to $1\frac{3}{8}$ in. at the lip—some far from round, others very roughly finished inside; stand-pipes of all sizes with shanks ranging from 11 in. to 30 in. in length, some so short that they can only be shipped on certain hydrants in the town; nozzles with all sorts of curves and tapers, some so faultily designed that a jet of water, instead of being projected in ratio to the pressure, broke into spray a few feet from the branch; in one case two 1 in. nozzles had recently been purchased from a manufacturer, and upon examining them I found that one measured $1\frac{7}{16}$ in. at the base and the other $1\frac{19}{16}$ in.; couplings, nominally all of the standard V thread pattern, having different pitches of thread and external diameters, and as a consequence non-interchangeable gear is found in the same fire-station: these and other defects are conditions existing to-day in a number of the brigades, and it is a matter, seeing it possesses the requisite authority, that the United Fire Brigades Association might very well deal with.

In the majority of the brigades a steady improvement in the discipline, drills, and method of work generally is evident.

About the usual number of accidents—none fatal—has been sustained by firemen in the execution of their duty. The most serious were as follows:—

Auckland.—November 16, 1911: During the progress of a fire one fireman cut the tendons of his left hand, and another received injuries to his head and shoulders. February 21, 1912: Fireman burnt about face and head, caused by a gas-explosion.

Christchurch.—June 3, 1912: Firemen received burns on face and hands.

Dunedin.—May 29, 1912: Four ladders were coupled together when a centre-section coupling broke; two firemen were on the ladder—both were injured, one sustaining compound fracture of the right leg below the knee.

The following casualties to civilians have been reported by Superintendents of brigades as having occurred in their respective districts:—

Auckland.—August 11, 1911: A five-roomed cottage was destroyed by fire, and the occupant, Mrs. Julia Kelly, burnt to death. October 30, 1911: A shed owned by the City Council, used for boiling tar, on fire, and a Council employee was severely burnt about the face and legs, afterwards dying from the injuries.

Christchurch.—June, 11, 1912: Small fire in private dwellinghouse—two aged ladies were severely burnt and were removed to the Hospital, one subsequently dying as a result of the injuries.

The principal improvements in equipments that have been effected or are in course of being carried out are as follows: New central stations erected and occupied in Dunedin and Hastings respectively. A fire-ladder, 87 ft. in height when fully extended, electrically driven and manipulated imported for Auckland, and a 75 h.p. hose and chemical motor-car for Dunedin. New central stations are in course of erection in Greymouth, Dannevirke, and Petone, all three are approaching completion. New motor-cars are on order: For Auckland a 60 h.p. hose tender; Palmerston North, a 60 h.p. combined hose, chemical, and ladder car. Plans have been approved for a new central station in Gisborne. New Plymouth, plans are being prepared for a section of a new central station, and tenders are being called for a 75 h.p. combined hose, chemical pump, and ladder motor-car. Additions have been made to the street fire-alarm systems in Auckland and Christchurch, and in the latter city two more private thermostatic alarms have been installed. The defective smaller appliances are gradually being replaced with those of more efficient design and construction. Detailed information on the subject of equipment will be found in an attached summary.

A word of warning is necessary in reference to hand chemical extincteurs. There is now a large number of them in New Zealand, and in travelling about I have come across them, supposedly ready for service, in all sorts of conditions—some absolutely empty, others half-full, others with no soda in the water, &c.; also, I have seen several cylinders that have burst when seeking to discharge them, in two cases with a narrow escape from a bad accident. Elsewhere serious injuries have been incurred from this cause. These extincteurs have abundantly proved their value, but if they are to be of service when the emergency arises a little care is necessary, and to that end the following precautions should be adopted: The extincteurs should be periodically discharged and refilled. When discharging everybody connected with the premises, male or female, young or old, should witness the operation at least once, so that they may become familiar with the process. In instantaneous use lies its greatest value. Before recharging the cylinder should be thoroughly washed out for the purpose of removing any trace of acid that might remain. When charging care must be taken that the soda is thoroughly dissolved. Distilled water is best for the purpose, otherwise the soda may crystallize and so stop the vent, with the result that, if there should be any weakness in the cylinder itself, caused by corrosion or being of poor quality, &c., an explosion follows. When recharging see the cylinder-vent, the hose, and the nozzle are clear of any obstruction. Do not forget to put the charge of acid in its place. If the suggested precautions are observed the CO_2 extincteur will do a fair proportion of what is claimed for it.

The total number of calls received throughout the combined fire districts—namely, 686—shows a decrease of 55 when compared with the number received during the previous year; there was also a decrease in the number of actual fires that occurred—viz., 347, against 366 for the year ending 30th June, 1911.