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The fire loss (all fire losses quoted, unless otherwise stated, include both insured and non-insured loss) throughout the fire districts only for the nine months amounted to £498,671, as compared with £516,366 for the preceding twelve months, a proportionate increase of 22 per cent. The four heaviest district losses occurred in Auckland (£110,905), Wellington (£89,415), Christchurch (£67,010), and Kaiapoi (£25,984).

The fire loss throughout New Zealand for the twelve months ended 31st December, 1927, is estimated at £1,331,508. This, with the population of the Dominion for the same period estimated at 1,448,010, gives an average loss of 18s. $4\frac{3}{4}$ d. per head of population. The loss in the forty-eight fire districts for the same period amounted to £502,944, which, with a population of 544,303 residents within the districts, gives a per capita loss of 18s. $5\frac{1}{4}$ d., whilst the loss for the 902,707 persons resident

other than in the fire districts amounted to £828,564, an average of 18s. $4\frac{1}{4}$ d. per capita.

Serious as the fire-waste conditions in New Zealand have been for years past, the foregoing figures only too clearly demonstrate that the position is steadily going from bad to worse, and there are good reasons for the assertion that the figures in question are really an underestimate of the actual loss. Although the excessive fire waste prevalent in this Dominion has been prominently before the public for years past, very little has been done—certainly no organized effort has been made—to reduce this tremendous waste of the wealth of the community. An editorial in an English paper dealing with the fire loss in Great Britain asks, "Can any nation afford this continual drag on its resources?" That year (1925) the loss in Great Britain averaged 3s. 9d. per head of the population: the same year in New Zealand the loss averaged 15s. per capita. Since then the fire loss in Great Britain for 1927 has dropped to 3s. 3\frac{1}{4}d. per capita, whilst in New Zealand the same year it has risen to 18s. 4\frac{3}{4}d. per capita; and the obvious question presents itself, "Can this Dominion afford such an enormous drain on its resources?"

There are 277 auto-detector and private fire-alarm installations throughout the fire districts, all directly connected to their respective local fire-brigade stations. Of these thirty-nine are of the combination auto-detector and sprinkler type, 134 are auto-detector systems of various patterns, and the remaining 104 are private manual alarms (these latter are alarm-boxes of various patterns operated by hand, fixed within the various buildings and connected with the fire-brigade station)—an increase

for the nine months of seven auto-detector and six manual alarms.

After all the publicity that has been given in regard to the almost certain immunity from serious loss by fire in auto-protected buildings the small increase in the number of installations is disappointing, particularly so in view of it having been pointed out for years past that these auto-detector systems can be installed at very little and in some cases no actual extra cost to the proprietors of the larger business or manufacturing establishments. Much authentic evidence has been published from time to time in regard to the proved reliability and efficacy of the various auto-detector and sprinkler systems in eliminating the disastrous "late call," and so reducing to a minimum the losses due to outbreaks of fire in the larger risks. In that reference follows an extract from the summing-up of the evidence given before the Royal Commission on Fire-prevention in Great Britain, and published in the findings of the said Commission: "It seems that in the United States, as in this country, these sprinklers were first brought into general use in connection with cotton-mills [one of the greatest of trade fire risks]. The percentage of fire loss where they were installed was so small in comparison with the premiums charged that certain mutual insurance companies were formed, and the claims presented were so few that these companies were able to return most of the premium income to their Evidence was given that one large company yearly returned to its subscribers an average of 93 per cent. of the premium paid.] From cotton-mills the practice of fitting them extended to other mills and industrial establishments in general. The results were on the whole so satisfactory that the insurance companies found themselves in this country, as in the United States, in a position to allow substantial rebates, ranging from 45 per cent. to a maximum of 80 per cent. where there were also other appliances, for their installation under approved conditions." In the face of such authentic and convincing evidence of the effectiveness of the combination detector and sprinkler system, as also in the case of the auto-detector systems, in which latter reference records covering a period of ten years prove that the fire loss in auto-protected buildings amounted to only 2.61 per cent. of the premiums paid, as against a loss of 51 per cent. in the case of non-protected buildings, it is surprising that their value as a preventive against serious loss has not been more generally recognized in a practical manner by the proprietors of the larger establishments in New Zealand.

When making reference to the excessive fire waste in this Dominion I consider it necessary to state that it is not due to any comparative inefficiency of the New Zealand fire brigades but to the abnormal number of outbreaks of fire. Analysis of a number of fire brigade annual reports issued in other and widely separated parts of the British Empire show that on a population basis the "fire calls" received by those brigades average only one-fourth of the number received by the brigades of

the combined fire districts in this Dominion.

Incendiarism is returned as the cause of forty-one fires, and thirty-two fires occurred in unoccupied buildings. The following particulars are some of the instances taken from the fire reports in proof that carelessness is the main factor in the outbreaks of fire. Matches thrown down alight, smoking and smouldering cigarette-butts are returned as the cause if 159 fires; sparks from washing-coppers and domestic fireplaces as accountable for ninety-six; electric irons, gas-rings, and kerosene heaters for fifty; lighted candles and live ashes for forty-three, striking matches, smoking, and naked lights in proximity to benzine for thirty. Lighted matches thrown down are returned as responsible for a loss of £24,119, smoking and cigarette-butts for £16,165, sparks from washing-coppers and domestic fireplaces for £13,112, domestic electric irons and radiators for £10,483, clothes airing before the fire for £3,665—a loss amounting to £67,544, practically all due to sheer carelessness in some form. And these are only the principal items; there are numerous smaller losses in the same category; and it should be remembered that these figures cover a period of nine months only. In the matter of this