1922.

NEW ZEALAND.

FIRE BRIGADES OF THE DOMINION

(REPORT ON THE) FOR THE YEAR ENDED 30TH JUNE, 1922, BY THE INSPECTOR OF FIRE BRIGADES.

Presented to both Houses of the General Assembly by Command of His Excellency.

The INSPECTOR OF FIRE BRIGADES to the Hon. the MINISTER OF INTERNAL AFFAIRS.

SIR,— Office of the Inspector of Fire Brigades, Wellington, 12th October, 1922.

Herewith I have the honour to lay before you my fourteenth annual report for the year ended 30th June, 1922, relative to the working of the Fire Brigades Act, and including matter in connection therewith.

During the year the Woolston Borough became incorporated with the City of Christchurch, automatically ceasing to exist as an independent fire district on the 1st April last. The Borough of Foxton was proclaimed a fire district on the 1st May, 1922. Following is a list of the thirty-five constituted fire districts:—

Auckland	Greymouth	Milton	Taumarunui
Balclutha	Hamilton	Napier	Tauranga
Christchurch	Hastings	New Plymouth	Te Aroha
Dannevirke	Hawera	Oamaru	Timaru
Dargaville	Hokitika	Ohakune	Waihi
Dunedin	Kaitangata	Palmerston North	Waitara
Feilding	Lawrence	Petone	Wanganui
Foxton	Levin	Port Chalmers	Whangarei.
Gisborne	Masterton	Rotorua	

I have officially inspected the brigades, with their stations and equipment, working under Fire Board control, as follows:—

Auckland—16th and 17th May, 1922.
Balclutha—26th January, 1922.
Christchurch—27th March, 1922.
Dannevirke—29th May, 1922.
Dargaville—23rd November, 1921.
Dunedin—30th and 31st January, 1922.
Feilding—11th April, 1922.
Gisborne—12th May, 1922.
Greymouth—21st March, 1922.
Hamilton—18th May, 1922.
Hastings—26th April, 1922.
Hawera—17th October, 1921.
Hokitika—22nd March, 1922.
Kaitangata—25th January, 1922.
Lawrence—1st February, 1922.
Levin—13th December, 1921.
Masterton—30th May, 1922.
Milton—24th January, 1922.
Napier—27th April, 1922.
New Plymouth—19th October, 1921.
Oamaru—28th March, 1922.
Ohakune—4th May, 1922.
Palmerston North—10th April, 1922.
Petone—19th June, 1922.
Port Chalmers—31st January, 1922.
Rotorua—24th February, 1922.
Taumarunui—16th November, 1921.
Tauranga—28th February, 1922.
Te Aroha—2nd March, 1922.
Timaru—29th March, 1922.
Waihi—1st March, 1922.
Waitara—18th October, 1921.
Wanganui—12th December, 1921.
Whangarei—22nd November, 1921.

Also, the following special visits were paid :—

Petone—11th July and 9th December, 1921 : Testing of an auxiliary water-supply.
Trentham Camp—14th October, 1921, and 9th February, 1922 : Inspection of camp and equipment.
Featherston Camp—1st November, 1921 : Inspection of camp and equipment.
Foxton—16th February, 1922 : Meeting in regard to formation of Fire Board.
Rotorua—27th February, 1922 : King George V Hospital—inspection and report.
Hanmer—24th March, 1922 : Queen Mary Hospital—inspection and report.
Cashmere Hills—27th March, 1922 : Sanatorium—inspection and report.

Periodical inspections have been made of certain public institutions, and, as usual, advice has been given to local bodies and others in relation to fire-prevention, fire risks, water-supply ; specifications for and purchase of new plant and sketch-plans for new fire-stations and additions to existing buildings have been prepared.

With certain exceptions, the fire inspection of Government buildings has been taken over by the Public Works Department, and the Assistant Fire Inspector has been transferred to that Department.

During the year the Department has, on behalf of the various Fire Boards and of the United Fire Brigades Association, imported and distributed in accordance with the requisitions received 19,000 ft. of fire-hose.

The United Fire Brigades Association has adopted the internal-expansion pattern of coupling for use in New Zealand, and in accordance with that resolution the Department has had blue-prints of the couplings prepared and added to the series of working-drawings of the standpipes, branches, nozzles, &c., now adopted as the standard patterns in this Dominion.

Following are the principal improvements and additions to equipment :—

Auckland—Erection and equipment of a hose-reel station to serve the Point Chevalier district.
Christchurch—New 50-horse-power motor fitted with 300–400 g.p.m. turbine pump, first-aid pump, ladder, &c. ; section purchased for erection of a new fire-station in the suburbs.
Dunedin—Extension of street fire-alarm system ; the 85 ft. electric extension ladder fitted with a new set of batteries.
Wanganui—New central fire-station complete and in occupation ; street fire-alarm installation, having forty-nine call-points, completed and in commission.

Fatalities due to fires have been reported as follows :—

Auckland—16th June, 1922 : Boardinghouse—elderly male boarder burned to death.
Hamilton—3rd April, 1922 : Hotel—two male guests and a female employee burned to death.
Rotorua—31st July, 1922 : Private dwelling—aged male occupant burned to death.

The estimates for the year ending 30th June, 1923, amount to a total of £74,754, as against £82,484 for last year, a decrease in the aggregate of £7,730.

The total number of calls received throughout the fire districts for 1921–22 was 1,119, as against 1,168 for 1920–21, a decrease of 49, made up under the several headings as follows : Fires, 531 (540)—decrease, 9 ; chimney fires, 173 (140)—increase, 41 ; bush and rubbish fires, 148 (226)—decrease, 78 ; out-of-district fires, 23 (36)—decrease, 13 ; false alarms, 244 (234)—increase, 10.

Of the 531 fires, 9 are reported as due to incendiarism, 11 as having occurred on unoccupied premises, and 176 as of unknown origin. Of the 531 fires, 213 occurred in dwellinghouses, 29 resulting in total loss, 28 were damaged to the extent of from 50 to 90 per cent. of their value, 27 damaged from 25 to 50 per cent., and in the remaining 129 cases the damage ranged from slight loss to 25 per cent. of their value.

The total fire loss throughout the fire districts for the year ended 30th June, 1922, amounted to £183,619, as against £394,704 for the previous year, a decrease of £211,085. The three heaviest district losses occurred in Auckland (£24,819), Hamilton (£23,530), and Dunedin (£18,442).

The insured loss throughout the Dominion for the year ended 31st December, 1921, amounted to £765,310. This exceeds by nearly £200,000 the loss for 1917 (£578,021), the heaviest annual loss of previous years. The proportion of the loss throughout the fire districts for the corresponding twelve months amounted to £253,887.

At a conservative estimate the fire waste for 1921 amounted to £900,000, or 14s. 9d. per head of population, which must be approaching a world record for individual fire loss in any country under normal conditions. The loss was widely distributed, for, although there were several rather severe warehouse fires, no conflagration or particularly disastrous fire occurred during the twelve months.

It is to be regretted that more of the business firms owning large warehouses or stores do not in their own interest recognize the value of and install in their premises one of the several reliable systems of automatic fire-alarms and sprinklers, which are universally recognized as most efficient safeguards, and provide a nearly certain immunity from heavy loss in the case of internal outbreaks of fire. A large rebate in premium is allowed by insurance companies in the case of buildings fitted with approved automatic alarms and sprinklers—to the extent that the amount of the rebate is in some cases sufficient to cover, or nearly cover, interest on the capital cost of the installation ; and in that view it would cause little or no hardship if the Government, in the common interest, and to reduce the drain on the national wealth caused by such heavy fire losses, were to make compulsory the installation of automatic safeguards in buildings of certain descriptions or over a certain size, as is now being done in other countries.

Considerably more than half the population protected by the brigades of the Dominion are resident in the thirty-five constituted fire districts, with the reasonable assumption that the value of the property at risk in the said districts is in the same or even higher ratio, and the returns prove that the efficiency of the fire-prevention work during the past twelve months of the brigades operating under the Fire Board system of control has been very satisfactory.

Appended are the following tables :—

(1.) Summary of calls attended by each brigade ;
(2.) Fire loss in each district ;
(3.) Annual cost of each brigade ;
(4.) Summary of the causes of fires in each district ;
(5.) Personnel and equipment of each brigade ;

also short detailed reports dealing with each fire district.

I have, &c.,
THOS. T. HUGO,
Inspector of Fire Brigades.

The Hon. Minister of Internal Affairs, Wellington.

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1. SUMMARY OF FIRE CALLS.

District.	Fires.	Chimney Fires.	Bush, Grass, and Rubbish Fires.	False Alarms.	Out of District.	Totals.
Auckland	136	14	27	55	8	240
Balclutha	1	..	..	..	..	1
Christchurch	82	66	27	86	7	268
Dannevirke	3	..	1	1	..	5
Dargaville	8	..	2	..	..	10
Dunedin	61	47	23	53	..	184
Feilding	7	3	..	1	..	11
Foxton	..	..	..	..	..	..
Gisborne	25	2	3	..	2	32
Greymouth	5	1	1	..	..	7
Hamilton	17	3	5	4	..	29
Hastings	15	3	1	1	..	20
Hawera	13	1	..	1	1	16
Hokitika	3	..	..	1	..	4
Kaitangata	2	..	1	..	..	3
Lawrence	1	..	..	..	..	1
Levin	2	..	1	1	..	4
Masterton	11	2	4	2	..	19
Milton	3	3	..	..	..	6
Napier	12	7	3	3	..	25
New Plymouth	8	..	1	..	..	9
Oamaru	6	3	1	..	..	10
Ohakune	2	..	..	..	1	3
Palmerston North	26	1	6	4	1	38
Petone	6	1	1	1	..	9
Port Chalmers	4	2	1	..	..	7
Rotorua	10	5	2	2	..	19
Taumarunui	5	..	1	..	..	6
Tauranga	2	1	..	..	..	3
Te Aroha	4	1	1	..	..	6
Timaru	13	1	9	..	..	23
Waihi	4	1	8	20	..	33
Waitara	2	..	..	..	..	2
Wanganui	29	5	17	7	3	61
Whangarei	3	..	1	1	..	5
Totals	531	173	148	244	23	1,119

2. Summary of Fire Losses.

District.	Insured.	Uninsured.	Totals.	District.	Insured.	Uninsured.	Totals.
	£	£	£		£	£	£
Auckland	24,556	263	24,819	Napier	1,143	435	1,578
Balclutha	..	..	..	New Plymouth ..	2,924	1,010	3,934
Christchurch ..	9,044	1,889	10,993	Oamaru	4,678	7,660	12,338
Dannevirke	475	355	830	Ohakune	200	75	275
Dargaville	1,014	1,700	2,714	Palmerston North ..	13,897	410	14,307
Dunedin	15,196	3,246	18,442	Petone	1,000	55	1,055
Feilding	5,255	1,305	6,560	Port Chalmers ..	25	..	25
Foxton	..	..	..	Rotorua	5,998	538	6,536
Gisborne	10,831	760	11,591	Taumarunui ..	5,390	1	5,391
Greymouth	2,758	3,050	5,808	Tauranga	1,130	..	1,130
Hamilton	20,604	2,926	23,530	Te Aroha	355	465	820
Hastings	6,995	2,095	9,090	Timaru	3,578	..	3,578
Hawera	4,996	1,526	6,522	Waihi	..	83	83
Hokitika	274	110	384	Waitara	1,250	250	1,500
Kaitangata	10	..	10	Wanganui	3,951	1,736	5,687
Lawrence	..	75	75	Whangarei	165	416	581
Levin	..	77	77				
Masterton	2,795	571	3,366	Totals ..	150,407	33,132	183,619
Milton	..	50	50				

3. Cost of Fire Brigades (Capital Expenditure included).

As taken from the Estimates for the respective Years.

District.	Year ending 30th June, 1918.	Year ending 30th June, 1919.	Year ending 30th June, 1920.	Year ending 30th June, 1921.	Year ending 30th June, 1922.	Year ending 30th June, 1923.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auckland ..	11,700 0 0	12,000 0 0	12,305 0 0	17,000 0 0	18,375 0 0	16,325 0 0
Balclutha ..	..	233 0 0	260 0 0	140 0 0	350 0 0	400 0 0
Christchurch ..	7,000 0 0	8,585 0 0	8,550 0 0	9,650 0 0	14,113 0 0	12,100 0 0
Dannevirke ..	251 9 9	467 13 11	586 9 1	617 15 0	672 13 6	585 18 6
Dargaville ..	..	614 16 6	416 0 0	523 6 7	675 3 6	504 0 0
Dunedin	8,500 0 0	8,500 0 0	9,500 0 0	11,500 0 0	13,500 0 0	13,500 0 0
Feilding	354 0 0	348 0 0	464 16 6	568 18 10	594 2 11	648 0 0
Foxton	..	..	..	..	..	250 0 0
Gisborne ..	958 5 10	1,311 10 0	1,069 3 9	1,586 10 0	1,517 4 5	1,734 0 1
Greymouth ..	888 0 0	903 0 0	920 0 0	943 0 0	890 0 0	887 0 0
Hamilton ..	1,450 0 0	1,100 0 0	1,300 0 0	1,449 13 6	1,900 0 0	2,350 0 0
Hastings ..	1,300 0 0	1,124 12 3	1,038 0 0	1,024 0 0	978 0 0	837 0 0
Hawera	374 0 0	615 0 0	732 8 4	764 14 3	751 14 5	837 0 0
Hokitika ..	346 13 4	420 0 0	425 0 0	550 0 0	425 0 0	570 0 0
Kaitangata ..	..	..	..	..	260 0 0	192 0 0
Lawrence ..	60 0 0	60 0 0	60 0 0	80 0 0	80 0 0	80 0 0
Levin	..	..	611 10 0	660 10 0	1,086 3 1	921 17 5
Masterton ..	931 13 0	1,084 0 0	1,501 0 0	1,536 0 0	2,029 3 0	1,880 0 0
Milton	90 0 0	80 0 0	85 0 0	232 4 9	250 0 0	167 10 0
Napier	..	..	..	..	2,190 0 0	1,671 0 0
New Plymouth ..	1,380 0 0	1,488 10 3	1,302 3 0	1,500 9 0	2,435 0 0	2,183 0 0
Oamaru	550 0 0	500 0 0	550 0 0	800 0 0	800 0 0	750 0 0
Ohakune ..	..	..	481 0 0	468 2 9	462 0 0	435 0 0
Palmerston North ..	1,400 7 4	1,512 12 11	1,530 10 7	2,055 0 5	2,417 10 7	2,100 7 3
Petone	850 12 4	850 0 0	838 0 0	893 0 0	1,030 0 0	1,306 0 0
Port Chalmers ..	..	..	350 0 0	400 0 0	400 0 0	325 0 0
Rotorua	807 0 0	885 10 0	1,490 10 0	875 0 0	1,424 16 0	1,340 10 8
Taumarunui ..	..	..	..	510 0 0	600 0 0	640 0 0
Tauranga ..	315 11 6	287 0 0	455 5 0	414 18 4	547 8 4	541 2 11
Te Aroha ..	..	..	..	500 0 0	731 0 0	683 0 0
Timaru	1,350 0 0	1,400 0 0	1,930 0 0	1,750 0 0	2,400 0 0	1,750 0 0
Waihi	..	850 0 0	1,160 0 0	930 0 0	990 0 0	710 0 0
Waitara	..	..	201 8 0	143 0 0	209 0 0	200 0 0
Wanganui ..	..	..	5,141 15 7	4,505 17 4	5,255 5 10	4,800 0 0
Whangarei ..	550 0 0	400 0 0	340 0 0	576 0 0	680 0 0	550 0 0
Totals ..	42,183 15 3	46,520 5 10	56,642 9 8	66,433 7 11	82,484 6 11	74,754 6 10

4. Summary of Causes.

Summary of Causes.	Auckland.	Balclutha.	Christchurch.	Dannevirke.	Dargaville.	Dunedin.	Feilding.	Foxton.	Gisborne.	Greymouth.	Hamilton.	Hastings.	Hawera.	Hokitika.	Kaitangata.	Lawrence.	Levin.	Masterton.	Milton.	New Plymouth.	Napier.	Oamaru.	Ohakune.	Palmerston North.	Petone.	Port Chalmers.	Rotorua.	Taumarunui.	Tauranga.	Te Aroha.	Timaru.	Waihi.	Waitara.	Wanganui.	Whangarei.	Totals.
Ashes, live	6	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	..	13
Benzine, proximity to lights	5	..	3	..	1	1	..	..	..	..	2	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	1	19
,, cleaning clothes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Candles, drapery, &c., in contact	6	..	4	..	1	2	1	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	1	1	..	1	..	..	..	3	..	23
Clothes airing before fire	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Defective buildings	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	5
,, chimneys, hearths	1	..	5	..	..	3	1	..	..	..	2	..	..	1	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	16
,, hot-water services	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Electricity, short-circuits, fusing of wires	14	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	19
,, irons left switched on	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	5
,, faulty installations	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Fireworks, sparks from	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Gas, defective fittings	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
,, explosions	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	5
,, rings, stoves	2	..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	9
Incendiarism	2	..	2	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	9
Kerosene-lamp explosions	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
,, heaters, overheated	1	..	..	..	..	3	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	8
Matches, children with	1	..	3	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	9
,, rats	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
,, thrown down alight	..	..	8	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	12
Miscellaneous causes	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	8
Motors back-firing	7	..	2	..	1	1	..	..	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	1	19
Naked lights	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Overheating beeswax, fat, &c.	3	..	5	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	1	..	..	..	..	..	..	..	..	16
,, machinery, exhaust-pipes	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	6
,, tar	11	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	18
,, wood, proximity to furnaces	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	5
Painters burning off paint	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	5
Phosphorus	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Smoking	1	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
,, cigarette-butts	7	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	16
Sparks from chimneys	..	..	1	..	1	4	1	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	12
,, copper-fires	4	..	6	1	..	2	..	..	1	..	..	..	1	..	..	..	..	1	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	2	..	22
,, engines	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	5
,, fireplaces, furnaces	6	..	7	..	..	3	..	..	1	..	2	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	4	..	27
,, other fires	3	..	2	..	2	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	11
Spontaneous combustion	4	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	9
Unknown	37	..	7	1	2	25	4	..	15	4	3	8	9	2	2	1	1	1	1	6	2	5	1	11	2	2	4	2	1	2	7	2	2	4	..	176
Totals	136	1	82	3	8	61	7	..	25	5	17	15	13	3	2	1	2	11	3	8	12	6	2	26	6	4	10	5	2	4	13	4	2	29	3	531

5. Summary.—Personnel, Plant, and Appliances.

——	Auckland.	Balclutha.	Christchurch.	Dannevirke.	Dargaville.	Dunedin.	Feilding.	Foxton.	Gisborne.	Greymouth.	Hamilton.
Brigades, total strength of ..	62	16	41	23	20	43	17	14	31	21	28
Fire-stations—											
Residential	5	..	4	1	1	3	1	..	1	1	1
Non-residential	1	1	..	1	1	..	1	1	1	5	1
Fire-alarms—											
Circuits (C.), boxes (B.)	26 (C.), 234 (B.)	..	21 (C.), 146 (B.)	..	3	10 (C.), 109 (B.)	..	..	..	..	1 (C.), 1 (B.)
Automatic, private	44	..	32	..	..	33	..	..	1	..	1
Telephones (points)	19	1	5	1	1	21	4	..	3	7	2
Motors—											
Hose-and-ladder tenders (h.p.) ..	7 (4, 40; 2, 32; 1, 20)	..	1 (14)	1 (40)	..	2 (16, 30)	1 (20)	..	1 (20)	..	..
Chemical, hose-and-ladder (h.p.) ..	2 (1, 38; 1, 40)	..	2 (40, 40)	..	..	2 (75, 60)	..	..	1 (50)	1 (25)	..
Pump, hose-and-ladder (h.p.) ..	1 (110)	..	3 (70, 50, 50)	..	..	..	..	..	..	..	1 (60)
First-aid, pump, hose-and-ladder (h.p.)	1 (65)	..	1 (50)	..	..	3 (60, 60, 60)	..	..	..	..	..
Electric, ladders (height) ..	1 (87′)	..	..	..	..	1 (84′)	..	..	..	..	..
Fire-engines—											
Steam (g.p.m.)	..	..	1 (450)	..	..	..	..	..	1 (600)	1 (600)	..
Manual (g.p.m.)	..	..	..	..	..	..	..	..	1	1 (60)	..
Chemical-engines, hand-drawn (gals.)	..	..	..	..	..	..	..	1 (40)	..	..	..
Hose-carts, reels, hand-drawn ..	1	1	..	2	2	1	2	..	3	6	3
Ladders—											
Motor-traction (height)	1 (65′)	..	1 (65′)	..	..	1 (80′)	..	..	..	..	..
Extension (height) (*on motor) ..	3 (2, 22′; 1 35′)*	..	4 (45′, 42′, 35′, 35′)*	1 (25′)*	..	5 (50′, 20′)*	..	1	1 (35′)*	2 (40′, 30′)	1 (50′)*
Single and coupling (total length) ..	12 (18′ to 22′)	3 (12′, 14′, 18′)	20 (16′, 6′)	4 (90′)	3 (25′, 10′, 10′)	2 (18′, 18′)	6 (83′)	..	5 (81′)	4 (81′)	4 (88′)
Jumping-sheets (square feet) ..	5 (10′ x 10′)	..	3 (2, 9′; 1, 10′ x 10′)	..	..	1 (12′ x 12′)	..	..	1 (10′ x 10′)	1 (10′ x 10′)	..
Smoke-jackets (J.), helmets (H.), masks (M.)	4 (H.)	..	2 (H.), 1 (J.)	..	2 (M.)	1 (J.), 1 (H.)	2 (M.)	..	1 (H.)	2 (M.)	2 (M.)
Hand-pumps	5	1	7	2	1	5	1	2	1	1	1
Hand chemical extinctеurs ..	6	2	7	2	..	9	2	..	4	2	1
Portable standpipes—											
Ratchet valves	17	1	1	..	1	13	..	..	..	..	2
Double heads	..	1	19	8	2	4	6	..	7	9	1
Single heads	6	..	1	..	2	2	..	..	4	1	6
Hose—											
Rubber-lined (diameter) ..	540′ ($\frac{3}{4}$″)	..	2,750′ (2$\frac{3}{4}$″)	..	..	200 (2$\frac{1}{2}$″)	..	..	..	..	..
Unlined (diameter)	12,840′ (2$\frac{3}{4}$″)	1,200′ (2$\frac{1}{2}$″)	12,500′ (2$\frac{3}{4}$″)	2,700′ (2$\frac{1}{2}$″)	1,800′ (2$\frac{1}{2}$″)	17,500′ (2$\frac{1}{2}$″)	3,000′ (2$\frac{1}{2}$″)	100′ (2$\frac{1}{2}$″)	3,000′ (2$\frac{1}{2}$″)	4,000′ (2$\frac{1}{2}$″)	3,500′ (2$\frac{1}{2}$″)
Water-supply (G. = gravitation) ..	G.	G.	G.	G.	G.	G.	G.	Tanks and river	G.	G.	G.
Pressure, average, noon–midnight ..	40–120	70–75	95–105	80–85	90–95	120–160	90–95	..	116–130	85–100	45–48

5. Summary.—Personnel, Plant, and Appliances—*continued.*

——	Hastings.	Hawera.	Hokitika.	Kaitangata.	Lawrence.	Levin.	Masterton.	Milton.	Napier.	New Plymouth.	Oamaru.	Ohakune.	Palmerston North.
Brigades, total strength of	20	25	30	18	10	16	25	16	41	26	16	17	24
Fire-stations—													
Residential	1	1	..	..	..	1	1	1	2	1	1	1	2
Non-residential	..	..	5	..	1	..	..	..	3	1	1	..	1
Fire-alarms—													
Circuits (C.), boxes (B.)	..	3 (C.), 14 (B.)	..	..	..	1 (C.), 6 (B.)	6 (C.), 16 (B.)	..	1 (C.), 2 (B.)	2 (C.), 26 (B.)	..	..	..
Automatic, private	..	..	..	..	..	..	1	..	..	..	..	..	1
Telephones (points)	3	2	9	..	..	4	2	2	5	3	5	..	2
Motors—													
Hose-and-ladder tenders (h.p.)	..	1 (35)	..	..	..	1 (20)	1 (25)	..	1 (35)	1 (20)	1 (40)	1 (20)	1 (25)
Chemical, hose-and-ladder (h.p.)	1 (30)	..	..	..	..	..	1 (25)	..	..	..	..	..	..
Pump, hose-and-ladder (h.p.)	..	..	..	..	..	..	..	..	..	..	..	..	1 (55)
First-aid, pump, hose-and-ladder (h.p.)	..	..	..	..	..	..	..	..	1 (65)	1 (65)	..	..	..
Electric, ladders (height)	..	..	..	..	..	..	..	..	..	..	..	..	..
Fire-engines—													
Steam (g.p.m.)	1 (600)	..	1 (380)	..	..	..	1 (300)	..	..	..	..	1 (400) motor	..
Manual (g.p.m.)	1 (80)	..	2 (80, 60)	..	..	..	..	1 (50)	..	..	..	..	..
Chemical-engines, hand-drawn (gals.)	..	..	..	1 (80)	..	..	..	1 (30, 30)	..	..	..	..	..
Hose-carts, reels, hand-drawn	2	3	5	1	2	1	2	1	6	2	2	..	2
Ladders—													
Motor-traction (height)	..	..	..	..	..	..	..	..	..	..	..	..	..
Extension (height) (*on motor)	1 (32′)	1 (35′)	..	..	..	1 (26′)	1 (35′)*	..	1 (50′)*	1 (50′)*	1 (30′)*	..	1 (60′)*
Single and coupling (total length)	9 (144′)	6 (121′)	5 (99′)	..	2 (49′)	5 (57′)	6 (83′)	3 (56′)	14 (200′)	8 (88′)	2 (40′)	2 (32′)	3 (59′)
Jumping-sheets (square feet)	3 (14′ x 14′)	..	..	..	..	..	..	..	..	1 (12′ x 12′)	..	..	1 (12′ x 12′)
Smoke-jackets (J.), helmets (H.), masks (M.)	2 (M.)	1 (H.)	..	..	..	..	1 (M.)	..	2 (H.)	..	1 (H.)	..	3 (M.)
Hand-pumps	2	2	2	4	1	1	3	1	2	2	2	2	2
Hand chemical extincteurs	..	2	..	..	2	2	2	2	6	7	1	4	2
Portable standpipes—													
Ratchet valves	..	1	..	..	1	1	2	2	1	1	1	..	..
Double heads	5	5	5	..	..	1	2	..	8	11	5	..	5
Single heads	..	2	2	..	1	2	3	..	9	1	2	..	4
Hose—													
Rubber-lined (diameter)	..	..	..	..	..	..	..	..	..	..	..	..	..
Unlined (diameter)	3,000′ (2½″)	1,900′ (2½″)	2,500′ (2¾″)	800′ (2½″)	1,200′ (2½″)	1,600′ (2½″)	2,800′ (2½″)	600′ (2½″)	6,150 (2½″)	7,200′ (2½″)	3,000′ (2½″)	900′ (2½″)	6,000′ (2½″)
Water-supply (G. = gravitation)	G.	G.	G.	G	G.	G.	G.	G.	G.	G.	G.	Creeks and races	G.
Pressure, average, noon–midnight	120–130	37–71	100–105	..	65–80	100–120	85–96	60–62	65–130	100–125	80–100	..	50–100

5. Summary.—Personnel, Plant, and Appliances—*continued.*

—	Petone.	Port Chalmers.	Rotorua.	Taumarunui.	Tauranga.	Te Aroha.	Timaru.	Waihi.	Waitara.	Wanganui.	Whangarei.	Totals.
Brigades, total strength of	17	16	18	18	15	16	25	16	15	19	19	794
Fire-stations—												
Residential	1	..	1	1	1	1	1	1	1	1	1	40
Non-residential	..	2	1	..	1	..	..	..	1	3	2	35
Fire-alarms—												
Circuits (C.), boxes (B.)	1 (C.), 13 (B.)	..	..	..	..	..	6 (C.), 24 (B.)	3 (C.), 16 (B.)	..	4 (C.), 49 (B.)	1 (C.), 1 (B.)	86 (C.), 657 (B.)
Automatic, private	1	..	2	..	..	..	1	1	..	8	..	126
Telephones (points)	1	..	1	4	3	2	3	7	..	2	4	128
Motors—												
Hose-and-ladder tenders (h.p.)	..	1 (20)	1 (60)	1 (20)	..	1 (20)	..	1 (30)	..	1 (40)	1 (20)	28
Chemical, hose-and-ladder (h.p.)	1 (30)	..	..	..	1 (20)	..	..	..	..	1 (40)	..	13
Pump, hose-and-ladder (h.p.)	..	..	..	..	..	..	1 (60)	..	..	..	..	7
First-aid, pump, hose-and-ladder (h.p.)	..	..	..	..	..	..	1 (45)	..	..	1 (60)	..	9
Electric, ladders (height)	..	..	..	..	..	..	..	..	..	..	..	2
Fire-engines—												
Steam (g.p.m.)	..	..	..	..	..	..	..	..	..	..	..	7
Manual (g.p.m.)	..	..	..	..	..	..	..	..	..	..	..	6
Chemical-engines, hand-drawn (gals.)	..	..	..	..	..	..	..	..	..	..	..	3
Hose-carts, reels, hand-drawn	1	2	2	2	2	1	1	1	2	3	3	70
Ladders—												
Motor-traction (height)	..	..	..	..	..	..	..	..	..	..	..	3
Extension (height) (*on motor)	1 (35′)*	1 (26′)	..	1 (26′)	1 (36′)*	1 (30′)*	2 (60′, 30′)*	1 (35′)*	1 (30′)	2 (60′, 35′)*	1 (50′)	38
Single and coupling (total length)	4 (40′)	1 (20′)	6 (91′)	2 (20′)	2 (59′)	4 (65′)	7 (85′)	2 (55′)	..	3 (42′)	2 (30′)	161
Jumping-sheets (square feet)	1 (9′ x 9′)	..	1 (9′ x 9′)	..	..	..	1 (12′ x 12′)	..	..	1 (12′ x 12′)	..	20
Smoke-jackets (J.), helmets (H.), masks (M.)	1 (H.)	..	1 (M.)	1 (M.)	..	..	1 (H.)	..	2 (M.)	..	2 (M.)	36
Hand-pumps	2	2	1	1	2	..	2	1	1	2	2	69
Hand chemical extincteurs	2	..	2	1	..	2	4	2	..	2	..	80
Portable standpipes—												
Ratchet valves	2	1	1	..	..	1	4	..	..	7	..	61
Double heads	2	2	1	3	4	2	4	1	2	3	3	131
Single heads	5	..	5	1	1	..	..	2	..	..	3	65
Hose—												
Rubber-lined (diameter)	..	..	..	..	..	..	..	..	..	..	..	3,490
Unlined (diameter)	3,700′ (2½″)	1,600′ (2½″)	1,600′ (2½″)	2,100′ (2½″)	2,300′ (2½″)	1,600′ (2½″)	4,000′ (2½″)	1,200′ (2½″)	1,350′ (2½″)	5,400′ (2½″)	1,600′ (2½″)	126,240
Water-supply (G. = gravitation)	G.	G.	G.	G.	G.	G.	G	G.	G.	G.	G.	..
Pressure, average, noon–midnight	32–78	80–120	60–68	100–125	75–110	100–110	70–75	90–110	95–125	110–140	160–170	..

DETAILED REPORTS.

AUCKLAND.

Inspection, 16th and 17th May, 1922. The turnouts at the various stations were performed smartly, and there is marked improvement in the bearing and discipline of the men and in the carrying-out of the inspection drills. The stations and equipment were found to be in good order and condition.

A hose-reel station has been erected in the Point Chevalier district, which will be manned by volunteer firemen.

The "duplex" system of street fire-alarms is now installed throughout the city proper, and the older instruments are being utilized in the outer portions of the city.

Additional married quarters are urgently needed, and it is the Board's intention to proceed with the erection of the proposed new district fire-station to serve the western area, and also with the erection of two sets of married quarters adjoining the Remuera district station, at the earliest opportunity.

BALCLUTHA.

Inspection, 26th January, 1922. Considerable improvement was evident in the carrying-out of the inspection drills as compared with former occasions, but more instruction and drill are still required.

I have again to report that up to the time of my inspection, with the exception of purchasing a site for the erection of a new fire-station, very little has been done by the Board in respect to improving fire-fighting conditions in Balclutha. A new fire-station is urgently required, and the Board should take immediate action in the matter.

CHRISTCHURCH.

Inspection, 27th March, 1922. The turnouts at the various stations were performed smartly, and the stations and equipment were in their usual good order and condition. The newly acquired 45 h.p. turbine, first-aid, and ladder combination machine was taken to the river, and got to work with very satisfactory results.

During the year the Woolston Borough became incorporated with Christchurch, and fire protection of the Woolston district was taken over by the Christchurch Fire Board on the 1st April last.

A number (forty-six) of "duplex" street fire-alarm boxes have been installed in the various outer districts of the city, and a section of land has been purchased with the object of erecting a fire-station for the protection of the Opawa, St. Martin's, and Avonside districts.

The weakest feature in the equipment of the brigade is the long-talked-of mechanically operated 90 ft. turntable ladder, and this matter should receive the early attention of the Board.

DANNEVIRKE.

Inspection, 29th May, 1922. The inspection drills were carried out in a satisfactory manner, and steady improvement in that respect was manifest. The station and equipment were in good order and condition.

I had again to bring under the notice of the Board the necessity for the provision of a 35 ft. trussed telescopic ladder, and also for the installation of a street fire-alarm system.

DARGAVILLE.

Inspection, 23rd November, 1921. Various wet drills were carried out in a satisfactory manner, and the station and equipment were in good order. Some of the street hydrants were overgrown with grass, and others covered with street-metal and mud; also, a number of the indicators were entirely hidden in foliage or altogether missing.

The Board are calling tenders for the supply of a motor hose-tender.

DUNEDIN.

Inspection, 30th and 31st January, 1922. The turnouts at the various stations were performed smartly, including a particularly smart response to a street fire-alarm call by the South Dunedin section; also, the inspection drills were carried out in an efficient manner.

The 85 ft. electro-mechanical turntable ladder has been fitted with a new set of the Edison type of battery, and is now again in commission: this at a total cost of just under £2,000—in my opinion, too much to have been expended for that purpose.

I have again to confirm my previous recommendation in respect to adequate provision for the protection of the Mornington district, the provision of additional quarters for married firemen, and numerical strengthening of the brigade personnel.

No practical steps have yet been taken in respect to the better protection from fire of property on the harbour-front, and I am afraid that sooner or later this will prove a very costly error.

FEILDING.

Inspection, 11th April, 1922. The inspection wet and dry drills were carried out in a satisfactory manner, and considerable improvement in that respect is manifest.

I have again to recommend the provision of a more powerful motor machine, so as to enable the carrying of more men, and particularly of ladders. The supply of water for fire-extinction purposes is still far from satisfactory.

GISBORNE.

Inspection, 12th May, 1922. At the inspection turnout the chemical motor got away well, but the Ford broke down immediately after leaving the station. The steam fire-engine has been thoroughly overhauled, and is now in good working-order. The various drills were carried out smartly.

To ensure the salt-water reticulation being in reliable order it requires testing once every three months at least. The Ford motor hose-tender is now quite unreliable—practically useless—and should be replaced. I have again to recommend the installation of a street fire-alarm system. Neglect in this matter must sooner or later result in serious consequences.

GREYMOUTH.

Inspection, 21st March, 1922. The inspection drill was carried out in the energetic and efficient manner usual with this brigade.

The station and equipment were in good order and condition, with the exception of the steam fire-engine, which, when got to work at the wharf, developed a heavy knock in the cylinders; and, although, when subsequently working from the creek, little or no knock was audible, the fault requires adjustment.

I have to again recommend that a street fire-alarm system be installed; also to report that the high-pressure water-supply for fire-extinction is still in a very unreliable condition.

HAMILTON.

Inspection, 18th May, 1922. The improvement in carrying out the inspection drills noted at the time of my previous inspection has not been maintained, and is a matter requiring the attention of the Board. The Frankton Junction reel-shed and its equipment were in a very neglected state.

The Board have decided to install a system of street fire-alarms, to consist of two circuits having twenty-eight call-boxes thereon. The provision is necessary of a second and lighter motor, to relieve the heavy motor pump machine of some of the longer runs.

HASTINGS.

Inspection, 26th April, 1922. A restricted amount of wet drill was carried out in a satisfactory manner, and the station and plant were found in their usual good order. The motor has been overhauled and is in good running-order, but the machine is loaded up to its full carrying-capacity, which does not include the carrying of sufficient fire-ladders, and I would again recommend that a second motor be provided. Also, I have had to again call the attention of the Board to the necessity of installing a system of street fire-alarms.

HAWERA.

Inspection, 17th October, 1922. The various inspection drills were carried out in the smart and efficient manner usual with this brigade.

The present street fire-alarm installation is becoming unreliable. It has served its purpose, and as soon as financial considerations allow it should be replaced with a more modern system; in the meantime close and constant supervision is necessary. The motor hose-tender has now been in continuous service for four years. It is time it was taken down, overhauled, and fitted with a magneto. All fire-motors should be fitted with dual ignition.

HOKITIKA.

Inspection, 22nd March, 1922. Twenty-six members of the brigade were present at the inspection muster. The steam fire-engine was got to work at the wharf, and subsequently the manual engine was taken to the tank opposite Keller's Hotel and there got to work in an exceptionally smart and efficient manner. The plant and equipment were found to be in their usual good order and condition.

KAITANGATA.

Inspection, 25th January, 1922. At the inspection muster only eight members of the brigade out of a total strength of seventeen were in attendance. When instructed to carry out certain inspection drills the Superintendent stated the brigade had decided they would not drill or attend any fires until such time as the Board provides them with what they consider is a suitable fire-fighting equipment. The present equipment is inefficient and unsuitable to the degree that the brigade cannot be expected to obtain any satisfactory results therefrom. The Board have since decided to procure a motor hose-tender fitted with a first-aid pumping outfit and other smaller appliances.

LAWRENCE.

Inspection, 1st February, 1922. Owing to changes in the railway time-table the original date set down for the inspection had to be altered at short notice, and as a consequence only five members of the brigade were present at the inspection muster. Verbal and practical instruction in fire-brigade work was given. The station and equipment were in good order.

LEVIN.

Inspection, 13th December, 1921. The various drills were carried out in a very satisfactory manner, considering this is practically a new brigade. The alarm-cabinet stands in a very unsuitable position: it should be placed in the office. The side doors of the motor hose-box are badly designed and inconvenient: they should be altered as suggested. The brigade should be supplied with a 26 ft. extension ladder.

MASTERTON.

Inspection, 30th May, 1922. During the inspection drill it was apparent that more practice was required in the handling of the telescopic fire-ladder; also, in respect to the steam fire-engine, it took some 17½ minutes after lighting the fire before 30 lb. of steam was registered on the pressure-gauge, this being due to inferior fuel. Good coal should be provided for this purpose.

It was necessary to call the attention of the Board to the fact that upon more than one recent occasion the chief and second officers of the brigade had been absent from the town at the same time—an undesirable proceeding.

MILTON.

Inspection, 24th January, 1922. Various drills with the manual pump and chemical-engine were carried out in a satisfactory manner, and the station and equipment were found to be in good order. In view of the near completion of the high-pressure water-supply reticulation, practical and verbal instruction was given in that method of fire-extinction.

NAPIER.

Inspection of both town and port sections of the brigade was made on the 27th April, 1922. The various drills were carried out in a satisfactory manner.

A 35 ft. extension should be carried on the motor pump machine, and the 50 ft. escape-ladder dismounted and stood in the station ready to run by hand. The siren alarm should be fixed in a more suitable position on the motor, and a permanent primer fixed in place of the present temporary one. Also, the bumper recently fixed on the front of the machine is altogether too large, and in the way: it should be removed altogether, or a smaller one fitted.

It would be a great mistake to further modify the plans for the proposed new central fire-station. If financial conditions will not permit erection of the station in accordance with the last design, the Board would be well advised to postpone building until the plan can be carried out. The installation of a street fire-alarm system also requires attention.

NEW PLYMOUTH.

Inspection, 19th October, 1921. Both the town and Fitzroy sections of the brigade attended at the central station for inspection. During the course of the inspection drills it was apparent that the men were in need of more instruction and drill, particularly in respect to working the 60 ft. escape-ladder.

It is quite opposed to all ideas of efficiency to have a different system of drill in two sections of the same brigade, and for that and other reasons I found it necessary to recommend the disbandment of the Fitzroy section as a separate unit of the brigade, and this has since been done.

Particularly seeing New Plymouth is a seaport town, the brigade should be provided with a couple of smoke-helmets, one of each pattern—viz., one self-contained oxygen-breathing apparatus, and the other an air-supplied smoke-helmet fitted with a telephone.

OAMARU.

Inspection, 28th March, 1922. The various inspection drills were carried out in a satisfactory manner as far as the men themselves were concerned, but otherwise fire-prevention conditions in Oamaru are far from satisfactory, which is in some measure reflected by the excessive fire loss during the last three years—probably the highest three-years continuous loss of any town of a similar size in the Dominion. As stated in my last two reports, the brigade is undermanned. The motor, a second-hand one in the first place, is more or less unsatisfactory. The water service generally is unsatisfactory; the street hydrants are very rusty, and boxes contain a lot of dirt—so much so as to render it difficult to ship the standpipes promptly; many of the hydrant-indicators are missing; the reticulation on the higher levels is inadequate, quite a lot of the piping being only 1½ in. and 2 in. in diameter. A street fire-alarm system is necessary.

OHAKUNE.

Inspection, 4th May, 1922. Throughout the day and during the night of my visit the brigade was engaged at a timber-mill fire situated some little distance outside the borough boundary, consequently there was no inspection muster. I visited the fire twice during the day and night; the motor steam fire-engine was working well, and the fire was handled in a manner that would have done credit to many an older and more experienced brigade.

The present arrangement for ringing the firebell is very crude, and requires bettering. The brigade should be provided with some helmets. Other small matters requiring attention are mentioned in my report to the Board.

PALMERSTON NORTH.

Inspection, 10th April, 1922. The inspection drills were laid out with the object of judging of the qualification of certain officers for promotion, and in that connection a special report has been submitted to the Board. The stations and equipment were in the usual good order and condition.

There are two matters which should receive attention from the Board: the purchase of a site for and erection of a new central fire-station, and the installation of a street fire-alarm system. The want of a suitable and recognized means of "calling" the brigade is a very weak point in the fire protection of the town, and may easily prove the cause of a serious disaster; therefore prompt action should be taken in the matter of installing a system of alarms.

PETONE.

Inspection, 19th June, 1922. The various inspection drills were carried out in the efficient manner usual with this brigade. The station and equipment were found in good order and condition. The members of the brigade deserve commendation for the interest displayed and the voluntary work performed in the additions to and otherwise improving the fire-station.

The Board have decided to purchase a second motor appliance.

I have to again recommend that the 4 in. pipe connecting the Gear Company's pumping outfit with the 6 in. main in Victoria Street be replaced with a 6 in. pipe. The fire-station should be connected with the public-telephone system, so making available some hundred potential fire-alarm call-points.

PORT CHALMERS.

Inspection, 14th February, 1922. The muster included several newly enrolled members, and, whilst all entered into the work in a very willing manner, during the course of the inspection drill it was clearly evident that the brigade, as a whole, was much in need of more instruction and drill. For the present, until the members attain some degree of efficiency, practices should be carried out once a week; a monthly drill is not sufficient. The station and appliances were in good order.

I have had again to direct the attention of the Board to previous recommendations in respect to the purchase of a more suitable site and the erection of a new fire-station.

ROTORUA.

Inspection, 24th February, 1922. The various inspection drills were carried out in an efficient manner, and the station and equipment were in good order and condition.

It is necessary to confirm my previous recommendation in respect to the provision of a telescopic fire-ladder. The Board has decided to install a system of street fire-alarms, and arrangements to that end are now in hand.

TAUMARUNUI.

Inspection, 16th November, 1921. The members of this brigade are a very willing body of men, but it was apparent that they are in need of more instruction, and the squad system of drill should be adopted. Various minor matters, set out in my report to the Board, require attention.

TAURANGA.

Inspection, 28th February, 1922. The inspection drills were carried out in an efficient manner, and the appliances were in good order. The chemical-engine was discharged, but the average pressure was lower than it should have been, and a considerable portion of the charge remained in the cylinder. The chemical proportions of the charge have been altered, and should give better results.

With a view to an extension of the present fire-station building, the other half-section of land should be purchased. The installation of a street fire-alarm system, and the ringing of the firebell by mechanical means instead of by hand as at present, require the early attention of the Board.

TE AROHA.

Inspection, 2nd March, 1922. Owing to inclement weather only a restricted amount of drill was carried out, which was performed in a fairly satisfactory manner. The brigade has not been provided with the smaller items of equipment recommended in previous reports. A very suitable site has been purchased, and the erection of the proposed new fire-station should be proceeded with at once.

TIMARU.

Inspection, 29th March, 1922. The various inspection drills with the motor machines, pumps, fire-escape ladders, &c., were carried out in the efficient manner usual with this brigade. The station and all equipment were in good order and condition.

WAIHI.

Inspection, 1st March, 1922. The inspection drills were carried out in a satisfactory manner, and the station and equipment were found in good order. Local conditions and circumstances not warranting the cost of maintaining a permanent motor-driver, other arrangements have now been made, at a saving in the upkeep of the brigade of about £200 per annum.

WAITARA.

Inspection, 18th October, 1922. During the course of the inspection drill it was clearly apparent that the members of the brigade, whilst very willing and interested in the work, are much in need of more instruction and drill. The large area and hilly character of portions of the borough call for the provision of a motor machine for the transport of men and appliances. Fire-ladders and axes for the men are required.

WANGANUI.

Inspection, 12th December, 1921. The brigade is numerically weak—at the date of my inspection its membership stood at seventeen all told: the strength should be increased to not less than twenty-four of all ranks.

The newly erected central fire-station was officially opened on the 15th September last. It is a large commodious building, and the accommodation and conveniences provided should be a strong inducement to suitable men to join the auxiliary staff of the brigade. A street fire-alarm system, consisting of four circuits having forty-nine call-boxes thereon, has been installed, and is giving every satisfaction. A couple of smoke-helmets are required.

WHANGAREI.

Inspection, 22nd November, 1921. The various inspection drills were carried out in a satisfactory manner, and in that direction a steady improvement is manifest. The equipment was in good order, but the condition of the fire-station building is very unsatisfactory, and the erection of the proposed new station should be commenced at once.

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