

above. The gauge outside the Tourist Offices in Fenton Street is weak, registering 5 lb. more than the actual pressure. The gauge at the office in the Sanatorium grounds is also weak to the extent of showing 3 lb. Upon my return to Wellington I had my gauge retested at the office of the Inspection of Machinery, and the foregoing set-down errors may be taken as correct.

"It may be taken that the available pressure throughout the twenty-four hours averages from 60 lb. to 68 lb. This in itself cannot be considered an efficient pressure for fire-extinction purposes, but in your case is very much counterbalanced by the unusually large diameter of the pipes throughout the reticulation; and the water-supply for fire purposes, so far as the reticulation is laid down, may be regarded as adequate to the requirements of your town under the present local conditions.

"The fire-hydrants are spaced generally 225 ft. apart—a reasonable provision.

"*Recommendations.*—The authorized strength of the brigade attached to the Central District should be increased to twenty.

"A new Central Station is required, and should be designed to provide, amongst other things, sleeping-accommodation for four men (six would be better), situated on or near the position of the present building: that is a suitable site in relation to the larger risks of the town.

"The conditions in Rotorua are different to those usually prevailing in other towns of a similar size, in that there are a number of boardinghouses of large dimension, both one- and two-storey, that are required for the accommodation of the visitors to the district, including amongst them a considerable proportion of aged and infirm people, who, as a rule, only stay a short time in the various houses and do not become familiar with their surroundings, or insufficiently so as to act with confidence at a time of excitement such as that caused by fire, and these special conditions call strongly for the installation of a street fire-alarm system, or, as an alternative, arrangements made for an all-night service at the telephone exchange. As the majority of the boardinghouses in question are connected with the exchange, such arrangement should meet requirements in this important direction for some time to come, providing there is a fireman on duty at the Central Station every night.

"The hose-reel shed at Ohinemutu, with its equipment, requires putting in good order, and some one residing in the neighbourhood placed in charge also; failing Europeans, arrangements should be made to drill some of the Natives living in the neighbourhood.

"A small hose-reel shed should be built at Whakarewarewa, and equipped with a hose-reel or cart sufficiently large to carry three or four hundred feet of hose, a branch and stand-pipe; also, some one should be placed in charge. Three hand-pumps, one for each station, London Fire Brigade pattern, and fitted with stirrups, are required. 1,000 ft. of new hose should be obtained, also three stand-pipes and an outfit of new nozzles. The firebell at the Central Station should be fitted with automatic ringing-gear.

"I have, &c.,

"THOS. T. HUGO,

"Inspector of Fire Brigades."

#### WHANGAREI.

Two inspections of the Whangarei Fire Brigade and its equipment were held—viz., 1st December, 1911, and 24th April, 1912.

The following reports, forwarded to the secretary of the Fire Board, and dated 9th December, 1911, and 10th May, 1912, respectively, cover both inspections:—

"SIR,—

"9th December, 1911.

"Following upon my inspection of the Whangarei Fire Brigade held on the 1st instant, I beg to forward the following for the consideration of your Board.

"At the muster at 8 p.m. on the date mentioned there were present the Superintendent, Deputy Superintendent, and fifteen officers and firemen; these, with two on sick-leave, accounted for nineteen out of a total strength of twenty on the roll. This was a satisfactory attendance.

"It was apparent whilst the subsequent drill was being carried out that there was room for improvement, particularly in regard to the use of the new telescopic ladder.

"The 1 in. nozzles recently purchased for the use of the brigade are badly defective in construction, causing the jet of water to spray a short distance from the branch, as was demonstrated during the course of the wet drill. This is a serious defect, and they should be replaced by others of a better design.

"During the course of my inspection through the town I noticed, in the case of the new brick building now being erected in Bank Street, that on one of the side walls of the building the studs on the ground floor facing the street for carrying the lining-boards are perpendicular, and to all present appearances there is no provision made for placing stops between the studs at the ceiling level: this means that in case of fire once getting behind the lining-boards there is a clear passage for it to spread between the ceiling and floor of the next story without being observed, and even if observed it is difficult for the brigade to extinguish. If my supposition is correct it is a serious constructional defect, and should be prohibited by the building by-laws. I pointed this out to Superintendent Chissel, who will be able to explain the matter more clearly on the spot.

"I have, &c.,

"THOS. T. HUGO,

"Inspector of Fire Brigades."