1886.

NEW ZEALAND.

MARINE DEPARTMENT

(ANNUAL REPORT OF THE).

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

SIR,— Marine Department, Wellington, 1st June, 1886.

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

LIGHTHOUSES, ETC.—No addition has been made to the number of lighthouses under the control of this department, which are twenty-nine in number, as stated in last report. These lighthouses have been maintained in good order, necessary repairs having been executed to several of them. Pencarrow Head light was reported as having been out for a short time on the 15th May, 1885; on inquiry it was found that this was caused by a slight accident to the machinery of the lamp; but, as the principal keeper, who was on watch, did not appear to have been sufficiently vigilant, he was fined and reprimanded. Shortly afterwards, the same keeper reported that he had allowed the lamp to go out. This occurred just after his resignation had been sent in and accepted. He was, of course, relieved as soon as possible. At Moko Hinou the keeper on watch on the 28th March went to sleep, and the light became stationary from the weight having run down. The keeper, who was a probationer, was at once dismissed. A similar occurrence also took place at Waipapapa Point on the 29th July last. In this case, too, the keeper on watch was a probationer. He was also dismissed. During the year one principal keeper resigned; the services of two were dispensed with on account of bad health, one of whom was paid compensation; the other retired on a pension, and I regret to say that he (Principal Keeper R. J. Campbell) died shortly afterwards. Two probationary keepers mentioned were dismissed; five assistant-keepers were appointed during the same period.

Bean Rock.—The stonework that protects the foundation of this lighthouse was again damaged by the easterly gale of the 15th July last, necessitating extensive repairs; these were carried out, together with those effected after the damage done by the gale in March, 1885, at the cost of £195 6s. 2d. It is hoped that the foundation has now been made permanently secure. The surface of the foundations, being dry at low tide, affords a suitable bed for rock-oysters, a quantity of which have from time to time been planted among the interstices of the stonework, in the expectation that they will, in the course of a few years, spread over the entire surface and bind it together.

Puysegur Point.—Owing to the very wet and boisterous climate at this station, it was found that the ordinary weatherboards with which the tower was covered would not keep out the wet; consequently it was found necessary to re-cover the tower. This was done with diagonal boarding, overlaid with tarred felt, and an outer covering of 1½in. totara boards, with a slip-tongue of galvanized hoop-iron. It is believed that the tower will now be quite weatherproof. The work was completed at the end of March; but many of the accounts in connection with it were not received until after the end of the financial year.

Centre Island.—Electric bells for calling keepers have been fitted at this station.

Cape Foulwind.—Electric bells for calling keepers have also been fitted at this station.

Dog Island.—A new finial for the lightning-conductor has been fixed, and a new centre for one of the holophotes, which was accidentally broken, has been procured from Paris, and fitted in position.

Farewell Spit.—This station is now connected by telephone with the telegraph system of the colony. Arrangements have been made to have watch kept from the tower during the whole of the day, so that the signals made by vessels wishing to communicate by telegraph may be duly observed.

Planting.—Steps were taken last year to plant pine-trees of various kinds at the lighthouse stations where there is no bush at hand; many of these trees have grown well, and it is proposed to plant a number more this winter. Care has been taken that these trees are planted in such positions that they cannot possibly interfere with the exhibition of the light; and in time they will afford valuable shelter, and will be useful in supplying firewood.

Cuvier Island.—An order has been sent Home for the apparatus and lantern for this lighthouse. It is to be a first-order revolving white light, attaining its greatest brilliancy once every thirty seconds. As soon as the land has been acquired it is proposed to begin the erection of the tower and buildings.

Manukau Head Leading Lights.—The necessary steps for proceeding with the erection of these lights have been taken, and the work is now in progress.

Jackson's Head Beacon.—Designs for a concrete beacon, to replace the one which was swept away by a gale in March, 1885, shortly after its erection, were prepared by the Marine Engineer, Mr. Blackett, and the works were commenced in February last. An experienced foreman was engaged, and he was sent to the rock with a staff of men in the s.s. "Napier," which vessel was chartered for the purpose. At the end of the financial year the work was progressing favourably.

Kaikoura.—It is proposed to place a sum on the estimates for the purpose of having a survey made of the proposed site for a lighthouse on this peninsula.

HARBOURS.—The control of the harbour staff at Gisborne was handed over to the Harbour Board of that port on the 1st March last.

The Auckland Harbour Board abolished compulsory pilotage from the 1st October last, and thus took the lead of other Boards in the liberal policy of reducing the charges on shipping. It is to be hoped that the Harbour Boards at other ports where compulsory pilotage is still in force will not be slow to follow the good example set by Auckland.

Considerable injury having been done to the channels of various harbours by the disgraceful practice of masters throwing their ballast overboard, and, repeated warnings having been disregarded, it has now been determined to prosecute all persons who are found doing this. In pursuance of this determination, proceedings were, in September, 1885, taken against the master of the "Maria Virginia" for discharging ballast in Mongonui Harbour, when he was fined £5 and costs.

A large iron buoy was found on the beach on the south side of Young Nick's Head, near Gisborne, and was recovered by the Harbourmaster there, whose description of it led to the belief that it belonged to the Bluff Harbour Board, On inquiry, this was found to be the case, it having broken away from the Bluff Harbour in a gale of wind in March, 1885, and, after drifting about at sea for about four months, was picked up, as above stated, 670 miles to the northward of the port from which it started.

Kaipara.—The repairs to the steam-launch referred to in last report were completed early in the year; she is now in thoroughly good order. Representations having been made that the shoals about the Heads had altered considerably, instructions were given to have a survey made of the Galatea Channel, and the banks and channels of the Wairoa River, including the entrances to the Oruawharo, Otamatea, and Kaipara Rivers up as far as Te Rewa Point. This is now being done. Plans for some new buoys for buoying the Wairoa River have been prepared, and it is proposed shortly to call for tenders for making them. The necessary properly-tested buoy-chain for mooring them has been procured from England.

Hokianga.—I regret to have to report the death of Captain Thomas Seon, who had been Harbourmaster and pilot at this port for upwards of thirteen years. It is proposed to fill the vacancy so caused by the appointment of Mr. George Martin, who has acted as signalman and occasional pilot for the last twelve years.

Wairau.—Here, too, I regret to have to report the death of the signalman and pilot, James Bulliff, who died on the 7th January last, having nearly completed eighteen years' service. He was succeeded by John Rodgers, who had been a boatman at Hokitika for over nineteen years. A house for the signalman and pilot has been built on the pilot-station reserve, near the entrance of the river, at a cost of £294 3s. 6d. The station is now connected with the telegraph system of the colony by telephone to Blenheim. The sum of £92 15s. 2d. was expended in clearing the river of snags. This was done under the superintendence of the River Board.

Whakatane.—The contract for the removal of rocks at the entrance of the Whakatane River was completed early in the year, and the balance, £47 11s. 5d., paid to the contractor. The total cost for this service was £149 14s.

Nelson.—A new pilot-boat of approved design has been supplied to this station.

Waitapu.—A small boat, and material to enable the Harbourmaster to build a boat-shed, have been supplied to this place.

Mokihinui.—The sum of £332 16s. 11d. has been expended in improving the bar and channel, and in erection of a flagstaff, purchase of lights for leading-lights, &c.

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

April 22: Validating election of Chairman of Waitara Harbour Board.
April 22: Authorizing Mercury Bay Timber Company and Messrs. Schapp and Ansenne to construct boom across Waiwawa River.
April 22: Approving plans of boom across Waiwawa River.
May 5: Approving plans of bathing-place at Sumner.
May 5: Approving plans of breakwater, training-bank, and railway north side of Grey River.
June 9: Approving plan of swimming-bath at Timaru.
July 7: Fixing dues and rates and making regulations for Kaikoura Wharf.
July 21: Authorizing Messrs. Lane and Brown to construct boom in Whangaroa Harbour.
July 21: Approving of lease of portion of Thames foreshore for erection of furnace, &c., for gold-saving.
July 28: Approving plan of mooring-stage, Greymouth.
August 4: Approving plan of New Zealand Frozen Meat Company's wharf at Waitara.
August 18: Approving of Thames Harbour Board licensing J. Darrow to use portion of fore-shore.
August 18: Vesting Kaiwaka Wharf, Point Curtis, in Hobson County Council.
August 18: Approving plans of Wellington Harbour Board reclamation.
August 18: Approving plans of wharf at the Needles, Manukau.
August 25: Approving of Thames Harbour Board licensing Messrs. Tapp and Dunlop to occupy foreshore.

August 25: Fixing dues and rates and making regulations for Havelock Wharf.
September 1: Fixing tolls and charges and making regulations for Opotiki Wharves.
October 13: Approving plans of ferry-steps and landing-stage, Westport.
October 13: Approving plans of bridge across Iwitaua River.
November 3: Licensing W. Gash to use foreshore, Lower Otago Harbour, for erection of smoke-house for fish-curing.
November 10: Approving plans of extension of inner north tee, Queen's Wharf, Wellington.
November 26: Approving plan of bath at Tauranga.
November 26: Licensing Tauranga Improvement Company to occupy foreshore for bath.
December 5: Approving plans of Wellington Rowing Club's boat-shed and landing-stage.
December 15: Approving plans of bridge across Wairoa River at Clyde.
December 15: Approving plans of Auckland Tramway Company's Wharf at Birkenhead.
December 15: Licensing Auckland Tramway Company to use foreshore at Birkenhead.
December 29: Approving plans of breakwater, Gisborne.
January 14: Approving extension of wharves at Aratapu and Mount Wesley.
January 14: Approving plan of coal-bins at Westport coal-staiths.
January 14: Approving plan of goods-shed on wharf, Greymouth.
February 8: Approving plan of extension of Awhitu Wharf, Manukau.
February 24: Approving plans of two bridges across Tokatoka River.
February 24: Approving plans of wharf near Point Jerningham, Wellington.
March 2: Approving plans of timber wharf and viaduct at Gisborne.
March 16: Approving plan of wharf at Kaiapoi.

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

Poor Knight Islands.—Sunken rock reported off.
Lyttelton Harbour.—Dredging operations.
Auckland Harbour.—Area taken for defence purposes.
Oamaru Harbour.—White light on staging for moorings.
Akaroa Harbour.—Position of jetty light altered.
Wellington Harbour.—Extension of Queen's Wharf.
Golden Bay.—Ballast-ground at Tata Islands.
Grey River.—Dredging operations (two notices).
Cape Palliser.—Result of survey of reported danger on which s.s. "Ionic" struck.
New River.—Buoys placed at south ends of training-walls.
East Cape.—Passage between East Cape Islet and mainland unsafe.
Westport Harbour.—Position of beacons altered.
Manukau Harbour, Entrance.—Result of recent soundings.
Picton Harbour.—Wharf extension.
Grahamstown.—Light on Albert Street Wharf discontinued.
Farewell Spit Lighthouse.—Telephone station established.

With reference to the first notice, search for the change in question has been made on several occasions by the "Stella," but no trace of it could be found. The "Hydra" rock, which for many years has been marked "PD" on the chart near Cape Saunders, was discovered, and its position fixed by Captain Grey, of the Government steamer "Stella." It was just a cable's length north of the position assigned to it by the chart. Notices to Mariners are now sent to the hydrographers of the Imperial German, the Austrian, Dutch, and United States Navies, from whom also are received copies of all the notices published by them.

Light-dues.—The sum of £7,433 6s. was collected as light-dues during the year, being £1,092 14s. 8d. less than was collected last year. As the San Francisco mail steamers, and all the direct steamers arriving from England with mails, are—in the case of the steamers belonging to the New Zealand Shipping Company, by the terms of their contract with the Post Office, and in the case of those belonging to the Shaw, Savill, and Albion Company (Limited), by the special direction of the Hon. the Postmaster-General—exempted from payment of light-dues, this fully accounts for the falling-off in these dues. Nearly half of the tonnage now arriving from Great Britain is composed of steam-vessels. No amount has this year been paid to the credit of light-dues by the General Post Office on account of either the direct steamers or the San Francisco mail steamers.

Government Vessels.—The "Hinemoa" has, as a rule, been empoyed on special service, and she has carried a considerable quantity of cargo at different times for various departments. She made a special trip to the Bounty and Antipodes Islands in March last, with huts and a supply of provisions and clothes, for the purpose of establishing a dépôt for the use of castaways on each of these groups. Appended hereto will be found a valuable and interesting report by Captain Fairchild respecting this trip. It is worthy of being mentioned that in the act of digging one of the holes for piles for the hut for stores placed on the Antipodes Islands a singular relic in the shape of a fragment of coarse pottery was turned up from about two feet below the surface. This curious discovery leads one to wonder how and whence came this piece of pottery, and it opens to the imagination the widest field for conjecture. The fragment in question has been sent to the Colonial Museum, together with specimens of the herbage growing on the island, and of the earth, rocks, &c.

Repairs of considerable magnitude were made to the "Hinemoa's" boilers early in the year, and on examination recently it was found that it would shortly be necessary to have new boilers made. Plans have accordingly been prepared, and a sum placed on the Estimates for defraying the necessary expenses for building and fitting them in position. The "Stella" has been continuously employed attending to lighthouses, buoys, &c. She also made a special trip in October last to the Auckland, Campbell, Antipodes, and Bounty Islands in search of castaways, the Government of Victoria having requested a vessel to be sent to these islands (all of which are within the statu-

tory boundaries of the Colony of New Zealand), as it was reported as possible that the crew of the missing ship "North American" might be found on one of them. The search, however, proved fruitless. As already stated, the "Hinemoa" went there in March last, and established dépôts. Notices were posted on the dépôt buildings that a steamer would be despatched to the islands about February or March in each year, and it will therefore be necessary to see that this is done without fail.

Tenders were called for the supply of a new boiler for the "Stella," and that of Messrs. Luke and Sons for £909 was accepted; the boiler is to be completed by the 9th July. During the year the "Stella" steamed 18,860 miles, was 2,471 hours under steam, burnt 614 tons of coal, landed 1,007 tons cargo, and carried 184 passengers.

The schooner "Kekeno" has as usual been employed in making visits to the Auckland and Campbell Islands and West Coast Sounds, in connection with the protection of the seal fisheries.

Examination of Masters, Mates, and Engineers.—One hundred and forty-seven candidates passed their examination; of these, 109 were masters, mates, and engineers of sea-going vessels, and 38 masters and engineers of river steamers. Very strict tests are now enforced to see whether candidates suffer from colour-blindness; but, as yet, only one candidate—for a certificate as master of a river steamer—has failed from that cause. It is interesting to note that during the year one of the boys apprenticed from the Kohimarama Training School passed for, and obtained a certificate as "Only mate."

Survey of Steamers.—Certificates of survey under "The Shipping and Seamen's Act, 1877," have been issued to 187 steamers of 29,624 aggregate tonnage and 9,902 horse-power, being four steamers more than were surveyed last year. Owing to the establishment of a direct line of steamers with the United Kingdom, the question of the recognition by the Board of Trade of certificates of survey issued by this department has been raised, and, as the surveys here are conducted under the same regulations as those in the United Kingdom, His Excellency the Governor was advised to apply to the Colonial Office to move the Board of Trade to issue the necessary instructions to have New Zealand certificates of survey recognized. I have little doubt that this request will be acceded to.

Relief of Distressed Seamen, &c.—Certain moneys expended by this department on the relief of distressed seamen belonging to the German Empire and to the Colony of New South Wales have been recovered; and an amount of £41 10s. 8d. has been refunded to the Government of Fiji in respect of the relief of the crew of the "Active" and "Nightingale," both of which vessels belonged to New Zealand. In connection with the relief of the crew of the "Nightingale" by the master of the Peruvian ship "Remijio," who picked up the boat's crew, consisting of the master and others, and deviated very considerately from his voyage to land them at Fiji, it was determined to present him with a binocular glass in recognition of his humane services. The Agent-General was therefore requested to procure one suitably inscribed, similar to those usually presented by the Board of Trade, and to hand it over to that body for presentation to Captain Howard, which has been accordingly done.

Wages and Effects of Deceased Seamen.—During the year accounts of the estates of eighteen seamen were received by the department in pursuance of the provisions of "The Shipping and Seamen's Act, 1877;" the names of the men and the net amount of each estate are shown in a return attached hereto. In March last the sum of £57 2s. 10d., being balances of the estates of nine seamen that had remained unclaimed for a period of six years, was, as provided by the 87th section of "The Shipping and Seamen's Act, 1877," paid into the Public Account.

Inspection of Machinery.—The annual reports of the Chief Inspector and the Inspectors are attached hereto. During the year an additional Inspector has been appointed to overtake work which it was found the District Inspectors could not possibly cope with. The new Inspector at first took charge of the Canterbury District during the temporary absence of the Inspector; he then proceeded to Otago to work up the arrears in that district. It has not yet been settled where he is to be located, as a rearrangement of the districts is under consideration with the object of utilizing to the best advantage the services of the several Inspectors for the survey of steam-vessels as well as the inspection of machinery.

Wrecks and Casualties.—The accompanying table shows an analysis of the casualties reported. Those on the coast of the colony number 65, representing tonnage amounting to 25,908 tons, as against 63 casualties affecting 9,222 tons last year. The large increase in the tonnage in 1885–86 is accounted for by slight casualties to several large steamers. The number of total wrecks show a considerable decrease, being, within the colony, 10 of 1,368 tons, as against 17 of 4,175 tons the previous year.

It is gratifying to be able to report that the number of lives lost is less than last year, being 36 as against 55; those lost in the colony being only 9, as against 48 in the previous year. Of the lives lost on or near the coasts of the colony, 5 were in the "Malietoa" (all hands), and 4 in the "Fanny Kelly." Of those lost beyond the colony, 10 were lost in the "Elizabeth" (all hands), 6 from the "Earl Derby," 2 from the "Ada Melmore," and 1 each from the following vessels: "Halcione," "City of Florence," "Ganges," "Edwin Bassett," "Waikato," "Dragon," "Opawa," "Glenlora," and "Sarah and Mary."

The lives lost on board the "Manapouri," from the unfortunate accident caused by fumes from nitric acid, have not been included in this return.

Fisheries.—Oysters: Owing to the reckless way in which the rock-oyster fisheries have been worked it has been found necessary, in order to prevent their absolute destruction, to close the beds at Whangarei, the Hauraki Gulf, and the coast and harbours between Bream Head and a point just north of the Bay of Islands for a period of three years. It is hoped that by the end of that time the beds will have recovered. It was reported that one of the main causes of the beds having been so nearly destroyed was that the oysters were frequently stripped from the rocks with

spades, which reckless operation cleared away the small with the marketable oysters. In order to prevent this, an Order in Council has been made providing that no spade or other apparatus for taking rock-oysters shall be used of which the edge or blade shall exceed 2 inches in width. An Order in Council was also made under the provisions of "The Fisheries Encouragement Act, 1885," prohibiting the exportation of rock-oysters from the colony. The great importance of conserving our oyster-beds, both rock and mud, cannot be more forcibly illustrated than by quoting from the report of the Royal Commission on the fisheries of Tasmania in 1883, which shows that whereas, in one of the best years, the number of oysters dredged from the principal native beds amounted to 22,350,000, the value of which, at the present current prices, would be £93,125, a sum which, it is stated, is more than the equivalent of the value of the exports of grain, hay, flour, and bran from Tasmania in the three years previous to the date of the report, the yield of the beds has been reduced by over-fishing to not more than 100,000 per annum. The knowledge of this should be sufficient to induce the Government here to so regulate the taking of oysters as to prevent the productiveness of our beds from being arrested or destroyed from the same cause. The quantity of oysters exported from New Zealand—chiefly to Sydney and Melbourne—during the year ended the 31st December last amounted to 1,057,760 dozen rock-oysters, valued at £3,333, and 170,455 dozen mud-oysters, valued at £2,196.

Salt-water Fish.—The department is at present collecting information on the habits, spawning-season, &c., of the edible fish inhabiting New Zealand waters, with a view of adopting and enforcing a close season for some of the fish. I trust to be able by next year to report more fully hereon. A trawl has been ordered from England for use on board one of the Government steamers for the purpose of ascertaining what kinds of fish can be procured on the various parts of the coast, and the best seasons for taking them.

Fresh-water Fish.—A shipment of whitefish-ova was received from America in February last, unfortunately in a putrid condition. These were forwarded through the courtesy of Professor Spencer Baird, the United States Commissioner of Fish and Fisheries. A shipment of salmon-ova was received by the s.s. "Ionic" in March last, and was distributed among certain acclimatization societies. I am glad to say that this shipment turned out a success—in fact, the most successful, I believe, hitherto received in the Australian Colonies. Some 200,000 ova were shipped; but only eight of the nine boxes arrived in good condition, one having to be left out of the ice-house prepared for the ova, there being no room for it. Notwithstanding this, some healthy fry were hatched out. I note that in Tasmania their most successful shipment of salmon-ova received by the "Yeoman," in 1885, yielded 36,000 fry out of 150,000 ova shipped—or 24 per cent.—whilst those ex "Ionic" yielded some 50 per cent. of healthy fry. The importation of this ova and the various steps that had to be taken in anticipation of, and after, their arrival in the colony were, as you are aware, carried out under the immediate directions of the Hon. Sir Julius Vogel, the Commissioner of Trade and Customs. The correspondence relating to the introduction of fish-ova has been printed, and will be presented to Parliament as a separate paper.

I would submit, for consideration, whether the present practice of placing the young salmon-fry in many different rivers is a judicious one. It would appear to be more desirable to place all the salmon-fry hatched into one particular river, that river being selected, regardless of position and district, as being the best salmon river, on account of the temperature of water and other necessary conditions. When once salmon are established in one river, it would be only a work of time to get them placed, at any rate, in most of the rivers in the Middle Island. In support of this plan, I quote the following paragraph from the United States Commission of Fish and Fisheries Report for 1883 on the subject of Artificial Propagation of Fish: "Failures have resulted, in a large degree, from the limited scale on which the work has been carried out. If the expectancy of destruction in a given locality be estimated as representing one million young fish, and any number less than one million be introduced therein, it is easy to understand that there will be no result." This opinion appears to apply with singular force to New Zealand, where several of the acclimatization societies are eager to secure a share of the young salmon in order that they may be turned out in rivers in various parts of the colony, some of which are entirely unfitted for the salmon to thrive, or, perhaps, even to live in.

Now that the Government have taken in hand the importation of fish-ova, I submit for consideration whether it would not be desirable, in the public interest, to make some inquiry as to the operations of acclimatization societies, especially in relation to pisciculture. So far as I can make out, there are no less than twenty-one such societies in the colony. All that appears to be requisite for the establishment of a society is, that a copy of its rules, signed by the chairman and countersigned by three members thereof, shall be deposited in the office of the Colonial Secretary. There is thus nothing to prevent any half-dozen persons from forming themselves into an acclimatization society in any district where no organization of that kind had already been constituted. It has, heretofore, been the practice, at the instance of any one of these societies, to make and gazette regulations under "The Salmon and Trout Act, 1867," for fishing in specified waters within the district in which such society operates. These regulations prescribe a fee, usually £1, for every fishing license. There is no specific authority in the Act for imposing this fee; this seems to have been done under the provisions in the Act quoted, which authorize the Governor to make such regulations for certain specified purposes as seem expedient, and also "as to any other matter or thing which in any manner relates to the management and protection of salmon or trout in this colony, or to the fishing for or taking salmon or trout." In some districts considerable amounts must be collected from the public for such licenses, and, as the license-fees are of the nature of a tax, I think it would be only reasonable in future to require that the accounts of societies which receive these fees should be published. I think it would also be reasonable for the Government in future to require any society which submits regulations for approval and publication to furnish, along with such regulations, a copy of its rules and a list of its members.

I understand that seven fish-hatcheries, belonging to acclimatization societies, are in existence now, viz., one each at Auckland, Wairarapa, Nelson, Christchurch, Dunedin, Wallacetown (Inver-

cargill), and Queenstown, and one, belonging to a private individual, at Opawa, near Christchurch. Now that communication between different parts of the country has been so greatly facilitated by the extension of the railways, it is worthy of consideration whether better results, with less expenditure of money, could not be obtained by having two well-equipped establishments, one in the North and one in the Middle Island, whence the young fry could be easily distributed.

In making the above remarks I have no desire whatever to detract in the slightest degree from the credit that is due to many of the acclimatization societies, for undoubtedly they have rendered lasting and most valuable service to the colony in introducing and stocking our rivers with trout. This good work has been accomplished by the zeal, energy, and public spirit of the members of those societies, who have not only contributed largely from their private purses, but have, year after year, sedulously watched over the hatching of the ova, and afterwards undertaken long and toilsome journeys to distant lakes and rivers to liberate the young fish. My object has been to exhibit the question in a purely economic light, and to suggest a course of action in regard to these societies which, I am inclined to think, would tend to establish them on a satisfactory footing, and promote their well-being, as it would operate in the direction of preventing the undue increase of small weak societies, and thus strengthen and widen the sphere of usefulness of the larger and older ones.

Harbour Improvement Plans.—Only two Harbour Boards, viz., Timaru and Oamaru, have forwarded plans this year for publication. These are attached hereto.

Returns.—The usual report, by the Marine Engineer, on works carried out, annual returns, wreck-chart, &c., are appended hereto.

I have, &c.,

WILLIAM SEED,
Secretary.

The Hon. the Minister having Charge of the Marine Department.

Captain FAIRCHILD to the SECRETARY, Marine Department, Wellington.

SIR,— "Hinemoa," s.s., Wellington, 25th March, 1886.

In accordance with instructions contained in your letter of the 13th March, I proceeded to the Antipodes and Bounty Islands, and have to report as follows:—

We reached the Antipodes at 10 a.m. on the 16th March, and, after steaming round the island, found fairly good anchorage on the north-east side, in fifteen fathoms of water, with black sandy bottom. We at once proceeded to land the material and erect the house, which was finished at 5 p.m on the 17th, and all the stores, &c., deposited therein. I travelled up to the highest part of the island, which I found to be 1,320ft. high, and which I named Mount Galloway, after our chief engineer, who accompanied me. Nearly the whole of the island is covered with coarse grass, and there are over 2,000 acres of land comparatively level, on which albatrosses sit in thousands. There are also two streams of water, taking their source from the mount; one empties into the sea on the north-east side of the island, and the other on the north-west side; each of these streams discharges about five gallons of excellent water per minute. There is no bush or wood of any kind on the island. As far as I could see, there were no off-lying dangers near the island, with the exception of a reef running off the south-west end of the island, about half a mile long, and has a rock on its outer end about three feet out of water. We caught no fish while at the island, although we had fishing-lines from the vessel, and I regret that time would not permit of my taking the boats in search of better fishing-ground. It is high-water, full, and change about 3h. 30m.; range about 6ft.

The house is erected on the north-east end of the island, in the best-sheltered place we could find, about 100ft. above sea-level, and about 300ft. in from shore, and can be seen a good distance off from a vessel approaching from the north-east. Enclosed is a rough sketch of the island.

A peculiar incident happened whilst sinking the holes for the posts for the house. When down about 2ft. we unearthed a piece of an earthenware bowl, which I forward to you, also samples of grasses, fern, and rock of volcanic origin. I also found some pieces of timber, which had been the remains of an old hut; but, as it was New Zealand wood, it had, no doubt, been a sealer's hut.

Sheep and goats would do well on the island, and I would recommend that some be sent there next trip of a Government vessel; also, some English grass and blue-gum and wattle seeds.

The wet weather was not so severe as might be expected; the lowest thermometer was 42°.

The Bounty Islands were reached at 10 a.m. on the 19th, and, after finding a fairly-good anchorage in twenty-three fathoms of water on the north side, we at once proceeded to select a site and erect a house. The house is erected on the largest island, near the western side of the group, and is about 120ft. above sea-level, and can be seen from a vessel approaching from the north. I enclose a rough sketch of these islands, which are fourteen in number, and run from 20ft. to 290ft. in height, and are composed of coarse granite, without a speck of vegetation on them, not even a bit of moss, and no fresh water. They are covered with millions of penguins and other sea-birds. As there is no firewood I would recommend that a cheap cooking-lamp be made, which would burn penguin fat or oil. There would be no trouble in getting any amount of penguin oil, and by this means castaways could cook fish, &c.; and, as for fresh water, I think that, as much rain falls there during a great part of the year, they might catch the rain-water, and so exist. We steamed round the islands and through a passage between what may be called the eastern and western groups, taking frequent soundings. The lead brought up some specimens of very handsome and delicate live shells, which got broken. I regret that I had no time to use the dredge to obtain further specimens, because dredging about the islands would prove interesting. Seals are scarce, as we only saw one; and, like at the Antipodes, we caught no fish, as time would not permit of our going to the best grounds. Near where we built the house we found the remains of an old hut and some firewood; and, as it was New Zealand wood, it was probably left there by a party of sealers from the South Island, who, to my knowledge, visited the Bounty Islands about six years ago.

I have, &c.,

JOHN FAIRCHILD.

The Secretary, Marine Department, Wellington.

SUMMARY of CASUALTIES to SHIPPING and SEAMEN reported to the Marine Department during the Financial Year ended the 31st March, 1886.

Nature of Casualties.	Casualties on or near the Coasts of the Colony.									Casualties outside the Colony.									Total Number of Casualties reported.		
	Steamers.			Sailing-vessels.			Total within Colony.			Steamers.			Sailing-vessels.			Total outside Colony.					
	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.	No. of Vessels.	Tonnage.	No. of Lives Lost.
Strandings,—																					
Total wrecks	2	140	..	8	1,228	4	10	1,368	4	..	..	..	3	413	..	3	413	..	13	1,781	4
Partial loss	4	361	..	7	1,929	..	11	2,290	..	..	..	..	..	..	..	..	..	..	11	2,290	..
Slight damage	1	75	..	4	847	..	5	922	..	..	..	..	1	342	..	1	342	..	6	1,264	..
No damage	6	9,852	..	3	288	..	9	10,140	..	..	..	..	2	1,328	..	2	1,328	..	11	11,468	..
Total strandings	13	10,428	..	22	4,292	4	35	14,720	4	..	..	..	6	2,083	..	6	2,083	..	41	16,803	4
Founderings,—																					
Total loss	..	..	..	1	79	5	1	79	5	..	..	..	1	349	10	1	349	10	2	428	15
Collisions,—																					
Partial loss	7	4,066	..	1	237	..	8	4,303	..	..	..	..	..	..	..	..	..	..	8	4,303	..
Slight damage	4	1,675	..	1	41	..	5	1,716	..	..	..	..	..	..	..	..	..	..	5	1,716	..
No damage	5	398	..	..	..	..	5	398	..	..	..	..	..	..	..	..	..	..	5	398	..
Total	16	6,139	..	2	278	..	18	6,417	..	..	..	..	..	..	..	..	..	..	18	6,417	..
Miscellaneous, including damage to boilers, machinery, hull, yards, sails, &c.	6	3,120	..	5	1,572	..	11	4,692	..	..	..	..	3	1,343	1	3	1,343	1	14	6,035	1
Total casualties to shipping	35	1,968	..	30	6,221	9	65	25,908	9	..	..	..	10	3,775	11	10	3,775	11	75	29,683	20
Loss of life only	..	..	..	..	..	..	..	..	..	..	..	..	10	8,429	16	11	8,429	16	10	8,429	16
Total number of casualties reported	35	1,968	..	30	6,221	9	65	25,908	9	..	..	..	20	12,204	27	21	12,204	27	85	38,112	36

RETURN showing the Total Ordinary Expenditure of the Marine Department during the Financial Year ended the 31st March, 1886.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
	£ s. d.	£ s. d.	£ s. d.
HEAD OFFICE:—			
Secretary	200 0 0		
Chief Clerk	390 0 0		
2 Clerks	430 0 0		
Marine Engineer	300 0 0		
Draftsman	205 8 4		
Nautical Assessor	300 0 0		
		1,825 8 4	1,825 8 4
HARBOURS:—			
Manukau,—			
Salaries	708 0 0		
Repairs to signal station	62 0 5		
Overhauling buoys	65 4 2		
Contingencies	6 15 4		
		841 19 11	
Russell,—			
Salaries	306 0 0		
Contingencies	9 0 0		
		315 0 0	
Whangaroa,—			
Contingencies	0 10 0		
		0 10 0	
Hokianga,—			
Salaries	373 13 4		
Contingencies	23 0 5		
		396 13 9	
Kaipara,—			
Salaries	735 2 5		
Repairs to steam-launch	296 12 7		
Stores, coals, and contingencies	143 6 4		
		1,175 1 4	
Opunake,—			
Salary	60 0 0		
Contingencies	17 17 0		
		77 17 0	
Rangitikei,—			
Salary	107 2 0		
Contingencies	39 2 7		
		146 4 7	
Foxton,—			
Salaries	327 15 0		
Contingencies	10 19 10		
		338 14 10	
Wairoa,—			
Salary	100 0 0		
Contingencies	5 0 0		
		105 0 0	
Wangawehi,—			
Maintenance of light	40 0 0		
		40 0 0	
Whakatane,—			
Removal of rocks	47 11 5		
		47 11 5	
Tauranga,—			
Salaries	318 0 0		
Contingencies	50 8 11		
		368 8 11	
Gisborne,—			
Salaries	325 8 4		
Contingencies	24 10 4		
		349 18 8	
Wairau,—			
Salary	139 3 1		
House for signalman	294 3 6		
Removal of snags, &c.	92 15 2		
Contingencies	85 6 1		
		611 7 10	
Picton,—			
Salaries	129 0 0		
Contingencies	17 17 6		
		146 17 6	
Havelock,—			
Salary	20 0 0		
Contingencies	12 17 0		
		32 17 0	
Nelson,—			
Salaries	916 9 1		
Contingencies	108 18 0		
		1,025 7 1	
Motueka,—			
Contingencies	0 2 6		
		0 2 6	
Riwaka,—			
Salary	12 0 0		
Contingencies	1 12 0		
		13 12 0	
Waitapu,—			
Salary	18 15 0		
Contingencies	48 5 11		
		67 0 11	
Collingwood,—			
Salary of lightkeeper	18 15 0		
Contingencies	18 8 6		
		37 3 6	
Karamea,—			
Contingencies	27 10 0		
		27 10 0	
Mokihinui,—			
Improvement of bar and channel	218 0 0		
Erection of flagstaff	74 0 8		
Contingencies	40 16 3		
		332 16 11	
Nile River,—			
Maintenance of signals	35 2 3		
		35 2 3	
Carried forward	..	6,532 17 11	1,825 8 4

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	..	6,532 17 11	1,825 8 4
HARBOURS—*continued.*			
Hokitika,—			
Salaries	342 5 2		
Contingencies	62 14 3		
		404 19 5	
Okarito,—			
Salary	50 0 0		
Contingencies	35 14 0		
		85 14 0	
Catlin's River,—			
Salary	125 0 0		
Contingencies	38 2 11		
		163 2 11	
Fortrose,—			
Salary	100 0 0		
Contingencies	18 9 3		
		118 9 3	
Riverton,—			
Salary	120 0 0		
		120 0 0	
Akaroa,—			
Salary	25 0 0		
Contingencies	11 15 8		
		36 15 8	
Waimakiriri,—			
Salary	110 0 0		
Contingencies	60 0 0		
		170 0 0	
Kaikoura,—			
Salary	28 17 9		
Contingencies	0 16 2		
		29 13 11	
General harbour contingencies	130 12 5		
		130 12 5	
Compensation to signalman, Greymouth, for loss of office..	..	274 17 0	
			8,067 2 6
LIGHTHOUSES :—			
Salaries of keepers	7,876 10 8		
Keepers' travelling expenses	26 9 11		
Oil	1,088 15 2		
Stores and contingencies	1,991 1 9		
Pension to widow of late Lightkeeper Deck	24 0 0		
Lighthouse artificer	116 13 4		
		11,123 10 10	
"Stella," s.s.,—			
Amount expended for new boiler	25 15 3		
Wages, stores, provisions, &c.	4,790 1 10		
	4,815 17 1		
Less amount earned by steamer	184 19 3		
		4,630 17 10	
			15,754 8 8
Relief of distressed seamen	..	90 15 8	
Provision dépôts for castaways on Antipodes and Bounty Islands	..	116 8 9	
Inquiries into wrecks and casualties	..	161 10 10	
Departmental travelling expenses	..	42 8 5	
Charts	..	62 16 6	
Coastal buoys and beacons	..	2 5 0	
Survey of Steamers,—			
Salary of engineer surveyor	500 0 0		
Travelling expenses	222 0 6		
		722 0 6	
Sundries	..	75 7 2	
Surrender of lease of site for sailors' home at Lyttelton ..	..	257 11 2	
Expenses under Fisheries Conservation Act	..	5 11 6	
			1,536 15 6
Inspection of Machinery,—			
Salaries of Inspectors	1,400 0 0		
Travelling expenses	588 9 10		
Cost of collection of fees	56 4 0		
Sundries	14 9 6		
		2,059 3 4	
			2,059 3 4
Examination of Masters and Mates,—			
Salaries	575 0 0		
Contingencies	17 17 2		
		592 17 2	
			592 17 2
Protection of Seal Fisheries,—			
Schooner "Kekeno," wages, stores, &c.	..	611 2 3	
			611 2 3
"Hinemoa," s.s.,—			
Repairs	951 17 5		
Wages, coal, stores, provisions, &c.	6,788 10 9		
	7,740 8 2		
Less amount earned by steamer	121 17 0		
		7,618 11 2	
			7,618 11 2
			38,065 8 11
Less amounts credited to vote	..	..	473 7 0
			£37,592 1 11

RETURN showing the Amount of Pilotage, Port Charges, &c., collected during the Year ended the 31st March, 1886.

Name of Port.	Pilotage.	Port Charges, &c.	Total.
	£ s. d.	£ s. d.	£ s. d.
Auckland* ..	1,314 19 7	2,226 15 8	3,541 15 3
Russell ..	9 5 0	..	9 5 0
Onehunga ..	..	149 2 5	149 2 5
Kaipara ..	238 6 8	253 8 3	491 14 11
Thames* ..	47 1 0	49 4 9	96 5 9
Mongonui ..	..	62 5 0	62 5 0
Hokianga ..	54 0 3	..	54 0 3
Tauranga ..	11 5 1	..	11 5 1
Gisborne† ..	72 17 7	..	72 17 7
Waitara* ..	104 16 11	42 1 6	146 18 5
New Plymouth*	66 17 0	60 12 0	127 9 0
Wanganui* ..	425 4 9	..	425 4 9
Foxton ..	130 7 2	..	130 7 2
Patea* ..	37 4 4	3 17 0	41 1 4
Wairoa ..	89 17 0	2 18 6	92 15 6
Napier* ..	1,934 4 8	779 1 9	2,713 6 5
Wellington* ..	1,018 4 2	3,500 16 6	4,519 0 8
Nelson ..	1,108 2 7	..	1,108 2 7
Hokitika ..	11 5 8	..	11 5 8
Lyttelton* ..	3,326 13 9	2,564 3 7	5,890 17 4
Timaru* ..	..	669 14 9	669 14 9
Oamaru* ..	484 10 4	553 10 8	1,038 1 0
Dunedin* ..	4,661 18 2	4,121 9 3	8,783 7 5
Invercargill* ..	16 2 10	38 10 3	54 13 1
Bluff* ..	673 10 0	803 0 2	1,476 10 2
Totals ..	15,836 14 6	15,880 12 0	31,717 6 6

* Harbour Board revenue. † £7 2s. 3d. Harbour Board revenue.

RETURN showing the Amount of Light Dues collected during the Year ended the 31st March, 1886.

	£ s. d.
Auckland	1,627 18 0
Onehunga	12 15 4
Whangaroa	31 17 4
Kaipara	127 15 4
Russell	84 16 0
Mongonui	5 2 0
Poverty Bay	3 11 8
New Plymouth	21 19 6
Wanganui	15 10 0
Picton	2 4 4
Wellington	1,777 8 10
Napier	182 5 4
Nelson	100 18 2
Lyttelton	927 1 2
Timaru	137 0 4
Oamaru	47 19 4
Dunedin	1,242 19 6
Bluff	1,084 3 10
Total	£7,433 6 0

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

Name of Lighthouse.	Cost of Erection.
	£ s. d.
Poncarrow Head	6,422 0 4
Nelson	2,824 8 9
Tiri Tiri	5,747 7 2
Mana Island*	5,513 0 1
Taiaroa Head	4,923 14 11
Godley Head	4,705 16 4
Dog Island	10,480 12 8
Farewell Spit	6,139 11 8
Nugget Point	6,597 3 7
Cape Campbell	5,619 2 6
Manukau Head	4,975 2 4
Cape Foulwind	6,955 9 1
Brothers	6,241 0 0
Portland Island	6,554 14 5
Moeraki	4,288 13 2
Centre Island	5,785 19 0
Puysegur Point	9,958 19 5
Cape Maria van Diemen	7,028 14 8
Akaroa Head	7,150 6 5
Cape Saunders	6,066 6 3
Cape Egmont†	3,353 17 11
Moko Hinou	8,186 5 0
Waipapapa Point	5,969 18 11
Ponui Passage‡	..
Kaipara Head	5,571 8 0
French Pass	1,427 17 5
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 Lighthouses, &c., out of Public Works Loan, during the Year ended the 31st March, 1886.

Nature of Expenditure.	Amount.
	£ s. d.
Jackson's Reef Beacon	300 2 7

RETURN showing the Certificates of Service issued to Masters, Mates, and Engineers during the Year ended the 31st March, 1886.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
John Hebley	Master	Home trade ..	21 May, 1885 ..	2533
Samuel Tiller	"	" ..	5 Aug., " ..	2534
Henry Parker	"	" ..	23 Mar., 1886 ..	2535
James Mentiplay	Engineer	First class	10 Aug., 1885 ..	1042
Alexander Hendry	"	Second class ..	11 Jan., 1886 ..	1043

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
Brothers ..	2nd „	„	10″	„	„	„	24 Sept., 1877
	..	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	ber	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, 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.
	£ s. d.
Shipping and Seamen's Act,—	
Fees for shipping and discharge of seamen, and sale of forms	1,000 15 3
Survey of steamers	1,175 7 0
Examination of masters, mates, and engineers	194 5 0
Light-dues	7,433 6 0
Merchant Shipping Act	121 10 0
Inspection of Machinery Act	2,506 0 0
Pilotage and port charges	2,185 18 11
Sale of charts	52 3 6
Sundry receipts under Harbours Acts	124 0 0
Sundries	9 7 3
Total	£14,802 12 11

Return of Estates of Deceased Seamen received in pursuance of the provisions of "The Shipping and Seamen's Act, 1877," during the Year ended the 31st March, 1886.

Name of Seaman.	Net Amount of Estate.	Name of Seaman.	Net Amount of Estate.
	£ s. d.		£ s. d.
Alexander Murphy	3 4 3	Harry Bridge	19 0 2
W. Hansen, *alias* E. W. P. Peterson ..	6 5 4	James Hall	1 16 6
James McLellan	1 6 9	William Beard	25 2 9
Frederick Augustus Yates	0 8 9	James Moore	0 13 6
Andrew Munro	0 19 0	Thomas West	1 2 3
Edward Jarvis	0 5 9	Robin Sydney Bing	13 2 6
G. Duke	0 3 0	Charles Schultze	0 4 9
Joseph Wolfenden	4 11 4	Charles C. A. Laker	6 18 6
Vincent Croll	2 3 2	Alexander Morice	27 0 0

RETURN of Steamers to which Certificates of Survey were issued in New Zealand during the Year ended the 31st March, 1886.

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	
Alexandra	73	30	Non-condensing	Paddle	River	
Antrim	35	30	"	"	"	
Arawata	623	300	Compound	Screw	Sea-going	
Argyle	129	40	"	"	"	
Awarua	100	80	"	Paddle	"	Tug.
Awhina	5	50	"	Screw	"	New tug.
Balclutha	84	50	Non-condensing	Stern-wheel	River	
Beautiful Star	146	30	Condensing	Screw	Sea-going	
Bee		2	Non-condensing	"	River	Launch.
Bella	12	12	"	"	Extended river	
Birkenhead	55	16	"	Paddle	River	
Blanche	8	9	"	Screw	Extended river	
Black Diamond	9	20	"	Paddle	River	
Boojum	14	12	Compound	Screw	Extended river	
Britannia	108	40	Non-condensing	Paddle	River	New vessel.
Calliope	11	7	"	Twin-screw	"	Launch.
Canterbury		24	"	"	Extended river	"
Charles Edward	140	60	Compound	"	Sea-going	
City of Cork	42	46	Non-condensing	Paddle	Extended river	
Clansman	336	98	Compound	Screw	Sea-going	New vessel.
Coromandel	67	25	"	"	Extended river	
Delta	60	30	Non-condensing	Paddle	River	
Devonport	24	12	"	"	"	
Dispatch	38	40	Condensing	"	Sea-going	Tug.
Douglas	55	30	"	Screw	"	
Durham	53	30	Compound	"	River	
Effort	13	12	"	Paddle	"	Launch.
Elsie		8	"	Screw	Extended river	"
Enterprise	61	32	"	Paddle	"	
Erin		4	"	Screw	River	"
Fairy	32	15	Non-condensing	"	Extended river	
Fairy		4	"	"	River	"
Fingal	22	13	Condensing	"	Extended river	
Fly		3	Non-condensing	"	River	"
Gairloch	187	85	Compound	Twin-screw	Sea-going	New vessel.
Glenelg	156	75	"	Screw	"	
Go-Ahead	129	45	"	"	"	
Gordon		10	"	"	River	New launch.
Grafton	242	123	"	Twin-screw	Sea-going	
Hannah Mokau	35	15	"	Screw	Extended river	
Hauraki	59	18	"	"	Sea-going	
Hauroto	1,276	253	"	"	"	
Hawea	462	160	"	"	"	
Heathcote	94	35	"	"	River	Hopper barge.
Herald	356	85	"	"	Sea-going	
Hokianga		7	Non-condensing	"	River	Launch.
Huia	90	25	Compound	"	Sea-going	
Ida	12	10	Non-condensing	"	River	
Ino	32	20	"	"	Extended river	Wrecked.
Invercargill	123	50	Compound	"	Sea-going	New vessel.
Iona	61	45	Non-condensing	Stern-wheel	River	
Iona	159	65	Compound	Screw	Sea-going	
Iron Age	36	30	Condensing	Paddle	River	
Isabel		8	"	Screw	"	New launch.
Jane	25	8	Non-condensing	"	"	
Janet Nicoll	496	90	Compound	"	Sea-going	New vessel.
Jane Douglas	75	20	"	"	"	
Jane Williams	33	15	Non-condensing	"	River	
Kakanui	57	22	Compound	"	Sea-going	
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	28	20	Non-condensing	"	River	
Koputai	5	120	Compound	Paddle	Sea-going	Tug.
Koranui	301	80	"	Screw	"	
Kotuku	41	40	Non-condensing	Three screws	Extended river	
La Buona Ventura	4	4	"	Screw	River	Launch.
Lady Barkly	39	18	Compound	"	Sea-going	
Lalla Rookh	44	15	"	"	River	
Lara		7	Non-condensing	"	River	
Lilie	10	10	"	Paddle	River	
Lily	20	10	"	Twin-screw	"	
Little George		4	"	Screw	"	Launch.
Lyttelton	6	14	"	Twin-screw	Extended river	Launch.
Lyttelton	86	25	Condensing	Paddle	Sea-going	
Lyttelton	39	80	Compound	"	"	Tug.
Macgregor	163	60	"	Screw	"	
Mahinapua	205	80	"	Twin-screw	"	
Mahinapua		10	Non-condensing	Stern-wheel	River	Launch.
Manapouri	1,020	300	Compound	Screw	Sea-going	
Manawatu	112	40	"	"	"	
Manukau	45	15	Non-condensing	"	River	
Maitai	163	55	Compound	"	Sea-going	New vessel.
Matau	50	40	Non-condensing	Stern-wheel	River	
Maori	17	8	"	Screw	Extended river	

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.
Maori	118	60	Condensing	Screw	Sea-going	
Mawhera	340	75	Compound	"	"	
Merle	..	12	Non-condensing	Stern-wheel	River	Launch.
Minnie Casey	43	25	Compound	Screw	"	
Moa	110	25	Condensing	"	Sea-going	
Mohaka	20	12	Non-condensing	"	Extended river	
Moturoa	..	10	"	"	"	Launch.
Mountaineer	66	25	Compound	Paddle	River	
Murray	78	18	Condensing	Screw	Sea-going	
Napier	48	24	Compound	"	"	
Neptune	44	18	"	"	Extended river	
Noko	15	9	Non-condensing	"	River	Launch.
No. 222	502	120	Compound	Twin-screw	Sea-going	Dredge.
Ohau	411	92	"	Screw	"	
Omapere	352	160	"	"	"	
Orawaiti	283	120	"	"	"	
Oreti	138	43	"	"	"	
Patiki	37	22	Non-condensing	Paddle	River	
Pearl	9	7	"	Screw	Extended river	
Pelham	228	68	Compound	"	Sea-going	
Pelorus	18	12	Non-condensing	"	River	
Penguin	442	180	Compound	"	Sea-going	
Peninsula	31	18	Non-condensing	Paddle	River	
Picton	7	8	"	Screw	Extended river	Launch.
Pioneer	5	5	"	"	River	Launch.
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.
Ringarooma	623	300	Compound	"	Sea-going	
Riro Riro	4	4	Non-condensing	"	River	Launch.
Rose Casey	99	40	Compound	"	Extended river	
Rosina	21	14	Non-condensing	"	"	
Rotoiti	17	15	"	Twin-screw	River	
Rotomahana	864	450	Compound	Screw	Sea-going	
Rotomahana	139	45	Condensing	"	"	
Rotorua	576	172	Compound	"	"	
Rowena	74	30	"	"	"	
Ruby	32	14	"	"	Extended river	
Scotchman	30	10	Non-condensing	"	River	
Sea Gull	..	3	"	"	"	Launch.
Sir Donald	29	12	Condensing	"	Extended river	
Snark	..	6	Non-condensing	"	River	
Spray	..	3	"	"	"	Launch.
Staffa	40	25	Condensing	"	Sea-going	
St. Kilda	174	45	"	"	"	
Stormbird	137	40	Compound	"	"	
Sumner	94	35	Non-condensing	"	River	Hopper-barge.
Suva	177	55	Compound	"	Sea-going	
Taiaroa	228	110	"	"	"	Wrecked.
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	
Tangihua	20	15	Non-condensing	"	River	
Tarawera	1,269	250	Compound	"	Sea-going	
Taupo	408	92	"	"	"	
Te Anau	1,028	250	"	"	"	
Te Aroha	50	14	Non-condensing	Paddle	River	
Tekapo	1,544	270	Compound	Screw	Sea-going	First survey in colony.
Terrier	..	3	Non-condensing	"	River	Launch.
Terror	..	10	"	"	"	Launch.
Theodore	35	25	"	Paddle	"	New vessel.
Timaru	279	70	Compound	Screw	Sea-going	
Titan	21	55	Condensing	Paddle	"	Tug.
Tongariro	39	10	Non-condensing	"	Extended river	
Tongariro	62	25	"	"	River	
Triumph	1,797	400	Compound	Screw	Sea-going	First survey in colony
Tuhua	..	28	Non-condensing	Stern-wheel	River	New vessel.
Tui	55	22	Compound	Screw	Sea-going	
Vesta	3	5	Non-condensing	"	River	Launch.
Victoria	93	40	"	Paddle	"	
Vivid	16	14	"	Screw	Extended river	
Waihi	63	20	Compound	"	Sea-going	
Waihora	1,269	265	"	"	"	
Waikato	61	20	Non-condensing	Paddle	River	
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	
Waiwera	..	8	"	"	"	New launch.

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.
Waiwera	6	10	Compound	Screw	Extended river	Launch.
Wakatipu	1,157	256	"	"	Sea-going	
Wakatu	75	30	"	"	"	
Wallabi	101	25	Condensing	"	"	
Wallace	64	50	"	"	"	Wrecked.
Wanaka	278	120	Compound	"	"	
Wareatea	288	70	"	"	"	
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, 1886.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Charles Hodge*	First Mate	Foreign trade	1 April, 1885	426
Edwin Phillips	Master Ordinary	"	11 " "	427
Valentine J. R. Christian	"	"	11 " "	288
John Charles Hill	Only Mate	"	11 " "	428
John Charles Roberts	First Mate	"	11 " "	429
Felix Black	Master Ordinary	"	15 " "	430
George James Goss	Second Mate	"	21 " "	431
Edward John Harvey	Only Mate	" (local renewal)	24 " "	432
George McDonald	Master Ordinary	"	28 " "	353
John Jackson Addison McMeckan	First Mate	"	4 May, "	433
Alfred Henry Compton	Master Ordinary	"	12 " "	292
Charles Frederick Helander*	First Mate	"	19 " "	434
John Curran	Master Ordinary	"	21 " "	131
Thomas Frederick Bradford	Only Mate	"	27 " "	435
Frederick Warren Markham	Second Mate	"	1 June, "	436
Harry Robert Smith	"	"	11 " "	437
Ernest Warner Cleveland	"	"	16 " "	438
Alexander Robinson	"	"	16 " "	439
Andrew Anderson	First Mate	"	19 " "	340
Ernest Augustus Brown	"	"	25 " "	440
William Miller	Master Ordinary	"	29 " "	328
John Larnach	Second Mate	"	10 July, "	441
George McKenzie	Master Ordinary	"	16 " "	397
Herbert George Evans	Second Mate	"	22 " "	442
Angus Campbell	Only Mate	"	24 " "	443
William Donald	First Mate	"	28 " "	214
Mark Furneaux	Master Ordinary	"	5 Aug., "	444
Thomas Powell	Second Mate	" (renewal)	11 " "	445
Henry Matheson	Master Ordinary	"	11 " "	401
Anders Pedersen	"	"	21 " "	446
John Taylor Anderson	Second Mate	"	24 " "	447
William Waller	Master Ordinary	"	4 Sept., "	218
John Wilson	Second Mate	"	21 " "	448
Arthur Frederick Anthony	First Mate	"	26 " "	449
Thomas Braidwood	Second Mate	"	6 Oct., "	450
William Bishop	Master Ordinary	"	6 " "	416
George Bell	"	"	6 " "	324
Asa Norman Whitney	"	"	6 " "	451
Thomas Bergen De Wolfe	"	"	21 " "	452
Daniel Mathieson	"	"	29 " "	357
Thomas Harries	"	"	2 Nov., "	382
Archibald Duncan McPhail	Second Mate	"	2 " "	453
William Gifford Fildes	First Mate	"	5 " "	454
John McMaster Stewart	"	"	5 " "	455
John Metcalfe	Master Ordinary	"	5 " "	390
Herbert George Moxon	Second Mate	"	10 " "	456
John Robertson	First Mate	" (renewal)	17 " "	457
Malcolm Livingstone	Second Mate	"	18 " "	458
Lionel Campbell Hugh Worrall	Only Mate	"	10 Dec., "	459
John McLean Cameron	Master Ordinary	"	10 " "	150
John Johnson	Only Mate	"	15 " "	460
John Collinson	"	"	18 " "	461
Alexander Robinson	"	"	30 " "	439
James Robinson	First Mate	"	11 Jan., 1886	404
Frederick William Johnson	Second Mate	"	11 " "	462
homas Gilmour	"	"	11 " "	463
George Taylor Clarke	Master Ordinary	"	15 " "	464
Arthur Coe	Only Mate	"	26 " "	465
William Campbell	Second Mate	"	26 " "	466
John Mackay	Master Ordinary	"	8 Feb., "	349
Oscar Jarman	First Mate	"	15 " "	467
William Henry Neville	Second Mate	"	15 " "	468
James Mill	"	"	3 March, "	469
Ludwig Carl Albert Waldemar von Glasenapp	Master Ordinary	"	6 " "	470
Claude Duret	Second Mate	"	6 " "	471
George Kassens	Only Mate	"	8 " "	472

* Issued during suspension of Master's certificate.

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.
Charles Edward Wisdom Fleming	Master Ordinary	Foreign trade	8 March, 1886	473
William Alfred Glover	First Mate	"	15 " "	474
John Mill	Second Mate	"	15 " "	475
Oscar Craythorne Manning	"	"	24 " "	476
Thomas Henry Malcolm	First Mate	"	26 " "	341
John Silvester Liddell	Second Mate	"	29 " "	477
Edward John Harvey	Master	Home trade (renewal)	24 April, 1885	5,286
Walter Samuel Pope	"	Home trade	30 " "	5,257
John Shawyer Barnes	Mate	"	5 June, "	5,287
James Ryan	Master	"	10 " "	5,148
Christian Hansen	Mate	"	10 July, "	5,288
Ernest Kenneth Muirhead	"	"	14 Aug., "	5,289
William Arthur Wildman	Master	"	12 Oct., "	5,250
Henry Hamilton Johnston	Mate	"	12 " "	5,290
Johann Fredrich Rust	Master	"	21 " "	5,254
John Nicolas	"	"	21 " "	5,267
Theodore William Haultain	"	"	2 Nov., "	5,291
Lionel Campbell Hugh Worrall	"	"	10 Dec., "	5,283
Samuel Benney	"	" (renewal)	22 " "	5,292
Joshua Harris	"	River trade	11 April, "	3,110
James Ramsay	"	" (renewal)	21 " "	3,111
Benjamin Poole	"	"	2 June, "	3,112
Joseph Lockie	"	"	29 " "	3,113
Thomas Wills	"	"	14 Aug., "	3,114
Paul Coffey	"	"	27 " "	3,115
Alfred Henry Skudder	"	"	31 " "	3,116
Mark Thomas	"	"	13 Oct., "	3,117
John Wyman	"	"	24 " "	3,118
Robert Huia Gibbons	"	"	6 Nov., "	3,119
Ralph Dawson Welsh	"	"	25 " "	3,120
Benjamin Palmer	"	"	10 Dec., "	3,121
Philip Samuel Jones	"	"	26 Jan., 1886	3,122
Richard Liddle	"	" (renewal)	1 March, "	3,123
William Henry Brewer	1st Class Engineer	Foreign trade	4 April, 1885	93
George Tee	2nd Class Engineer	"	15 " "	127
Charles John Swann	"	"	4 May, "	128
Robert Stewart	"	"	21 " "	129
John Purdie	1st Class Engineer	"	29 June, "	130
Alexander Milne	"	"	29 " "	131
John Craigie Gifford	"	"	20 July, "	132
Edward William Titchener	2nd Class Engineer	"	21 " "	133
Robert Packer	"	"	29 " "	134
John Smith	"	"	29 " "	135
Edward Mundle	"	"	24 Aug., "	136
John Lindsay Galbraith	1st Class Engineer	"	12 Oct., "	75
Neil Dickson Hood	2nd Class Engineer	"	12 " "	137
Herman Nielsen	1st Class Engineer	"	16 " "	98
Thomas Cargill	2nd Class Engineer	"	16 " "	138
Ernest Seager Stratford	"	"	21 " "	139
William Alexander McGregor	"	"	10 Nov., "	140
David Mitchell	1st Class Engineer	"	18 Dec., "	95
David Reith	2nd Class Engineer	"	22 " "	141
William McKeegan	"	"	30 " "	142
John Anderson Moyes	"	"	5 Jan., 1886	143
John McLeod	"	"	11 " "	144
Philip James Carman	1st Class Engineer	"	29 " "	8
John Baird Rankin	"	"	29 " "	103
Robert Smith Ross	2nd Class Engineer	"	29 " "	145
Alexander McNair	"	"	4 Feb., "	146
James Barr	"	"	8 " "	147
Robert Tosh Dickie	"	"	15 " "	148
Peter Mudie	1st Class Engineer	"	18 " "	149
Samuel Dalrymple	"	"	26 " "	150
William Signal	2nd Class Engineer	"	26 " "	151
Asa Norman Whitney	Master, passed in steam	"	10 Nov., 1885	451
John McGill	Engineer	River trade	4 May, "	1,479
Frederick Hugh Wilson	"	"	4 " "	1,480
David Penman	"	"	4 " "	1,481
John Henry Stubbs	"	"	7 " "	1,482
Arthur Wellington Howe	"	"	20 " "	1,483
Thomas Bowie	"	"	23 " "	1,484
Villers Walter Beere	"	"	16 June, "	1,485
Joshua Harris	"	"	7 July, "	1,486
James Carter	"	"	16 " "	1,487
Walter Simmonds	"	"	11 Aug., "	1,488
John White	"	"	15 Sept., "	1,489
John Marr Walker	"	"	28 " "	1,490
Ernest Charles Binns	"	"	30 Oct., "	1,491
William Ewington	"	"	10 Nov., "	1,492
Benjamin Charles Curno	"	"	14 " "	1,493
Joshua Mallett	"	"	10 Dec., "	1,494
John Ramsay	"	"	30 " "	1,495
Arthur Steele Ford	"	"	4 Jan., 1886	1,496
Alexander James Pickering Connell	"	"	5 " "	1,497
Henry Jerred	"	"	16 " "	1,498
James Murray	"	"	15 Feb., "	1,499
George Ritson	"	"	18 " "	1,500
James Wilson Bower	"	"	12 March, "	1,501
James Branton Massey	"	"	23 " "	1,502

RETURN showing the Number of Masters, Mates, and Engineers examined during the Year ended the 31st March, 1886, distinguishing the Number of Successful and Unsuccessful Candidates.

Class of Certificate.	Auckland.			Wellington.			Lyttelton.			Dunedin.			Thames.			Totals.		
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.
Foreign-going masters and mates	20	19	39	9	1	10	10	6	16	28	5	33	..	..	..	67	31	98
Home-trade masters and mates	3	2	5	7	2	9	..	1	1	1	..	1	..	..	..	11	5	16
River-steamer masters ..	3	1	4	3	1	4	3	..	3	..	..	..	3	..	3	12	2	14
Sea-going engineers ..	4	..	4	12	1	13	1	..	1	14	4	18	..	..	..	31	5	36
River-steamer engineers ..	7	..	7	7	..	7	..	..	..	2	1	3	1	..	1	17	1	18
Totals	37	22	59	38	5	43	14	7	21	45	10	55	4	..	4			

	Tauranga.			Napier.			Ngaruawahia.			Tairua.			Wanganui.					
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.			
River-steamer masters ..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
River-steamer engineers ..	..	..	..	1	..	1	1	..	1	1	..	1	1	..	1	4	..	4
Totals	1	..	1	1	..	1	1	..	1	1	..	1	1	..	1			

	Picton.			Invercargill.			Queenstown.			Westport.			—					
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.						
River-steamer engineers ..	1	1	2	1	..	1	1	..	1	1	..	1	..			4	1	5
Totals	1	1	2	1	..	1	1	..	1	1	..	1	..			147	45	192

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, 1886.

Name of Lighthouse.	Salaries.	Oil.		Stores and Contingencies.	Totals.
		Gallons consumed.	Value.		
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
Cape Maria van Diemen	335 0 0	913	70 7 6	72 17 4	478 4 10
Moko Hinou	382 0 10	847	65 5 9	39 6 7	486 13 2
Tiri Tiri	265 0 0	485	37 7 8	38 3 2	340 10 10
Bean Rock	150 0 0	64	6 16 0	196 14 8*	353 10 8
Ponui Passage	160 0 0	78	6 0 3	8 18 6	174 18 9
Portland Island..	360 16 8	645	49 14 4	56 2 1	466 13 1
Napier Bluff	36 0 0	Gas	21 0 3	1 15 3	58 15 6
Pencarrow Head	253 13 0	867	66 16 7	30 2 7	350 12 2
Somes Island	205 16 8	215	16 11 6	20 5 11	242 14 1
Cape Egmont	299 3 4	453	34 18 4	28 14 1	362 15 9
Manukau Heads	262 6 8	512	39 9 4	29 2 8	331 18 8
Kaipara Heads	242 10 0	483	37 4 7	73 9 9	353 4 4
Brothers	502 9 1	656	50 11 4	68 7 11	621 8 4
Tory Channel	112 10 0	175	13 9 6	5 0 9	131 0 3
Cape Campbell	265 0 0	590	45 9 7	58 3 8	368 13 3
Godley Head	257 10 0	508	39 3 2	42 16 8	339 9 10
Akaroa Head	260 0 0	570	43 18 9	59 9 2	363 7 11
Moeraki	260 0 0	502	38 13 11	24 19 8	323 13 7
Taiaroa Head	275 0 0	490	37 15 5	106 12 3†	419 7 8
Cape Saunders	255 0 0	500	38 10 10	50 9 8	344 0 6
Nugget Point	261 2 0	960	74 0 0	42 13 8	377 15 8
Waipapapa Point	273 1 4	497	38 6 2	42 16 2	354 3 8
Dog Island	360 16 8	812	62 11 10	140 4 6‡	563 13 0
Centre Island	389 6 8	826	63 13 5	63 15 1	516 15 2
Puysegur Point	354 16 10	855	65 17 1	534 15 9§	955 9 8
Cape Foulwind	279 3 4	532	41 0 2	52 5 2	372 8 8
Farewell Spit	355 1 7	497	38 6 2	62 6 8	455 14 5
Nelson	282 6 0	226	17 8 5	30 16 8	330 11 1
French Pass	180 0 0	119	9 3 5	9 15 9	198 19 2
Totals	7,876 10 8	14,877	1,169 11 3	1,991 1 9	11,037 3 8

* £195 6s. 2d. of this amount was for repairs to foundations of tower.
† £59 1s. 4d. of this was for new ruby lamp-glasses.
‡ £24 16s. 9d. of this was for repairs to burners.
§ £424 13s. 10d. of this was for repairs to tower.

RETURN of Wrecks and Casualties to Shipping reported to the Marine Department, from the 1st April, 1885, to the 31st March, 1886.

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.		
1885.													
March 1	Halcione ..	Ship ..	843	..	..	General	Loss of life only	1	Lat. 44° 38′ S., long. 61° 12′ E.	W.	Gale ..	An A.B., W. Simms, while engaged aloft stowing maintopgallant-staysail, fell from the rigging, striking his head on the rail, and then overboard and was lost	Ernest J. Parker.
April 1	Joliba, 25 years	Barque..	310	10	..	Grain ..	Stranded; partial loss	..	Toloa Head, South Head of Lyttelton Harbour	N.W. to N.E.	Unsteady	Anchor should have been let go when vessel missed stays	Charles Gramkie.
" 3	Circe, 16 years	Brig'ntine	145	7	..	Coal ..	Stranded; slight damage	..	Opposite lightship, Tewaewae Point, Bluff Harbour	S.W.	Moderate	Vessel working into harbour, when she attempted to put about, and not doing so quickly she grounded	Jacob Eckhoff.
" 10	Ruapehu, s,s., 1 year, 100A1	Barque..	2655	..	..	General	Stranded; no damage	..	East end of Lambton Bay, Wellington Harbour	S.E.	Light ..	Vessel grounded when coming up harbour in charge of pilot	Charles Curtis Brough.
" 19	Wallace, s.s., 17 years	Schooner	108	17	3	General	Stranded; partial loss	..	North Spit, mouth of Hokitika River	N.	Gentle breeze	Immediate cause of stranding was the sea, which was heavy at the time, but contributory cause was steamer being kept by the semaphore-signal a little too long on the northward course. No blame attached to master	Alfred Bruce.
" 22	Nightingale, 25 years	Brig'ntine	220	8	3	Timber..	Water-logged & abandoned; partial loss	..	Lat. 36° 15′ S., long. 154° 22′ E.	S.E.	Moderate	Vessel, owing to gale, sprung a leak, became waterlogged, and was abandoned. Subsequently five of the crew returned to her and brought her to Sydney, N.S.W.	George Henry Short.
April 23	Dart, 26 years	Cutter ..	16	2	1	Sheep ..	Stranded; no damage	..	Tawhitinui Reach, Pelorus Sound, 1 mile N.E. of Oaie Island	S.W.	Light ..	Vessel struck on rock not marked on chart ..	William Turner.
" 23	City of Florence, 18 years	Ship ..	1200	..	..	General	Loss of life only	1	On voyage from London to Wellington, lat. 1° S., long. 23° 40′ W.	..	Fine ..	An O.S. named Frederick Stretton, while engaged in securing the foretopgallant-stay, fell into the foretop, fracturing his skull and breaking his lower jaw. He died at 10 p.m. same night, six hours after the accident	William Smith Leask.
" 27	T. W. Lucas, 28 years, A2	Brig'ntine	292	7	4	Coal ..	Stranded; slight damage	..	South Spit entrance to Wanganui River	..	Calm ..	While in tow of the s.s. "Huia" the tow-line parted. An anchor was let go, but there was not room to swing clear of South Spit	F. Kroger.
..	Elizabeth, 11 yrs., A1 Lloyds	Barque..	349	10	..	Coal ..	Supposed foundered	10 (all h'nds)	On voyage from Newcastle, N.S.W., to Lyttelton	..	..	Vessel left Newcastle for Lyttelton on the 23rd April, and has not since been heard of	Thomas Walker.
May 3	Gairloch, s.s., 1 yr., A1 Lloyds	Schooner	187	18	10	Sheep and cattle	Collision; partial loss	..	Off Cape Horn, Manukau Harbour	S.S.E.	Fresh	Collision attributed to default of master of "Herald." His certificate was suspended for three months, and he was ordered to pay £32 5s. 6d. for costs of inquiry	Samuel Richard Savory.
	Herald, s.s., 1 year, 100 A1 Lloyds	Schooner	356	22	1	Fruit and oysters	Collision; partial loss						Findlay McArthur.
" 4	Oceania, 9 years	Barque..	320	10	..	Flour, salt, and bark	Stranded; total loss	..	Tom's Rock, between Sinclair Head and Tongue Point, Cook Strait	N.W. to N.	Strong gale	Wreck caused by error of master in keeping too near the land. Master being sole owner and heavy loser by wreck, Court did not suspend his certificate, but ordered him to pay costs of inquiry	Robert Firth.

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.		
May 4	Wellington, s.s., 22 years	Schooner	262	20	20	General	Collision; partial loss	..	A little north of the southern end of Kawau Island, Hauraki Gulf	S.W. by S.	Fresh	Mate of Wellington, S. Stephenson, was in default, first, in not stopping and reversing his engines, second, in not porting instead of starboarding his helm. His certificate was suspended for three months	Edward Stephenson.
	Macgregor, s.s., 4 years	Schooner	163	14	15	Produce	Collision; partial loss						Frederick Johnson.
" 5	Comet, 8 years	Ketch ..	58	4	..	Coal ..	Stranded; partial loss	..	Mouth of Turanganui River, Poverty Bay	S.S.W.	Gale ..	Stranding was accidental, but master blamed for not giving every assistance to pilot in attempting to get vessel off. He was ordered to pay costs of inquiry	Raymond Burns.
" 10	Reward, 8 years	Schooner	40	3	..	General	Loss of main-boom, main-topmast, and mainmast-head; sprung leak	..	Twenty miles eastward of Tologa Bay, Gisborne	N.	Gale ..	Damage caused through heavy gale ..	James J. Conway.
" 18	Othello, 32 yrs.	Barque..	342	30	..	Whale oil	Stranded; slight damage	..	Island off Santa Cruz, South Pacific	S.E.	Moderate	Set of current caused vessel to go on reef ..	James Earle.
" 28	Grafton, s.s., 31 years	Schooner	297	22	2	General and produce	Shaft broke and propellor dropped	..	Just inside beacons, Nelson Inner Harbour	..	Calm ..	Casualty caused by propeller touching bank ..	Henry Edward Hill.
June 10	Samuel, 24 years	Barque..	427	11	..	Guano ..	Sprung a leak	..	On voyage from Sydney Island, Phœnix group, to Falmouth	S.E.	..	Vessel sprung a leak, and put into Auckland for repairs	Henry Wattleworth Watterson.
" 20	Earl Derby, 9 years	Barque..	961	..	..	General	Loss of life only	6	On voyage from London to Wellington, lat. 42° S., long. 61° E.	W.	Fresh gale	A heavy sea broke on board amidships and abaft, filling her waist, and when it cleared away it was found that six of the crew were missing	John Kerr.
" 21	Italy, 18 years	Barque..	286	12	8	N.Z. produce	Stranded; slight damage	..	Between East Cape and East Cape Island	S.W.	Strong ..	Vessel touched on reef	George Morris Rapp.
" 28	Ionic, s.s., 2 years	Barque, 4 masts	3070	103	..	General	Stranded; no damage	..	Off Cape Palliser ..	N.W.	Light ..	When, according to evidence taken at inquiry, vessel was abreast of Cape Palliser, and about 2 miles off shore, she touched some bank, which caused her to careen considerably. No shoal or bank is shown on chart in such position, and no blame is therefore attachable to officers of ship. Fresh survey of place recommended.*	John Gemmel Cameron.
July 5	Helena, 21 years	Schooner	149	7	..	Timber..	Stranded; total loss	..	4 miles east of Farewell Spit Lighthouse, western entrance to Cook Strait	E.	Light ..	Casualty caused by serious error of judgment on part of master in shaping his course too far to the southward. His certificate was suspended for three months, and he was ordered to pay costs of inquiry	Henry Bowden.

"	6	Anne Milbank, s.s., 9½ years	Schooner	62	5	..	..	Wheel d'mged, deckhouse-bridge spons'n and portion of paddle-box carried away; partial loss	..	East side of Railway Wharf, Auckland Harbour	S.E.	Strong gale	Vessel damaged by contact with wharf during heavy gale; not sufficient steam to move her away before gale burst	Walter Parker.
"	6	Saxon, 9¼ years	Schooner	58	4	..	Produce	Damage to upper portion of hull of vessel; partial loss	..	East side of Queen Street Wharf, Auckland	S.E.	Strong gale	Vessel damaged by contact with wharf during heavy gale	Adolphus Martin.
"	6	Fleetwing, 6 years	Schooner	55	4	..	Ballast..	Loss of mainmast and boat	..	A little to northward of Hen and Chickens	E.N.E.	Hard ..	Vessel went on beam ends owing to ballast shifting, and, in order to right her, mainmast had to be cut away	Edwin McDonald.
"	6	Ganges, 3 years	Barque..	1443	..	..	..	Loss of life only	1	On voyage from Suva, Fiji, to Wellington	Variable	Squally	A Lascar seaman named Abdool, while engaged taking in maintop-gallant-sail, fell from the yard on to the deck, and was killed	John Ferry.
"	14	Edwin Bassett, 19 years	Barque..	397	..	..	Coal ..	Loss of life only	1	On voyage from Newcastle, N.S.W., to Wellington	..	..	The boatswain's mate, Henry Bridge, while engaged aloft, fell on to the deck, and was killed	Alex. McDonald.
"	18	Kreimhilda, 10 years	Schooner	36	4	..	N.Z. produce	Stranded; total loss	..	Ohua, near Tapu, by Whangaroa	N.E.	Strong ..	Loss of vessel caused by carrying away of main-boom while wearing in gale, and heavy sea, rendering vessel unmanageable. It would perhaps have been more prudent of master to have overhauled his blocks more frequently than he seems to have done	Percy Bathurst.
"	18	Ino, s.s., 6 years	Schooner	32	6	..	General	Stranded; partial loss	..	Waikawa Bay, Otago ..	N.E.	Light ..	Mate James Anderson, who holds N.Z. certificate as master ordinary, No. 312, was ignorant of vessel's position long before she stranded. He showed ignorance of, or neglect of consideration of, action of tide on vessel when he altered course. He neglected ordinary precaution of examining compass from time to time to see if vessel was being steered given course, and, when in fog he ordered change of course, he was especially negligent in not looking at compass to see that new course was made and kept. His certificate was suspended for two months. Vessel's reckoning was kept by master in very unskilled and careless manner. Master censured for not navigating his vessel with more care.	Peter Andrew Lyders.
"	18	Mazeppa, 9 years	Schooner	111	8	..	Copra ..	Stranded; total loss	..	Island of Ngatik, Caroline group, North Pacific	W.S.W.	Squally	Thick weather prevented breakers being seen in time, and vessel being slack in stays did not gain headway before she was thrown on reef	Peter Theet.
"	23	Kate McGregor, 11 years	Schooner	65	6	..	Island produce	Stranded; total loss	..	Island of Rarotonga ..	N.E.	..	Casualty caused by wind shifting when vessel going through a narrow passage between two reefs	Oscar Schulze.

* Since the inquiry was held, Captain Johnson, of the Marine Department, has surveyed the locality, where he found a patch of sunken rock, extending about 7 cables south of the easternmost of the two points forming the cape, with a bank of foul ground extending 1½ miles from the shore. He states that if masters comply with the directions given in "The New Zealand Pilot," viz., "not to round the Cape within two miles," their vessels will be in perfect safety.

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.		
July 24	Coquette, 2 years	Barquentine	214	8	..	Coal ..	Stranded; no damage	..	Bar of Wanganui River	N.E.	Light ..	Towline parted through vessel striking on bar, in consequence of there being insufficient water	Samuel Brown.
" 30	Clyde, 17 years	Ketch ..	41	3	2	Ballast..	Collision; slight damage	..	Entrance to Nelson Inner Harbour	..	Calm	Master of "Wallace" committed error of judgment in not waiting outside until the "Clyde" was clear of the narrows	Edward Aldis Robinson.
" 30	Wallace, s.s., 18 years	Schooner	108	16	1	General	Collision; slight damage						Edward Stafford Williams.
" 31	May, 12 years..	Schooner, 3 masts	237	..	..	Ballast..	Collision; partial loss	..	Half-mile off Point Halswell, Wellington Harbour	S.S.E.	Moderate	Collision was result of error of judgment on part of master of "Waihora" in porting his steamer's helm, and so bringing her across the "May's" course in dangerous proximity to her. Under circumstances master of "May" was justified in putting his helm up. Master of "Waihora" censured, and ordered to pay costs of inquiry	George Forbes.
" 31	Waihora, s.s., 2 years	Schooner	1296	..	..	General	Collision; slight dent						Thomas McGee.
Aug. 8	Tainui, s.s., 1 year	Ship, 4 masts	3230	..	..	General	Stranded; no damage	..	Abreast of Deborah Bay, Otago Harbour	N.	Fresh ..	Vessel stranded through steering-gear not answering quickly enough	B. J. Barlow.
" 10	Coronilla, 10 years	Barque..	524	16	1	General	Stranded; partial loss	..	Barrett's Reef, Wellington	..	Calm ..	Casualty caused through warp parting when being towed by steamer	Adam Bell Carruthers.
" 13	Katikati, s.s., 7 years	Schooner	27	3	..	General	Burnt and scuttled; partial loss	..	Whangarei River ..	..	..	Fire was discovered in forehold shortly after vessel left wharf, and she had to be scuttled to save her	George McLeod.
" 24	Western Star, 4 months	Brig'ntine	124	7	..	Timber	Stranded; slight damage	..	One mile inside Outer South Head, Kaipara	N.W.	Strong ..	Vessel went ashore through refusing to stay ..	John Frederick Hansen.
" 31	Edwin Bassett, 19 years	Barque..	397	12	..	Ballast & timber	Stranded; total loss	..	Sandy Beach by Redpoint and Reef, about 4 miles south of West Wanganui Inlet, west coast, Middle Island	..	Calm ..	Master showed error of judgment in hanging about so near the shore on such an exposed coast, on a dead lee-shore, to westerly winds and swell, and dangerous either from calm or from westerly wind. Certificate of master suspended for three months, and he was ordered to pay costs of inquiry	Alex. McDonald.
" 31	Gleaner, 15 years	Brig'ntine	115	8	..	Produce	Loss of masts, straining of vessel, &c.	..	Cook Strait	N.W.	Whole gale	Foremast and maintopmast carried away, and vessel strained during gale	John Urquhart.
Sept. 4	Waitaki, s.s., 9 years	Schooner	228	20	12	General	Stranded; collision; very slight damage	..	Queen Street Wharf, Auckland	..	..	"Waitaki" grounded when leaving wharf, and in coming off she struck the s.s. "Doric" very lightly	James Crawford.
" 4	Doric, s.s., 2 years, A1	Ship ..	3057	115	..	General	Collision; partial loss						John William Jennings.
" 4	Coralie, 11⅓ years	Cutter ..	29	4	..	General	Stranded; partial loss	..	About 4 miles north of Whakatane	Variable	Strong ..	Vessel went ashore in thick weather ..	Peter Stanberg.
" 6	Suva, s.s., 8 years	Schooner	177	21	2	Sheep ..	Stranded; partial loss	..	Rock off Flatpoint, about 1½ miles, east coast, North Island	W.	Squally	Casualty caused through navigating vessel on coast without verifying her position by other means than that of the distance run by log, and guessing the distance from the shore by the eye. Master ordered to pay costs of inquiry	John Hutchison.

"	7	Waihora, s.s., 2 years	Schooner	1269	..	..	General	Fire; slight damage	..	At Wharf, Auckland Harbour	..	..	Fire occurred among cargo in forehold ..	Thomas Popham.
"	13	Waikato, 10 yrs., A1 Lloyds	Ship ..	1021	28	..	General	Loss of life only	1	Lat. 37° 30′ S., long. 18° 20′ E., about off the pitch of Cape of Good Hope	S.W.	Strong gale	A heavy squall struck the ship, carrying away the maintack, and the clew of the mainsail struck the carpenter with such force as to knock him over the lee side. He was probably killed by the blow	William Hutchison Taylor.
"	23	Grafton, s.s., 30 years	Schooner	297	25	8	Coal ..	Stranded; no damage	..	On sandbank about ¾ mile off Cape Farewell, about midway between Pillar Point and elbow of Farewell Spit	..	Calm ..	Vessel steered too close into shore	Henry Edward Hill.
"	30	Ada Melmore, 8 yrs., A1 Lloyds	Barque..	569	15	..	General	Loss of life only	2	Lat. 39° 41′ S., long. 57° E.	S.W.	Heavy ..	Two A.B.s, Henry Beeze and Joseph Axelson, while engaged in stowing the main upper-topsail, were thrown over the sail. The former fell into the sea, and was not seen after. The latter fell on to the deck and was killed at once	William Millikin.
..		Malietoa, 1½ years	Schooner	79	5	..	Coal ..	Supposed foundered; total loss	5 (supposed all hands)	On voyage from Whangarei to Timaru	..	..	Vessel left Whangarei on the 28th September, 1885, for Timaru, and has not since been heard of. Supposed to have foundered, with loss of all hands	Alexander Godfrey.
Oct.	1	Dragon, 21 yrs., A1 Lloyds	Barque..	696	20	4	General	Bulwarks, &c., carried away; slight damage	1	Lat. 47° S., long. 90° E.	N.W.	Whole gale	A sea broke over the poop, and washed overboard from the wheel Emil Naurotzky, quartermaster. By the same sea the cabin-doors were stove in, and a portion of the bulwarks on both sides carried way	Samuel Milner.
"	4	Ransom, 9⅓ yrs.	Brig'ntine	237	10	7	Copra ..	Stranded; total loss	..	Pleasant Island, South Pacific	..	Calm ..	Wind having fallen when vessel loading, current drove her on to the reef	John Bushell.
"	7	Jane Douglas, s.s., 10 years	Schooner	75	13	15	General	Stranded; slight damage	..	Long Point, Kapiti Island, Cook Strait	N.W.	Moderate breeze	Vessel was being brought up to an anchorage, with engines stopped, when she forged too far ahead and struck	James W. G. Fraser.
"	12	Dunedin, 25 yrs.	Schooner	66	6	..	Timber..	Stranded; total loss	..	On Black Reef, off Cape Kidnappers	S.	Whole gale	Vessel struck on rock, where she remained fast until high water, when she came off, and was taken into Napier Harbour, beached, and abandoned	Jacob Eckhoff.
"	14	Wallace, s.s., 18 years	Schooner	108	16	6	General	Stranded; total loss	..	At entrance to River Grey, west coast Middle Island	S.W.	Fresh breeze	Vessel wrecked on protective works through heavy sea striking her when crossing the bar, and causing her to become unmanageable	Edward Stafford Williams.
"	20	Tui, s.s., 10 yrs.	Schooner	55	12	..	General	Collision; no damage	..	Point Halswell to Worser Bay, Wellington Harbour	N.W.	Moderate	Collision attributable to indiscretion of Captain Pope, of "Tui," in not giving a wider berth to "Jane Douglas" when overtaking her. Captain Pope reprimanded, and ordered to pay costs of inquiry	Charles Quentin Pope.
"	20	Jane Douglas, s.s.	Schooner	75	12	..	General	Collision; no damage						James William Grant Fraser.
"	24	Dunelm, 22 yrs., A1 Lloyds	Barque..	507	12	..	Creosote	Stranded; no damage	..	South Breaksand, the Downs, English Channel	W.	Fresh ..	Vessel grounded through missing stays ..	Alexander Swietoslowski.
"	27	Lalla Rookh, s.s., 9½ years	Schooner	44	6	..	Kaurigum	Stranded; partial loss	..	Orwell Bank, Manukau Harbour	S.W.	Moderate	Vessel touched several times when entering the harbour	Charles Bonner.
Nov.	1	Wairarapa, s.s., 3 years, A1 Lloyds	Schooner	1023	64	97	General	Fire; partial loss	..	Nine miles north of Table Cape, east coast, North Island	..	..	Ship took fire from some cause of which there was not sufficient evidence given on inquiry. Evidence shows deficiency in arrangements for patrolling or visiting the saloon deck through the night	Henry William Holbrook Chatfield.

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.		
1885.													
Nov. 7	Penguin, s.s., 11 years	Schooner	442	34	110	General	Rudder-post damaged, stern-bushes and shaft bent; partial loss	..	Wharf in Lyttelton Harbour	..	Calm ..	Casualty caused through mooring-line getting foul of the propeller	George Allman.
„ 18	Waihi, s.s., 3 years	Schooner	63	12	11	General	Collision; no damage	..	Harding's Bend, Opawa River, Cook Strait	..	..	Mohaka was coming down river and Waihi going up, and when rounding a bend in the river the Waihi, which had no lights up, ran into the Mohaka and sank her	Walter Manning.
„ 18	Mohaka, s.s., 7 years	Cutter ..	20	4	..	General	Collision; partial loss						Thomas Eckford.
„ 22	Wanganui, 11 years	Schooner	78	6	..	General	Stranded; partial loss	..	Mouth of Hokitika River	N.	Light breeze	Current caught vessel and forced her on to North Spit	John Graham.
Nov. 26	Hudson, 16 yrs.	Barque..	797	19	1	General	Stranded; partial loss	..	About 12 miles north of Timaru	N.W. by W.	Gentle breeze	Master neglected to take necessary precautions for safety of his ship, no cast of lead having been made, although land had been sighted and vessel enveloped in dense fog. Second mate, Herbert Collings, had been instructed by chief officer to keep lead going. Certificates of master and second mate suspended for three months each	Edwin James Thomas.
Dec. 13	Comet, 9 years	Ketch ..	58	4	..	Ballast..	Stranded; no damage	..	About 2 miles eastward of Cape Farewell Lighthouse	S.S.W.	Moderate	Casualty caused through continuous head wind, heavy sea, and fog or thick weather, which prevented observations being taken. Vessel was afterwards got off without damage	Raymond Burns.
Dec. 19	Minnie Casey, s.s., 10 years	Schooner	43	8	21	General	Collision; slight damage	..	Te Rewa Point, Kaipara Harbour	..	Calm	Captain Seymour committed grave error of judgment in leaving deck of vessel without proper officer in charge, but that probably mistaking distance in hazy atmosphere, and as he has been a sufferer himself for this dereliction of duty, Court decided to return his certificate, and to order him to pay costs of inquiry, £17 17s.	Thomas Rawson.
„ 19	Tangihua, s.s. 8 years	Cutter ..	21	4	..	1 ton lime	Collision; partial loss						Joseph Seymour.
„ 24	Soukar, 22 yrs. A1	Ship ..	1304	22	..	Coal ..	Fire on board; slight damage	..	Ocean Steamer Wharf, Inner Harbour, Lyttelton	..	..	No evidence as to cause of fire	J. E. Croker.
1886.													
Jan. 4	Opawa, 9 years	Ship ..	1076	..	..	General	Loss of life only	1	Lat. 41° 10′ S., long. 28° 40′ E.	S.W.	Half a gale	A boy named Henry Hagger, while engaged aloft furling sail, fell into the sea and was drowned	Joseph John Hamon.
„ 19	Glenlora, 21 yrs.	Barque..	774	17	5½ adults	General	Loss of life only	1	Lat. 46° 50′ S., long. 118° 54′ E., off Cape Leuwin	W.S.W.	Moderate breeze	An O.S. named J. W. Jones, while engaged washing the paint on the outside of the poop-rail, accidentally fell into the water and was drowned	Alfred Haynes Sargent.
„ 24	Sea Gull, 27 yrs.	Brig'ntine	122	7	..	Timber	Stranded; total loss	..	Three-quarters of a mile from North Head of Waikawa Harbour	..	Calm ..	Wind having fallen when vessel got outside the heads, she became unmanageable, and drifted into the breakers, which drove her ashore	William Hanning.

Feb.	3	Fanny Kelly, 12 years	Ketch ..	35	3	4	Timber & bricks	Stranded; total loss	4	Reef off Kauri Head, about 4 miles from Whangarei Heads	N.N.E.	Gale ..	Casualty caused by error of judgment on part of master in overestimating the speed of his vessel when running off the wind in thick weather on a dark night	George Charles Williams.
Feb.	3	Antares, 11 yrs., 100 A1 Lloyds	Barque..	821	19	..	Ballast..	Stranded; no damage	..	Marion Reef, Troubridge Shoal, St. Vincent Gulf, South Australia	S.E.	Gentle breeze	Court of opinion charge of neglecting to verify ship's position not sustained. Master had no means of taking cross-bearings, and he did exercise only means in his power in use of lead, log and Troubridge light	John Hutchison.
"	23	Sarah and Mary	Brig'ntine	145	..	..	..	Loss of life only	1	Lat. 43° 37′ S., long. 156° 42′ E.	..	..	An O.S. named Thomas West was accidentally knocked overboard by the boom and drowned	Henry Priest.
Mar.	1	Omaha, 12 years	Brig'ntine	133	7	..	Wool ..	Stranded; partial loss	..	Waitangi, Chatham Islands	..	..	Casualty caused by parting of cables, which must have been defective	Joseph Goodman.
"	4	Ino, s.s., 12 years	Schooner	32	6	..	General	Stranded; total loss	..	On beach at entrance to Mataura River, Fortrose	S.E.	Light ..	Casualty caused through there being insufficient water on bar	John Mason.
"	16	Gordon, steam-launch	Cutter ..	not reg'd	3	20	..	Collision; no damage	..	About 260 yards N.E. off Queen's Wharf, and near Railway Wharf, Wellington Harbour	S.E.	Fresh breeze	If master of Gordon had kept better look-out, and continued on his course, the collision would probably not have occurred	Charles Watchlin.
"	16	Mahinapua, s.s., 4 years	Schooner	205	not	ascer-t'ned	General	Collision; no damage	..					Francis Holmes.
"	16	Waireka, 2 years	Barquentine	103	7	..	Ballast..	Stranded; total loss	..	Immediately below signal-station, South Head, Hokianga Harbour, on west side of the point	N.N.E. to E.N.E.	Breeze ..	Vessel made stern-board, and went ashore through wind falling when tacking under South Head	Olaf Johnson.
"	19	Oreti, s.s., 9 years	Schooner	138	17	7	Cattle ..	Stranded; no damage	..	Middle Bank, entrance to Wanganui River	S.W.	Light ..	Pilot, who was guiding vessel by semaphore, did not make sufficient allowance for strong ebb setting over Middle Bank	William Robertson.
"	30	Hawea, s.s., 11 years	Schooner	462	36	36	General	Stranded; no damage	..	At the entrance to Nelson Harbour.	..	Calm ..	Current carried vessel ashore when entering the harbour	Joseph Hansby.

APPENDIX.

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

The MARINE ENGINEER to the SECRETARY, Marine Department.

SIR,— Marine Department, 31st March, 1886.

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, viz.:—

Light on Cuvier Island.—An order for the lantern and lighting apparatus for this lighthouse has been sent to England for execution.

Removal of Snags and Rocks from the Mokau River.—The amount voted for this work has been expended with a good result for a distance of twenty-seven miles from the mouth of the river. The work has been carried out with the view of securing a channel 35ft. to 40ft. wide, and 7ft. deep at low-water spring-tides; but this depth has not been attained, there being places yet where only 3½ft., 4ft., and 5ft. of water can be found.

Jackson's Head Beacon.—This is now being erected in the shape of a circular tower of solid concrete, and the work has progressed to a height of about 12ft. from the foundation-level, which corresponds nearly with the low-water line. The height of the tower will be 38ft., but the lateness of the season will prevent the whole of this being completed; enough, however, will be built to serve the purpose of a beacon meanwhile, and the remainder will be finished next summer.

Kaipara Harbour.—Some changes in the soundings in the channels and on the bar pointed to the necessity for a new survey: this is now being carried out, and a new chart will be prepared containing all the necessary information.

Nelson Harbour.—During a visit to Nelson in February I made a survey of the changes in the direction of the channel of the Waimea River, and the results of the survey will be described in a separate report.

I have, &c.,

JOHN BLACKETT,
Marine Engineer.

The Secretary, Marine Department.

ANNUAL REPORT ON INSPECTION OF MACHINERY.

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

SIR,— Office of Chief Inspector of Machinery, Wellington, 5th June, 1886.

I have the honour to submit the twelfth annual report on the working of the Inspection of Machinery Acts for the year ended the 31st March, 1886.

The number of boilers inspected during the year was 1,682, being an increase over the previous year of 207. Of this number, 36 boilers were found to be in a dangerous state, and 140 were more or less defective. The reports of the Inspectors will fully explain the nature and extent of such defects.

I have again much pleasure to report that no boiler explosion has taken place during the year. This fact continues to show the advantages of the system of Government inspection as being preferable to, and affording a safer guarantee against explosion than, the voluntary system which is carried out in Great Britain, where, during the past year, 41 steam-boiler explosions took place, killing 30 persons, and injuring 54 others, in addition to 19 miscellaneous explosions, killing 15 persons and injuring 22 others.

Accidents to life or limb to men working about machinery continued to decrease in number during the year as compared with last year and former years; and such accidents will, I feel sure, continue to become less numerous, as all dangerous parts of machinery are being carefully fenced. I have to report that, as in last year, no accidents to persons working about machinery have taken place in the Wellington, Hawke's Bay, Taranaki, Nelson North, Nelson South, or Marlborough Districts; but in Auckland there have been one fatal, and three not fatal; in Canterbury, one not fatal; and in Otago, two not fatal.

A constantly-increasing demand is made upon the time of the Inspectors in regard to the construction of new boilers, as it is found to be of great importance, not only to examine the boiler when made, and to witness the hydraulic test, but also to inspect the work in progress.

Attached hereto are the annual reports of the Inspectors, which give further and full information as to the details of the inspections made, tables showing the number of boilers and machinery inspected in each district, and particulars of the special kinds of defects found in boilers.

Lifts and hoists continue to be examined as far as the Inspectors' time will allow, and safety-catches are being fitted to nearly all now at work.

I also attach a table showing the number of boilers inspected and the amount of fees payable during the year.

I have, &c.,
J. NANCARROW,
Chief Inspector of Machinery.

The Secretary, Marine Department, Wellington.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1886.

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	27	156	13	132	56	121	505	854
Canterbury ...	13	141	3	112	42	54	365	615
Auckland	16	41	27	95	30	136	345	625
Wellington ...	7	36	22	23	27	62	177	395
Marlborough ...	1	6	1	7	4	14	33	65
Taranaki	...	4	6	3	11	12	36	86
Nelson North ...	2	19	6	17	17	11	72	142
Nelson South ...	...	1	...	3	...	7	11	19
Westland	...	4	2	16	4	11	37	63
Hawke's Bay ...	6	36	6	17	14	24	103	192
Totals ...	72	444	86	425	205	452	1,684	3,056

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

SIR,— Auckland, 7th April, 1886.

I have the honour to forward you my annual report on the boilers and machinery inspected by me in the Auckland District for the year ended the 31st March, 1886.

I am glad that there are no accidents with boilers to report. Thirty-seven have been repaired, 20 changed owners, 13 let out on hire, 5 granted extended certificates; 21 new ones have been brought into use, 11 of which were imported from Great Britain, and 10 manufactured in this colony: making a total of 471 workable boilers in this district, 345 of which have been inspected. Seventy-seven are laid up, due to depression of trade and other causes, and 49 remained uninspected at the end of the year.

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

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

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

The Chief Inspector of Machinery.

RETURN showing the NUMBER and DESCRIPTION of the BOILERS INSPECTED, and FEES payable.

Nature of Boiler.	Number.			Fees.	Remarks.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.		
				£ s. d.	
Portable boilers	...	3	6		
Stationary boilers	3	2	87	175 0 0	Employed at 35 establishments; fees at £5 each.
Locomotive boilers ...	...	...	2		
Portable boilers	14	37	18		
Stationary boilers	92	28	49	444 0 0	Charged for at per horse-power of each boiler.
Locomotive boilers ...	2	1	1		
Machinery inspections, 6 at £1 each	...	...	...	6 0 0	
Total fees for year ...	111	71	163	625 0 0	

RETURN of DEFECTS found in BOILERS and FITTINGS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Description.	Dangerous.	Ordinary.	Total.
Furnace-flues out of shape	...	1	1
Blistered plates	...	4	4
Fractured plates	...	3	3
Pitted and grooved plates	...	1	1
Corrosion, internal	1	3	4
Corrosion, external	2	10	12
Joints sprung	...	2	2
Tubes	...	8	8
Stays	...	7	7
Total defects in boilers	3	39	42
Defective fittings—			
Safety-valves	...	6	6
Pressure-gauges	...	11	11
Water-gauges	...	15	15
Spring-balances	...	2	2
Blow-off cocks and pipes	1	2	3
Fusible plugs in fire-boxes	...	3	3
Omissions—			
Boilers without sludge-holes	...	1	1
Gross total	4	79	83

RETURN of MACHINERY INSPECTED in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Description of Machinery.	Steam.	Water.	Gas.	Description of Machinery.	Steam.	Water.	Gas.
Assaying	1	...	...	Lifts or elevators	...	5	...
Boiling-down	1	...	...	Laundries	2	...	...
Brick works	8	...	...	Lead works	1	...	...
Bone-mills	2	...	...	Locomotives	4	...	...
Bakeries	1	...	1	Mortar-mills	10	...	...
Breweries	10	...	...	Meat-canning factories	3	...	...
Boat-building	1	...	...	Oil, soap, and candle works	1	...	...
Block and pump works	2	...	...	Pumping and winding	19	...	...
Cabinet-making factories	3	...	...	Phormium-dressing	2	...	...
Cartridge factory	1	...	...	Potteries	4	...	...
Coach factories	2	...	...	Printing	3	...	...
Chair factory	1	...	...	Pile-driving	1	...	...
Cheese and butter factories	8	...	...	Paint factory	1	...	...
Cooperage	1	...	...	Quartz-crushing	1	...	...
Chemical and manure works	1	...	...	Quartz-smelting	1	...	...
Cordial works	3	...	...	Refrigerating works	2	...	...
Cement works	5	...	...	Rope works	1	...	...
Coffee-mills	2	...	...	Road roller	1	...	...
Chaff-cutting	14	...	...	Saw-mills	44	...	...
Dredging	2	...	...	Sash and door factories	3	...	...
Dock	1	...	...	Ship-building	3	...	...
Flour-mills	8	...	...	Stone-breaking	2	...	...
Flock-mill	1	...	...	Sausage-machines	3	...	...
Fellmongeries	2	...	...	Sugar works	1	...	...
Fish- and fruit-preserving	2	...	...	Soap works	3	...	...
Firewood-cutting	15	...	...	Tobacco factory	1	...	...
Fire-engine	1	...	...	Threshing-machines	10	...	...
Gas works	3	...	...	Tanneries	5	...	...
Hoisting	17	...	...	Vinegar factory	1	...	...
Hauling	7	...	...	Wool-dumping	2	...	...
Iron works and foundries	20	...	...	Water works	2	...	...
Joineries	2	...	...				

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Date Notice.	Description of Boiler.	Nature of Repairs ordered.
1885.		
April 21 ...	Cornish	Patch on bottom renewed.
April 30 ...	Portable	Patch fitted to plate at sludge-hole.
June 8 ...	Locomotive ...	Four suspension-stays fitted to stay-bars on top of fire-box.
June 16 ...	Longitudinal tubular	Two new tubes fitted.
June 18 ...	Longitudinal tubular	New safety-valve, and one fore-and-aft stay fitted.
June 24 ...	Vertical flue ...	Patch fitted to the fractured part of vertical flue.
July 7 ...	Longitudinal tubular	Fractured part of plate in mud-receiver repaired.
July 7 ...	Longitudinal tubular	Blistered part of plate in mud-receiver cut out and patch fitted.
July 11 ...	Locomotive ...	Re-tubed.
July 21 ...	Portable	Thirteen new tubes, and patch fitted to defective part of fore-tube plate.
July 24 ...	Cornish	The bottom renewed. Was found in a dangerous state.
Aug. 25 ...	Longitudinal tubular	Strengthening-ring fitted to man-hole.
Aug. 28 ...	Portable	Plate at two sludge-holes patched.
Sept. 18 ...	Vertical tubular ...	Re-tubed.
Oct. 10 ...	Cylindrical ...	Six seams caulked.
Oct. 10 ...	Cylindrical ...	Three seams caulked, and several rivets renewed.
Oct. 26 ...	Longitudinal tubular	Patch fitted to shell, ditto to combustion-chamber, and two seams caulked.
Oct. 28 ...	Portable	Two patches fitted to the lower part of the fire-box.
Nov. 5 ...	Cornish	Two plates in the bottom renewed.
Nov. 11 ...	Cornish	The bottom renewed. Was found in a dangerous state.
Nov. 11 ...	Portable	Two stays in fire-box renewed.
Nov. 18 ...	Cornish	Four seams caulked, and two angle-iron rings fitted to furnace-flue.
Dec. 9 ...	Vertical tubular ...	The plate at two sludge-holes patched.
Dec. 11 ...	Vertical tubular ...	Re-tubed.
Dec. 12 ...	Vertical tubular ...	Screw-patch fitted to tube-plate and stay to fire-box.
Dec. 15 ...	Vertical tubular ...	To be re-tubed.
Dec. 17 ...	Vertical tubular ...	New safety-valve fitted.
Dec. 18 ...	Cornish	Part of one plate in bottom renewed.
1886.		
Jan. 8 ...	Longitudinal tubular	Screw-patch fitted to mud-receiver.
Jan. 9 ...	Vertical tubular ...	Three tubes renewed.
Jan. 13 ...	Vertical flue ...	Blow-off cock renewed, and fusible plug fitted to crown of furnace.
Feb. 6 ...	Longitudinal tubular	Strengthening-ring fitted to man-hole.
Feb. 11 ...	Cornish	Three plates in shell and one in furnace-flue renewed.
Feb. 17 ...	Vertical tubular ...	Patch fitted to lower part of the shell.
Feb. 18 ...	Vertical tubular ...	Patch fitted to plate at sludge-hole.
Mar. 5 ...	Longitudinal tubular	Ten screw-stays fitted to fire-box, and two patches in ditto renewed.
Mar. 30 ...	Longitudinal tubular	Two fore-and-aft stays renewed.

NOTE.—The fittings were attended to in many cases during my visit.—W. J. J.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Machinery.	Parts required to be fenced.
1885.		
April 20 ...	Flour-mill ...	Two driving-belts leading through the floor of drying-room.
June 16 ...	Iron works ...	Pulley and belt of fan-blast.
July 15 ...	Saw-mill	Two lengths of shafting and five belts.
Aug. 5 ...	Saw-mill	Fly-wheel of breaking-down saw, one length of shafting, and two belts.
Aug. 6 ...	Hydraulic lift ...	Safety-gear to be fitted.
Aug. 7 ...	Tobacco factory ...	Fly-wheel of gas-engine.
Aug. 19 ...	Chaff-cutting ...	Front of engine and belt.
Aug. 29 ...	Dredging machinery	Pair of pinion-wheels of reversing-gear.
Aug. 31 ...	Brick and tile works	Driving-belt of brick-making machine and driving-belt of plastic machine.

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

Date of Notice.	Description of Machinery.	Parts required to be fenced.
1885.		
Sept. 3 ...	Saw-mill	Two fly-wheels of breaking-down saw.
Sept. 4 ...	Cheese factory ...	Pulley on milk-vat.
Sept. 8 ...	Saw-mill	Driving-belt of planing machine.
Sept. 9 ...	Saw-mill	Two connecting-rods of breaking-down saw.
Oct. 28 ...	Brick and tile works	Pair of wheels on brick-making machine.
Oct. 31 ...	Saw-mill	Two pairs pinion-wheels on planing machine.
Nov. 3 ...	Hydraulic lift ...	Safety-gear to be fitted.
Nov. 10 ...	Saw-mill	Driving-belt of circular saw.
Nov. 16 ...	Brick and tile works	Two pairs of wheels and belt of brick-making machine.
Nov. 18 ...	Saw-mill	Driving-belt of log-winch and driving-belt of circular saw.
Dec. 19 ...	Cement works ...	Two fly-wheels and pair of bevel-wheels on stone-crusher.
Dec. 29 ...	Saw-mill	Three deal-frame fly-wheels and one pair bevel-wheels.
1886.		
Jan. 7 ...	Cement works ...	Four belts leading through floor.
Jan. 16 ...	Flour-mill ...	Engine and fly-wheel, three pairs of bevel-wheels on Hirst frame, three pairs of bevel-wheels on upright shaft, and five belts on break-rollers.
Jan. 25 ...	Meat-canning factory	Fly-wheel and belt of sausage machine.
Feb. 1 ...	Printing machinery	Engine fly-wheel and four pulleys.
Feb. 3 ...	Saw-mill	Two lengths of shafting and belt of goose-saw.
Mar. 6 ...	Chaff-cutter ...	Belt leading through the barn-floor.
Mar. 22 ...	Saw-mill	Two belts on planing machine.

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, 1886.

Name and Address of Owner.	Description of Machinery.	Name of Persons injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
Auckland Fibre Manufacturing Company	Spinning-frame ..	Leopold La Fenne, aged 14 years	Right arm broken, 9th January	Not ..	It appears he was running towards a spinning-frame when he slipped on the floor; in falling he threw out his arm to save himself; it came in contact with the bobbin-flyer, and was drawn in and broken. It was purely accidental. The machine is protected as far as practicable.
New Zealand Timber Company, Auckland	Horizontal engine	William Parker, engine-driver, aged 22 years	Neck and chest bruised; compound fracture right leg; 30th December	Fatal	It is not known how this accident occurred. It appears the drivers passed through between the engine-valve gear and the end of one of the girders that carry the boiler. Stepping on one of the motion-guides—a very risky thing to do—I suppose he missed his footing, and was thrown back by the crosshead. The girders have been shortened, to give more clear space, and a rail fixed, which does away with the inducement to step on the dangerous part referred to.
Auckland Timber Company	Buzz-plane ..	John Ryan ..	Two fingers taken off left hand	Not ..	It appears he neglected to adjust the machine-table to its proper position, which caused the piece of wood he was planing to spring, bringing his hand in contact with the knives.

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

SIR,— Office of Inspector of Machinery, Wellington, 25th May, 1886.

I have the honour to forward for your information my annual report of the boilers and machinery inspected in the Wellington, Marlborough, Nelson North, Taranaki, and Hawke's Bay portions of the district for the year ended the 31st March, 1886.

I am glad to be able to state that no accidents have occurred to boilers, machinery, or to any person employed about them, during the above period.

The number of new boilers put to work during the year is 48—22 imported and 26 colonial-made, making the total number of workable boilers 553, of which number 421 have been inspected, 20 have extended certificates, 63 are idle, and 49 were still to inspect at the end of the year.

Appended are returns showing the class, horse-power, and number of boilers inspected; the fees payable for inspection of boilers; the number of 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 the different sections of the district.

Verbal notices to fence machinery and also to repair boilers have been given when the work was of a trivial nature, and could be done while I was on the spot.

I have received forty-eight notices under section 12, and seven notices under section 45, of the Act during the year.

I have, &c.,

The Chief Inspector of Machinery, Wellington. H. A. McGregor.

Return showing the Number of Land Boilers inspected in the Wellington Distric dur ng the Financial Year ended the 31st March, 1886.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			Totals.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	
Wellington	7	36	22	23	27	62	177
Marlborough	1	6	1	7	4	14	33
Nelson North	2	19	6	17	17	11	72
Taranaki	..	4	6	3	11	12	36
Hawke's Bay	6	36	6	17	14	24	103
Totals	16	101	41	67	73	123	421

Return of Machinery inspected in the Wellington District during the Financial Year ended the 31st March, 1886.

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.	Water.	Wind.	Steam.	Water.	
Phormium-dressing	..	..	..	..	2	..	2	..	2	..	..	..	..	..	6
Printing	2	..	..	5	..	..	..	..	..	..	..	..	..	..	7
Flour-mills	10	1	4	..	..	..	2	4	4	1	3	..	2	2	33
Saw-mills	23	..	..	..	10	1	..	24	2	6	1	..	11	..	78
Sash and door factories	9	..	..	..	..	..	..	4	..	3	..	1	3	..	20
Foundries	6	..	..	..	1	..	..	2	..	1	..	..	2	..	12
Quartz-crushing	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Threshing machines	16	..	..	..	1	..	..	1	..	2	..	..	19	..	39
Soap and candle works	3	..	..	..	..	..	..	1	..	..	..	..	1	..	5
Cordial factories	2	..	..	..	..	..	..	..	..	..	..	..	2	..	4
Boiling-down establishments	12	..	..	..	1	..	..	..	..	5	..	..	4	..	22
Brick-making machines	5	..	..	..	..	..	..	1	..	..	..	..	..	..	6
Biscuit factories	3	..	..	..	..	..	..	3	..	..	..	..	..	..	6
Chaff-cutting machines	6	..	..	..	1	..	..	4	..	1	..	..	2	..	14
Breweries	7	..	..	..	1	..	..	4	..	1	..	..	3	..	16
Drain-pipe works	4	..	..	..	..	..	..	1	..	..	..	..	..	..	5
Hoisting machinery	11	..	..	..	1	..	..	1	..	7	..	..	1	..	21
Hauling machinery	1	..	..	..	..	..	..	..	..	1	..	..	..	..	2
Dredging machinery	1	..	..	..	..	..	..	..	..	..	..	..	1	..	2
Pumping machinery	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Coffee- and spice-mills	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Tanneries	3	..	..	..	..	..	..	..	..	..	..	..	1	..	4
Wool-dumping	2	..	..	..	..	..	..	..	..	..	..	..	4	..	6
Ice machine	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Sausage machines	4	..	..	..	1	..	..	1	..	..	..	..	..	..	6
Tobacco-cutting	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Traction-engines	1	..	..	..	..	..	..	..	..	..	..	..	2	..	3
Gas works	1	..	..	..	..	..	..	1	..	1	..	..	..	..	3
Mortar-mills	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
Machine shops	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Meat-preserving works	4	..	..	..	..	..	..	..	..	1	..	..	1	..	6
Locomotives	6	..	..	..	2	..	..	1	..	2	..	..	..	..	11
Rice-mill	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Freezing machines	2	..	..	..	..	..	..	..	..	1	..	..	1	..	4
Hydraulic lifts	16	..	..	..	..	..	..	..	..	..	..	..	..	..	16
Wool-scouring machines	2	..	..	..	..	..	..	1	..	..	..	..	1	..	4
Electric-light machines	2	..	..	..	..	..	..	..	..	..	..	..	1	..	3
Turneries	1	..	..	..	..	..	1	..	..	1	..	..	1	..	4
Totals	171	1	4	5	21	1	5	55	9	36	4	1	65	2	380

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1886.

Name of District.	Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Totals.
	£ s. d.	£ s. d.	£ s. d.
Wellington	395 0 0	...	395 0 0
Marlborough	65 0 0	...	65 0 0
Nelson North	142 0 0	...	142 0 0
Taranaki	86 0 0	...	86 0 0
Hawke's Bay	192 0 0	...	192 0 0
Totals	880 0 0	...	880 0 0

RETURN of NUMBER of NOTICES given to REPAIR BOILERS in the WELLINGTON DISTRICT during the Financial Year ended 31st March, 1886.

District, and Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
WELLINGTON—		
1885.		
April 13 ...	Cornish	Three small rivetted patches on bottom of shell.
Oct. 19 ...	Cornish	A compensating ring to be fitted round the man-hole, and new studs fitted in the door.
Nov. 17 ...	Portable	Six tubes to be expanded and fitted with ferrules.
Nov. 19 ...	Portable	Four mud-holes to have compensating rings fitted.
Nov. 19 ...	Vertical	A new lum-leg to be fitted.
1886.		
Jan. 19 ...	Vertical	Six vertical stays to be fitted.
MARLBOROUGH—		
1885.		
June 6 ...	Multitubular ...	Six longitudinal stays to be fitted in the steam- and tube-space.
June 17 ...	Cornish	Twelve rivets to be renewed in flange of dome.
NELSON NORTH—		
Aug. 3 ...	Cornish	A small patch where blow-off is fitted, and all the landing on the bottom caulked.
Aug. 6 ...	Portable	Seven extra screw-stays to be fitted in water-spaces.
TARANAKI—		
Oct. 20 ...	Vertical	Three vertical stays to be fitted on top of boiler and furnace.
Oct. 20 ...	Cornish	The lower flange of a Galloway tube to be re-rivetted.
Oct. 20 ...	Portable	The tube-ends in smoke-box to be expanded and beaded.
HAWKE'S BAY—		
1886.		
Feb. 11 ...	Cornish	All the landings of the bottom seams to be re-caulked, and twenty new rivets fitted.
Feb. 11 ...	Cornish	To have an angle-iron stiffening-ring fitted round the furnace-flue.
Feb. 11 ...	Portable	The tube-ends in smoke-box to be expanded and beaded.

RETURN of NUMBER of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1886.

District and Date of Notice.	Description of Machinery.	Parts required to be fenced.
WELLINGTON—		
1885.		
April 13 ...	Bush saw-mill ...	The main driving-belts of circular saw.
April 16 ...	Bush saw-mill ...	The fly-wheel of engine and main driving-belt.
April 21 ...	Bush saw-mill ...	The driving-belt of circular saw and counter-shaft.
April 27 ...	Bush saw-mill ...	The main driving-belt and saw-gummer.
May 19 ...	Biscuit factory ...	The fly-wheel of engine, and gear of rollers.
MARLBOROUGH—		
1885.		
June 11 ...	Bush saw-mill ...	Driving-belts of circular saws, and piston-rod of engine.
June 13 ...	Bush saw-mill ...	All the driving-belts from counter-shaft to circular saws.
June 13 ...	Flax-mill	The driving-belts of two stripping machines.
NELSON NORTH—		
1885.		
July 17 ...	Quartz-crushing ...	The fly-wheel of engine, and gearing of counter-shaft.
July 21 ...	Bush saw-mill ...	The fly-wheel of engine, and driving-belts of circular saws.
July 21 ...	Bush saw-mill ...	The driving-belts of vertical and circular saws.
July 29 ...	Cutting chaff ...	The driving-belt from engine to chaff-cutter.
TARANAKI—		
1885.		
Oct. 6 ...	Bush saw-mill ...	The back part of fly-wheel of engine, and main driving-belt from fly-wheel to counter-shaft.
HAWKE'S BAY—		
1886.		
Jan. 22 ...	Bush saw-mill ...	New mill. All the driving-belts and the fly-wheel of engine.
Feb. 9 ...	Bush saw-mill ...	New mill. All the driving-belts from engines to counter-shaft, and counter-shaft to saws.
Feb. 10 ...	Bush saw-mill ...	New mill. All the driving-belts from engine to counter-shaft, and counter-shaft to saws.
Feb. 11 ...	Bush saw-mill ...	New mill. The driving-belts of circular saws.
Feb. 25 ...	Cooperage ...	The fly-wheel of engine and main driving-belt.

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

SIR,— Office of Inspector of Machinery, Dunedin, 7th May, 1886.

I have the honour to forward you the annual report of inspection of boilers and machinery in the Otago District during the financial year ended the 31st March, 1886, contained in the enclosed tables.

In doing so I have much pleasure in bringing under your notice the small number of accidents (2), and these happily not of a serious nature. You will also observe by the report that they have not been occasioned through any want of fencing, but simply accidental, and such as are likely to occur to persons engaged among machinery.

The accidents to boilers were two in number, and not of a dangerous character. In the one case, the boiler, which is a return tubular, was placed close to the ground and merely built round about, so that it was only a question of time how long the plate would last. The other, a circular longitudinal tubular boiler, fired externally, was allowed to run too long without being cleaned, the consequence being an accumulation of scale, which caused the plate to crack through the line of rivet-holes in the circular seam over the bridge. A piece was cut out, boiler retubed and thoroughly cleaned, and is now in good order and condition. The feed-water here is bad.

Four steam-digesters have been set aside as unfit for use, by agreement, rather than put in the necessary repairs required to make them good. These are being replaced in the one case by two new steel ones, and in the other by two good second-hand ones.

The rapid deterioration of the crowns and angle-irons on the crowns of digesters is due to the chemical action of fatty acids, which appear to concentrate about the top, and which are generated in the process of the work, and in many cases exist already in the partly-decomposed state of the substances used.

I invariably recommend in these cases, as the best means of preservation, frequent and thorough cleaning over the crown and about 18in. down the sides (as this is the only part attacked); but owing to the nature of the work this is seldom attended to.

In the table of defects there are nine cases of corrosion mentioned. In some of these cases it is not preventible; but there are a great number of cases of oxidation going on which are caused

principally by the intermittent use of the boiler, possibly working only two days in the week, the rest of the time standing full of water. To counteract the effects of this, soda-ash (caustic soda), and in some cases lime, has been used with good results.

In the table of notices of repairs, the item double-furnace Cornish-tubular is due entirely to wear and tear; these boilers having been in use for the last twenty years or more, but at a low pressure (16), the engines being condensing.

In the table of notices to remove dangerous parts of machinery: In one case I found, in the upper part of a circular breaking-down bench, a fracture in the centre in a T-shape extending 12in. in length; in another case a saw had been removed, which was shown me, where the centre had come entirely out, and which could not be seen until the washer was removed.

There were only six cases requiring fencing, and the notices given were all verbal.

The number of boilers reported to me as being sold, that is, those which have already been in use, was 26. New boilers imported, portable, 21; ditto, vertical, 4; second-hand imported return tubular, 4; locally made, 12: total, 41.

The total number of inspections made during the year was 505; of these, 81 were made by Mr. Blackwood in the northern part of the district.

In conclusion I may state that there are still a number of boilers remaining to be inspected, but which, with the additional assistance now granted, will be taken up during the year, as there are a number of widely-scattered inspections, which will necessarily take some time to get into regular form.

I have, &c.,

The Chief Inspector of Machinery, Wellington. ALEXANDER CRAWFORD.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

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	27	156	13	132	56	121	505

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

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	330 0 0	...	854 0 0
Stationary	524 0 0	...	

RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Description of Machinery.	Steam.	Steam and Water.	Description of Machinery.	Steam.	Steam and Water.
Aërated water	1	...	Copper and brass works ...	3	...
Agricultural-implement shops ...	8	...	Coffee and spice works ...	2	...
Bakeries	3	...	Confectionery	3	...
Boiling-down	7	...	Cranes	15	...
Bone-mills	5	...	Dairy factories	3	...
Brick and tile works	6	...	Dredges, harbour	4	...
Breweries	10	...	Dye works	1	...
Cabinet-making	5	...	Engine-shops	4	...
Cement works	1	...	Engine-shops and foundries ...	5	...
Chaff-cutting	16	...	Foundries	5	...
Chemical works	2	...	Fellmongeries	5	...
Chicory works	1	...	Flour-mills	10	7
Cooking	2	...	Flock-mills	2	...
Collieries	6	...	Fish-preserving	1	...
Corn-crushers	4	...	Fire-grate and range works ...	4	...

RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT—*continued.*

Description of Machinery.	Steam.	Steam and Water.	Description of Machinery.	Steam.	Steam and Water.
Firewood-cutting	1	...	Rope works	1	...
Fire-engine	1	...	Saw-mills	42	2
Fruit-preserving	2	...	Seed-dressing	1	...
Gas works	2	...	Soap works	3	...
Hoists	22	...	Soap and candle works ...	3	...
Hydraulic lifts	4	...	Standard works	2	...
Joineries	6	...	Steam roller (road)	1	...
Lapidary	1	...	Stone-crushers	6	...
Laundries	2	...	Stone-dressing	1	...
Locomotives	10	...	Stone-cutting	2	...
Lathmaker	1	...	Tanneries	4	...
Lead-pipe works	2	...	Tramway cable	2	...
Lime hydraulic works	1	...	Threshing machines	122	...
Machine shops	6	...	Traction-engines	8	...
Oil-mill, linseed	1	...	Turnery, wood	5	...
Paper-mills	1	1	Venetian blinds	1	...
Pottery	1	...	Winding	8	...
Pipe works, clay	3	...	Wool-pressing	4	...
Printing-papers	5	...	Woollen factories	4	...
Pumping water	5	...	Woodware factories	3	...

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Description.	Dangerous.	Ordinary.	Total.
Blow-off cocks	...	2	2
Boilers (furnace-tubes) corroded	2	...	2
Bottoms of shells leaking	1	2	3
Bottoms of combustion-chambers thin	...	4	4
Bottom plates of shells thin	...	2	2
Corrosion, internal	...	3	3
Corrosion, external	...	2	2
Digesters, steam, corrosion of shells and angle-iron	2	...	2
Digesters, steam, corrosion of angle-irons	...	2	2
Fire-box, crown cracked	1	...	1
Gauges, pressure	1	...	1
Gauges, water	1	...	1
Hand-holes weak	...	1	1
Man-hole weak	...	1	1
Mud-holes weak, leakage	...	4	4
Plate cracked through scale	1	...	1
Plate pitted through corrosion...	...	4	4
Seams leaky	...	1	1
Shell-plates sprung by fire	...	1	1
Screwed stays in fire-box corroded	1	...	1
Stay, vertical, corroded	1	...	1
Test-cocks renewed	...	1	1
Totals	11	30	41

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Accident.	Name and Address of Owner.	Nature and Cause of Accident.
23rd September, 1885	N.Z. Implement Company, Dunedin	Leakage in bottom of shell through wasting of plates, caused by damp arising from the ground.
23rd November, 1885	Fleming and Gilkison, Invercargill	Plate in bottom of shell cracked through accumulation of scale, fired externally.

RETURN of NOTICES given to REPAIR BOILERS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1885.		
May 9 ...	Portable	New pressure-gauge to be got.
May 12 ...	Portable	Tube-plate to be repaired; new stay-bolts in crown of fire-box; new pins in longitudinal stays.
May 16 ...	Cornish tubular ...	Compensation-ring to be put round hand-hole.
May 19 ...	Cornish	New pressure-gauge; new blow-off cock and new test-cocks to be put on.
July 13 ...	Cornish tubular ...	Patch on crown of boiler, 2ft. x 3ft.
Aug. 17 ...	Vertical	Two mud-holes to be plated round.
Aug. 18 ...	Double-furnace Cornish tubular	Two combustion-chambers to be patched.
Aug. 18 ...	Double-furnace Cornish tubular	Two bottoms to be renewed, 13ft. 9in. x 2ft. 6in.; two bottoms of combustion-chambers to be sheathed, with stays coming through; two bottoms of smoke-boxes to be sheathed, with stays coming through; four lower and four upper man-holes to have compensation-rings put on, 4in. x $\frac{1}{2}$in.
Aug. 26 ...	Vertical tubular ...	New stay between crown of fire-box and crown of shell.
Aug. 29 ...	Longitudinal tubular	New blow-off cock.
Sept. 28 ...	Lancashire ...	One plate to be renewed in No. 2 tube.
Sept. 28 ...	Lancashire ...	Two plates to be renewed in No. 1 tube.
Oct. 20 ...	Longitudinal tubular	Two test-cocks, and set of water-gauge fittings.
Oct. 23 ...	Longitudinal tubular	Several seams to be caulked on top of boiler.
Nov. 18 ...	Cornish	Three bands, 4in. by $\frac{1}{2}$in., to be rivetted round the shell; two angle iron-rings to be put round the tube, 3in. x 3in. x $\frac{3}{8}$in.; also one plate on top of shell to be cut out and renewed, and several plates taken out and straightened and replaced.
Nov. 21 ...	Locomotive ...	Small crack in crown of fire-box to be primed and stayed.
Nov. 23 ...	Longitudinal tubular	Plate over fire to be partly cut out and new piece put in.
1886.		
Jan. 11 ...	Portable	A number of screwed stays to be renewed.
Feb. 22 ...	Steam-digesters ...	Two new crowns to be put in, with new double angle-irons top and bottom, 3in. x 3in. x $\frac{3}{8}$in., also four new stays of $1\frac{1}{4}$in. in each, and new pressure-gauges.
Mar. 8 ...	Cornish boiler ...	Notice to have tube scaled, being found in an unsafe condition.
Mar. 8 ...	Steam-digester ...	Two top angle-irons to be renewed; size 3in. x 3in. x $\frac{3}{8}$in.
Mar. 11 ...	Cornish	Compensation-ring to be put round man-hole; also gusset or palm-stay in front end-plate.
Mar. 11 ...	Portable	New crown in fire-box.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Class of Machinery.	Parts requiring to be fenced.
1885. *Verbal.*		
May 11 ...	Engine	Lower half of fly-wheel to be boxed up.
May 18 ...	Laying-shaft ...	Pinion of laying-shaft at passage to be fenced off.
May 23 ...	Brick-making machine	Laying-shaft to be boxed over, also spur-wheels to be fenced off.
June 22 ...	Vertical	Bevel-wheels to be protected by a guard.
1886.		
Feb. 24 ...	Engine	Cranks and spur-wheel of engine to be fenced round.
Written.		
Feb. 27 ...	Engine	Connecting-rod of engine and crank.

RETURN of NOTICES given to REMOVE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Machinery.	Nature of Machinery to be removed.
1886. Jan. 14 ...	Saw-mill machinery	Circular saw cracked.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with LAND BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1886.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
Messrs. Findlay and Co., timber merchants, Dunedin	Circular saw ..	Neil Shaw, sawyer, aged forty-two; Oct. 13, 1885	Two fingers cut off left hand	Not	This accident was caused through the slipping of a block of wood he was cutting, and was purely accidental.
George Hyndman, working-jeweller, Moray Place, Dunedin	Slitting-machine, a small iron disc-saw, for cutting greenstone	Humphrey Stevenson, aged fourteen; 18th April, 1885	Right arm broken	Not	Boys are employed to attend these machines, and, to enable them to put the belts off and on, a fixed stool is attached to each machine; the stool is 3ft. high, and the driving-shaft 7ft. from the floor; this enables them to put their belts on easily without any danger; but it seems that this boy went up on the bench, which is 4ft. high above the floor. This, of necessity, placed him so high, that he was partly above the shaft, when he put his arm over the shaft, which immediately caught his shirt, dragging his arm round and breaking it in two places. The driving-shaft is 1¼in. in diameter, and the belt 1in. broad. This accident was entirely the boy's own fault, as boys are not allowed to go on to the bench, and could in no way be prevented by any fencing.

SUMMARY of INSPECTIONS.

Number of Inspections	505
Machinery inspected	454
Defects found on the Inspection of Boilers and Fittings	41
Return of Accidents to Boilers and Machinery reported	2
Return of Notices given to repair Boilers	23
Return of Notices given to remove Dangerous Parts of Machinery ...	1
Return of Notices given to fence Dangerous Parts of Machinery ...	6
Return of Accidents to Life and Limb	2

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

SIR,— Christchurch, 8th May, 1886.

I have the honour to forward annual report of boilers and machinery inspected in the Canterbury, Westland, and Nelson South Districts during the financial year ending the 31st March, 1886.

The forms used in the report are the same as formerly, and, should any further particulars be required, I shall be happy to supply them.

For want of sufficient time, the Canterbury District has not been thoroughly inspected this year, and there are therefore some boilers at work without certificates.

The Westland District has been thoroughly inspected, and I was engaged in the Nelson South District at the close of the year. It has been all inspected since, and will appear in the next annual report.

In all cases where repairs to boilers or protection to machinery were required, I found all owners ready to comply with my instructions; so I do not consider it desirable always to serve written notice for repairs or protections.

I have, &c.,

The Chief Inspector of Machinery, Wellington. GEORGE CROLL.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ending the 31st March, 1886.

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	13	141	3	112	42	54	365
Westland	...	4	2	16	4	11	37
Nelson South	...	1	...	3	...	7	11
Totals	13	146	5	131	46	72	413

I had not completed the Nelson South District at the close of the financial year. For this reason only a few of the boilers in that district appear in this report.

RETURN showing FEES payable for the INSPECTION of BOILERS and MACHINERY during the Financial Year ending the 31st March, 1886.

Name of District.	Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Total.
	£ s. d.		£ s. d.
Canterbury	615 0 0	...	615 0 0
Westland	63 0 0	...	63 0 0
Nelson South	19 0 0	...	19 0 0
Total	697 0 0	...	697 0 0

There are fourteen maximum fees, representing thirty-nine boilers.

RETURN of MACHINERY INSPECTED in the CANTERBURY DISTRICT during the Financial Year ending the 31st March, 1886.

Description of Machinery.	Steam.	Water.	Steam and Wind.	Description of Machinery.	Steam.	Water.	Steam and Wind.
Saw-mills	34	...	...	Woollen mills	2	...	...
Threshing machines ...	100	...	...	Wool washing and dumping	6	...	...
Foundries and iron works	26	...	...	Tanneries	4	...	...
Flour-mills	7	2	1	Bone-mill	1	...	...
Brick and pottery works...	3			Glue works	1	...	...
Coal-mining	1	...	...	Refrigerating works ...	2	...	...
Soap-boiling and boiling down	12	...	...	Meat-preserving ...	2	...	...
Coffee works	2	...	...	Printing	2	...	...
Stone-sawing	1	...	...	Carpet factory	1	...	...
Chaff-cutting	15	...	...	Rope works	1	...	...
Wood-working	13	...	...	Baths and water-lifts ...	6	...	...
Breweries	8	...	...	Laundry	1	...	...
Coach factories... ...	2	...	...	Concrete-mixing and stone-breaking	2	...	...
Firewood-sawing ...	11	...	...	Barbed-wire works ...	1	1	...
Tramway-engines ...	8	...	...	Gas works	2	...	...
Butchers'	19	...	...	Jam factory	1	...	...
Cranes and winches ...	17	...	...	Cheese factory	1	...	...
Cordials and confectioners'	6	...	...	Brush factory	1	...	...
Traction-engines* ...	23	...	...	Air-compressing at bridge	1	...	...
Road-roller	1	...	...	Flock mill	1	...	...
Fire-engines	2	...	...	Electric light	1	...	...
Pumping and drainage ...	2	...	...	Biscuit bakery	2	...	...
Dock and slip	2	...	...				
Landing service ...	1	...	...				

* Traction-engines are all used for threshing, and are included in threshing machines.

RETURN of MACHINERY INSPECTED in the WESTLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Description of Machinery.	Steam.	Steam and Water.	Water.	Steam and Wind.
Breweries	5	...	...	...
Cranes and winches	9	...	...	...
Wood-working	2	...	...	...
Coffee works...	1	...	...	...
Saw-mill	7	...	...	...
Fire-engine	1	...	...	...
Foundry and iron-works	2	...	...	...
Coal-mining	2	...	...	...
Winding and sawing	1	...	...	...
Printing	1	...	...	...
Locomotives (contractors')	3	...	...	...
Sluicing, &c.	1	...	...	...
Air-compressing at bridge	1	...	...	...

RETURN of MACHINERY INSPECTED in the NELSON SOUTH DISTRICT during the Financial Year ended the 31st March, 1886.

Description of Machinery.	Steam.	Steam and Water.	Water.	Steam and Wind.
Saw-mill	1	...	...	...
Cranes and winches	3	...	...	...
Locomotive	1	...	...	...
Coal-mining	2	...	...	...

As I was engaged inspecting in this part of my district at the close of the financial year, and had only got a small part of it completed, the above return does not show all the machinery, but only such as I found in use at Brunnerton Coal-mines, and plant of contractor in use at Cobden, in connection with Greymouth Harbour Works on north side of the river. I have since completed the district.

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1886.

Description of Defects.	Dangerous.	Ordinary.	Total.
Blow-off pipes or cocks bad	...	2	2
Boilers dirty inside	...	2	2
Corrosion from leakage at mud-holes	1	7	8
Corrosion in bottom from damp	2	1	3
Cracks in furnace or fire-box	...	8	8
Cracks in shell over fire	1	...	1
Cracks in neck of uptake	1	...	1
Cracks in neck of end angle-iron	1	...	1
Collapse of furnace	2	...	2
Crown of fire-box down	...	5	5
Leakage in fire-box	...	3	3
Leakage at pipe-joints on boiler	...	1	1
Patches in fire-boxes (portable)	...	9	9
Pressure-gauges bad	...	7	7
Safety-valves set fast	1	...	1
Screwed stays in fire-box gone	2	...	2
Tubes wasted	2	2	4
Top of boiler thin from corrosion	1	...	1
Vat requiring stays renewed	1	...	1
Vats requiring new angle-iron	2	1	3
Vats requiring safety-valves	...	2	2
Totals	17	50	67

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the WESTLAND DISTRICT during the Financial Year ended 31st March, 1886.

Description of Defects.	Dangerous.	Ordinary.	Total.
Corrosion from leakage of joints	...	1	1
Corrosion on bottom of boiler	1	...	1
Corrosion from leakage at doors	...	1	1
Stays in fire-box broken	1	1	2
Studs of sludge-doors stripped	...	1	1
Tubes wasted	...	1	1
Totals	2	5	7

RETURN of DEFECTS found on the INSPECTION of BOILERS in the NELSON SOUTH DISTRICT during the Financial Year ended 31st March, 1886.

Description of Defects.	Dangerous.	Ordinary.	Total.
Cracks in bottom over fire	1	...	1
Pressure-gauge bad	...	1	1
Tubes wasted and leaking in contractor's locomotive ...	1	...	1
Totals	2	1	3

RETURN of NOTICES given to REPAIR BOILERS in the CANTERBURY DISTRICT during the Financial Year ended 31st March, 1886.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1885.		
May 18 ...	Tubular	Verbal. New blow-off pipe and cock.
June 9 ...	Cornish	Verbal. New joint on blow-off cock.
June 11 ...	Vat	Verbal. New top and angle-iron ring.
June 15 ...	Portable	Verbal. Renew joints of all sludge-doors.
July 9 ...	Cornish	Verbal. New angle-iron ring on back end of tube.
July 9 ...	Portable	Verbal. Close up all sludge-doors and put in screwed plugs. Reduced pressure, and told owners will not pass again.
July 17 ...	Tram-engine ...	Verbal. Renew patch in furnace.
July 21 ...	Tram-engine ...	Verbal. Renew patch in furnace.
Sept. 11 ...	Portable	Written. Ten new tubes.
Sept. 16 ...	Portable	Verbal. Bore a few holes and screw pins in crack in fire-box.
Sept. 16 ...	Portable	Verbal. Expand ends of tubes where leaking in fire-box.
Sept. 25 ...	Portable	Verbal. New pressure-gauge and spring-balance.
Oct. 21 ...	Portable	Verbal. Expand ends of tubes leaking in fire-box.
Oct. 28 ...	Cornish	Written. New front end-plate.
Oct. 29 ...	Vertical	Verbal. New uptake.
Oct. 29 ...	Portable	Verbal. Renew a few of screwed stays in fire-box.
Nov. 3 ...	Portable	Verbal. New set of tubes.
Nov. 4 ...	Vertical	Written. Renew all pipe-joints on boiler.
Nov. 4 ...	Vat	Written. New angle-iron, and refasten all stays on top.
Nov. 12 ...	Vertical	Verbal. New crown-plate in boiler.
Dec. 15 ...	Portable	Verbal. New pressure-gauge.
Dec. 16 ...	Portable	Verbal. New pressure-gauge.
1886.		
Feb. 18 ...	Portable	Verbal. New pressure-gauge.

RETURN of NOTICES given to REPAIR BOILERS in the WESTLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1886.		
Mar. 5 ...	Cornish	Verbal. New blow-off pipe.
Mar. 10 ...	Vertical	Verbal. Renew ten rivets in bottom ring.
Mar. 16 ...	Portable	Verbal. Renew fourteen stays in fire-box.
Mar. 17 ...	Locomotive ...	Written. Renew twenty-six tubes.
Mar. 23 ...	Portable	Verbal. Renew a few stays in fire-box, top row of stays.

RETURN of NOTICES given to REPAIR BOILERS in the NELSON SOUTH DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1886.		
Mar. 17 ...	Vertical	Verbal. New safety-valve in room of present one—too small.
Mar. 20 ...	Tubular	Verbal. Cut out cracked plate in bottom, and put in new plate.

This district was not completed on the 31st March.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Machinery.	Parts required to be fenced.
1885.		
Sept. 8 ...	Flock-mill ...	Verbal. Driving-belt.
Sept. 11 ...	Flour-mill ...	Written. Bridge over water-race at wheel, and driving-belt of silk-dresser.
Sept. 23 ...	Tannery	Verbal. Fly-wheel of engine.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WESTLAND DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Notice.	Description of Machinery.	Parts required to be fenced.
1886.		
Mar. 17 ...	Saw-mill	Verbal. Driving-belts from fly-wheels to saws.
Mar. 19 ...	Winding in coal-mining	Verbal. Hand-rail to both sides of winding-drum.

No such notice was required in the Nelson South District up to the 31st March, 1886.

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1886.

Date of Accident.	Owner's Name and Address.	Nature and Cause of Accident.
1885.		
July 30 ...	Hale and Thrope, Christchurch (tubular boiler)	Reported leakage on bottom. Found first ring-seam leaking very bad, caused by an accumulation of grease on bottom introduced with feed. Had all the bottom plates renewed.
Aug. 6 ...	R. W. Walters, Christchurch (tubular boiler)	Reported leakage on bottom. Found all the seams in bottom leaking; iron had appearance of being red hot; not very dirty. I am of opinion the fire has been lit while boiler empty. Condemned.
Sept. 25 ...	James Dalziel, Mount Grey	Reported portable engine cracked in fire-box, caused by dirt. Two patches; cracks cut out.
1886.		
Feb. 11 ...	Bruce and Company (Limited), Timaru (2 Cornish boilers)	Reported collapse of furnaces, and repaired by two new plates in one furnace; the other was set up and stayed to shell. As this took place during my absence on leave, I cannot state the cause.
Feb. 22 ...	Hancock Brothers, Spreydon (vertical boiler)	Reported leakage in furnace. Found a crack in plate, caused by dirt in water-spaces. Had furnace renewed.

I had no notices of this nature from Westland or Nelson South Districts.

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, 1886.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident and Remarks.
Frank White, Temuka	Threshing machine	Thomas Gilbert, aged twenty-one years	Loss of right foot	Not	He was engaged cutting bands on top of machine, but how he got his foot into the beaters is not explained. I have seen several means tried of protecting drum, but, so far as I know, none have been a success, but are thrown aside.

This is the only accident I have to report for the Canterbury District, and am thankful to be able to say have none for Westland and Nelson South Districts.

By Authority: GEORGE DIDSBURY, Government Printer, Wellington.—1886.

NEW ZEALAND

WRECK CHART

1ST APRIL 1885 TO 31ST MARCH 1886

Compiled from Official Records

in the

MARINE DEPARTMENT.

Statute Miles

10 5 0 10 30 50 70 90 110 130 150 170 190 200

Nautical Miles

10 5 0 10 30 50 70 80 110 130 150 170 180

Three Kings

Cape Maria Van Diemen

North Cape

Ahipara Bay

Bay of Islands

Hokianga H.

Mokohinau

Great Barrier

Kaipara Har.

Kawau

Tiri Tiri

AUCKLAND

Manukau Har.

Var. 14° 17. E.

TAURANGA

East Cape

Kawhia Har.

GISBORNE

Poverty Bay

NEW PLYMOUTH

Cape Egmont

POPUNAKE

Portland Isd.

NAPIER

Cape Kidnappers

WANGANUI

Cape Farewell

Farewell Spit

Manawatu R.

Cape Turnagain

Castle Point

Karamea R.

NELSON

Brothers

WELLINGTON

BLENHEIM

Cape Palliser

Cape Foulwind

WESTPORT

Cape Campbell

Clarence R.

KAIKOURA

GREYMOUTH

HOKITIKA

Waiau-ua R.

Abut Head

CHRISTCHURCH

LYTTELTON

Sumner H.

Jacksons Bay

Rakaia R.

Akaroa Har.

Rangitata R.

TIMARU

Milford Sound

Waitaki R.

Caswell Sound

OAMARU

Moeraki

DUNEDIN

Dusky Sound

Puysegur Pt.

Solander Id.

INVERCARGILL

Centre Id.

Bald Id.

Nugent Pt.

Var. 16° 42' E.

Snares

SYMBOLS.

STRANDINGS.

X - - - Signifies a Total Loss.

X - - - „ . Partial Loss.

COLLISIONS.

++ - Signifies a collision between two steam vessels with partial loss.

+O - 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.

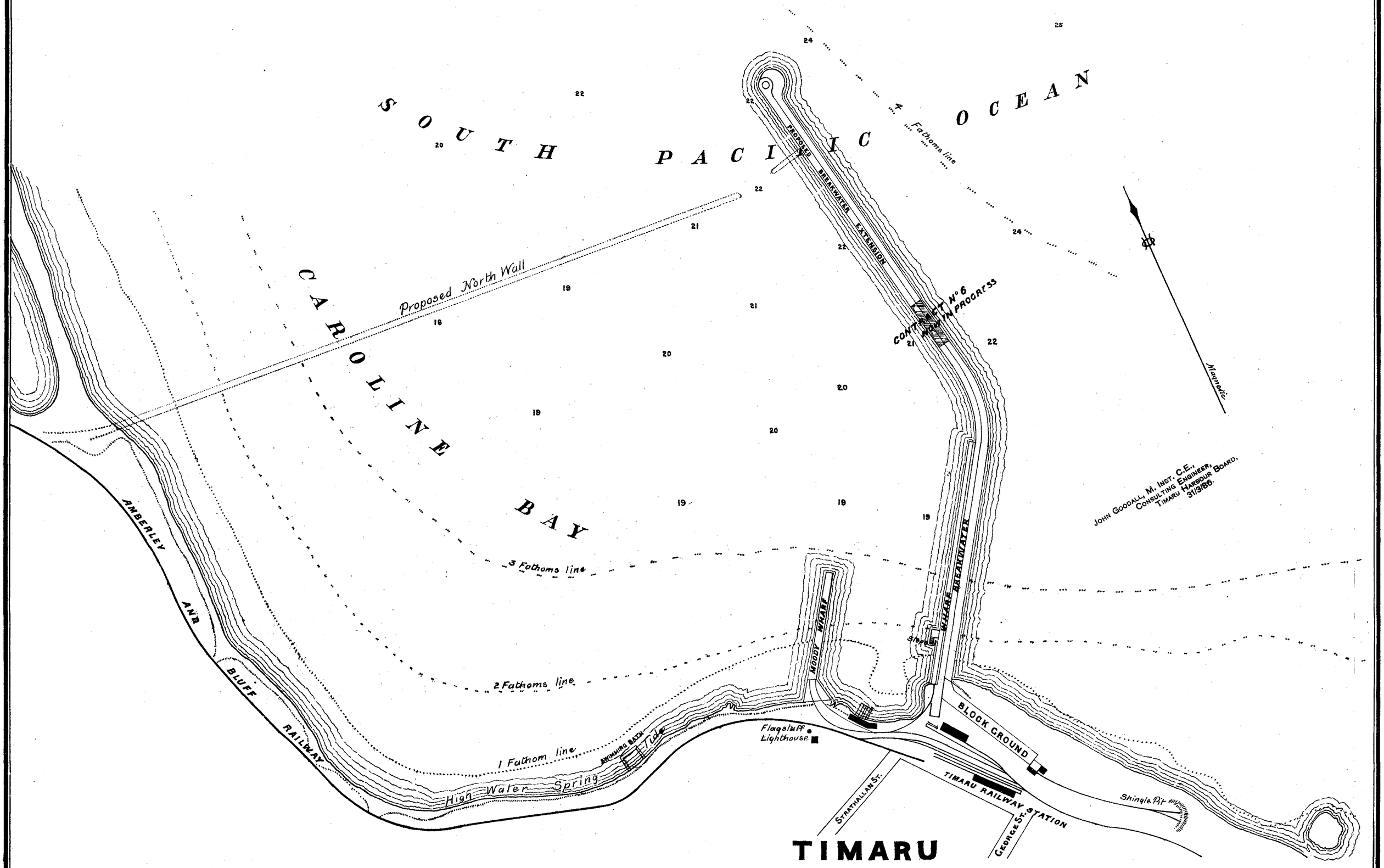
† - - - A partial loss of a steam-vessel.

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

TIMARU HARBOUR WORKS.

GENERAL PLAN.

SCALE: 6 CHAINS TO ONE INCH.



NOTE.—THE FIGURES DENOTE THE DEPTH OF WATER IN FEET AT LOW-WATER SPRING-TIDES. A DEEP-WATER BERTH, 600 FT. X 100 FT., IS NOW IN PROGRESS OF BEING DREDGED TO 24 FT. BELOW L.W.S.T.

THE PORT OF OAMARU

Is situated in a bay at the Oamaru headland to the north of Cape Wanbrow, is about forty-three miles north from Taiaroa Head, and thirteen miles south from the mouth of the Waitaki River, on the east coast of the Middle Island of New Zealand; lat. 45° 6′ S., long. 71° 1′ E.

It is the outlet for the produce of the Waitaki and part of the Waimate District, and forms the terminus of several branch lines of railway—the Windsor and Livingstone, Duntroon and Kurow, and the Waimate and Waihao forks, as well as the Moeraki–Waitaki section of the main line.

The principal articles of export are, wool and cloth, grain- and farm-produce, breadstuffs, frozen mutton, and the famous Oamaru building-stone.

The port has been improved by the construction of a concrete sea-wall and a rubble mole, 1,850ft. and 1,700ft. in length respectively, enclosing about 60 acres, and forming a perfectly safe, commodious, and easily-accessible harbour.

The entrance is 600ft. in width, well sheltered by the sea-wall. Four wharves have been built, (Macandrew, Normanby, Cross, and Sumpter Wharves), a large area has been dredged round the wharves, and the Sumpter Wharf especially stands in a basin dredged to accommodate vessels of the largest class.

Strong moorings have been laid, and warps, cranes, and other appliances are kept in readiness; every care and attention being afforded to vessels by the Harbourmaster and his assistants.

Full particulars of the by-laws, charges, &c., may be obtained on application at the office of the Harbour Board, Oamaru.

SAILING DIRECTIONS.

Lights.

A fixed red light is exhibited from a lighthouse on the South Head, Oamaru Bay, and is seen in clear weather about eight to ten miles over an arc of 146° 0′ 15″, between N.N.W. and S. by W. from seaward, the outer anchorage being on a S.W. by W. bearing, distant one and a half miles. All bearings are magnetic.

A green light is exhibited from a staff at the north end of the breakwater, at an elevation of 16ft. above the sea-level, and is seen in clear weather three or four miles from seaward, between bearings N.W. and S.S.W. (magnetic).

A red light is exhibited on east end of north mole. The light is about 14ft. above high-water mark, visible all round, and distant from the green light on the breakwater 550ft., the lights bearing from each other S.W. ¼ W., N.E. ¼ E., between which light is the entrance to the harbour.

Vesels entering should give the breakwater end a berth of at least 40 fathoms.

Signals.

The signals are shown from a flagstaff erected on the cliff immediately south of the breakwater.

The following signals are shown in accordance with the provisions of the Harbour Regulations:—

Put to Sea or keep to Sea.—Day: Two balls horizontal on yard on either side of mast. Night: Two white lights horizontal, with red light between them.

In bad weather the green light at the end of the breakwater cannot be shown. Masters of vessels in the roadstead, in calm weather, will require to exercise judgment in getting their vessels to sea.

There are exhibited at the Port of Oamaru two leading lights on beacons erected above the cliff to the south-westward of the harbour: From the upper or south beacon, a fixed green light, 120ft. above sea-level; from the lower beacon, a fixed white light, 104ft. above sea-level.

The beacons are white, with a black vertical stripe in the centre of each: the north beacon, a circular disc; the south or upper beacon, the gable of a small hut. They are 180ft. apart, bearing from each other N.N.E. ¼ E., and S.S.W. ¼ W. (magnetic).

The beacons in line lead in, clearing the spit at the breakwater-end about 80ft., and the mole-end about 85ft., with 18ft. water at two cables' length off breakwater, 17ft. abreast of the spit, and 16ft. abreast of the mole end, low-water springs.

Vessels making for the harbour should get the lights or beacons in one when about two cables' length off the breakwater, keeping them in line till the end of the breakwater bears S.E. by E.; then starboard the helm, passing the mole (on which is a fixed red light) about 120ft. off, and steer for wharf, if directed, or anchor where convenient, out of the fairway, if possible.

Signals to Steamers.—Steamers arriving at night, and sounding whistle on approaching the breakwater, will be signalled to wharf as follows:—Macandrew Wharf: A red light on west or outer corner of wharf. Normanby and Sumpter Wharves: East side, a green light on east corner of wharf; west side, a red light on west corner of wharf.

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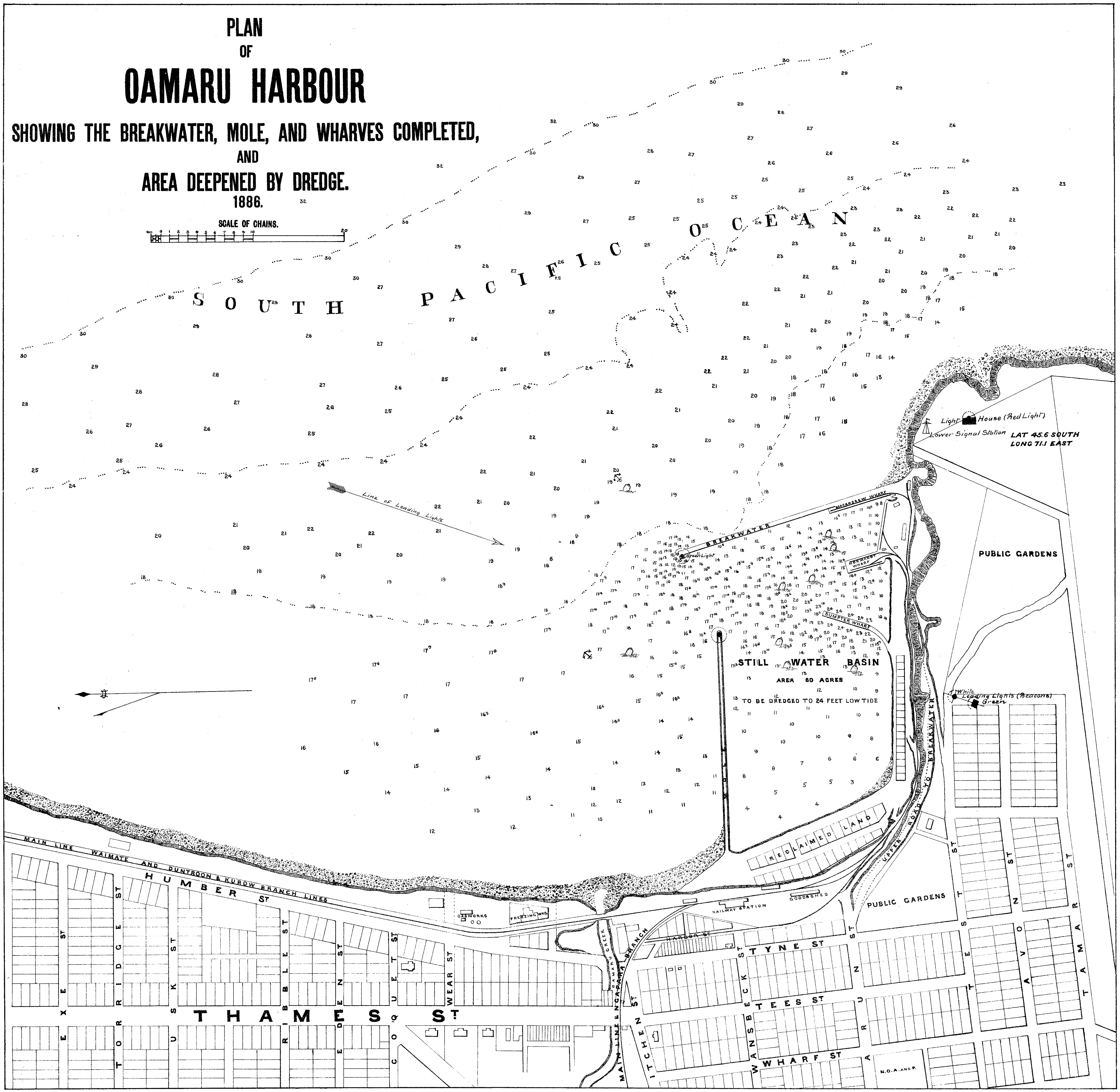
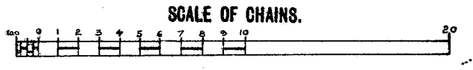
Strangers should not attempt to take the port at night, but keep five miles to the windward till daylight, more especially in heavy southerly weather, as then the wind draws directly out of the entrance, and, if much sea on, vessels would be liable to get dangerously near to the north beach.

WM. SEWELL,
Harbourmaster.

PLAN OF OAMARU HARBOUR

SHOWING THE BREAKWATER, MOLE, AND WHARVES COMPLETED, AND AREA DEEPENED BY DREDGE.

1886.


SCALE OF CHAINS.
SOUTH PACIFIC OCEAN
Line of Leading Lights
BREAKWATER
MACANDREW WHARF
NORMANBY WHARF
SUMPTER WHARF
Green Light
STILL WATER BASIN
AREA 60 ACRES
TO BE DREDGED TO 24 FEET LOW TIDE
RECLAIMED LAND
Light House (Red Light)
Lower Signal Station
LAT 45.6 SOUTH
LONG 71.1 EAST
PUBLIC GARDENS
White Leading Lights (Beacons) Green
UPPER ROAD TO BREAKWATER
MAIN LINE WAIMATE AND DUNTROON & KUROW BRANCH LINES
HUMBER ST
GASWORKS
FREEZING WKS
RAILWAY STATION
GOODS SHED
PUBLIC GARDENS
HARBOUR ST
TYNE ST
TEES ST
WHARF ST
THAMES ST
EXE ST
TORRIDGE ST
USK ST
RIBBLE ST
EDEN ST
COQUET ST
WEAR ST
ITCHEN ST
WANSBECK ST
ARUN ST
TEESE ST
AVON ST
TAMAR ST
OAMARU CREEK
MAIN LINE & NGAPARA BRANCH
N. O. A. AND P.

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Wm. SEWELL,
Harbourmaster.

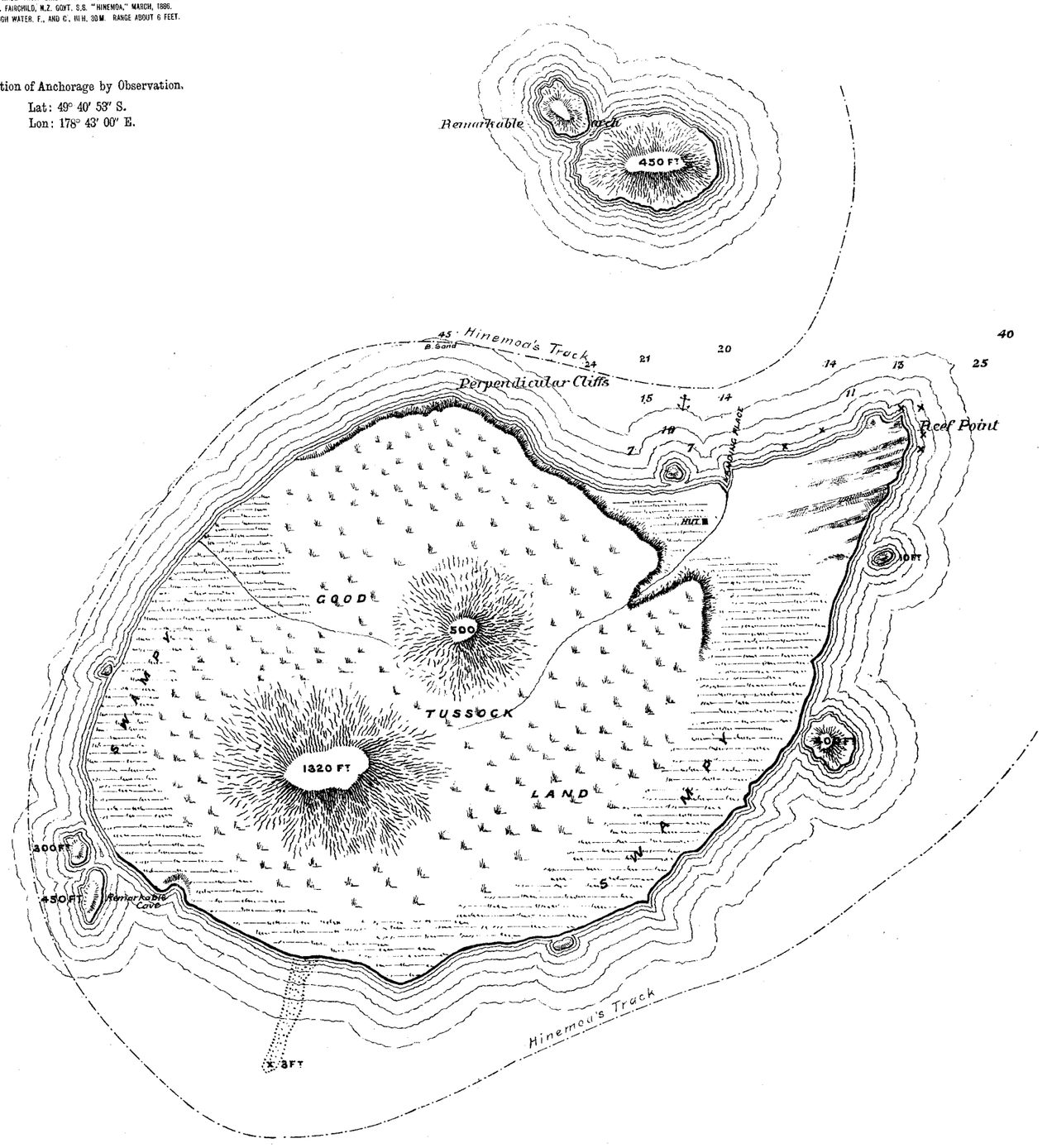
SKETCH MAP
OF
THE ANTIPODES ISLANDS.

SCALE: 3 INCHES TO 1 MILE.

NOTE.—SKETCH MADE FROM BIRDS-EYE VIEW, WITH A FEW COMPASS BEARINGS AND SOUNDINGS, BY CAPT. FAIRCHILD, N.Z. GOVT. S.S. "HINEMOA," MARCH, 1886.
HIGH WATER, F. AND C., 11 H. 30 M. RANGE ABOUT 6 FEET.

Position of Anchorage by Observation.
Lat: 49° 40′ 53″ S.
Lon: 178° 43′ 00″ E.

M.N.



Photolithographed at the General Survey Office, Wellington, N.Z. July 1886.

SKETCH MAP
OF
THE BOUNTY ISLANDS,

SCALE: 3 INCHES TO 1 MILE.

NOTE.—SKETCH MADE FROM BIRDS'-EYE VIEW, WITH A FEW COMPASS BEARINGS AND SOUNDINGS. BY CAPT. FAIRCHILD, N.Z. GOVT. S.S. "HINEMOA," MARCH, 1886.

Position of Anchorage by Observation.
Lat: 47° 43′ 00″ S.
Lon: 179° 0′ 27″ E.

Photolithographed at the General Survey Office, Wellington N.Z. July 1886.