

law entitled to make some portion of the regulations; and I would suggest, as one way of overcoming this difficulty, that they should be passed as a whole by the Legislature of the Colony, after the consent of the several authorities has been procured. If the general principle be approved, much time might be saved and much correspondence avoided, were a congress of the principal harbour masters summoned to consider the regulations in a spirit of mutual concession, as the differences even now existing between the regulations of the different Provinces are in reality comparatively trifling.

Wrecks.

The number of wrecks and similar casualties during the past year has been very considerable. Thirty-nine have been reported, and investigated under the Enquiry into Wrecks Act, and some are known to have occurred which have not as yet been reported, or of which the Enquiry into Wrecks Act, as at present worded, scarcely takes cognizance. In addition to these, several vessels have been stranded and repaired on more than one occasion, so that it is decidedly within the mark, to say that not less than forty-five to fifty casualties, more or less serious, have occurred. The most important are the wrecks of the barque "Cambodia," and of the steamers "Queen," "South Australian," and "Star of the Evening," the latter resulting in the loss of six lives.

The "Cambodia," a large vessel of 811 tons register, bound in ballast to Howland's Island, for guano, and only touching at New Zealand for stores, was wrecked on Manukau bar, from the master, who was a stranger, not understanding the signals on the pilot flagstaff; he seems to have acted with judgment while his vessel was in danger, but to have deserted her somewhat prematurely, as she was afterwards taken into port, and has since been repaired. This wreck may be said to have been mainly caused by a faulty General Chart, on which "Auckland" was printed on the west side of the island, in such a manner as to mislead a stranger, causing the master of the "Cambodia" to believe he was approaching Auckland, which he knew by reputation to be a port of very easy access. It is to be regretted that the name of the publisher of the chart was not given at the inquiry, as it would only be right to call his attention to the effect of this error. The wrecks of the three steamers referred to have been, attributed, more or less directly, to compass errors, by the Courts of Enquiry, and I see no reason to dispute the accuracy of the findings; but it would seem most important to impress upon mariners that owing to the very variable nature of the currents on some parts of the New Zealand coasts, compass courses should not be too implicitly relied on, under any circumstances, even when a vessel has been successfully sailed on the same courses on previous occasions, and that every possible means should be employed to check the accuracy of a ship's position from time to time; and that the fact of a vessel having been swung for compass correction in harbour, does not exonerate a master of a vessel from being bound to take every opportunity of ascertaining the errors of his compasses by actual observation when at sea. With a view to test the accuracy of the not unfrequent assertions of extraordinary variations in compasses in certain states of the weather, it has been suggested by the Harbour Master at the Bluff that the various lighthouses in the Colony should be supplied with compasses of moderate delicacy, and that the lightkeepers should be instructed to record their readings at certain hours daily, and more frequently should any abnormal variation be elicited, and the idea seems worthy of consideration, as, though lightkeepers might not be competent to make delicate magnetic observations, they could easily detect any abnormal variation which could endanger a vessel.

Lighthouses.

Dog Island lighthouse having been found to oscillate more than such a tower usually does, during violent gales, and also to leak to such an extent as to threaten to destroy the cohesion of the mortar with which it was built, it was decided to rip and point the whole very carefully with Portland cement, and this has been done in a satisfactory manner. With a view to making the tower still more waterproof as well as to make it more visible in varying states of the atmosphere, it has also been painted, the middle third of its height being white and the top and bottom thirds black. At the same time the iron sheeting of the dwelling-house roofs were carefully rivetted, as the ordinary screw attachments had proved insufficient for ensuring a watertight roof. The whole of these repairs have now been completed for a considerable time, and the principal keeper reports that the result is quite satisfactory, and both tower and dwelling are now perfectly watertight.

A portion of the roofing iron on the dwellings at Pencarrow having been blown away during a severe gale, it was found necessary to repair the damage and secure the whole in a more substantial manner, and the same opportunity was taken for making a somewhat better track to the lighthouse, and building a store on the beach, in which goods or stores may be deposited when landed, and another at the lighthouse for the protection of spare stores. This latter is also fitted as a workshop.

The tanks for storing water at Godley Head having proved very inadequate for the supply of the station during the dry season, and there being no streams or springs within a radius of several miles from the tower, six additional iron tanks have recently been fitted up. A small boat landing-place has also been constructed, and the path to the lighthouse repaired and improved so as to render it more easy to take the tanks up; a few other minor improvements, suggested by experience, were completed at the same time.

Certain repairs to the roofs of the dwelling at Nelson lighthouse will be required during the current year, and a few minor works at Tiri Tiri; but, beyond a small expenditure for painting, I see no reason to anticipate the need for any outlay on the buildings at the other stations.

During the year, two lightkeepers have resigned, four have been dismissed for insubordination or drunkenness, and one has been removed on account of ill health. I am in hopes that the men appointed in their places will prove more permanent and steady officers, as it is both annoying and costly to lose a keeper after he has learned his duty. As one very common source of disagreement between the principal and assistant keepers at the several stations appeared to be a want of a sufficiently definite division of the duties and responsibilities incident on each, I have drawn up a set of instructions (Appendix E.), founded on those adopted in the British or at least the Scotch Lighthouse Service; and every officer, on entering the service, is now