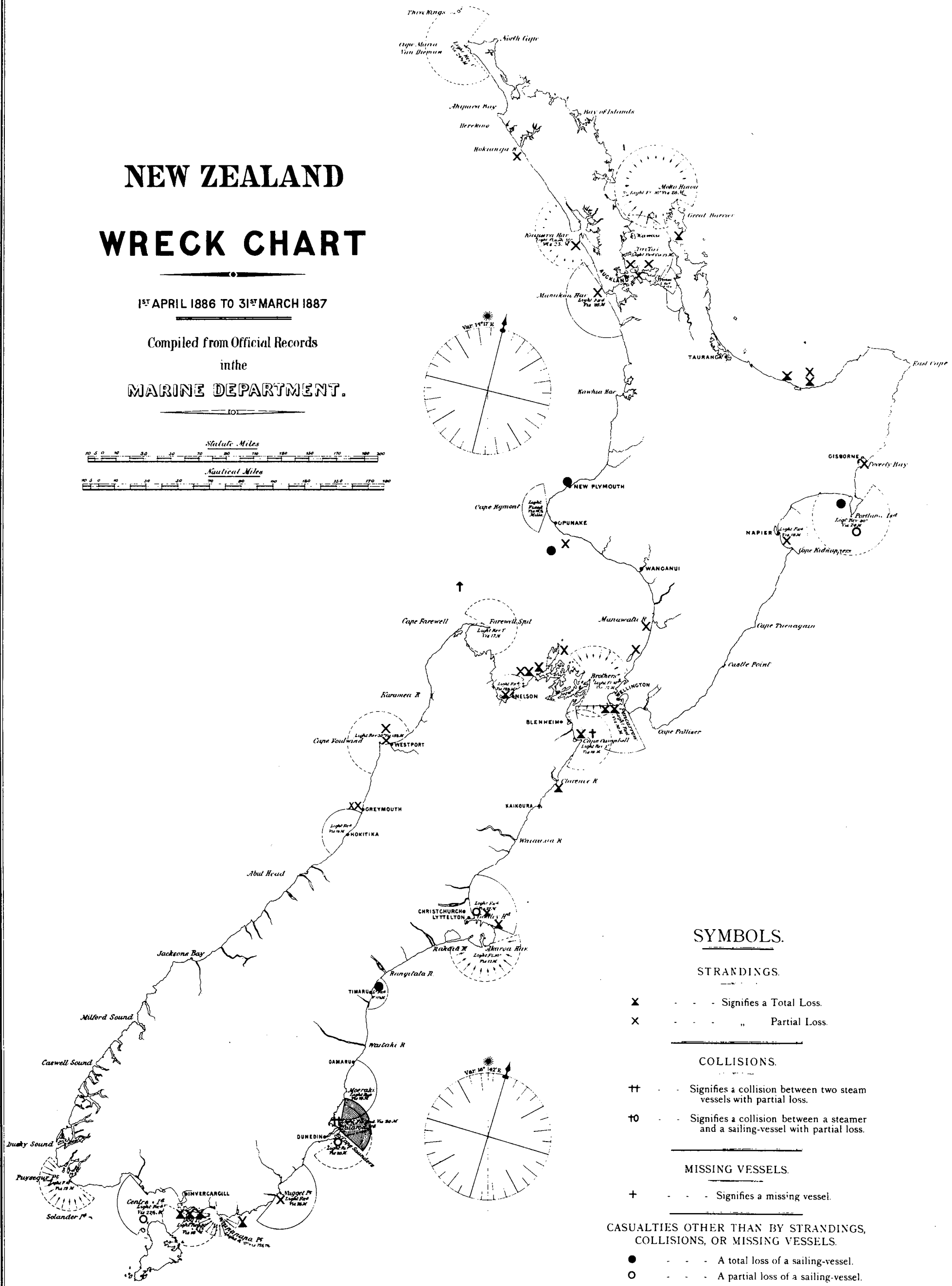
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# NEW ZEALAND WRECK CHART

1<sup>ST</sup> APRIL 1886 TO 31<sup>ST</sup> MARCH 1887

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.

### 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.

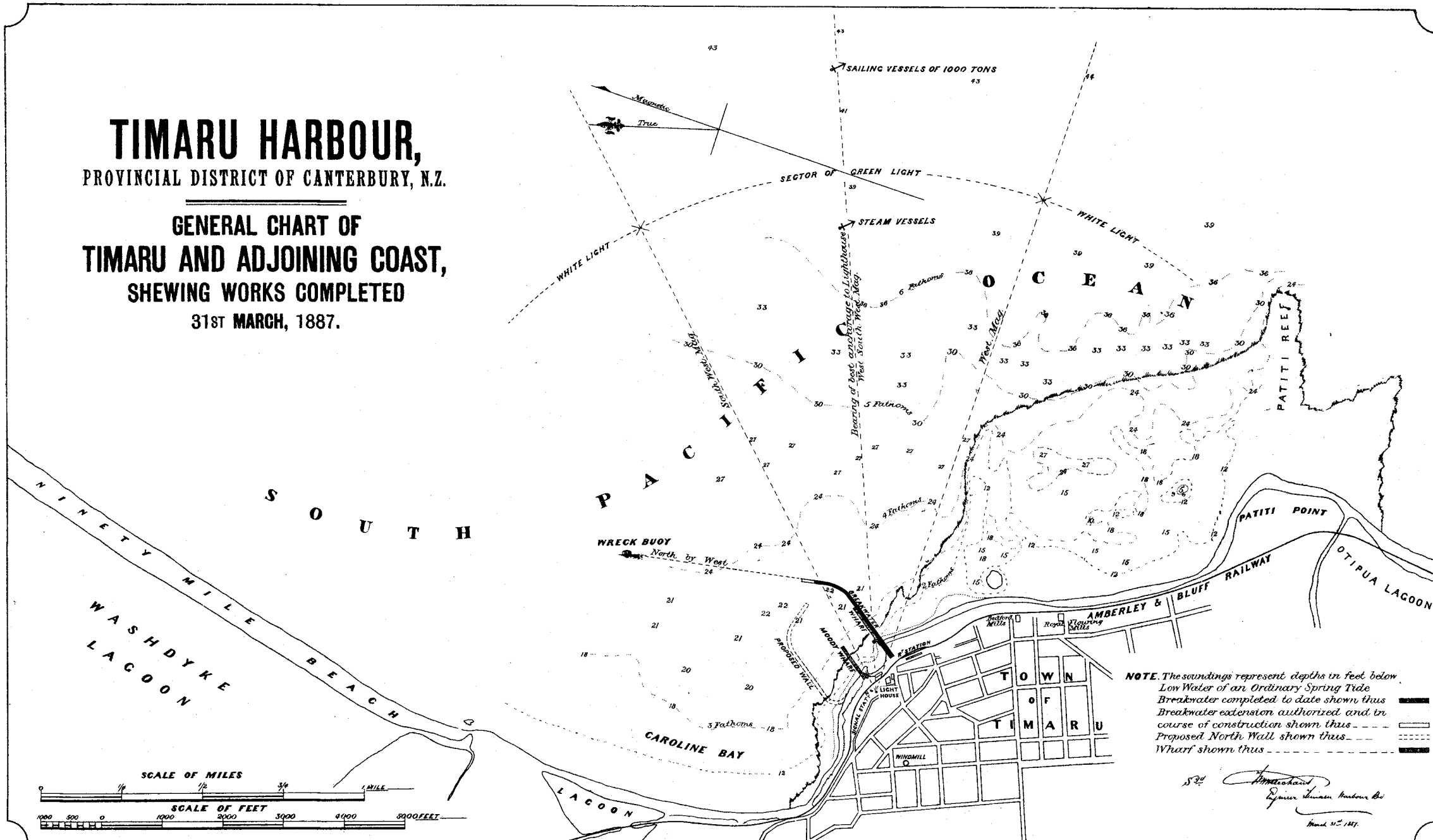


# TIMARU HARBOUR,

PROVINCIAL DISTRICT OF CANTERBURY, N.Z.

## GENERAL CHART OF TIMARU AND ADJOINING COAST, SHEWING WORKS COMPLETED

31ST MARCH, 1887.



**NOTE.** The soundings represent depths in feet below Low Water of an Ordinary Spring Tide.  
Breakwater completed to date shown thus ———  
Breakwater extension authorized and in course of construction shown thus - - - - -  
Proposed North Wall shown thus . . . . .  
Wharf shown thus ———

Signed *[Signature]*  
Surveyor General, Canterbury District  
March 31st 1887.

## PORT OF TIMARU.

THE Port of Timaru, which is the natural outlet of the large and fertile district of South Canterbury, whose export business in a few years will equal that of any port in New Zealand, is situated at a slight projection of the coast-line at the south-west extremity of the Ninety-Mile Beach, south of Banks Peninsula. The town of Timaru stands near the sea-shore, partly on a rise. The lighthouse and flagstaff (only 40ft apart) are on a cliff towards the north end of the town, in latitude 44° 23' S., longitude 171° 17' 20" E. The breakwater, which is now 2,100ft. long, and is rapidly being pushed seawards, extends from the beach in a N.E. by N. direction, and will be seen when viewed from the sea to be in a line with the flagstaff.

The coast-line from Banks Peninsula to Timaru is low, and cannot be seen in thick weather or by night until close in with the breakers, while southwards of the Town of Timaru the cliffs are from 30ft. to 50ft. high. This is a sure guide to Timaru, viz., low shingle beach northward, moderately high cliffs and headlands to the southward.

If the weather is clear, the high mountain range will be seen behind Timaru long before the coast-line has risen. Burke's Pass, a remarkable gorge, almost directly behind Timaru, is a good landmark, showing a distinct gap, and should be steered for on a course W.S.W. magnetic; the cliffs above mentioned will prevent any mistake.

*Directions.*—Vessels bound for Timaru, after rounding Banks Peninsula, should steer S.W. by W. southerly unless the wind be strong from E.S.E., which causes an inset, when it is necessary to keep three-quarters of a point more southerly.

The shore from the end of the breakwater to Patiti Point, a long mile, S.S.E., is fronted by sand and shoal patches, with outlying reefs of rocks and kelp, always breaking, the reef extending nearly two-thirds of a mile direct to seaward from Patiti Point, and one and a half miles to the south-east from the breakwater at Timaru. The reef off Patiti Point runs out a quarter of a mile farther than is marked on the charts, and should have a wide berth.

From Patiti Point southward the coast is again formed of low cliffs, fronted by a shingle beach, and extends thirty miles in a south direction to Waitangi (chart, Waitaki) River, with several small streams intervening. A high mountain range, 3,500ft. (the Hunter Hills), approach within a few miles of the coast, between Timaru and Waitaki River.

The Timaru lighthouse is 30ft. high; it is built of wood and painted white. The light is a fixed white light of the fifth order, dioptric, and shows a green sector of 45° (four points) from W. to S.W., magnetic, as viewed from seaward. It stands 85ft. above the sea-level, and, allowing 15ft. for the height of the observer's eye, should be visible in clear weather at a distance of fourteen nautical miles.

The GREEN LIGHT is intended as a guide to vessels approaching Timaru during the night. Masters of vessels are particularly cautioned that on nearing the port, and while lying at anchor, they must not lose sight of the green light; also, that while under way, the lead-line should always be kept going.

Two red lights, 10ft. apart, are exhibited from the outer end of the breakwater, when weather permits, and show all round to seawards.

The accommodation for shipping under the shelter of the breakwater is now very considerable, and is being rapidly increased as the work extends. Moorings are laid down, to which several vessels can be well secured, moored head and stern. There are besides about 1500ft. available wharfage for berthing vessels. The depth of water is from 10ft. to 23ft. at low-water spring-tides, and vessels drawing up to 19ft. are discharged and loaded with great facility, as the railway runs the whole length of the wharf, and steam cranes are always available.

In order to give despatch to sailing-vessels the Harbour Board maintains a powerful tug, of 56 h.p. nominal.

The towage rates have been made exceedingly liberal, to induce masters of vessels to avail themselves to the utmost of the services of the tug.

*Signals.*—The New Zealand General Signals are used.

It has been notified by the Harbourmaster that vessels frequenting the port should be provided with at least one extra heavy anchor and strong cable, and that vessels of large tonnage, say 800 tons register and over, must not anchor in less than seven fathoms of water, the flagstaff bearing W.S.W. Vessels of less tonnage may anchor closer in on the same bearing, but not within a mile and a half of the breakwater, and in no case must approach the breakwater or moorings without permission, in consequence of the rapid extension of the harbour works.

On the plan are marked the best anchorages for all classes of vessels, also the bearings from the lighthouse. High water, full and change, at 3h. 30min.; spring tides, rise and fall, 6ft. 6in.

### Shipping inwards at Port of Timaru—

Year 1884	...	...	282 vessels	...	...	63,133 tons register.
" 1885	...	...	332 "	...	...	90,109 "
" 1886	...	...	363 "	...	...	98,756 "

### Principal Exports, year 1886—

Wool	...	...	...	...	...	22,646 bales.
Wheat	...	...	...	...	...	39,388 sacks.
Oats	...	...	...	...	...	91,513 "
Flour	...	...	...	...	...	136,093 "
Bran and sharps	...	...	...	...	...	73,572 "
Potatoes	...	...	...	...	...	9,890 "
Chaff	...	...	...	...	...	9,656 "
Frozen mutton	...	...	...	...	...	33,032 carcasses.

### Revenue from Wharfage and Harbour Charges—

Year	£	s.	d.
1879	...	...	...
1880	...	...	...
1881	...	...	...
1882	...	...	...
1883	...	...	...
1884	...	...	...
1885	...	...	...
1886	...	...	...

The harbour district includes the Counties of Geraldine and Mackenzie, and the following Ridings of the Waimate County, namely, Pareora, Otaio, Makikihi, Deep Creek, and part of Waibao, the Borough of Timaru, and the Town Districts of Geraldine, Temuka, and Arowhenua. The area of the district is 2,718,800 acres. Its rateable value under Government assessment is £6,634,000. Population, 24,000.

The Harbour Board has a right of rating over the property in the harbour district in the event of its revenue being insufficient to meet the interest on money borrowed for harbour works. There has up to the present time been no need to levy any rates, the revenue being sufficient for all purposes.

J. H. SUTTER,  
Timaru, 31st March, 1887.  
Chairman, Timaru Harbour Board.



APPENDIX.

ANNUAL REPORT ON LIGHTHOUSE WORKS, ETC., BY THE  
MARINE ENGINEER.

The MARINE ENGINEER to the SECRETARY, Marine Department.

SIR,— Marine Department, 31st March, 1887.  
I have the honour to forward, for the information of the Hon. the Minister having charge of the Marine Department, the annual report on works executed for new lighthouses, and on other works during the year.

*Cuvier Island.*—The lantern and lighting-apparatus for this lighthouse has been received in New Zealand. I was on the point of starting from Wellington for Cuvier Island to lay off the reserve for the lighthouse and the sites for the tower and dwelling-houses, &c., when I received an order to proceed south to Oamaru, to inspect and report on the damage to the breakwater at that place, and since that time no favourable opportunity has occurred to visit Cuvier Island.

*Removal of Snags from the Mokau River.*—A further sum of £500 having been voted for this work, a party was despatched about the end of December to continue the work reported on last year. The work is going on favourably, and will probably be finished, as far as the funds will allow, about the end of April.

*Jackson's Head Beacon.*—This work is practically finished, and the working-party are expected to return in a few days. The beacon consists of a solid tower of concrete, well bonded, about 40ft. high above high-water level, with a diameter of 17ft. at the base and 11ft. at the top. This is surmounted by a stout handrailing of wrought-iron, and by a central staff 12ft. high, on which is a "cage" of wrought-iron 5ft. in diameter.

The masters of vessels trading coastwise speak highly of the efficacy of the structure as a beacon to guide them safely through the channel between it and the mainland of Jackson's Head.

*Toi-tois Harbour.*—As instructed, I visited this harbour in January, and spent some days inspecting the River Mataura and the entrance to it at the Heads. A special report on this inspection will be forwarded to you in a few days.

*Bluff Harbour, Mid-channel Rock.*—After inspecting the Toitois Harbour I proceeded to the Bluff, for the purpose of examining the Mid-channel Rock, as directed. On this subject you will also receive a special report.

I have, &c.,  
JOHN BLACKETT,  
Marine Engineer.

The Secretary, Marine Department.

INSPECTION OF MACHINERY.

RETURN showing the Number of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1887.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			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.	Boilers.	Fees.
Otago ...	19	128	11	159	52	126	495	£ 836
Canterbury ...	26	166	5	92	24	60	373	648
Auckland ...	18	43	23	103	29	119	335	605
Wellington ...	3	24	37	21	50	92	227	527
Marlborough ...	4	17	2	6	10	19	58	124
Taranaki ...	...	4	6	3	13	11	37	85
Nelson North ...	3	24	6	18	15	12	78	115
Nelson South ...	...	2	2	8	1	13	26	53
Hawke's Bay ...	4	19	6	14	18	28	89	171
Totals ...	77	427	98	424	212	480	1,718	3,164

## ANNUAL REPORTS ON WORK DONE.

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

SIR,—

Auckland, 13th April, 1887.

I have the honour to forward you the annual report on the boilers and machinery inspected in the Auckland District for the year ended the 31st March, 1887.

During the above period 335 boiler and 11 machinery inspections have been made, making a total of 346 land inspections. Seventeen new boilers have been brought into use, 10 of which were imported from Great Britain, and 7 manufactured in this colony; 41 have been repaired, 45 have changed owners, and about 130 are laid up at present—for the most part due to the great depression of trade.

It is satisfactory that there are no accidents with boilers to report; and also that many owners are realising the fact that it is more economical to keep a boiler in good working order than to allow it to get into a defective state, and have extensive repairs to effect.

I regret having accidents with machinery to report, one of which terminated fatally.

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

I have, &c.,

The Secretary, Marine Department.

W. J. JOBSON.

RETURN showing the NUMBER and DESCRIPTION of the BOILERS, &c., INSPECTED and FEES payable in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1887.

Nature of Boiler.	Number.			Fees.	Remarks.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.		
Portable boilers ...	...	3	6	£ 175 0 0	{ Employed at 35 establishments; fees at £5 each.
Stationary boilers ...	7	5	77		
Portable boilers ...	16	38	17	419 0 0	{ Charged for at per horse-power of each boiler.
Stationary boilers ...	96	24	42		
Locomotive boilers ...	2	2	...		
Machinery inspections, 11 at £1 each ...	...	...	...	11 0 0	
Total for year ...	121	72	142	605 0 0	

RETURN of DEFECTS found in BOILERS and FITTINGS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1887.

Description.	Dangerous.	Ordinary.	Total.
Furnace-flues and fire-boxes out of shape ...	...	3	3
Blistered ...	...	4	4
Fractured ...	...	6	6
Pitted and grooved ...	1	1	2
Corrosion, internal ...	2	3	5
Corrosion, external ...	...	11	11
Defective tubes ...	...	4	4
Defective stays ...	...	5	5
Man-holes requiring strengthening ...	...	3	3
Joints sprung ...	...	2	2
Total defects in boilers ...	3	42	45
Defective fittings—			
Safety-valves ...	...	2	2
Feed-valves ...	...	1	1
Pressure-gauges ...	...	3	3
Water-gauges and test-cocks ...	...	8	8
Spring-balances ...	...	2	2
Blow-off cocks and pipes ...	...	1	1
Steam-pipes ...	...	1	1
Fusible plugs in furnaces and fire-boxes ...	...	3	3
Omissions—			
Boilers without test-cocks ...	...	1	1
Gross total ...	3	64	67

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Notices.	Description of Machinery.	Parts required to be fenced.
1886.		
April 9 ...	Brewery ...	Engine fly-wheel.
May 17 ...	Pumping and winding	Engine crank and connecting-rod.
May 18 ...	Butter-box factory ...	Engine fly-wheel.
May 18 ...	Hydraulic lift ...	Safety-catch and hood fitted.
May 24 ...	Saw-mill ...	Belt of planing machine, and fly-wheel of breaking-down saw.
May 28 ...	Winding ...	Spur- and pinion-wheels.
June 3 ...	Hydraulic lift ...	Safety-catch and hood to be fitted.
June 9 ...	Freezing-works ...	Engine fly-wheel.
July 7 ...	Saw-mill ...	Circular-saw spindle.
July 29 ...	Tannery ...	Belts of bark-mill, scouring machine, and rolling machine.
Aug. 8 ...	Flour-mill ...	Shaft and belt of porcelain rollers.
Aug. 16 ...	Saw-mill ...	Belt of planing machine.
Nov. 2 ...	Saw-mill ...	Connecting-rods of breaking-down saw.
Nov. 4 ...	Furniture factory ...	Goose-saw.
Nov. 8 ...	Saw-mill ...	Engine-cranks and connecting-rod coupling on main shaft.
Nov. 24 ...	Quartz-crushing ...	Wheel on wiper-shaft.
Nov. 26 ...	Pumping ...	Pump-beam and engine-crank and connecting-rod.
Dec. 28 ...	Saw-mill ...	Two belts of planing machine, and connecting-rod of breaking-down saw.
1887.		
Jan. 20 ...	Saw-mill ...	Goose-saw, two belts of planing machine, and engine fly-wheel.
Jan. 25 ...	Brickworks and pottery	Belt of pug-mill.
Feb. 6 ...	Hydraulic lift ...	Safety-catch and hood to be fitted.
Feb. 22 ...	Firewood-cutting ...	Engine fly-wheel.
Mar. 7 ...	Chaff-cutting ...	Belt of chaff-cutter.
Mar. 18 ...	Saw-mill ...	Two fly-wheels of breaking-down saw, belt of circular saw, and emery-wheel.
Mar. 23 ...	Leadworks ...	Pair wheels on shearing machine.
Mar. 30 ...	Steam lift ...	Safety-catch and hood to be fitted.

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, 1887.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
Coulthard Bros., Papakura	Saw-mill ..	William McClenan, aged 14 years	Head and arm crushed, 18th December, 1886	Fatal	During a temporary stoppage of the breaking-down saw, the deceased, unknown to any one, appears to have gone into the saw-pit. The man in charge of the saw started it. It is supposed the deceased was reaching over the saw-frame at the time, as his head and arm got crushed between it and the timber-carriage. He died shortly after from the effects of the injuries received. The duty of deceased was to keep the mill clear of sawdust. The manager cautioned him against going into the saw-pit, there being a long-handled rake provided for drawing out the sawdust. At the inquest a verdict of Accidental death was returned.
John Ross and Co., Mercer	Saw-mill ..	John Ross ..	Leg broken, 19th December	Not ..	It appears that, while throwing off the belt from the engine fly-wheel while in motion, he got entangled with the belt and one of his legs broken. He was manager of the mill, and ought to have known that engines are generally stopped for this purpose.

RETURN of MACHINERY INSPECTED in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1887.

Description of Machinery.	Steam.	Water.	Gas.	Description of Machinery.	Steam.	Water.	Gas.
Assaying ... ..	1	...	...	Lifts or elevators ... ..	...	8	1
Brickworks ... ..	3	...	...	Laundries ... ..	1	...	...
Block and pump works ... ..	1	...	...	Leadworks ... ..	1	...	...
Bone-mills ... ..	4	...	...	Mortar-mills ... ..	9	...	...
Boiling-down ... ..	2	...	...	Maize-mills ... ..	3	...	...
Bakeries ... ..	1	...	...	Meat-canning factories ... ..	3	...	...
Breweries ... ..	11	...	...	Oil, soap, and candle works	1	...	...
Boat-building ... ..	1	...	...	Oil-springs ... ..	2	...	...
Coach factory ... ..	1	...	...	Pumping and winding ... ..	18	...	...
Chair factory ... ..	1	...	...	Phormium-dressing ... ..	2	...	...
Cartridge factory ... ..	1	...	...	Printing ... ..	3	...	...
Cheese factories ... ..	9	...	...	Potteries ... ..	4	...	...
Chemical manure works ... ..	1	...	...	Pile-driving ... ..	2	...	...
Cordial works ... ..	4	...	...	Quartz-crushing ... ..	2	1	...
Confectionery ... ..	2	...	...	Refrigerating works ... ..	2	...	...
Cement works ... ..	1	...	...	Ropeworks ... ..	1	...	...
Coffee-mills ... ..	2	...	...	Road roller ... ..	1	...	...
Chaff-cutting ... ..	19	...	...	Saw-mills ... ..	35	...	...
Dredging ... ..	1	...	...	Sash and door factories ... ..	3	...	...
Dock ... ..	1	...	...	Ship-building ... ..	2	...	...
Flour-mills ... ..	7	...	...	Stone-breaking ... ..	1	...	...
Flock-mill ... ..	1	...	...	Sausage-machines ... ..	5	...	...
Fellmongeries ... ..	2	...	...	Sugarworks ... ..	1	...	...
Firewood-cutting ... ..	16	...	1	Soapworks ... ..	3	...	...
Fire-engine ... ..	1	...	...	Threshing machines ... ..	10	...	...
Gasworks ... ..	3	...	...	Tanneries ... ..	4	...	...
Hauling ... ..	5	...	...	Vinegar factory ... ..	1	...	...
Hoisting ... ..	11	...	...	Wool-dumping ... ..	2	...	...
Ironworks and foundries ... ..	16	...	...	Waterworks ... ..	2	...	...
Joineries ... ..	3	...	...				

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1886.		
April 16 ...	Cornish ... ..	Patch fitted to the shell at blow-off.
April 17 ...	Portable ... ..	Lower parts of the fire-box repaired.
May 3 ...	Cylindrical ... ..	Three seams pared and caulked.
May 8 ...	Cornish ... ..	Half-plate in bottom renewed, and strengthening-ring fitted to man-hole.
May 8 ...	Cornish ... ..	Strengthening-ring fitted to man-hole.
May 8 ...	Cornish ... ..	Strengthening-ring fitted to man-hole.
May 9 ...	Longitudinal tubular	Two sludge-holes enlarged, and new doors fitted.
May 10 ...	Lancashire ... ..	Repairs effected to flange of furnace-flue.
May 10 ...	Lancashire ... ..	Repairs effected to flange of furnace-flue.
May 10 ...	Lancashire ... ..	Repairs effected to flange of furnace-flue.
May 10 ...	Lancashire ... ..	Repairs effected to flange of furnace-flue.
July 3 ...	Vertical flue ... ..	Three stays fitted to crown of furnace.
July 10 ...	Portable ... ..	Crown of fire-box repaired.
July 17 ...	Locomotive ... ..	Patch in fire-box renewed.
July 19 ...	Cornish ... ..	One plate in bottom renewed.
July 21 ...	Longitudinal tubular	Rivettet patch fitted to the bottom.
July 24 ...	Longitudinal tubular	End of fire-box repaired.
July 26 ...	Longitudinal tubular	Defective part in mud-receiver cut out, and rivettet patch fitted.
Aug. 3 ...	Vertical flue ... ..	Defective part of vertical flue renewed.
Aug. 17 ...	Portable ... ..	Patch fitted to corner of fire-box.
Aug. 20 ...	Vertical flue ... ..	Flange of vertical flue renewed.
Sept. 6 ...	Vertical tubular ... ..	Top tube-plate renewed.
Sept. 10 ...	Portable ... ..	Top of the fire-box repaired.
Oct. 20 ...	Portable ... ..	Two stays in fire-box renewed.
Oct. 23 ...	Portable ... ..	Defective parts in bottom of fire-box cut out and renewed.

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT—*continued.*

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1886.		
Nov. 7 ...	Portable ...	Patch fitted to top of fire-box.
Nov. 7 ...	Longitudinal tubular	One stay to be renewed.
Nov. 16 ...	Longitudinal tubular	Two additional stays to be fitted to ends, and two stays in ends renewed.
Nov. 23 ...	Cornish ...	Patch fitted to bottom at blow-off.
Nov. 25 ...	Vertical tubular	Patch fitted to vertical flue.
Dec. 2 ...	Longitudinal tubular	Dog-stay fitted to crown of furnace.
Dec. 2 ...	Longitudinal tubular	Crown of furnace repaired, and twenty tubes renewed.
Dec. 11 ...	Vertical flue	Patch fitted to furnace.
Dec. 20 ...	Longitudinal tubular	Three tubes renewed; others caulked.
Dec. 31 ...	Locomotive	Tubes renewed, and general overhaul.
1887.		
Jan. 3 ...	Vertical tubular	One-half of the tubes renewed; others shortened and refixed.
Feb. 4 ...	Vertical flue	Four stays fitted to crown of furnace and top of boiler.
Feb. 8 ...	Longitudinal tubular	Patch in furnace to be renewed.
Mar. 4 ...	Portable	Lower part of fire-box repaired.
Mar. 12 ...	Vertical flue	Sludge-hole enlarged, and new door fitted.
Mar. 16 ...	Longitudinal tubular	Lower parts of the fire-box repaired.
Mar. 18 ...	Portable	Two stays in fire-box to be renewed.

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

SIR,— Office of Inspector of Machinery, Wellington, 20th May, 1887.

I have the honour to forward for your information my annual report on the boilers and machinery in the Wellington, Marlborough, Nelson North, Taranaki, and Hawke's Bay Districts for the year ended 31st March, 1887.

The number of boilers inspected during the above period was 489. Twenty-three new ones have been put to work, 14 of which have been constructed in the colony, and 9 imported; 3 have been laid up as unfit for work, 27 have extended certificates, 20 were still to inspect at the end of the year, and 37 are idle. This gives a total of 573 workable boilers in the district. No accidents have occurred to or with boilers.

I regret, however, having to report three accidents which have occurred in connection with machinery, two of them unfortunately of a fatal nature. The first accident occurred to a young man who had his right arm severely injured in the cog-wheels of a carding engine, which he was working with the wheel guard removed. The next, a fatal accident, occurred to an engineer while erecting a new clay-crushing plant. No one observed the accident take place; but, as he had got some grease for the cogs a few minutes before, it is thought that he was applying it to the wheels while in motion, and some part of his clothing was caught between the cogs, dragging his arm in as far as the shoulder, the shock to the system causing death in a few hours. A second fatal accident occurred from the breaking of a hydraulic-lift chain and the failure of the safety-catch to stop the descent of the cage on which the man was riding at the time. The injury received must have caused instant death. This lift was unknown to me until after the accident, the owners only then giving notice that they had one in their possession. I may state here that the hydraulic lifts in Wellington are not constructed to carry passengers, and notices cautioning the employes against using them as such are posted on the greater number of them. The workmen, however, regardless of the danger, still persist in riding on them rather than walking up the stair.

Mr. Blackwood has inspected 58 boilers in the Marlborough District and 46 in the Wellington District. Mr. Mowatt has inspected 48 boilers in the Wellington District since his appointment in January last.

Appended are returns showing the class, horse-power, number of boilers inspected, the fees payable for inspections, the number of written notices given to fence dangerous parts of machinery, the number of notices given to repair boilers, and the number and description of machinery inspected in each district; also return of accidents to life and limb. I am unable to give full information as regards the number of verbal notices given to fence machinery or do small repairs to boilers, all the data having been destroyed in the fire at the Post Office buildings.

I have, &c.,

H. A. MCGREGOR,  
Inspector of Machinery.

The Secretary, Marine Department.

RETURN of NOTICES given to REPAIR BOILERS in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1887.

District, and Date of Notice.	Description of Boiler.	Nature of Repairs.
WELLINGTON— 1886.		
April 19 ...	Multitubular ...	New plate in the front part of the bottom.
April 22 ...	Portable ...	All the tube-ends in the fire-box to be expanded and fitted with verrels.
May 8 ...	Portable ...	Five new screw-stays in each side of fire-box.
NELSON NORTH—		
Aug. 6 ...	Multitubular ...	The knees on the sides of the boiler to be re-riveted, and six extra bolts in flange of dome.
Aug. 12 ...	Portable ...	Plates to be fitted round the mud-hole openings of the fire-box, and new doors fitted.
TARANAKI—		
Oct. 7 ...	Cornish ...	The front angle-iron of the boiler-shell to be chipped and caulked round the lower edge.
Oct. 10 ...	Vertical ...	A new lumleg to be fitted.
HAWKE'S BAY— 1887.		
Feb. 26 ...	Cornish ...	An angle-iron ring to be fitted round the flue.
Mar. 8 ...	Portable ...	A set of new tubes to be fitted, and two longitudinal stays.
Mar. 10 ...	Portable ...	Three new dog-stays to be fitted on crown of fire-box.
Mar. 14 ...	Portable ...	The landing round the bottom of fire-box to be chipped and caulked.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1887.

District, and Date of Notice.	Description of Machinery.	Parts required to be fenced.
WELLINGTON— 1886.		
April 16 ...	Bush saw-mill ...	The fly-wheel of engine, and main driving-belt.
April 16 ...	Bush saw-mill ...	The driving-belts of circular and vertical saw.
April 17 ...	Bush saw-mill ...	Main driving-belt between the engine and platform of vertical saw.
May 1 ...	Bush saw-mill ...	A hand-rail to be erected round the engine.
NELSON NORTH—		
Aug. 14 ...	Chaff-cutting ...	A new feed-pump to be fitted on the engine.
Aug. 21 ...	Flour-mill ...	The gearing of the stone to be fenced round, and the end of the counter-shaft boxed in.
TARANAKI—		
Oct. 9 ...	Sash and door factory ...	The driving-belts of the planing machine to be boxed in.
Oct. 13 ...	Bush saw-mill ...	The tail-rod of engine-piston to be boxed in.
HAWKE'S BAY— 1887.		
Mar. 9 ...	Bush saw-mill ...	Counter-shafting and pulleys.
Mar. 11 ...	Bush saw-mill ...	Main driving-belt from engine to counter-shaft, and driving-belts of circular saws.
Mar. 11 ...	Bush saw-mill ...	Counter-shaft and driving pulleys.
Mar. 11 ...	Bush saw-mill ...	Main driving-belts of circular saws.
Mar. 12 ...	Bush saw-mill ...	The fly-wheel of engine, counter-shaft pulleys, and driving-belts of circular and vertical saws.

RETURN of MACHINERY INSPECTED in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1887.

Description of Machinery.	Wellington.				Marlborough.			Nelson North.		Taranaki.			Hawke's Bay.		Total
	Steam.	Steam and Water.	Water.	Gas.	Steam.	Steam and Water.	Water.	Steam.	Water.	Steam.	Steam and Water.	Wind.	Steam.	Water.	
Phormium-dressing .. .. .	..	..	..	..	2	..	2	..	2	..	..	..	..	..	6
Printing .. .. .	2	..	..	5	1	..	..	1	..	..	..	..	..	..	9
Flour-mills .. .. .	10	1	4	..	..	..	2	4	4	1	3	..	2	2	33
Saw-mills .. .. .	26	..	..	..	11	1	..	25	2	8	1	..	14	20	108
Sash and door factories ..	6	..	..	..	1	..	..	4	..	2	..	1	4	..	18
Foundries .. .. .	6	..	..	..	1	..	..	2	..	1	..	..	2	..	12
Quartz-crushing .. .. .	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Threshing machines .. .. .	16	..	..	..	12	..	..	6	..	2	..	..	..	..	36
Soap and candle works ..	3	..	..	..	..	..	..	1	..	..	..	..	1	..	5
Cordial factories .. .. .	3	..	..	..	1	..	..	1	..	..	..	..	2	..	7
Boiling-down establishments ..	14	..	..	..	5	..	..	..	5	..	..	..	2	..	26
Brick-making machines ..	6	..	..	..	..	..	..	1	..	..	..	..	2	..	9
Biscuit factories .. .. .	4	..	..	..	..	..	..	1	..	..	..	..	..	..	5
Chaff-cutting machines ..	6	..	..	..	1	..	..	5	..	..	..	..	2	..	14
Breweries .. .. .	9	..	..	..	1	..	..	4	..	1	..	..	3	..	18
Drain-pipe machines .. .. .	5	..	..	..	..	..	..	1	..	..	..	..	..	..	6
Hoisting machinery .. .. .	13	..	..	..	1	..	..	1	..	7	..	..	4	..	26
Dredging machine .. .. .	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Pumping machinery .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Coffee- and spice-mills ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Tanneries .. .. .	3	..	..	..	..	..	..	2	..	..	..	..	1	..	6
Wool-dumping .. .. .	2	..	..	..	1	..	..	..	..	..	..	..	4	..	7
Ice machine .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Sausage machines .. .. .	4	..	..	..	1	..	..	1	..	..	..	..	..	..	6
Tobacco-cutting .. .. .	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Traction-engines .. .. .	1	..	..	..	4	..	..	2	..	..	..	..	..	..	7
Gasworks .. .. .	1	..	..	..	..	..	..	1	..	1	..	..	1	..	4
Mortar-mills .. .. .	1	..	..	..	..	..	..	..	2	..	2	..	..	..	3
Machine shops .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Meat-preserving works ..	4	..	..	..	1	..	..	..	1	..	..	..	1	..	7
Locomotives .. .. .	12	..	..	..	1	..	..	1	..	2	..	..	1	..	17
Freezing machines .. .. .	2	..	..	..	..	..	..	..	1	..	..	..	1	..	4
Hydraulic lifts* .. .. .	..	..	18	..	..	..	..	..	..	..	..	..	..	..	18
Wool-scouring machines ..	2	..	..	..	1	..	..	1	..	..	..	..	2	..	6
Electric-light machines ..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	4
Turneries .. .. .	1	..	..	..	..	..	..	1	..	..	..	..	1	..	3
Woollen-mills .. .. .	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hauling machinery .. .. .	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Totals .. .. .	169	1	22	5	46	1	4	69	9	34	4	1	54	22	441

\* £4 fees charged for new lifts.

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, 1887.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
The Wellington Woollen Factory	Carding engine ..	Ralph Ramsden, aged 18 years	Muscle of the upper part of the right arm severely lacerated	Not ..	The cause of the accident was working the machine without its wheel-guard. There was no necessity for the removal of this protection, even to oil the machine.
Herbert Hill, Brick Yard, Wellington	Clay-crushing machine	John Robertson, aged 49 years	The right arm seriously crushed, and ribs broken	Fatal	This accident occurred while the machinery was being erected. No one saw the accident take place; but Mr. Robertson stated before his death that no one was to blame but himself.
P. Hayman and Co., Merchants, Wellington	Hydraulic lift ..	William Kitchen	Injury to the back and head	Fatal	This accident occurred from the breaking of the chain of a hydraulic lift, and failure of the safety-catch to stop the descent of the cage on which the man was riding at the time. The failure of the safety-catch was mainly due to the yielding of the guides when pressed outwards by the catches. Stronger guides have been fitted, as also a new chain.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1887.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			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.	Boilers.	Fees.
Wellington* ...	3	24	37	21	50	92	227	£ 527
Marlborough† ...	4	17	2	6	10	19	58	124
Nelson North ...	3	24	6	18	15	12	78	115
Taranaki‡ ...	...	4	6	3	13	11	37	85
Hawke's Bay§ ...	4	19	6	14	18	28	89	171
Totals ...	14	88	57	62	106	162	489	1,022

\* In the above return, thirty-nine boilers over 10 h.p. are included in seventeen maximum fees.

† In the above return, five of the boilers over 10 h.p. are included in two maximum fees.

‡ In the above return, six of the boilers over 10 h.p. are included in three maximum fees.

§ In the above return, sixteen of the boilers over 10 h.p. are included in five maximum fees.

The INSPECTOR of MACHINERY, CANTERBURY DISTRICT, to the CHIEF INSPECTOR of MACHINERY.  
SIR,—

Christchurch, 14th April, 1887.

I have the honour to forward annual report of boilers and machinery I have inspected in the Canterbury District during the financial year ending the 31st March, 1887; also return of boilers and machinery in Nelson South District which remained at the close of last financial year where I was then engaged inspecting.

The Canterbury District has been more thoroughly inspected this year, although there are some parts not reached owing to not having sufficient time to do so; but, now Westland and Nelson South have been taken from my district, I shall be able to do Canterbury thoroughly.

I am sorry to have so many accidents to report, but cannot see how such as these can be prevented. At the Coroner's inquest in the fatal case the jury returned a verdict of Accidental death.

Should any further information or particulars be required, I shall be happy to supply them.

I have, &c.,

The Secretary, Marine Department, Wellington.

GEORGE CROLL.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the CANTERBURY and NELSON SOUTH DISTRICTS during the Financial Year ending the 31st March, 1887.

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 ...	26	166	5	92	24	60	373
Nelson South ...	...	2	2	8	1	13	26
Totals ...	26	168	7	100	25	73	399

RETURN showing FEES payable for the INSPECTION of BOILERS and MACHINERY in the CANTERBURY and NELSON SOUTH DISTRICTS during the Financial Year ending the 31st March, 1887.

Name of District.	Fees payable in respect of Boilers.			Fees payable in respect of Machinery.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Canterbury ...	647	0	0	1	0	0	648	0	0
Nelson South ...	53	0	0	...			53	0	0
Totals ...	700	0	0	1	0	0	701	0	0

NOTE.—There are 16 maximum fees, including 44 boilers.



RETURN of MACHINERY INSPECTED in the CANTERBURY DISTRICT during the Financial Year  
ending the 31st March, 1887.

Description of Machinery.	Steam.	Steam and Water.	Water.	Description of Machinery.	Steam.	Steam and Water.	Water.
Asphalte works ...	1	...	...	Flour-mills ...	9	...	...
Baths ...	1	...	...	Flock-mill ...	1	...	...
Boiling-down ...	7	...	...	Flax-mills ...	4	...	...
Butchers' ...	20	...	...	Foundries and ironworkers' ...	23	...	...
Breweries ...	11	...	...	Freezing works... ..	2	...	...
Bone-mills ...	3	...	...	Gasworks ...	2	...	...
Cabinetmaking and wood- turning ...	7	...	...	Landing service ...	1	...	...
Cheese and butter factories	2	...	...	Linseed oil and fibre works	1	...	...
Chemical works ...	2	...	...	Meat-preserving ...	2	...	...
Cordial-making and con- fectioners' ...	5	...	...	Pottery and brick works...	5	...	...
Cooperage ...	2	...	...	Printing ...	1	...	...
Cranes and winches ...	12	...	...	Pumping ...	4	...	...
Chaff-cutting ...	24	1	...	Ropeworks ...	1	...	...
Coffee and chicory works	3	...	...	Stone-sawing and -breaking	2	...	...
Concrete-mixing ...	1	...	...	Saw-mills ...	29	...	...
Colliery ...	1	...	...	Soapworks ...	5	...	...
Coach-building ...	3	...	...	Threshing ...	122	...	...
Dock and slip ...	2	...	...	[Traction-engines] * ...	[37]	...	...
Electric light ...	1	...	...	Tannery ...	1	...	...
Firewood-sawing ...	8	...	...	Tramway-engines ...	6	...	...
Fire-engine ...	1	...	...	Woollen-mills ...	3	...	...
				Wool-pressing ...	3	...	...
				Wool-washing ...	2	...	...

\* Thirty-seven traction-engines are included in "Threshing."

RETURN of NOTICES given to REPAIR BOILERS in the CANTERBURY DISTRICT during the  
Financial Year ending the 31st March, 1887.

Date.	Description of Boiler.	Notice.	Repairs ordered.
1886.			
April 21 ...	Portable ...	Verbal ...	Cut out crack and rivet on patch in fire-box.
June 29 ...	Cornish ...	Verbal ...	Recaulk seam on bottom of shell in flue.
June 14 ...	Vertical ...	Written ...	New uptake and sludge-doors repaired.
July 12 ...	Tram-engine ...	Verbal ...	Enlarge patches in furnace, and renew stays.
July 13 ...	Tram-engine ...	Verbal ...	Enlarge patches in furnace, and renew stays.
Aug. 14 ...	Vertical ...	Verbal ...	New crown-plate and tubes.
Aug. 24 ...	Vertical ...	Verbal ...	New fire-box, and foundation-ring raised.
Sept. 16 ...	Portable ...	Written ...	New set of tubes.
Sept. 22 ...	Tram-engine ...	Verbal ...	Take out fire-box and properly repair.
Oct. 4 ...	Cornish ...	Verbal ...	Three stays in domes (two boilers).
Oct. 20 ...	Portable ...	Verbal ...	Large-headed rivets in furnace-mouth covering cracks, and reduced pressure to 40lb.
Oct. 27 ...	Tubular ...	Verbal ...	New end-plate and tubes (since out of use).
Nov. 16 ...	Portable ...	Written ...	Expand and re-ferrule tubes, also clean boiler thoroughly.
Nov. 25 ...	Portable ...	Verbal ...	New pressure-gauge.
Dec. 23 ...	Portable ...	Written ...	Renew top row of fire-box stays, also new tubes.
1887.			
Jan. 10 ...	Tubular ...	Verbal ...	Cut out cracked plate, and renew plate.
Jan. 28 ...	Portable ...	Verbal ...	Renew top row of fire-box stays.
Jan. 29 ...	Cornish ...	Written ...	Properly chip and recaulk seam over fire (two boilers); also renew rivets, leaking at present.
Feb. 18 ...	Vertical ...	Verbal ...	New fire-box and uptake, also pressure-gauge.
Feb. 24 ...	Portable ...	Written ...	Renew six tubes.
Feb. 24 ...	Portable ...	Verbal ...	New pressure-gauge.
Feb. 25 ...	Portable ...	Verbal ...	New pressure-gauge.
Mar. 16 ...	Vat ...	Written ...	Renew stays and washers.
Mar. 16 ...	Vat ...	Written ...	Four more stays and washers.
Mar. 16 ...	Vat ...	Verbal ...	New crown-plate and three new stays.

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the CANTERBURY DISTRICT during the Financial Year ending the 31st March, 1887.

Description of Defects.	Dangerous.	Ordinary.	Total.
Bulge in fire-box caused by dirt ... ..	...	1	1
Crown of boiler getting thin ... ..	...	3	3
Crown of fire-box down ... ..	...	2	2
Cracks in uptake ... ..	2	...	2
Cracks in fire-box ... ..	1	5	6
Cracks in crown-plate between tubes ... ..	1	...	1
Cracks in plate over fire ... ..	1	...	1
Collapse of uptake ... ..	1	...	1
Fire-box stays wasted or broken ... ..	2	...	2
Grooving at neck of uptake ... ..	...	1	1
Leakage at seams over fire (Cornish) ... ..	...	3	3
Plates wasted from leakage at doors ... ..	1	2	3
Patches in fire-box ... ..	...	7	7
Pressure-gauges bad ... ..	1	3	4
Thin in fire-box ... ..	1	4	5
Tops of domes require staying ... ..	...	2	2
Tubes getting thin in smoke-box ... ..	...	3	3
Vat-stays and crown-plates wasted ... ..	2	1	3
Vat-ends not sufficiently stayed ... ..	1	1	2
Total ... ..	14	38	52

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended 31st March, 1887.

Date of Notice.	Description of Machinery.	Notice.	Parts required to be fenced.
1886.			
May 21 ...	Woollen-mills ...	Verbal ...	Small gearing and belts of carding machines; fly-wheel of engine; pulley of wool-washing machine.
July 9 ...	Hydraulic lift ...	Verbal ...	Fly-wheel of gas-engine and pumps.
Aug. 10 ...	Brick-machinery ...	Written ...	Pump-gearing and lying shaft.
Dec. 29 ...	Woollen-mills ...	Written ...	Small gearing and belts of carding machines.
1887.			
Mar. 10 ...	Oatmeal-mill ...	Verbal ...	First driving-belt in engine-room, and one small driving-belt.

RETURN of MACHINERY INSPECTED in the NELSON SOUTH DISTRICT during the Financial Year ended the 31st March, 1887.

Description of Machinery.	Steam.	Steam and Water.	Water.	Steam and Wind.
Brewery ... ..	1	...	...	...
Colliery ... ..	1	...	...	...
Cranes and winches ... ..	5	...	...	...
Ironworker ... ..	1	...	...	...
Pumping ... ..	1	...	...	...
Quartz-crushing ... ..	3	...	...	...
Saw-mills ... ..	6	...	...	...
Winding ... ..	3	...	...	...

RETURN of DEFECTS found on the INSPECTION of BOILERS in the NELSON SOUTH DISTRICT during the Financial Year ended the 31st March, 1887.

Description of Defects.	Dangerous.	Ordinary.	Total.
Internal corrosion from using bad feed-water ...	2	...	2
Lamination in plate ... ..	...	1	1
Leakage in fire-box, and inside of boiler dirty ...	...	1	1
Leakage in bottom of boiler ... ..	...	1	1
Total ... ..	2	3	5

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Accident.	Owner's Name and Address.	Nature and Cause of Accident.
1886. April 21 ...	John Coe, Ellesmere (portable engine)	Reported leaking in fire-box. Found two cracks in plates, and water-spaces solid with dirt. Had plates cut out, patches screwed on with countersunk screws, and stayed as before.
Aug. 10 ...	Borough Council, Lyt-telton (Cornish boiler No. 1)	Reported leaking in furnace. Found ring-seam over fire leaking, caused by boiler being too stiff. Had rivets removed; found plate sound, so re-riveted and recaulked. Recommended new tube with "Adamson" ring and "Galloway" tubes.
Aug. 14 ...	Aulsebrook and Co., Christchurch (vertical tubular)	Reported leaking on top. Found top-plate had cracked between tubes, caused by the unequal expansion and contraction of boiler and tubes. Had plate, tubes, and stays renewed.
Nov. 22 ...	Tramway Company, Christchurch	Reported explosion. Found boiler thrown out of carriage, and copper fire-box ripped and torn from stays, caused by over-pressure. Boiler was tested on 13th July to 175lb. hydraulic pressure, and on the 14th July to 100lb. steam by my standard gauge; safety-valves set to blow off freely at that pressure. There was no one near the boiler at time of explosion.
1887. Jan. 10 ...	Thomas York, Woolston (tubular boiler)	Reported leaking in bottom. Found a crack in plate, caused by accumulation of scale and dirt. Had a piece cut out, and patch fitted.
Jan. 29 ...	Borough Council, Lyt-telton	Reported No. 2 boiler leaking in furnace—cause, the same as No. 1; so treated it in the same way.

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, 1887.

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.
Lightband, Allan, and Co., Woolston	Tannery ..	John McManus (aged 26 years)	Neck broken (14th May, 1886)	Fatal	John McManus was engaged removing skins. The weather being wet he had tied a sack over his shoulders with a piece of rope round his neck; a gust of wind caused the sack to fly up and catch on a revolving shaft overhead, and, as the rope did not part, he was wound up and his neck broken.
Hale and Throp, Christchurch	Ropeworks ..	— Baker (aged 15 years)	Part of finger on right hand off (8th July, 1886)	Not	— Baker, whilst working between two machines spinning fibre, stretched his right hand over the revolving bobbin to another boy who was working there, when a loop in the fibre caught his finger and cut it off.
Hale and Throp, Christchurch	Ropeworks ..	— O'Sullivan (aged 15 years)	Lost greater portion of right hand (8th July, 1886)	Not	— O'Sullivan, in feeding fibre into a machine, tried to mend broken fibre without first stopping the machine; had his hand drawn into feed-rollers. Instructions are to stop machine. Both the above accidents occurred the same day.
Freezing Works, Belfast	Refrigerating ..	— Blackburn (age not given)	Scalded slightly (28th October, 1886)	Not	— Blackburn was engaged raising steam and preparing for starting machinery. He opened stop-valve on boiler suddenly, and without opening engine stop-valves and drains, causing pipe to break.

The INSPECTOR of MACHINERY, OTAGO DISTRICT, to the CHIEF INSPECTOR of MACHINERY.

SIR,—

Office of Inspector of Machinery, Dunedin, 29th April, 1887.

I have the honour to forward unto you the annual report of inspection of boilers and machinery in the Otago District during the financial year ended the 31st March, 1887, contained in the accompanying tables.

In forwarding this report unto you I am sorry to state that the trade depression has been very severe down in this district during the past year; consequently a great part of the machinery has been working only a part of the time, the greatest part of the saw-mills working what is termed single-handed. Withal a considerable number of portable engines have been imported, as per table.

The locally-made boilers have been required principally for boiling-down, and also for dairy factories. This is the only branch of business which has made any progress during the year, the number of dairy factories in this district now amounting to thirteen.

A new industry has been added here in the shape of rolling-mills, and the conversion of iron into steel, which will be available for castings up to two tons.

Defects found in Boilers: There has been nothing unusual; wasting, either external or internal, always going on less or more in a number of boilers.

The accident reported to the Cornish boiler, although of a very serious nature, was fortunately unattended with injury to any one employed. The other one was not of such a serious nature, the only damage done being to put out the fire.

Notices to repair Boilers: In some cases of course the tear-and-wear has been going on for a number of years, there being only three cases where repairs have been rendered necessary through fractured or sprung plates.

Notices to remove Dangerous Parts of Machinery: There were only two cases, and these were circular saws, one being cracked for a distance of 10in., the other 14in. from the centre.

Notices to fence Dangerous Parts of Machinery: There were six cases.

Return of Accidents to Life and Limb: I am very much pleased to be able to report that I have received no notice of any accident to life or limb throughout this district during the past year. This is the first time since the Inspection of Machinery Act came into force that I have been able to forward a table clear of accidents.

The total number of boiler inspections made during the year amounted to 495; hydraulic lifts, 60; elevators, 6; water flour-mills, 4: making a total of 565 inspections. Of that number, Mr. Blackwood inspected—boilers, 126; hydraulic lifts, 52; elevators, 6; water-wheels, 4: total, 188.

I may state that, in the matter of fitting catches on these lifts, there is a considerable difficulty in the way in finding a catch that will meet all requirements. There is only one so far that is reliable, all the rest tried having proved failures; but this one, unfortunately, blocks up two sides on the floors, which means stopping the work; but possibly this may be overcome in a short time.

I have, &c.,

The Chief Inspector of Machinery, Wellington.

ALEXANDER CRAWFORD.

RETURN of NOTICES given to REPAIR BOILERS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1886.		
April 27 ...	Steam digester ...	Safety-valve to be fitted, and also steam-pressure gauge; also two 3in. x 3in. x $\frac{3}{8}$ in. angle-irons rivetted on each end, with two $1\frac{1}{4}$ in. stays attached with T ends.
July 6 ...	Cornish ...	Bolted patch on shell where boiler has been in contact with brickwork; size of patch, 4ft. x 18in.
July 12 ...	Cornish ...	Three circular seams in tube to be re-rivetted and caulked half-way round; ends of Galloway tubes caulked; and half-circle of angle-iron 3in. x 3in. x $\frac{3}{8}$ in. put round first crown-plate, and properly secured thereto.
July 20 ...	Longitudinal tubular	Laminated plate over firepiece cut out about 18in. x 12in., and patch rivetted over.
July 20 ...	Cornish ...	Patch to be rivetted in furnace as directed.
July 20 ...	Cornish ...	New front end-plate to be renewed, extending down to cross-seam.
Aug. 9 ...	Longitudinal tubular	Mud-hole door of 7in. x 5 in. or thereby to be put in front end of boiler; also new water-gauge cocks.
Aug. 9 ...	Steam digester ...	Pressure-gauge to be fitted on.
Sept. 7 ...	Vertical ...	Two mud-hole doors to be patched over about 18in. x 12in.
Sept. 29 ...	Portable ...	Cylinder to be rejoined, and bolts made tight in crank-shaft bracket.
Nov. 15 ...	Locomotive ...	New crown to be put in fire-box.
1887.		
Feb. 26 ...	Steam digester ...	Steam-pressure gauge to be fitted on.
Mar. 24 ...	Portable ...	Steam-pressure gauge to be got.

RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Description of Machinery.	Steam.	Steam and Water.	Description of Machinery.	Steam.	Steam and Water.
Aërated water ...	1	...	Graving-dock ...	1	...
Agricultural-implement shops ...	4	...	Hoists ...	19	...
Bath ...	1	...	Hydraulic lifts †	...	60†
Bakeries ...	3	...	Hedge-knife maker ...	1	...
Barbed-wire factory ...	1	...	Joineries ...	2	...
Boiling-down ...	11	...	Lapidary ...	1	...
Bone-mills ...	3	...	Laundries ...	3	...
Brass shop ...	1	...	Locomotives ...	7	...
Breweries ...	9	...	Lathmaker ...	1	...
Brick and tile works ...	6	...	Lead-pipe works ...	2	...
Beehive factories ...	2	...	Machine shops ...	4	...
Building yard... ..	1	...	Oil-mill, linseed ...	1	...
Cabinet-making ...	4	...	Parchment works ...	1	...
Cement works ...	1	...	Paper-mills ...	1	1
Chaff-cutting ...	20	...	Potteries ...	2	...
Chemical works ...	1	...	Pipe works, clay ...	2	...
Cocoa factory... ..	1	...	Printing-papers ...	4	...
Cooking ...	2	...	Pumping water ...	2	...
Collieries ...	9	...	Quartz-mills ...	2	...
Corn-crushers ...	2	...	Refrigerating works ...	3	1
Concrete-mixer ...	1	...	Road roller ...	1	...
Copper and brass works ...	2	...	Ropeworks ...	1	...
Coffee and spice works ...	2	...	Rolling-mills ...	1	...
Confectionery ...	2	...	Sausage-skins ...	1	...
Cranes ...	21	...	Sausage-machines ...	5	...
Creosote works ...	1	...	Saw-mills ...	34	...
Dairy factories ...	13	...	Slip, patent ...	1	...
Dredges, gold ...	1	...	Soapworks ...	2	...
Dredges ...	4	...	Soap and candle works ...	3	...
Dyeworks ...	1	...	Sheep-dip works ...	2	...
Elevators* ...	2	...	Standard works ...	4	...
Engine-shops ...	5	...	Stone-crushers ...	8	...
Engine-shops and foundries ...	6	...	Stone-dressing ...	1	...
Floating dock ...	1	...	Stone-cutting ...	3	...
Forge ...	1	...	Tanneries ...	4	...
Foundries ...	3	...	Tramway cable ...	2	...
Fellmongeries ...	5	...	Traction-engines ...	2	...
Flour-mills† ...	9	3	Threshing machines ...	90	...
Flock-mills ...	3	...	Turnery, wood ...	4	...
Fish-preserving ...	1	...	Venetian blinds ...	1	...
Fire-grate and range works ...	4	...	Wool-pressing ...	5	...
Firewood-cutting ...	2	...	Woollen factories ...	4	...
Fire-engine ...	1	...	Woodware factories ...	3	...
Fruit-preserving ...	2	...	Woodworking ...	4	...
Gasworks ...	2	...			

\* Also 4 driven by gas.

† Also 4 driven by water.

‡ By water only.

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

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 ... ..	294	0	0	...			836 0 0
Stationary ... ..	521	0	0	...			
Machinery ... ..	...			21 0 0			

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

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 ... ..	19	128	11	159	52	126	495

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Description.	Dangerous	Ordinary.	Total.
Blow-off cocks ... ..	1	...	1
Boiler (Cornish) tube corroded ...	...	1	1
Bottoms of shells leaking—setting ...	...	2	2
Bottoms of shells leaking over fire ...	...	1	1
Corrosion, internal ... ..	1	4	5
Corrosion, external ... ..	1	...	1
Digesters, steam, corrosion ... ..	1	...	1
Fire-box, crown of locomotive, cracked ...	1	...	1
Furnace, crown (Cornish) sprung ... ..	1	...	1
Gauges, pressure ... ..	2	...	2
Gauges, water ... ..	3	...	3
Mud-hole, plate wasted, leakage ... ..	...	1	1
Plate over fire cracked ... ..	1	...	1
Plate over fire sprung at seam ... ..	...	1	1
Plate over fire, accumulation of scale ...	2	...	2
Plate over fire laminated ... ..	1	...	1
Screwed stays of fire-box corroded ... ..	...	1	1
Tubes leaky ... ..	...	1	1
Tubes worn out—corrosion ... ..	...	2	2
Test-cocks renewed ... ..	...	2	2
Safety-valves in bad order ... ..	1	...	1

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Accident.	Name and Address of Owners.	Nature and Cause of Accident.
12th July, 1886	City Corporation of Dunedin	Crown of furnace partly down, and circular seams sprung and leaking over fire (Cornish boiler); cause, shortness of water.
20th October, 1886	Mataura Paper-mills Company	Circular longitudinal tubular boiler fired externally, plate over fire cracked through accumulation of sediment.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Notice.	Class of Machinery.	Parts requiring to be fenced.
1886.		
May 14 ...	Flour-mill ...	Belt of smutting machine and upright driving-shaft to be boxed over.
May 17 ...	Flour-mill ...	Upright driving-shaft to be boxed over.
May 19 ...	Gold dredger ...	Mitre-wheels on lower deck to be boxed over.
May 27 ...	Flour-mill ...	Upright driving-shaft to be boxed over.
July 24 ...	Biscuit-machine ...	Wheel and pinion of break-rolls to be covered over.
Sept. 28 ...	Seed-dressing machine	Fly-wheel to be boarded over.

RETURN of NOTICES given to REMOVE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Date of Notice.	Description of Machinery.	Nature of Machinery to be removed.
1886. Nov. 29 ...	Saw-mill ...	Breaking-down circular saw—cracked 10in. at centre.
1887. Mar. 7 ...	Saw-mill ...	Breaking-down circular saw—cracked 14in. at centre.

RETURN of NEW BOILERS, LOCALLY MADE and IMPORTED, introduced into the OTAGO DISTRICT during the Financial Year ended the 31st March, 1887.

Where made.	Description of Boilers.						Totals.
	Cornish.	Tubular.	Tubulous.	Vertical.	Portable.	Steam Digesters.	
Locally ...	1	12	1	2	...	10	26
British ...	1	...	...	4	21	...	26
America, United States ...	...	3	...	...	...	...	3

Boilers which have been in use and which have changed hands during the year, 43.

SUMMARY of INSPECTIONS.

Number of inspections of boilers	...	...	...	...	...	495
Number of inspections of hydraulic lifts	...	...	...	...	...	60
Number of inspections of elevators	...	...	...	...	...	6
Number of inspections of water-power engines	...	...	...	...	...	4
Number of machines inspected	...	...	...	...	...	497
Number of defects found on inspection of boilers and fittings	...	...	...	...	...	32
Number of accidents to boilers and machinery reported	...	...	...	...	...	2
Number of notices given to repair boilers	...	...	...	...	...	13
Number of notices given to remove dangerous parts of machinery	...	...	...	...	...	2
Number of notices given to fence dangerous parts of machinery	...	...	...	...	...	6
Number of accidents to life and limb	...	...	...	...	...	Nil

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