

NATIONAL WAR FUNDS COUNCIL.

The Council meets in Wellington from time to time for the transaction of business.

Since its establishment it has received from patriotic funds for administration the sum of £12,885 12s. 9d. Of this amount £2,339 5s. 8d. was raised for expenditure upon convalescent hospitals in New Zealand, and the whole of that amount has been expended for the object named. Other funds transferred to the Council consist of £3,813 9s. 5d. held hitherto by the Government as trustees for the New Zealand War Relief Fund, £4,078 11s. 6d. from the Westland Patriotic Fund, and £2,640 13s. 2d. from the Buller Patriotic Fund. In addition to these amounts handsome donations have been received from various sources, notably £10,000 contributed by the Bank of New Zealand, £2,087 9s. 4d. from the Union Steamship Company, £2,000 from Hugh Handyside, Esq., late of Hawke's Bay, and £1,000 from the New Zealand Shipping Company. The total receipts from all sources amount to £28,246 19s. 8d. Grants have been made from the Council's funds towards various patriotic objects. The funds now in the hands of the Council, with interest accrued on investments, amount to £25,763 2s. 8d. During the year the Westland and Buller Patriotic Societies have come under the Council under the provisions of the War Funds Act. On doing so they handed over the funds in hand, the Council from that date accepting the entire responsibility for soldiers and their dependants in those districts. The local executives previously existing have been appointed local Advisory Committees, and funds are regularly forwarded monthly to them for distribution. I am pleased to state that the executives continue to collect funds, which are regularly forwarded to the Council. The scheme is working well, and shows that the machinery of the War Funds Act, when tried by experience, is well devised and meets the needs of returned soldiers and their dependants.

J. W. KINNIBURGH,
Officer in Charge.

The Under-Secretary, Department of Internal Affairs, Wellington.

VI. REPORT OF GOVERNMENT ASTRONOMER.

Hector Observatory, 20th June, 1917.

STAFF.

ON the 2nd October, 1916, Cadet Norman Shrimpton was transferred to the Observatory from the Lands and Survey Department. As soon as he reached military age in December, 1916, Cadet Shrimpton volunteered for active military service, and on the 5th February, 1917, he reported for military duty.

On the 26th February, 1917, Relieving Cadet John Wilbur Nissen reported for duty at the Observatory.

TIME-SIGNALS.

The methods by which time-signals are supplied in New Zealand are as follows:—

At Wellington time-signals are given by electric lights erected at the Observatory at 20 h., 21 h., and 22 h., G.M.T. These signals are given as frequently as possible, whenever satisfactory observations have been obtained. A daily time-signal is supplied to the Telegraph Department for the purpose of checking all the clocks of the Telegraph and Railway Departments in the Dominion. An hourly signal is supplied to the Wellington Harbour Board's tide-gauge from the standard mean-time clock, and hourly signals are supplied to watchmakers in Wellington at a charge for maintenance of £2 per annum. Many time-signals are also given by telephone to the navigating officers of warships, transports, and mercantile marine. A galvanometer in the Public Telegraph-office, Featherston Street, is deflected every hour by the standard mean-time clock.

At Auckland time-signals are given by electric lights at 21 h., G.M.T. The signal-lights were erected by the Auckland Harbour Board. On Tuesdays and Fridays the signal-lights are extinguished by direct signal from the standard clock by means of the telegraph-lines, provided satisfactory observations have been obtained.

At Lyttelton time-signals are given by the time-ball at 16 h., G.M.T. The time-ball is the property of the Lyttelton Harbour Board. On Tuesdays and Fridays, provided satisfactory observations have been obtained, the time-ball is dropped by direct signal from the standard clock by means of the telegraph-lines.

For other parts of New Zealand signals are sent from the standard clock to galvanometers, usually twice a week.

EQUIPMENT.

Clocks and Chronometers.—The signal-clocks are somewhat inferior timepieces, with wooden pendulums, and have never kept good time. They have many contacts fitted on them for switching on the signal-lights and for sending out the time-signals. The extra duties put on the clocks have further interfered with their rates; consequently it has been necessary to take steps to improve their performance, and a method of synchronizing them has been in operation for a number of months with excellent results. The method used has proved to be very reliable, and has been found to keep the signal-clocks accurately in step with the standard mean-time clock for months at a time. This method of synchronization is capable of ready extension to clocks in the City of Wellington, and as many clocks as are required can be kept in time with the standard mean-time clock.

Astronomical mean-time clock No. 1896, made by Dent, London: This clock is the property of the Lyttelton Harbour Board, and is on loan to the Observatory. The pendulum of the clock is a zinc and steel one, and appears to be overcompensated for temperature; hence a fairly close regulation of temperature is necessary if the clock is to keep a good rate. The clock is of about the same order of accuracy as the other Dent clocks. It affords a good check on the other clocks, and is a useful addition to the equipment.