quickly handled and got into position, a few men being able to take it up to the top floors with ease. The steam fire-engines in use are of very solid construction, very elaborately and beautifully finished, and of a much greater capacity than those in general use elsewhere. The hose-wagon has nearly superseded the hose-reel, the advantage being that the hose comes off much easier. Especially is this noticed when corners have to be turned, as there is no side-pull, or chance of fouling with the reel revolving. Again, when the truck stops, the hose ceases paying out, but with the reel there is a chance of the hose getting foul through the drum continuing its revolutions. When extra lengths of hose are required it is much easier and quicker to get them out than to drag off the reel, and when time is of importance this advantage cannot be overlooked.

On most of the lofty buildings it is compulsory to have fire-escape platforms at each floor, with iron railings, and a ladder connecting each. These are for the safety of the occupants, but are also a great convenience to the firemen in their work. On a number of these buildings, alongside the fire-escapes, are fixed rising mains which reach on to the roofs. These mains have a two-way or three-way Siamese connection at the bottom, and the steamer's hose can be connected to the main. At each floor there are hose-connections, to which the firemen attach their hose, the connections being reached by the fire-escape ladders. This saves handling a large quantity of hose for each jet, which would otherwise have to be brought from the steamer. Leads of hose can also be taken from the connections on the roof, if the fire is in the building adjacent.

The fire-escapes and water-towers in use are very heavy pieces of apparatus, and are generally run with three horses. The water-towers are useful adjuncts to the fire-extinction plant, as it is possible with them to pour into a burning building volumes of water which would be quite impossible from ordinary ladders. These can be elevated and directed through windows or other openings where the heat would be too great for a fireman to work.

The San Francisco Fire Department have what is called a battery. It has a very large nozzle, up to 2½ in., mounted on a two-wheeled truck. To supply this jet six lines of hose can be connected, and a very powerful stream can be thrown. This is easily controlled by one man.

While in Chicago we inspected the latest built fire-boat, the "Illinois," which is the most powerful in the world. On her bow is fixed a large nozzle, up to 5 in., through which can be discharged nearly 10,000 gallons per minute to a distance of 400 ft. She is available for fires all along the river-frontage, and can deliver great quantities of water through very large hose; and can also pump water through the mains right up into the city.

Summing up the results of our investigations and inspections, with regard to the improvement of the fire-protection service of the colony, we may state them as follows: The principal point to be kept in mind in considering the question is, that any loss by fire means that property (representing expenditure of capital and labour) has been destroyed, and as such is a direct loss to the community. Each individual, as a member of the community, should in some decided manner have the fact brought prominently under his notice that he is a loser by every fire, inasmuch as he has to bear his portion of the loss. The opinion is often expressed that destruction of property by fire is not always a loss, and that in some cases it is a profit, by sale to a "cash customer"—namely, the insurance companies. Can it be supposed that the money handed over is self-created? The insurance companies collect the amount from other policy-holders, and hand it over to the insurer. Thus, if he is no loser, all the policy-holders have been taxed to provide this amount, and also the amount necessary to provide for a profit on the capital of the companies and the cost of premium collection. When it is considered that the loss by fire in New Zealand for the past twelve months will reach a total of fully £300,000, surely the time has arrived when some stringent efforts should be made to reduce this terrible waste. The community should have it strongly impressed on them what a heavy tax it means, amounting, as it does, to 8s. per head on the whole population. This is the actual value consumed, but does not represent the only loss, as to it has to be added the cost and profits of insurance companies, fire brigades, &c. There is also the loss of wages to employés through fires in premises used in connection with industrial pursuits. If all this loss could be brought home to the colonists in the shape of a direct tax, no doubt very urgent steps would be taken to reduce this increasing waste. If this could be done, we would soon feel the benefit, as at present every merchant and retailer in fixing the price of his goods has to take into consideration the amount of premiums paid to insurance companies—and the premiums are based on the fire-loss. At present the false sense of security, founded upon insurance against an actual monetary loss, perhaps has something to do with the careless manner in which the matter is considered.

At the Charleston Convention of Fire Chiefs, one speaker, in discussing this question, advocated "that the State should prohibit any full indemnity being paid to any one responsible for a fire-loss, or to any one on whose premises a fire originates, unless such occupant can show affirmatively that it originated through the carelessness or design of another party. When the exact location of the origin of the fire remains in doubt, none of the immediately adjoining parties should receive full indemnity. The possibility of any party profiting by a fire happening on his premises would be so remote that fires from this source would cease as if by magic." This view of the matter is a sound one, and well worth considering by our legislators, who should, we think, take up this question and have it thoroughly discussed. They would have the opportunity and power to obtain information that would be available to no one else.

Up to the present no reliable statistics are available to discover the actual loss by fire in New Zealand. Surely it is within the duties of the State that steps should be taken by them to secure such information as would show approximately the value of property annually destroyed by fire. The United Fire Brigades' Association has made an effort to get this done, but the result is anything but satisfactory. As is well known, the reports utilised are derived from the newspapers, and although every effort is made to get correct information the figures are often wide of the mark. Then again, the amounts quoted are often the total amounts of the insurance, and do not represent the actual loss. In many cases owners of property, when applied to, refuse