

SESSION II.
1918.
NEW ZEALAND.

FIRE BRIGADES OF THE DOMINION

(REPORT ON THE) BY THE INSPECTOR OF FIRE BRIGADES FOR THE YEAR ENDED
30TH JUNE, 1918.

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 Inspector of Fire Brigades, Wellington, 30th October, 1918.

Herewith I have the honour to lay before you my tenth annual report, for the year ended 30th June, 1918, relative to the working of the Fire Brigades Act and including matters in connection therewith.

During the year two new fire districts have been constituted—viz., Balclutha, 24th September, 1917, and Dargaville, 14th January, 1918. Also a poll was taken at Port Chalmers on the 22nd May last, and the proposal to proclaim the borough a fire district was carried. The fire districts as now constituted are—Auckland, Balclutha, Christchurch, Dannevirke, Dargaville, Dunedin, Feilding, Gisborne, Greymouth, Hamilton, Hastings, Hawera, Hokitika, Lawrence, Masterton, Milton, New Plymouth, Oamaru, Palmerston North, Petone, Rotorua, Tauranga, Timaru, Waihi, Whangarei, Woolston.

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

Auckland—27th May, 1918.	Lawrence—18th April, 1918.
Balclutha—17th April, 1918.	Masterton—18th June, 1918.
Christchurch—13th February, 1918.	Milton—17th April, 1918.
Dannevirke—4th April, 1918.	New Plymouth—19th September, 1917.
Dargaville—23rd May, 1918.	Oamaru—23rd October, 1917.
Dunedin—22nd April, 1918.	Palmerston North—24th June, 1918.
Feilding—29th April, 1918.	Petone—13th June, 1918.
Gisborne—11th December, 1917.	Rotorua—9th November, 1917.
Greymouth—8th February, 1918.	Tauranga—7th November, 1917.
Hamilton—14th November, 1917.	Timaru—19th March, 1918.
Hastings—17th June, 1918.	Waihi—6th November, 1917.
Hawera—30th April, 1918.	Whangarei—5th October, 1917.
Hokitika—11th February, 1918.	Woolston—14th February, 1918.

In addition to the statutory inspections, in accordance with requests received from local governing and other bodies, visits were paid for special purposes as follows:—

- Blenheim—21st July, 1917: Conference with local bodies in reference to formation of fire district.
- Devonport—8th October, 1917: Inspection of brigade and equipment.
- Invercargill—25th October, 1917: Conference with local bodies in reference to forming fire district.
- Waihi—15th January, 1918: Valuation of brigade buildings and equipment.
- Hamilton—18th January, 1918: Fire Board committee meeting.
- Otaki—3rd April, 1918: Inspection for purpose of advising on formation of a brigade, purchase of equipment, &c.
- Wanganui—1st May, 1918: Inspection for the purpose of reporting upon the efficiency of the brigade, equipment, water-supply, &c.
- Timaru—5th June, 1918: Inspection and report upon the new orphanage buildings.

In addition to the above, periodical inspections have been made of the military camps, their brigades and equipments at Featherston, Trentham, Awapuni, Narrow Neck, and Somes Island, as also of the various forts and buildings under the jurisdiction of the Defence Department. With respect to my inspectorial duties as Departmental Fire Inspector, it is quite impossible for me to visit all the Government buildings, numbering over two thousand, but practically all of the most important buildings have been inspected and reported upon.

Following upon an invitation received from the executive officers of the United Fire Brigades Association, I attended their annual conference held at Tauranga in February last, and delivered an address to the delegates entitled "The Use and Maintenance of Some of the Smaller Fire Appliances." At the request of the conference the address is being printed for circulation amongst the brigades.

A most serious aspect of the year's work is the excessive number of false alarms received by the various brigades, totalling 267, of which number a very large proportion were given with malicious intent, in two instances resulting in serious accidents, and in one case I regret to say with fatal results—viz., in Dunedin, on the 16th May last, whilst responding to an alarm of fire, which proved to be a false alarm maliciously given, one of the brigade motor machines capsized, with the result that Foreman Baxter was killed almost instantaneously and three other firemen were more or less seriously injured; again, in Auckland, on the 12th December, whilst responding to a call, which also proved to be a false alarm maliciously given, one of the brigade motors met with an accident which resulted in serious injury to one fireman and slighter injuries to several others. The grave side of these false alarms with their possible serious results does not appear to be at all generally realized; and in addition to the principal consideration—i.e., the risk to both firemen and the general public, always attending the "turn out" of a fire brigade—there must be added the cost of wear-and-tear and repairs to the motor and other apparatus employed, together with other actual expenses incurred, altogether amounting to a sum which would greatly surprise most people. It is a very difficult matter to discover the perpetrators, and in the very few instances where the offence has been "sheeted home" the offenders have been treated with a quite mistaken leniency; but, bearing the above fatality in mind, it is to be hoped that in the case of any future conviction the punishment will be made commensurate to the offence.

The difficulty of keeping the brigades up to an efficient strength by ordinary means is becoming more and more acute, and in that connection it is to be regretted that the recommendation contained in my report for last year has not been more widely acted upon. The idea has worked successfully in several towns, and I again suggest, more particularly for the present, at any rate, as applying to towns other than the four centres, that a number of the local business people be asked to undergo a sufficient amount of fire drill so to enable them to be of assistance to the brigade in case of necessity. In the present circumstances it certainly presents itself that, quite irrespective of social position, it is a duty obligatory upon any fit person to assist the local brigade to carry out what is undoubtedly a work of national importance.

The total number of "calls" received throughout the fire districts for 1917-18 was 820, as against 775 for 1916-17, though there was a decrease in the number of actual fires 406 (421), decrease 15; also in "bush and rubbish" fires 58 (82), decrease 24; the number of "out of district" fires, 26, is the same; with an increase in "chimney" fires 63 (62), increase 1; and a large increase in the number of false alarms, 267 (184), increase 83.

Out of the 406 actual fires 26 are reported as due to incendiarism, 16 as having occurred on unoccupied premises, and 159 as of unknown origin.

The fire loss throughout the fire districts for 1917-18 amounted to £245,806, an increase of £103,630 over that for 1916-17. The disastrous fire that occurred in Dannevirke on the 22nd October last is responsible for nearly one-half (£113,834) of the fire districts' total loss, Dunedin coming next with a loss of £51,798.

The insured loss throughout the Dominion for the year ended 31st December, 1917, amounted to £578,024, and throughout the fire districts for the corresponding period the insured loss was £218,325.

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 Detailed Reports dealing with each Fire District.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The Hon. the Minister of Internal Affairs, Wellington.

1. SUMMARY OF FIRE CALLS.

District.	Fires.	Chimney Fires.	Bush, Grass, and Rubbish Fires.	False Alarms.	Out of District.	Totals.
Auckland	97	7	16	130	4	254
Balclutha	..	..	..	..	..	..
Christchurch	75	14	3	50	5	147
Dannevirke	4	..	..	1	..	5
Dargaville	1	..	..	..	..	1
Dunedin	74	29	11	43	5	162
Feilding	4	1	..	..	1	6
Gisborne	17	..	1	5	5	28
Greymouth	13	..	1	..	1	15
Hamilton	4	1	4	2	..	11
Hastings	14	..	1	1	1	17
Hawera	1	1	..	1	..	3
Hokitika	12	1	1	..	..	14
Lawrence	2	..	..	..	..	2
Masterton	10	2	2	..	1	15
Milton	1	1	..	..	..	2
New Plymouth	9	..	2	3	..	14
Oamaru	4	1	..	..	1	6
Palmerston North	24	3	2	1	..	30
Petone	6	1	1	5	..	13
Rotorua	5	1	2	..	..	8
Tauranga	2	..	5	..	..	7
Timaru	8	..	..	6	1	15
Waihi	9	..	4	19	1	33
Whangarei	4	..	1	..	..	5
Woolston	6	..	1	..	..	7
Totals	406	63	58	267	26	820

2. SUMMARY OF FIRE LOSSES.

District.	Insured.	Uninsured.	Totals.
	£	£	£
Auckland	17,821	297	18,118
Balclutha	..	..	..
Christchurch	28,989	871	29,860
Dannevirke	73,955	39,839	113,834
Dargaville	..	20	20
Dunedin	40,550	11,248	51,798
Feilding	161	25	186
Gisborne	5,151	1,636	6,787
Greymouth	2,046	957	3,003
Hamilton	165	118	283
Hastings	2,437	1,091	3,528
Hawera	394	..	394
Hokitika	1,460	272	1,732
Lawrence	975	22	997
Masterton	170	88	258
Milton	100	..	100
New Plymouth	1,257	375	1,632
Oamaru	255	261	516
Palmerston North	4,839	602	5,441
Petone	280	10	290
Rotorua	1,091	42	1,133
Taurunga	354	150	504
Timaru	790	..	790
Waihi	1,355	1,402	2,757
Whangarei	520	1,055	1,575
Woolston	256	14	270
Totals	185,411	60,395	245,806

3. COST OF FIRE BRIGADES (CAPITAL EXPENDITURE INCLUDED).

As taken from the Estimates for the respective Years.

District.	Year ending 30th June, 1914.			Year ending 30th June, 1915.			Year ending 30th June, 1916.			Year ending 30th June, 1917.			Year ending 30th June, 1918.			Year ending 30th June, 1919.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Auckland ...	10,110	0	0	10,256	0	0	10,811	0	0	10,585	0	0	11,700	0	0	12,000	0	0
Balclutha ...	...			...			...			...			...			233	0	0
Christchurch ...	9,000	0	0	8,000	0	0	7,210	0	0	6,900	0	0	7,000	0	0	8,585	0	0
Dannevirke ...	881	3	5	612	6	9	639	16	1	819	9	4	251	9	9	467	13	11
Dargaville ...	...			...			...			...			...			614	16	6
Dunedin ...	7,000	0	0	7,000	0	0	7,000	0	0	8,000	0	0	8,500	0	0	8,500	0	0
Feilding ...	612	10	0	683	11	0	544	11	2	573	11	9	354	0	0	348	0	0
Gisborne ...	789	10	3	763	0	0	1,125	0	0	1,620	13	0	958	5	10	1,311	10	0
Greymouth ...	964	0	0	864	0	0	844	0	0	878	0	0	888	0	0	903	0	0
Hamilton ...	300	0	0	850	0	0	600	0	0	350	0	0	1,450	0	0	1,100	0	0
Hastings ...	1,146	0	0	1,105	0	0	1,287	0	0	1,125	0	0	1,300	0	0	1,124	12	3
Hawera ...	617	16	0	767	0	0	647	5	10	744	0	0	374	0	0	615	0	0
Hokitika ...	433	6	8	433	6	8	460	0	0	366	13	4	346	13	4	420	0	0
Lawrence ...	75	0	0	60	0	0	80	0	0	60	0	0	60	0	0	60	0	0
Masterton ...	1,150	0	0	1,151	1	4	1,246	18	0	1,026	7	2	931	13	0	1,084	0	0
Milton ...	120	0	0	100	0	0	110	0	0	100	0	0	90	0	0	80	0	0
New Plymouth ...	1,098	1	3	1,098	1	3	1,200	0	0	1,500	0	0	1,380	0	0	1,488	10	3
Oamaru ...	340	0	0	370	0	0	477	0	0	770	0	0	550	0	0	500	0	0
Palmerston North ...	1,842	9	1	1,939	3	4	1,685	19	0	1,364	12	5	1,400	7	4	1,512	12	11
Petone ...	847	16	10	1,076	11	9	880	13	7	870	0	0	850	12	4	850	0	0
Rotorua ...	419	10	0	614	0	0	752	7	0	794	0	0	807	0	0	885	10	0
Tauranga ...	...			...			655	6	8	444	12	11	315	11	6	287	0	0
Timaru ...	1,500	0	0	2,825	0	0	1,450	0	0	1,810	0	0	1,350	0	0	1,400	0	0
Waihi... ..	...			...			...			...			...			850	0	0
Whangarei ...	480	0	0	600	0	0	500	0	0	550	0	0	550	0	0	400	0	0
Woolston ...	...			...			...			914	4	0	776	2	2	900	0	0
Totals ...	39,927	3	6	41,368	2	1	40,336	17	4	42,166	3	11	42,183	15	3	46,520	5	10

4. SUMMARY OF CAUSES.

Summary of Causes.	Auckland.	Balclutha.	Christchurch.	Dannevirke.	Dargaville.	Dimedin.	Pellding.	Gisborne.	Greymouth.	Hamilton.	Hastings.	Hawera.	Hokitika.	Lawrence.	Masterton.	Milton.	New Plymouth.	Oamaru.	Palmerston North.	Petone.	Rotorua.	Tauranga.	Timaru.	Wahiti.	Whangarei.	Woolston.	Totals.
Ashes, live ..	3	..	2	..	..	6	..	..	..	..	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	14
Benzine, proximity to lights ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3
" " vapour, flashing back ..	2	..	3	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
Candles, drapery, &c., in contact ..	4	..	4	..	..	5	..	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	1	..	1	19	
Clothes airing before fire ..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	1
Defective building ..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	12	
" " chimneys, hearths ..	1	..	..	1	..	6	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	
" " hot-water services ..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	
Electricity, fusing of wires ..	6	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	
" " iron left switched on ..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	
" " imperfect insulation ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	
Flat-iron left on wooden shelf ..	..	..	1	..	..	2	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	6	
Gas, defective fittings ..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	
" " explosion ..	3	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	6	
" " rings, stoves ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	
Ignition of picture-films ..	..	..	1	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	3	1	..	1	..	..	..	1	
Incendiarism ..	1	..	9	..	..	..	..	5	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	26	
Kerosene-lamp explosions ..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	
" " heaters overheated ..	2	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	6	
Matches, children with ..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	
" " rats ..	..	..	2	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	
" " thrown down alight ..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	
Methylated spirits, filling stoves ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	
Motors, back-firing ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	
Naked lights ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	
Overheating beeswax, fat, &c. ..	3	..	3	..	..	4	1	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	14	
bearings ..	..	..	1	..	..	1	..	1	..	..	1	..	2	..	..	..	..	..	1	2	..	..	..	..	..	1	
" " tar ..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	
" " wood, proximity furnaces ..	1	..	1	..	..	2	..	..	..	..	1	..	2	..	..	..	..	..	1	..	..	..	..	..	..	9	
" " vulcanizing-ovens ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	9	
Painters burning off paint ..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	1	
Smoking ..	..	..	2	..	..	2	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	7	
" " cigarette-butts ..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	
Sparks from chimneys ..	2	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	5	
" " copper fires ..	..	..	5	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	
" " machinery ..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	2	
" " engines ..	1	..	..	..	..	5	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	2	..	5	
" " fireplaces, furnaces ..	..	..	3	..	1	2	..	..	2	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	14	
" " other fires ..	1	..	3	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	8	
Spontaneous combustion ..	3	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	7	
Vagrants ..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
Unknown ..	53	..	13	3	..	21	3	8	9	2	6	..	1	..	..	1	6	3	7	1	3	1	7	6	2	159	
Totals ..	97	..	75	4	1	74	4	17	13	4	14	1	12	2	10	1	9	4	24	6	5	2	8	9	4	6	406

5. SUMMARY.—PERSONNEL, PLANT, AND APPLIANCES.

	Auckland.	Baldutha.	Christchurch.	Dannevirke.	Dunedin.	Dargaville.	Felding.	Gisborne.	Greymouth.	Hamilton.	Hastings.	Hawera.	Hokitika.
Brigades, total strength of	77	15	35	22	77	13	24	17	20	25	26	17	30
Fire-stations, residential	5	..	3	1	2	1	1	1	1	1	1	1	..
" non-residential	1	1	..	1	4	1	1	5	5	1	..	..	5
Fire-alarms—(C.) circuits, (B.) boxes	35 C., 246 B.	..	16 C., 104 B.	..	8 C., 71 B	2 C., 2 B.	..	..	..	1 C., 1 B.	..	3 C., 14 B.	..
" Automatic, private	48	..	28	..	28	..	..	..	..	..	..	..	..
Telephones, points	Tel.	..	Tel.	Tel.	Tel.	Tel.	5	100	4	10	3	Tel.	8
Horses	..	..	..	..	..	..	1 (20)	1 (20)	1 (on hire)	..	..	1 (35)	1 (on hire)
Motors, hose-and-ladder (h.p.)	8 (2, 45; 4, 40; 1, 38; 1, 20)	..	1 (12)	..	2 (75, 15)	..	..	..	..	..	..	..	..
" chemical, hose-and-ladder (h.p.)	..	..	3 (40, 40, 14)	..	2 (55, 25)	..	..	1 (50)	..	1 (60) 400 gal.	1 (30)	..	..
" pump, hose-and-ladder (h.p.)	1 (110) 800 gal.	..	2 (70) 500 gal., (55) 400 gal.	..	..	..	..	..	..	..	..	..	..
" first-aid pump, hose-and-ladder (h.p.)	..	..	..	..	3 (60)	..	..	..	..	..	..	..	..
" electric, ladder (height)	1 (87')	..	..	..	1 (84')	..	..	..	..	..	..	..	1 (380)
Fire-engines, steam (gallons)	1 (450)	..	2 (260, 450)	..	..	..	..	1 (600)	1 (600)	..	1 (600)	..	22 (80)
" manual (gallons)	..	..	..	..	..	..	..	1 (100)	1 (60)	..	..	..	..
Chemical engines, hand-drawn (gallons)	..	..	..	..	..	..	..	..	..	..	..	..	..
Hose carts, reels, horse-drawn	..	..	..	..	1	..	..	..	..	..	..	..	..
" " hand-drawn	..	..	2	2	4	1	2	2	6	3	2	3	5
Ladders, motor-drawn (height)	1 (60')	..	1 (65')	..	1 (80')	..	..	1 (40')	1 (30')	1 (50') on motor	1 (40')	1 (35') on motor	..
" extension (height)	2 (44')	..	5 (1, 45'; 1, 38'; 3, 20')	..	3 (1, 50'; 2, 20')	2 (25')	..	..	..	7 (140')	6 (144')	7 (156')	5 (99')
" single and coupling (total length)	12 (18' to 22')	2 (28')	23 (10' 6" & 6')	5 (105')	5 (65')	1 (25')	8 (105')	6 (125')	4 (81')	..	2 (12' x 14')	..	..
Jumping-sheets (square feet)	5 (10' x 10')	..	4 (1, 10' 6"; 3, 9')	..	1 (12' x 12')	..	..	1 H.	1 (16' x 10')	..	..	1 H.	..
Smoke-jackets (J.), helmets (H.)	2 H.	..	1 J., 1 H.	..	1 J., 1 H.	..	..	1 H.	..	..	..	..	..
Hand-pumps	5	..	5	2	3	..	1	1	1	1	2	2	2
Hand chemical extinguishers	6	2	6	..	9	..	2	..	..	1	..	2	..
Standpipes, ratchet valves	17	1	1	8	15	1	6	8	9	1	6	1	5
" double heads	..	1	19	..	4	2	..	2	1	6	..	2	2
" single heads	4	..	..	..	4	..	..	..	..	..	..	..	..
Hose, rubber-lined (diameter)	..	..	2,000' (2 $\frac{3}{4}$ ")	2,700' (2 $\frac{1}{2}$ ")	14,100' (2 $\frac{1}{2}$ ")	1,462' (2 $\frac{1}{2}$ ")	3,050' (2 $\frac{1}{2}$ ")	3,000' (2 $\frac{1}{2}$ ")	5,000' (2 $\frac{1}{2}$ ")	4,200' (2 $\frac{1}{2}$ ")	3,500' (2 $\frac{1}{2}$ ")	3,000' (2 $\frac{1}{2}$ ")	2,800' (2 $\frac{1}{2}$ ")
" unlined (diameter)	15,000' (2 $\frac{3}{4}$ ")	850' (2 $\frac{1}{2}$ ")	11,000' (2 $\frac{3}{4}$ ")	80-88	130-160	80-85	90-110	90	85-100	40-42	120-130	50-80	100-105
Water-supply (G. = gravitation)	G.	G.	G.	G.	G.	G.	G.	G.	G.	G.	G.	G.	G.
Pressure, average, noon-midnight	40-120	70	95-105	80-88	130-160	80-85	90-110	90	85-100	40-42	120-130	50-80	100-105

5. SUMMARY.—PERSONNEL, PLANT, AND APPLIANCES—continued.

	Lawrence.	Masterton.	Milton.	New Plymouth.	Oamaru.	Palmerston North.	Petone.	Rotorua.	Tauranga.	Timaru.	Waihi.	Whangarei.	Woolston.	Totals.
Brigades, total strength of ..	12	30	13	30	20	23	22	15	15	17	14	16	5	630
Fire-stations, residential ..	1	1	1	2	1	2	1	1	1	1	1	1	1	32
" non-residential ..	1	1	1	1	1	1	1	1	1	1	1	1	1	34
Fire-alarms—(C.) circuits, (B.) boxes ..		5 C., 12 B.		2 C., 22 B.			2 C., 10 B.			6 C., 22 B.	3 C., 16 B.	1 C., 1 B.		84 C., 531 B.
" Automatic, private ..		1		Tel.	10	Tel.	Tel.	7		Tel.	Tel.	6	Tel.	107
Telephones, points ..		2		1 (20)	1	1 (25)	1 (30)	1 (45)			1 (30)	1 (15)	1 (40)	166
Horses ..														5
Motors, hose-and-ladder (h.p.) ..														20
" chemical, hose-and-ladder (h.p.) ..														8
" pump, hose-and-ladder (h.p.) ..														6
" first-aid pump, hose-and-ladder (h.p.) ..														4
" electric, ladder (height) ..														2
Fire-engines, steam (gallons) ..		1 (350)												8
" manual (gallons) ..			1 (50)											5
Chemical engines, hand-drawn (gallons) ..			1 (50)											1
Hose carts, reels, horse-drawn ..					1		1			1				4
" hand-drawn ..	2	3		4	2	3	2	2	2	1	2	4		60
Ladders, motor-drawn (height) ..														3
" extension (height) ..				1 (50') on motor	1 (20')	1 (50') on motor	1 (40') on motor		1 (36')	1 (60') on motor	1 on motor	1 (50')	1 (20') on motor	26
" single and coupling (total length) ..	2 (49')	6 (122')	3 (56')	5 (108')	2 (40')	8 (97')	7 (62')	6 (85')	2 (49')	8 (170')	3 (75')	1 (30')		144
Jumping-sheets (square feet) ..				1 (12' x 12')	1 H.	1 (12' x 12')	1 (8' x 8')	1 (11' x 11')		1 (12' x 12')				18
Smoke-jackets (J.), helmets (H.) ..							1 H.			1 H.				11
Hand-pumps ..	1	2	1	3	1	1	2	1	2	1	1	2	2	46
Hand chemical extinguishers ..	2	1	2	3	1	1	2	2		3	2			47
Standpipes, ratchet valves ..	1	2		1	1					1				42
" double heads ..		2		13	3	4		1	4	3		3		112
" single heads ..	1	5		2	2	4	6	5	1	2		2		53
Hose, rubber-lined (diameter) ..				200' (2½")										2,200
" unlined (diameter) ..	1,200' (2½")	3,000' (2½")	350' (2")	6,200' (2½")	2,800' (2½")	5,000' (2½")	4,300' (2½")	1,500' (2½")	2,000' (2½")	3,000' (2½")	2,500' (2½")	1,000' (2½")		103,712
Water-supply (G. = gravitation) ..	G.	G.	Wells and tanks	G.	G.	G.	G.	G.	G.	G.	G.	G.	No water-supply	
Pressure, average, noon-midnight ..	65-80	85-92		120-135	100-140.	80-100	55-65	48-50	70-110	70-75	120-125	115-125		

DETAILED REPORTS.

AUCKLAND.

An inspection of the Auckland Brigade and its equipment was made on the 27th and 28th May last, when all stations and equipments was found to be in good order and condition, and the various turnouts were carried out smartly and efficiently.

Following upon the inspection a report was submitted to the Board containing, amongst other matters, recommendations as to an improvement in the method of indicating the street fire-alarm call points (at present for various reasons the positions of the alarm-boxes are not at all easy to locate), also as to improvements in the first-aid equipment. In this last connection the Board are now calling tenders for the supply of a 40 gallons cylinder CO₂ chemical outfit to be carried on one of the motor hose-tenders.

The batteries of the electrically operated fire-ladder having worn out, and as there would be considerable difficulty at the present time in obtaining a new set of batteries, they have been taken out, the tractor motors disconnected, and a 30 horse-power petrol-engine fitted instead. The alteration has, if anything, improved the efficiency of the machine.

A feature of the year's working has been the excessive number of false alarms—viz., 130. Of that number 6 are classified as due to certain accidental causes, 3 as given with good intent, and 1 as malicious. Causes for the remaining 120 are not specified, therefore they must be set down as due to defects in the system. In addition to the very real danger incurred in every "turnout" when responding to an alarm of fire, false or otherwise, there is the wear-and-tear and expense to be considered, and which in this case must amount to a considerable sum. However, the Board have finally decided to install, throughout the city proper, the "Duplex" system of alarms in place of the old and defective system now in use, and have let a contract for that purpose.

During the past year there has been an increase of two in the number of fires, but a decrease of £15,327 in the fire loss as compared with 1916-17.

BALCLUTHA.

Balclutha was proclaimed a fire district on the 29th September, 1917, and my first inspection of the brigade and its equipment was made on the 17th April last. The inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

Office of the Inspector of Fire Brigades, 13th May, 1918.

An inspection of the Balclutha Fire Brigade and its equipment was made on the 17th ultimo, and in that connection I submit the following report for the consideration of your Board :—

At the inspection muster there was present the Superintendent, Deputy, and seven firemen; these, with one on theatre duty, accounted for only ten out of a strength of thirteen on the roll, not a satisfactory attendance, but I understand that through a mistake those absent had not been notified of the inspection. Certain drills were carried out which made it apparent that the members of the brigade require more drill and instruction, and attention should be paid to the general instruction and advice given at the time of my visit.

I find that the Superintendent, Foreman, and three firemen are employed at the freezing-works, distant some three miles from the town, therefore an effort should be made to maintain the brigade at its full authorized strength—viz., fifteen; this is particularly necessary seeing that the hose reel and other equipment has to be transported by hand-draught, a very exhausting process. Also the Deputy should be relieved of the duty of ringing up the Superintendent when an alarm occurs so to leave him free to proceed at once to the scene of the fire.

The water-supply for fire purposes is by means of 8 in., 5 in., 4 in., and 3 in. pipes, fairly well grid-ironed, with some parts of the town not yet reticulated. A test of the pressure on the 8 in. main in Clyde Street gave a head of 167 ft. = 72 lb., which pressure is quite adequate to local conditions and requirements; but the reticulation includes a considerable proportion of 3 in. pipes, and for many years past it has been generally recognized that the laying-down of that sized fire-main is a mistaken policy, both as regards efficiency and economy; and no mains of less than 4 in. diameter should ever be laid down for fire-extinction purposes.

The brigade possess only one standpipe; they should be provided with another one, as also with a hand-pump of the "London Fire Brigade" pattern. The nozzle outfit at present consists of three $\frac{5}{8}$ in., of which one is defective, one $\frac{7}{8}$ in., and two $\frac{3}{4}$ in. jet pieces, all of them quite unsuitable for either a first or second delivery; and they should be supplied with at least two new ones, one of $\frac{7}{8}$ in. diameter and the other $\frac{3}{4}$ in. diameter. When purchasing new standpipes, branches, couplings, and nozzles it should be stipulated that they must be strictly in accordance with the Government standard patterns. The necessity for the provision of this new equipment was fully explained to those members of your Board who were present at the inspection.

I noticed that some of the street hydrant indicators are partially hidden from sight owing to hedge overgrowth, which should be cleared away sufficiently to leave a clear view of the indicators.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

Wm. Carroll, Esq., Secretary to the Fire Board, Balclutha.

No fires have occurred in the borough since it was proclaimed a fire district.

CHRISTCHURCH.

An inspection of the Christchurch Brigade, its stations and equipment, was made on the 13th and 14th February last. The turnouts and various inspection drills were carried out in satisfactory and efficient manner, and the stations and equipment found in good order and condition.

To provide additional married accommodation two more rooms have been built at the Sydenham district station. An order has been placed for the supply of a second 55 horse-power 300-400 gallons motor turbine pump combination machine, but the date of its delivery is problematical, also there is on order a 35 ft. "Ajax" telescopic ladder and a "Draeger" smoke helmet.

Two matters requiring attention are: the erection of a substation at a point somewhere midway between the Central and St. Albans Stations and the borough boundary, and the provision of an 85 ft. mechanically operated fire-ladder. Both matters are essential to the efficient working of the brigade, and should be taken in hand at the earliest opportunity that circumstances will allow.

During the year 1917-18 seventy-five actual fires occurred in the district with a fire loss of £29,860, a decrease of one fire, but an increase of £20,692 in the fire loss as compared with 1916-17.

DANNEVIRKE.

An inspection of the Dannevirke Brigade and its equipment was made on the 4th April last, when there was present at the inspection muster the Superintendent and fourteen firemen, these with three on leave representing the full strength then on the roll.

During the course of the inspection it was apparent that details of drill are not being carried out, nor is the hose being cared for, in accordance with my previous suggestions. Some of the branch and hose coupling washers are in a bad state, causing a serious loss of water and pressure in consequence; also I noticed that the clips of the offside wheel of the hose reel had slipped backwards on the frame, consequently, the rims of the wheels in front were $2\frac{1}{2}$ in. wider apart than were the back rims, thus causing heavier draught than if the wheels were running true, a serious matter with a hand-drawn vehicle.

Reference to my previous reports will show that for a long time past I have repeatedly had occasion to adversely comment upon the management of the brigade so far as the methods of drills and the proper care and maintenance of the equipment is concerned, and I consider a change is necessary as recommended in my report dated the 6th April, 1918.

Four fires occurred during the year, involving a fire loss of £113,834, of which total £113,649 was due to the disastrous fire that took place on the 22nd October, 1917.

DARGAVILLE.

My first inspection of the Dargaville Brigade and its equipment was made on the 23rd and 24th May last. The inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,—

1st June, 1918.

An inspection of the brigade was made on the evening of the 23rd May, when there was present at the inspection muster the Superintendent, Deputy, and nine firemen; that, with two on leave, accounted for the full strength (thirteen) then on the roll. Certain drills were carried out but, owing to the exceptionally bad weather prevailing at the time, not to the extent I would have liked. However, such drill as was gone through was carried out smartly and in a practical manner, and the personnel of the brigade, both officers and men, appears to be both capable and energetic.

Recommendations.—The authorized strength of the brigade should be increased to twenty, this particularly in view of the fact that the fire apparatus is transported by man-power.

A motor-chassis should be purchased and a suitable body built thereon.

A small shelter-shed, just sufficiently large enough for the purpose, should be built at the Mangawhare end of the town and the recently purchased hose-reel housed there, and the reel equipped with hose, standpipe, and branch, the other reel to remain at the Central Station for use in emergencies.

The present fire-alarm-bell system is not satisfactory, the ringing apparatus is inefficient, and one of the towers in a dilapidated condition. In place of the large expense involved in providing a new tower, another bell, &c., I recommend that three sirens be installed, this, however, subject to a report from the Chief Officer of the Wellington Brigade that the sirens installed in his city are giving satisfactory results.

The stock of good hose, 1,462 ft., this including the 1,000 ft. of new hose, is by no means an ample supply, and in view of the present stringency and cost it should be conserved with the greatest possible care.

The brigade should be provided with a reducing hose and nozzle, as also with one hand-pump London Fire Brigade pattern.

The bell-tower at present at Mangawhare should be removed and set up in the vicinity of the Central Station, there to serve for hose-drying purposes, &c.

In reference to the steam fire-engine, whilst of a very old type of engine it still has a good pumping-efficiency, and in view of the question of the reliability of the water-supply mentioned in a foregoing portion of this report, as well as for other reasons mentioned when in Dargaville, I would suggest your Board should reconsider their decision not to take the engine over, particularly if the Council is prepared to accept a nominal price for it.

All the above recommendations were discussed and more fully explained to the Chairman and other members of your Board during my visit to Dargaville and Auckland.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

Since the constitution of the Fire Board in January last only one fire, with a fire loss of £20, has occurred in the district. All members of the brigade attended at the fire.

DUNEDIN.

An inspection of the Dunedin Brigade, its stations, and equipment was made as follows:—

City Section: 22nd April, when there was in attendance at the inspection muster the Superintendent, Deputy, sixteen permanent and three auxiliary firemen; or twenty-one in all.

South Dunedin Section: 22nd April; present, Foreman, four permanent and two auxiliary firemen.

Roslyn Section: 23rd April; present, Captain and seven firemen.

Mornington Section: 23rd April; present, Captain and five firemen.

The turnouts were carried out smartly and the equipment found in good order and condition. The following report was forwarded to the Secretary of the Board:—

SIR,—

17th May, 1918.

Following upon my recent inspection of the Dunedin Fire Brigade, its stations, and equipment, I beg to submit the following recommendations for the consideration of your Board:—

That three permanent men be quartered at the proposed new temporary fire-station in the Roslyn District.

That a portion of the new partially unoccupied Town Hall in Mornington be leased for use as a fire-station, to be equipped with a light motor appliance, and two permanent firemen quartered there. The third man quartered at the Roslyn Station might be utilized for relieving purposes at Mornington, and thus, without trenching on the strength at the Central Station, there would always be two men on duty at both the Roslyn and Mornington Stations.

Whilst quite realizing the financial difficulties I consider the North-east Valley District should be provided with some greater degree of protection than it has at present, and it appears to me that this is a case wherein the local residents might be invited to "lend a hand" in their own interest.

I have, &c.,

THOS. T. HUGO,
Inspector of Fire Brigades.

J. T. Hamann, Esq., Secretary, Fire Board, Dunedin.

The new district station situated at Cargill Road, South Dunedin, is now in occupation, and to provide accommodation for a second married man the Board have purchased a section of land, with cottage thereon, adjoining the station; and the two old hose-reel sheds, situated in South Dunedin and Caversham respectively, have now been evacuated.

Nothing has yet been done in the way of providing better means of protection from fire on the Harbour Board property, and I am making this matter the subject of a special report.

FEILDING.

An inspection of the Feilding Brigade and its equipment was made on the 29th April last, when there was present at the inspection muster the Superintendent, Deputy, and thirteen firemen; these, with one on leave, accounting for sixteen out of nineteen then on the roll.

The various drills required were carried out in a more efficient manner than hitherto, and there certainly is an improvement in that particular, also the turnout was performed smartly. The station and equipment was found to be in good order.

The same number of fires occurred in 1917-18 as during the previous year, with an increase of £16 in the fire loss. The attendance of the brigade at five calls, No. 4 omitted, averaged 10.8 of the membership.

GISBORNE.

An inspection of the Gisborne Brigade and its equipment was made on the 11th December last, and the following report forwarded to the Secretary of the Board covers the inspection:—

SIR,—

Office of Inspector of Fire Brigades, 9th January, 1918.

An inspection of the Gisborne Fire Brigade and its equipment was made on the 11th ultimo. Following is a report in that connection and including various matters submitted for the prompt consideration of your Board:—

At the inspection muster there was present the Superintendent, Deputy, seven firemen, and four cadets, or thirteen out of a total strength of fifteen then on the roll.

Steam was got up on the stationary fire-engine, and water was shown from a hydrant on the auxiliary salt-water service main in Peel Street within ten minutes from the time the fire was lighted—a satisfactory result. Motor hose, ladder, and other drills, wet and dry, were carried out in a fairly satisfactory manner. The station and appliances are in first-class order, but the rails had not yet been fixed on the barricade around the sliding-poles.

The numerical strength of the brigade, consisting as it does of fifteen all told, including four boys, is dangerously weak, and a strong effort should be made to increase the membership; also the time has arrived and passed when the present caretaker at the Central Fire-station should be replaced by a man who would be of much more general use to the brigade, and who should be a smart experienced fireman and competent to drive the motor.

I understand the Te Hapara district is now incorporated in the Gisborne Borough, and the borough boundary in that direction is nearly three miles distant from the Central Station, although at the present time there are no fire-mains laid down in the Te Hapara district. If the shed and hose-reel situated in Gladstone Road near Carnarvon Street, and which in its present location is of little or no service at all, were removed to a site much nearer to the Lytton Road, it might be of service to some portions of Te Hapara, but would certainly prove of greater service generally, and particularly if men residing in the vicinity were enrolled as members of the brigade.

Another work of importance requiring attention is the installation of a system of street fire-alarms, and early attention should be given to the matter.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

F. Cumming, Esq., Secretary, Fire Board, Gisborne.

To relieve the heavy hose, ladder, and chemical motor-machine, which has now been in constant service for nearly five years, of the longer distance runs, the Board have purchased a 20 horse-power second-hand chassis, and converted it for use as a ladder and hose-tender appliance.

Seventeen fires occurred in the district during the year 1917-18, as against fourteen during 1916-17, an increase of three, with an increase in the fire loss of £3,959. The attendance of the brigade at twenty-eight calls averaged thirteen members per call.

GREYMOUTH.

An inspection of the Greymouth Brigade and its equipment was made on the 8th February last, when there was present at the inspection muster the Deputy Superintendent and seventeen firemen; these, with the Superintendent absent sick and one on leave, accounting for all members then on the roll. The fire-engine was taken to the lagoon and there "got to work," the engine and pump, which had lately been thoroughly overhauled, proved to be in good working-order. The station and various hose-reel sheds with the appliances were found to be in good order and condition. A new back wheel has been fitted on the ladder-carriage, and it is now in serviceable order.

No improvement in the way of fire-protection had been made during the past year in the Blaketown district, but I understand the Borough Council is to sink a well there for the purpose of providing a supply of water for the manual engine. The time has quite arrived when the Board should provide a motor machine for the transport of men and equipment.

An excellent piece of work was performed by the Greymouth Brigade on the occasion of the fire at the Criterion Hotel at midnight on the 23rd January last. An old wooden building, with more than usually narrow, tortuous, and dangerous passages and staircases, coupled with the fact that the building was well alight when the alarm was given, to stop the fire at the stage it was checked was a creditable "job" to officers and men alike.

There was an increase of five in the number of fires, with an increase of £1,215 in the fire loss, as compared with the previous year. The attendance at twelve calls, Nos. 5, 8, and 13 omitted, averaged 15.83 of the total membership of the Brigade.

HAMILTON.

An inspection of the Hamilton Brigade and its equipment was made on the 14th November. The inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,—

Office of Inspector of Fire Brigades, 27th November, 1917.

An inspection of the Hamilton Brigade and its equipment was made on the 14th instant, when there was present at the inspection muster—Hamilton Section: The Superintendent and eight firemen, that with one absent accounted for the then full strength of the section. Frankton Section: The Deputy and seven firemen, that with three on leave accounted for the full strength.

A false alarm was given for a fire at the Defence Building in Knox Street; the motor fire-engine arrived on the scene in seventy-four seconds, and water was playing on the building within two minutes six seconds from the time the call was first given. Various drills, wet and dry, were carried out with the motor pump, ladders, &c., and in view of all the circumstances, such as the large proportion of new members and new plant, in a fairly satisfactory manner.

There are several phases of the fire-protection service in Hamilton at the present time which, to say the least, are very disquieting. In the first place, there is the numerical weakness of the Hamilton Section of the brigade, ten in all, the majority of them new members, and only two men sleeping on the station. To remedy this last as much as possible, as suggested at the time, direct alarm-wires should be run to the two firemen's houses situated within a few yards of the station. Secondly, there is the matter of the new fire-bell in Garden Place, at present practically useless for fire-alarm purposes. As far as I can judge, it appears to me that the metal of which the bell is constructed is altogether too soft; in any case the matter should be rectified at once.

Another matter to which I would call attention is the agreement with the Freezing Works Company at Horotiu, some eight miles away, whereby your Board, in case of a fire occurring at the works, "undertakes to send eleven firemen and an officer as soon as possible." Even with the brigade at its authorized strength, that is altogether too many men to send such a distance away, and under present conditions absolutely unthinkable. I would advise an immediate modification of the agreement.

At the time of my visit the whole faces of the hydrant indicators were painted white, but I believe this matter is being attended to.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

W. Luxford, Esq., Secretary, Fire Board, Hamilton.

There was a decrease of six in the number of fires, with a decrease of £26,684 in the fire loss as compared with the working of the previous year. The attendance of the brigade at the eleven calls averaged 13.6 members per call.

HASTINGS.

An inspection of the Hastings Brigade and its equipment was made on the 17th June last. The following report, forwarded to the Secretary of the Board, covers the inspection:—

SIR,—

20th June, 1918.

An inspection of the Hastings Fire Brigade and its equipment was made on the 17th instant, when there was present at the inspection muster the Superintendent, Deputy, seventeen firemen, and two messengers; these, with three on leave, accounting for the then full strength of the brigade. Various hose and ladder drills, both wet and dry, were carried out in a fairly satisfactory manner.

Both hand-pumps are out of order, and the hose on one of them is leaking from end to end; the hose on the other is leaking badly in one place in the middle of the length; it should be cut in two and half attached to each pump. There is a rung missing in one of the lengths of the coupling-ladder. All the new hose should be properly marked in the manner already fully explained.

The motor-machine is at present depending upon a battery-and-coil ignition only, and to give greater reliability I would recommend that a magneto be fitted on the machine so to provide dual ignition.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The Secretary, Fire Board, Hastings.

As compared with the previous year's working, there was an increase of three in the number of fires, but a decrease of £20,787 in the fire loss. The attendance of the brigade at fifteen calls, Nos. 12 and 14 omitted, averaged 17.3 members per call.

HAWERA.

An inspection of the Hawera Brigade and its equipment was made on the 30th April last, when there was present at the inspection muster the Superintendent, Deputy, and thirteen firemen; these, with two on leave, accounting for the full strength of the brigade then on the roll.

The turnout of the motor hose-tender was performed smartly, and the various wet and dry drills carried out in an efficient manner. The station and equipment was found to be in good order and condition. The Board have provided the brigade with a new 35 ft. trussed extension ladder, also with a Shand-Mason pattern smoke helmet.

Only one fire occurred in the district during the year, a decrease of six, with an increase of £20 in the fire loss as compared with the previous year's working. The attendance of the brigade at the three calls averaged seventeen members per call.

HOKITIKA.

An inspection of the Hokitika Brigade and its equipment was made on the 11th February last, when there was present at the inspection muster the Superintendent, Deputy, and twenty-two firemen; these, with one on duty and three on leave, accounting for twenty-eight out of the full complement of thirty.

Various drills, wet and dry, were carried out in an efficient manner; the manual engine was got to work in particularly fast time. The station and various hose-reel sheds, with all equipment, was found to be in their usual good order and condition.

During the year 1917-18 twelve fires occurred in the district, an increase of ten, with an increase of £1,265 in the fire loss as compared with 1916-17. The attendance of the brigade at the fourteen calls averaged 22·8 members per call.

LAWRENCE.

An inspection of the Lawrence Brigade and its equipment was held on the 18th April last.

At the inspection muster there was present the Superintendent, Deputy, and two firemen; these, with one absent on sick-leave and one on leave, accounting for only six out of the total membership of nine then on the roll. On account of the poor attendance at the muster no inspection drills were carried out, but the station and equipment was found to be in good order.

The authorized strength of the brigade is twelve all told, but under present circumstances it is found impossible to obtain a sufficient number of suitable men to keep the membership of the brigade up to its full strength, and a number of the older more active residents of the town should be required to undergo sufficient fire drill to enable them to be of service to the brigade in case of need.

During the past year two fires have occurred in the district, with a fire loss of £997. The attendance of members of the brigade at the two fires numbered six at the first and five at the second.

MASTERTON.

An inspection of the Masterton Brigade and its equipment was made on the 18th June last, when there was present at the inspection muster the Superintendent, Deputy, and twenty-three firemen; these, with four on leave, accounting for twenty-nine out of the total membership of thirty.

Certain drills were carried out in a satisfactory and efficient manner, and the station and equipment were found to be in good order and condition, with the exception that all three lengths of the fire-engine suction-hose are more or less perished, and at least two new lengths should be obtained.

The motor hose-tender and extension-ladder, which has been on order for a long time past, is now, I understand, on the point of delivery. Nothing has yet been done in the matter of extending the street fire-alarm system.

The same number, ten, of fires occurred as during the previous twelve months, but with a decrease of £227 in the fire loss. The attendance of the brigade at twelve calls, Nos 4, 6, and 15 omitted, averaged 18·25 members per call.

MILTON.

An inspection of the Milton Fire-station and the fire-equipment was made on the 17th April last, when the plant and appliances were found to be in good order, but the new suction-hose for the pump is too long for efficient working; a new pair of couplings should be procured, and the hose cut into two lengths, 18 ft. and 12 ft. respectively.

Two calls occurred during the year, of which one proved to be a chimney-fire and the other an actual fire causing a loss of £100.

NEW PLYMOUTH.

An inspection of the New Plymouth Brigade and its equipment was made on the 19th September last, and is covered by a report forwarded to the Secretary of the Board as follows:—

SIR,—

28th September, 1917.

An inspection of the New Plymouth Brigade and its equipment was made on the 19th instant, and in that connection I beg to submit the following matters for the consideration of your Board:—

At the inspection muster there was present the Superintendent, Deputy, and fourteen firemen; these, with one on leave, accounting for the then full strength of the brigade—viz., seventeen all told. The numerical strength of the brigade is at present much lower than is consistent with safety, and with every prospect of further decrease. However, this matter, including suggestions for a remedy during the present exceptional conditions, has already been the subject of a report submitted to your Board.

During the course of the inspection drills it was very apparent that the members of the brigade had not received sufficient instructions and drills in the working of the newly acquired plant—viz., use of the motor as a hose-tender, working of the motor-pump equipment, working of the escape-ladder, &c. I was informed that wet weather had greatly interfered with the drills on the regular practice nights. This should have been met by calling extra musters even if the brigadenen had to be paid for attendance thereat. As matters are I have to strongly recommend that a half-day muster be called at once and the men put through a comprehensive drill by daylight; after that, for five or six weeks running there should be a night drill once every week.

The screwed portions of the couplings, as also of the branches and nozzles, require a little attention so as to make all parts interchangeable.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

L. M. Monteath, Esq., Secretary, Fire Board, New Plymouth.

The various stations, including the Fitzroy substation, and appliances were found to be in good order and condition.

As compared with 1916–17 there was, during the past year, a decrease of nine in the number of fires that occurred in the district, with a decrease of £5,483 in the fire loss. The attendance of the brigade at the fourteen calls averaged 13–14 members per call.

OAMARU.

An inspection of the Oamaru Brigade and its equipment was made on the 23rd October, and is covered by the following report forwarded to the Secretary of the Board:—

SIR,—

31st October, 1917.

An inspection of the Oamaru Fire Brigade with its equipment was made on the 23rd instant, and in that connection I beg to submit the following report for the consideration of your Board:—

At the inspection muster there was present the Superintendent and twelve firemen; of the remainder three were on duty and four on leave. I understand that it is the custom in Oamaru to have three firemen on duty at the one picture-theatre. This is unnecessarily reducing the strength of the brigade; no more than two men are necessary for such duty.

Dry hose drill was carried out, but, as was pointed out at the time, not in a satisfactory manner in respect to one portion of the operation. A call was given for a supposed fire at the old Star and Garter Hotel; the horse hose-cart was turned out and water shown in three minutes twelve seconds from the time the whistle was blown. There was some little delay in the shipping of the standpipe, and the time might be improved upon.

Some of the street hydrants are so far below the surface of the roads that certain of the brigade standpipes cannot be shipped in consequence. In the case of the hydrant in front of the North Otago Company's Co-operative building, for instance, the seat of the hydrant is 18 in. below the surface-level of the road.

In reference to the contemplated purchase of a wheeled fire escape or ladder I would point out that whilst there is some need for such a ladder there is a much greater need for the provision of a motor-machine to transport both men and appliances. The present horse is not equal to the work, for, by the time it has galloped, drawing the cart with its complement of men, from the station to the monument in Thames Street, it shows signs of distress; in fact, the hill work in Oamaru would severely task the strength of a pair of horses. If for financial reasons both motor machine and ladder cannot be purchased at once, then the ladder should be held over for the time being, and in that case a very serviceable telescope ladder for carrying on the motor can be procured at a moderate cost (under £4), as follows:—

The ladder now carried on the horse cart is too short and altogether too flimsy for fire-brigade work, but one of a similar design to reach a height of 28 ft. when extended, and further strengthened as to sides, rungs, clips, &c., by being built to the specifications of a similar 34 ft. ladder, should prove a suitable and useful appliance.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

One more fire, with an increase of £326 in the fire loss, occurred in the district during 1917–18 as compared with 1916–17. The attendance of the brigade at the six calls averaged 13·3 members per call.

PALMERSTON NORTH.

An inspection of the Palmerston North Brigade and its equipment was made on the 24th June last, when there was present at the inspection muster the Superintendent and fourteen firemen; these, with four on duty and four on leave, accounting for the full strength of the brigade. Certain drills were carried out in an efficient manner, and the stations and equipment were found to be in good order and condition.

To relieve the heavier motor-machine, which has now been in constant commission for five years and a half, of the longer runs a 34 horse-power chassis has been purchased and a body built thereon locally. The body is well designed to suit the machine as a hose-tender, but I have to recommend, as suggested in my last report, that the machine be fitted with a CO₂ first-aid outfit,

also it should be provided with dual ignition. The horses having been done away with, one of the loose boxes is to be converted into a bedroom and the other utilized for storage purposes.

Improvements in the borough water-service are being gradually carried out, and the reticulation of that portion of the town known as the Native Reserve has now been completed.

During the year 1917-18 three more fires occurred, but with a decrease of £1,098 in the fire loss, as compared with 1916-17. The attendance of the brigade at twenty-six calls, Nos. 7, 8, 10 omitted, averaged sixteen members per call.

PETONE.

An inspection of the Petone Brigade and its equipment was made on the 13th June last. This inspection is covered by the following report forwarded to the Secretary of the Board :—

SIR,—

21st June, 1918.

An inspection of the Petone Fire Brigade and its equipment was made on the 13th instant, and in that connection I beg to submit the following report for the consideration of your Board :—

At the inspection muster there was present the Superintendent, Deputy, and fifteen firemen; these, with two on leave, accounting for nineteen out of a total strength of twenty-one then on the roll. Owing to the inclement weather indoor practice only was carried out, and various drills were performed in a satisfactory manner, and the equipment is in good order and condition. The improvement, commented upon in my last annual report, in the personnel, drills, &c., of the brigade still continues, and a word of commendation is due in view of the various improvements to the station premises carried out to an unusual extent by the members of the brigade.

I have again (see report dated the 29th June, 1917) to recommend that a magneto be fitted on the motor hose-tender so to provide dual ignition. I note there is no improvement in the water-pressure; at 7.30 p.m. on the night of my visit there was only 48 lb. showing on the fire-station pressure-gauge, which is an average of 15 lb. to 20 lb. less than my previous readings.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The Secretary, Fire Board, Petone.

During the past year six fires have occurred in the district, involving a fire loss of £290, or a decrease of two fires and a decrease of £102 in the fire loss as compared with 1916-17. The attendance of the brigade at the thirteen alarms averaged 13.7 members per call.

ROTORUA.

An inspection of the Rotorua Brigade and its equipment was made on the 9th November last. The following report, forwarded to the Secretary of the Board, covers the inspection :—

SIR,—

21st November, 1917.

An inspection of the Rotorua Fire Brigade and its equipment was made on the 9th instant, and in that connection I submit the following report for the consideration of your Board :—

At the inspection muster there was present the Superintendent, nineteen firemen, and three auxiliary firemen; these, with three on leave, accounting for the then full strength of the brigade, which is three short of its authorized number. Various drills with the motor hose-tender and ladders, &c., were carried out in a satisfactory manner, and the station and appliances generally are in good order.

The "Stepney" wheel which I previously recommended should be procured and carried on the motor hose-tender (see report dated 2nd March, 1917) has not yet been obtained, and the necessity for its provision was again demonstrated when, as the motor was standing in the engine-house, one of the back tires blew out at 4.30 a.m. on the morning of the 26th ultimo, and as a consequence the machine was out of commission for some hours, whereas were a "Stepney" available in cases of such accidents it would be in running-order again in less than two minutes. In view of local conditions—*i.e.*, the many large wooden boardinghouses with the large number of visitors staying at them, all strangers and many of them invalids, any delay of the brigade in responding to an alarm of fire may result in most serious consequences; and your Board would be well advised to procure the wheel with as little delay as possible, and I shall be much obliged if you will be good enough to advise me immediately the wheel is placed on the motor. I note the lighting on the motor is not by any means as good as it might be, probably due to some minor fault which should be rectified.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

T. J. Underwood, Esq., Secretary, Fire Board, Rotorua.

According to a report published in the *Rotorua Chronicle* of the 18th June, trouble is still being experienced with the converted motor hose-tender. In this instance when on the way in response to an alarm of fire on the evening of the 17th June the engine stopped, and the machine had to be towed to the scene of action by another motor.

During 1917-18 five actual fires occurred in the district, an increase of three fires, with an increase of £1,122 in the fire loss as compared with 1916-17. The attendance of the brigade at the eight calls received averaged fourteen members per call.

TAURANGA.

An inspection of the Tauranga Brigade and its equipment was made on the 7th November last. The inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,—

27th November, 1917.

An inspection of the Tauranga Brigade, its station, and equipment was made on the 7th instant, and in that connection I beg to submit the following report for the consideration of your Board:—

At the inspection muster there was present the Superintendent, Deputy, and eleven firemen; these, with one on leave, representing the then full strength of the brigade, which is six short of the authorized number, and every effort should be made to fill the vacancies. Wet- and dry-hose and ladder drill were carried out in a satisfactory manner, and I am pleased to say there is a great improvement in the methods of and the carrying-out of the various drills.

The electric-bell-ringing apparatus and street-fire-alarm system has not yet been installed, and the matter is, I understand, being held over for financial reasons. I note the brigade possesses only four helmets; as a helmet is an important item of a fireman's outfit, and essential to effective work at fires, I would recommend that every active member of the brigade be provided with one as soon as possible. As pointed out at the time, the floor of the reel-house requires renovating.

In accordance with my promise I have made inquiries in the matter of the collapsible canvas fire-buckets, and enclose herewith sample of canvas and quotation for the supply of eight buckets.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The Secretary, Fire Board, Tauranga.

Two fires occurred in the district during 1917-18 as against five during 1916-17, with a decrease of £9,871 in the fire loss. The attendance of the brigade at seven calls averaged 11.86 members per call.

TIMARU.

An inspection of the Timaru Brigade and its equipment was made on the 19th March last, and the inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,—

5th April, 1918.

An inspection of the Timaru Fire Brigade and its equipment was made on the 19th March last, and in that connection I beg to submit the following report for the consideration of your Board:—

At the inspection muster there was present the Superintendent, Deputy, and fifteen firemen; these, with one on the sick-list and two on leave, representing the full strength of the brigade. Various drills were carried out in a satisfactory manner, and the stations and equipment are in good order and condition.

In reference to the 60 ft. fire-escape ladder: most ladders of that type are fitted with pole struts, and the later-imported ladders of that particular make are so fitted. The said struts add greatly both to stability and ease of working of the ladder, and I would recommend it be so fitted, and which can be done at a very low cost if carried out in the manner explained at the time of my visit.

I notice the street-hydrant plate indicators have been removed along Stafford Street, and in place thereof the kerbstone has been painted white, but had become so discoloured that in some cases the painted portion could, even in daylight, hardly be distinguished from the other part of the kerbing, and would be quite useless at night. The clear marking of the street hydrants is most essential to the efficient working of a fire brigade, and I would recommend in this case that the indicator plates be fixed in position on the outer edge of the verandas, or, if it is desired to keep the indicators on the kerb, then a white glazed tile not less than 2 ft. long, 8 in. wide on top, and 6 in. deep should be let into the kerbstone.

The present heavy motor-machine has now been in continuous use for over three years, and it is quite time that a second and lighter machine be provided to relieve the heavier one of the longer runs. I understand it was the intention of your Board to purchase some such machine last year, and I would recommend that one be provided as early as possible, and that it be of the hose-tender and turbine-pump type, the pumping-capacity of the suggested machine to be 150 to 200 gallons per minute, which is ample for the purpose for which it is required.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

H. Fraser, Esq., Secretary, Fire Board, Timaru.

During the year 1917-18 the same number (eight) of fires occurred in the district as during 1916-17, but with an increase of £409 in the fire loss. The attendance of the brigade at fourteen calls, No. 11 omitted, averaged eighteen members per call.

WAIHI.

An inspection of the Waihi Brigade and its equipment was made on the 21st November last. The inspection is covered by the following report forwarded to the Board:—

SIR,—

21st November, 1917.

An inspection of the Waihi Brigade and its equipment was made on the 6th instant, and in that connection I forward the following report for the consideration of your Board:—

At the inspection muster there were present the Superintendent, Deputy, and ten firemen; these, with two on leave, accounting for fourteen out of a total strength of sixteen then on the

roll. There is in addition a motor-driver who, although permanently employed in that capacity, is not enrolled as a member of the brigade. This is something of an anomaly, and should be rectified.

Various hose drills, both wet and dry, were carried out in an energetic manner, and if attention is paid to the advice given at the termination of the inspection it will greatly improve the practical fire work of the brigade. The motor hose-tender appears to be in good working-order; there is a sufficient supply of hose, and it is, with the station and equipment generally, maintained in good order. I note there are only two hand axes in the possession of the brigade. Every active member should be provided with such axe, also new equipment is required as follows: Four standard pattern nozzles; one London Fire Brigade pattern hand-pump with stirrup fittings; one 24 ft. extension ladder to be carried on the motor, and to give sufficient stability and strength this ladder should be built, as to sides, rungs, clips, &c., to the specifications of the 30 ft. ladder of similar design.

In reference to the extension of the fire-alarm system, as suggested in my report dated the 7th December, 1916, the No. 1 circuit should be cut in two, also three new call-boxes should be installed in the centre of the town, placed, say, one on the corner of Kenny Street and Rosemont Road, one on the corner of Devon and Seddon Streets, and the third on the front of the fire-station, this last one to have the glass panel lighted up at night.

I enclose herewith copy of instructions for the repair of hose.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

J. J. Ritchie, Esq., Secretary, Fire Board, Waihi.

During the year nine actual fires occurred in the district, causing a fire loss of £2,757. The attendance of the brigade at thirty-two calls, No. 30 omitted, averaged 9.84 members per call.

WHANGAREI.

An inspection of the Whangarei Brigade and its equipment was made on the 5th October last. The inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,— Office of Inspector of Fire Brigades, Wellington, 18th October, 1917.

An inspection of the Whangarei Fire Brigade and its equipment was made on the 5th instant, and in that connection I beg to submit the following report for the consideration of your Board:—

At the inspection muster there was present the Superintendent, Deputy, and eight firemen; these, with six on leave, accounted for the full strength of the brigade.

A practice with the motor hose-tender was carried out, and, in reference to that machine, the body is not well designed for smart or convenient work, and at some later favourable opportunity it should be altered in the manner suggested. I found the station and appliances in good order and condition. The hydrant-indicators are badly in want of paint generally; they are so rusty that at night it is a difficult matter to distinguish them at all; also in some cases they are being overgrown by the green hedges, which should be cut away. A regular inspection of the street hydrants should be instituted. The doors of the reel-sheds in both Vine Town and Mair Town are at present only fastened by means of an ordinary bolt, and I understand there has been some interference with the sheds and plant. I would recommend a glass panel be fixed in one door and the doors then fastened by an internal latch-lock, the ordinary access being by means of a key.

It will be noted that on the occasion of the inspection muster six of the firemen were on leave, and of that number five were out of the district and one was laid up sick, so that for the time being, had an outbreak of fire occurred, only ten members of the brigade were available for duty. Of course, it was an exceptional case, but it is liable to happen at any time, and I understand there is nearly always some of the men out of the town. In any case I would advise that the brigade be strengthened numerically on the lines as fully explained to various members of your Board.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

C. J. Eccles, Esq., Secretary, Fire Board, Whangarei.

As compared with 1916–17, there was a decrease of one in the number of fires occurring in the district during 1917–18, but an increase of £1,273 in the fire loss. The attendance of the brigade at the five calls averaged 11.6 members per call.

WOOLSTON.

An inspection of the Woolston Brigade and its equipment was made on the 14th February last. The inspection is covered by the following report forwarded to the Secretary of the Board:—

SIR,— 20th February, 1918.

An inspection of the Woolston Fire Brigade, its station, and equipment was made on the 14th instant, and in that connection the following report is forwarded for the consideration of your Board:—

There was present at the inspection muster the Deputy Superintendent, six firemen, and one messenger; these, with the Superintendent on sick-leave and one messenger on leave, accounted for the full strength of the brigade (ten) then on the roll.

Drill with the motor machine chemical-engine and hand-pumps was carried out in a satisfactory manner, and the station and equipment are in good order and condition.

I would again, as in previous years, bring before your Board the urgent need for installing some means for the prompt summoning of the brigade in case of fire. To a practical fireman the present position is somewhat singular in that, having built a new up-to-date fire-station and tower and furnished it with a motor chemical-engine, there is as yet no adequate means of sounding an alarm, rendered more particularly necessary in Woolston owing to there being no water-supply for fire-extinction purposes; consequently the borough relies for protection upon a chemical-engine and other first-aid appliances, which essentially demand prompt application if any successful results are to be obtained; therefore I would strongly recommend your Board to install a suitable bell or a hand-worked siren similar to those that have been in successful use for some time past in several of the Wellington suburbs. These sirens are manufactured in Wellington, and are specially tuned for use as a general fire-alarm. In addition to, or instead of being worked by hand, they may, if required, be made to work with either electric or water power.

I have, &c.,

THOS. T. HUGO,

Inspector of Fire Brigades.

The Secretary, Fire Board, Woolston.

During 1917-18 six fires occurred in the district as against nine during 1916-17, a decrease of three, with a decrease of £609 in the fire loss. The attendance of the brigade at seven calls averaged three members per call.

Approximate Cost of Paper.—Preparation, not given; printing (1,050 copies), £22 10s.

By Authority : MARCUS F. MARKS, Government Printer Wellington.—1918

Price 9d.]