TENTH ANNUAL REPORT

OF

THE FIRE MARSHAL

FOR THE PROVINCE OF

BRITISH COLUMBIA

STATISTICS, 1931

PRINTED BY
AUTHORITY OF THE LEGISLATIVE ASSEMBLY.

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1932.

To His Honour J. W. FORDHAM JOHNSON,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Tenth Annual Report of the Fire Marshal for the year ended December 31st, 1931.

R. H. POOLEY,
Attorney-General.

Victoria, B.C., March 31st, 1932.

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REPORT OF FIRE MARSHAL.

OFFICE OF FIRE MARSHAL,
VANCOUVER, B.C., March 31st, 1932.

The Honourable R. H. Pooley, K.C.,
Attorney-General, Victoria, B.C.

SIR,—Pursuant to section 34 of the "Fire Marshal Act," I have the honour to submit my Tenth Annual Report as Fire Marshal for the year ended December 31st, 1931.

You will be pleased to note a decrease of loss, as compared with the same period in 1930, of approximately $1,600,000. Over $1,000,000 of this decrease must be credited to the City of Vancouver. In no city in Canada or the United States for which this office has a record is the work of fire prevention and investigation so well carried out as in the City of Vancouver. The record speaks for itself. This is highly creditable to Chief C. W. Thompson and the officers of his staff who are responsible.

The above comment is not in any sense a reflection on the excellent work being done by other assistant fire marshals in towns and cities of the Province, many of whom are working under adverse conditions without remuneration, and, in a number of cases, without proper support and co-operation from the local authorities. It is to be noted, however, that the work of the assistant fire marshals is being better understood and more appreciated by the public at large than ever before. They report to me that in many cases their services and advice are solicited by the citizens and any suggestions made for the removal of fire hazards are promptly carried out.

Fire Investigation.—Owing to the economic conditions existing the work of the office along this line has been greatly increased during the year. Mr. W. A. Walker, Deputy Fire Marshal in charge of this work, has been very active, having investigated 207 fires reported as of suspicious origin and held or assisted at twenty-six inquiries under section 12 of the Act. As a result of this work five persons were charged with arson, three charges of conspiracy to defraud insurance companies were laid, two convictions were secured, and three cases are now before the Court. While a charge of arson is admitted to be one of the hardest crimes to prove, yet our work in these cases was not without result.

In the case of one incendiary fire a claim for the sum of $32,000 was made and proofs of loss submitted. On the advice of this office the matter went to arbitration. Evidence secured at the Fire Marshal's inquiry was used, with the result that the claim was reduced to $4,500, and the companies interested have denied liability on the ground of fraud. This failure to "sell out to the insurance companies" put a stop for the moment to the activities of an organized arson gang that has attempted to operate in this Province.

It is pleasing to note, however, that in spite of the activities of these people, only 1.75 per cent. of our total fires was found to be of incendiary origin. This statement is based on the fact that a thorough investigation of all suspicious fires is made by this office. While we are unable, in many cases, to ascertain the causes of fires, we do find an entire absence of motives or circumstances which would justify us in ascribing them to incendiarism. In view of these facts we feel that we are justified in stating that the moral hazard in the Province, from an insurance standpoint, is excellent.

Fire Protection.—In spite of prevailing conditions a number of our cities and municipalities have improved their fire protection by the purchase of new equipment, repairing existing equipment, etc. These include Nanaimo, Rossland, Saanich, Victoria, and West Vancouver. The City of New Westminster has completed negotiations whereby the water system of the city will be connected with that of the Vancouver and District Water Board. This will ensure them of an adequate water-supply at all times for fire protection. In the City of Vancouver they have completed and placed in commission what I am advised is the most modern and complete fire-alarm system on this continent. This will ensure prompt response to fire-alarms by the Department and will undoubtedly be the means of reducing the amount of property destroyed.

It is also reported, although I have no official knowledge of the matter, that there is a fire-boat on the Burrard water-front of the city. I am advised that this boat is not under the control of the Vancouver Fire Department and is manned by men who have absolutely no training in the work of fire-fighting. If this latter report is correct it is regrettable.

Hotels and Apartments.—The question of the safety of hotels and apartments having been brought to our attention by the loss of two lives in a hotel fire, instructions were sent out to

the assistant fire marshals to ascertain if the requirements of section 24 of the Act were being enforced. A large number of delinquents were found. Orders were immediately issued to them to bring these places up to the required standard. Our reports show that these orders have been generally complied with.

Educational Work.—Owing to the pressure of other duties it has been impossible for myself and staff to give very much attention to this phase of our work, important as it is. On Vancouver Island, however, the work was ably carried on by the members of the Victoria and District Fire Insurance Agents' Association working in conjunction with Chief Stewart, of Victoria, representing this office. The work of the organization and the secretary, Mr. F. F. Fatt, in the schools and homes cannot be too highly commended. Great credit is also due to the press of the City of Victoria for publicity given to the work of fire prevention, and to the members of the trustee boards of the district for their co-operation and support.

In this connection I think I should refer to the convention of the British Columbia Fire Chiefs and Assistant Fire Marshals held in Vancouver. This was one of the most practical conventions of fire chiefs I ever had the privilege of attending. In making our inspections throughout the Province we find a great advance and improvement in methods of fire protection and prevention as a result of this convention.

Regulations governing Inflammable Liquids.—With reference to the handling of these liquids, these regulations, which were put in force by Order in Council on May 14th of last year, have given us control of what was fast developing into a serious situation. While there was some friction at first in connection with their enforcement, they are now working smoothly and efficiently.

Theatres.—An amendment to the "Fire Marshal Act" passed in 1931 placed the motion-picture theatres under the control of the Fire Marshal in so far as their licensing, safety, and the qualifications for projectionists are concerned. The work of theatre inspection has been efficiently carried out by Mr. W. A. Oswald, who, in addition to his work in general fire prevention in hospitals, schools, and other public buildings, has inspected 247 theatres and their equipment and issued 123 orders for improvements. Two hundred and seven thousand feet of defective film has been ordered out of service.

The Board of Examiners have conducted sixty-four examinations for projectionists during the year, forty-one for first class, twenty for second, and three for third. Regulations under the Act governing the construction and licensing of theatres and the examination and qualifications for projectionists have been passed by Order in Council and are being enforced.

Government Institutions.—Regular inspection of all Government institutions at Essondale, New Westminster, Tranquille, Kamloops, Marpole, and Coquitlam has been made during the year. At Essondale and New Westminster new fire-resistive buildings that are a credit both to the architects and builders have been completed and are now occupied. Improvements have been made in fire exits in existing buildings. The improvement of the water-supply at New Westminster, as before noted, ensures an adequate water-supply for fire protection. While conditions in some of the older buildings are not all we would desire, we feel that a great advance in the safety of the institutions has been made.

At Tranquille improvements in the water-supply for fire protection is to be noted. A new fire-truck equipped with ample hose and ladders will be in commission at an early date and a fire department organized under an experienced chief. The housekeeping conditions in all our public institutions are always found to be excellent.

In conclusion, I wish to express, on behalf of myself and assistant fire marshals throughout the Province, our warm appreciation of the interest you as Minister of the Department have taken in our work. Without such support we would be seriously handicapped.

The Provincial Police have co-operated in every possible way, both in the unorganized districts and in the cities and municipalities policed by them.

As to the members of my staff, I can only say that without their interest and co-operation the work of the Fire Marshal's Office could not be carried on.

I have the honour to be,
Sir,
Your obedient servant,

J. ALFRED THOMAS,
Fire Marshal.

TABLE I.—INSPECTIONS MADE AND ORDERS ISSUED BY ASSISTANT FIRE MARSHALS.

Name.	Inspections.	Orders.
City Municipalities (33).		
Alberni	12	3
Armstrong	82	21
Chilliwack	2	2
Courtenay	.....	.....
Cranbrook	2,984	86
Cumberland	57	11
Duncan	163	89
Enderby	50	19
Fernie	574	30
Grand Forks	111	53
Greenwood	3	1
Kamloops	322	30
Kaslo	.....	.....
Kelowna	326	4
Ladysmith	55	36
Merritt	17	11
Nanaimo	638	12
Nelson	1,122	54
New Westminster	1,926	182
North Vancouver	1,261	163
Port Alberni	148	45
Port Coquitlam	.....	.....
Port Moody	72	2
Prince George	263	119
Prince Rupert	447	195
Revelstoke	171	4
Rossland	513	66
Salmon Arm	26	2
Slocan	.....	.....
Trail	1,722	112
Vancouver	46,896	5,051
Vernon	.....	.....
Victoria	10,557	192
Totals	70,520	6,595
District Municipalities (28).		
Burnaby	150	43
Chilliwack	16	1
Coldstream	.....	.....
Coquitlam	.....	.....
Delta	4	.....
Esquimalt	36	6
Fraser Mills	.....	.....
Glenmore	.....	.....
Kent	3	.....
Langley	.....	.....
Maple Ridge	.....	.....
Matsqui	.....	.....
Mission	151	6
North Cowichan	60	4
North Vancouver	.....	.....
Oak Bay	292	5
Peachland	.....	.....
Penticton	8	.....
Pitt Meadows	.....	.....
Richmond	28	1
Saanich	11	.....
Salmon Arm	.....	.....
Spallumcheen	.....	.....
Sumas	.....	.....
Summerland	21	4

TABLE I.—INSPECTIONS MADE AND ORDERS ISSUED BY ASSISTANT FIRE MARSHALS—*Continued.*

Name.	Inspections.	Orders.
District Municipalities—Continued.		
Surrey	-----	-----
Tadanac	16	-----
West Vancouver	-----	-----
Totals	796	70
Village Municipalities (14).		
Abbotsford	-----	-----
Burns Lake	-----	-----
Creston	56	-----
Gibsons Landing	-----	-----
Hope	-----	-----
Mission	134	16
New Denver	-----	-----
Quesnel	77	60
Silverton	3	2
Smithers	3	1
Stewart	21	11
Terrace	-----	-----
Vanderhoof	27	9
Williams Lake	-----	-----
Totals	321	99
Fire Districts (12).		
Cariboo, County of	44	7
Ioco	2	-----
Kootenay, County of	220	50
Nanaimo, County of	-----	-----
Pacific Mills, Limited	-----	-----
Powell River	508	-----
Prince Rupert, County of	121	16
University Area	203	-----
Vancouver, County of	-----	-----
Victoria, County of	-----	-----
Westminster, County of	-----	-----
Yale, County of	86	15
Totals	1,184	88
Grand totals	72,821	6,852
Grand totals, 1930	60,136	6,912
Grand totals, 1929	56,954	6,832
Grand totals, 1928	43,075	4,938
Grand totals, 1927	47,221	4,437

TABLE II.—FIRES REPORTED.

Districts reporting.	Number.	Amount of Loss.
City Municipalities (33).		
Alberni	2	$94
Armstrong	6	2,929
Chilliwack	8	11,972
Courtenay	2	82
Cranbrook	18	6,259
Cumberland	3	370
Duncan	7	60,213
Enderby	1	10
Fernie	15	7,145
Grand Forks	7	9,170
Greenwood	.....	.....
Kamloops	18	19,768
Kaslo	5	8,434
Kelowna	29	6,274
Ladysmith	13	10,015
Merritt	6	13,565
Nanaimo	33	9,810
Nelson	21	11,641
New Westminster	67	81,018
North Vancouver	48	30,171
Port Alberni	6	4,275
Port Coquitlam	5	13,010
Port Moody	6	3,713
Prince George	17	17,421
Prince Rupert	20	11,797
Revelstoke	10	18,902
Rossland	10	5,272
Salmon Arm	1	35
Slocan	.....	.....
Trail	18	12,607
Vancouver	1,104	481,324
Vernon	14	32,976
Victoria	153	167,456
Totals	1,673	$1,057,728
District Municipalities (28).		
Burnaby	114	$120,406
Chilliwack	25	28,901
Coldstream	2	9,678
Coquitlam	9	21,752
Delta	1	2,750
Esquimalt	13	36,385
Fraser Mills	.....	.....
Glenmore	4	9,605
Kent	11	8,599
Langley	27	52,531
Maple Ridge	33	95,094
Matsqui	10	19,149
Mission	7	8,719
North Cowichan	13	53,693
North Vancouver	20	12,307
Oak Bay	49	33,479
Peachland	2	2,563
Penticton	10	4,580
Pitt Meadows	3	4,872
Richmond	16	15,759
Saanich	36	44,075
Salmon Arm	3	5,360
Spallumcheen	2	7,366
Sumas	5	2,251
Summerland	3	8,602
Surrey	38	67,532
Tadanac	9	2,700
West Vancouver	18	7,378
Totals	483	$686,086

TABLE II.—FIRES REPORTED—*Continued.*

Districts reporting.	Number.	Amount of Loss.
Village Municipalities (14).		
Abbotsford	5	$12,279
Burns Lake	7	13,227
Creston	2	8,680
Gibsons Landing	1	45
Hope	.....	.....
Mission	7	6,895
New Denver	.....	.....
Quesnel	2	306
Silverton	1	7,468
Smithers	3	7,321
Stewart	7	4,980
Terrace	7	16,644
Vanderhoof	2	871
Williams Lake	.....	.....
Totals	44	$78,716
Fire Districts (12).		
Cariboo, County of	54	$227,076
Ioco	4	327
Kootenay, County of	128	255,944
Nanaimo, County of	96	316,338
Pacific Mills, Limited	6	5,268
Powell River	6	172
Prince Rupert, County of	29	57,039
University Area	6	2,502
Vancouver, County of	24	120,871
Victoria, County of	24	75,650
Westminster, County of	15	60,842
Yale, County of	88	217,835
Totals	480	$1,339,864
Grand totals	2,680	$3,162,394

NOTE.—Construction of buildings—

Fire-resisting	18,	loss	$3,636
Brick or concrete	219,	,,	270,349
Frame	2,443,	,,	2,888,409
	2,680,	,,	3,162,394

TABLE III.—CAUSES OF FIRES.

Causes of Fires.	Number.	Amount of Loss.
Acetylene-torch carelessness	1	$155
Ashes against wood	19	9,641
Asphalt boiling over	1	21
Boiler insufficiently protected	2	3,281
Brush and comb, drying in oven, ignited	1	7
Candle carelessness	13	30,456
Carburettor back-firing	33	19,347
Car upset	4	1,475
Chair too near stove	1	20
Children playing with fire	2	954
Cleaning-rags left on engine	1	179
Clothes too near fireplace	3	36
Clothes too near furnace	2	13
Clothes too near stove or stove-pipe	57	8,465
Coal-gas explosion	3	743
Coat hung on compressor-pipe	1	27
Collision	1	445
Curtains from candle	11	386
Curtains from lamp	2	1,036
Curtains from stove	3	4,930
Defective belt	1	97
Defective brooder	3	760
Defective chimney	140	135,384
Defective film	3	513
Defective fireplace	24	2,488
Defective furnace or furnace-pipe	6	8,908
Defective matches	2	30
Defective motor	1	2,125
Defective oil-burner	5	807
Defective stove or stove-pipe	30	19,436
Defective wiring	26	135,634
Electrical appliances	110	19,651
Ether explosion	1	29
Explosion of child's steam toy	1	26
Exposure	134	156,586
Fire-crackers	16	7,322
Floor-boards ignited by exhaust-pipe	1	12
Friction of logging-cable	2	23,253
Friction on brake-drum	2	911
Furnace or furnace-pipe insufficiently protected	8	3,748
Gas-burner insufficiently protected	1	15
Gas explosion	1	1,000
Gas-furnace back-firing	1	25
Gasoline carelessness	31	23,376
Gasoline explosion	5	9,067
Gasoline on exhaust-pipe	10	1,961
Gasoline-torch carelessness	3	1,644
Gas-plate insufficiently protected	2	281
Grease on stove	28	4,509
Hot soldering-iron carelessness	1	7
Incendiary	47	194,890
Lamp explosion	2	2,970
Lamp upset	7	11,259
Lantern upset	4	3,583
Lightning	8	43,990
Live coals	29	508
Loose hay ignited by hot muffler	2	5,249
Match carelessness	32	3,718
Matches, children with	32	4,524
Matches, mice with	2	3,254
Mattress too near stove	1	600
Oil-furnace back-firing	3	1,483
Oil-stove explosion	2	537
Overheated dry-kiln	2	21,701

TABLE III.—CAUSES OF FIRES—*Continued.*

Causes of Fires.	Number.	Amount of Loss.
Overheated electric motor	2	$142
Overheating of machinery bearings	2	140,084
Paper from stove	2	1,165
Rubbish too near stove	1	190
Samples ignited from gas-heater	1	25
Short circuit	98	61,251
Smokers' carelessness	513	55,764
Sparks from boiler	6	147,585
Sparks from bonfire	9	2,269
Sparks from burning rubbish	2	1,633
Sparks from bush fire	44	137,416
Sparks from chimney	204	134,763
Sparks from cupola	1	308
Sparks from engine	1	2,532
Sparks from fireplace	184	10,312
Sparks from forge	3	7,314
Sparks from furnace or furnace-pipe	9	49,094
Sparks from locomotive	1	50
Sparks from mill burner	5	89,489
Sparks from motor	3	6,860
Sparks from stove or stove-pipe	60	50,066
Spontaneous combustion	37	54,905
Static electricity	3	276
Stove explosion	6	1,220
Stove-lid fell on floor	1	15
Stove or stove-pipe insufficiently protected	101	73,836
Sulphur burning	2	86
Sun's rays	1	40
Tar boiling over	9	6,450
Thawing pipes	2	30
Unknown	417	1,184,549
Varnish boiling over	1	10
Water in lime	1	27
Wood too near furnace	4	405
Wood too near stove	11	2,745
Totals	2,680	$3,162,394

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES.

Property.		Causes.		Amount of Loss.	
Apartments	107	Ashes against wood	1	$2,232	
		Clothes too near stove	1	25	
		Defective oil-burner	2	463	
		Defective stove	1	110	
		Electrical appliances	6	105	
		Fire-crackers	2	77	
		Gasoline carelessness	1	264	
		Grease on stove	1	10	
		Live coals	1	8	
		Match carelessness	3	101	
		Matches, children with	1	25	
		Oil-furnace back-firing	1	348	
		Short circuit	1	213	
		Smokers' carelessness	74	2,994	
		Sparks from chimney	2	40	
		Sparks from fireplace	2	55	
		Spontaneous combustion	1	302	
		Stove-pipe insufficiently protected	1	5	
		Unknown	5	43,130	
					$50,507
Armouries	1	Incendiary	1		275
Asphalt in barrels	1	Asphalt boiling over	1		21
Automobile camps	2	Exposure	1	$825	
		Sparks from stove	1	31	
					856
Automobiles	180	Carburettor back-firing	29	$11,134	
		Car upset	4	1,475	
		Cleaning-rags left on engine	1	179	
		Collision	1	445	
		Defective wiring	1	9	
		Exposure	8	1,140	
		Floor-boards ignited by exhaust-pipe	1	12	
		Friction on brake-drum	2	911	
		Gasoline carelessness	5	1,077	
		Gasoline on exhaust-pipe	9	1,901	
		Loose hay ignited by hot muffler	2	5,249	
		Match carelessness	4	1,193	
		Short circuit	55	10,591	
		Smokers' carelessness	19	3,158	
		Sparks from bonfire	1	700	
		Sparks from bush fire	1	288	
		Unknown	37	13,472	
					52,934
Bakeries	4	Electrical appliances	1	$35	
		Spontaneous combustion	1	224	
		Unknown	2	5,661	
					5,920
Banks	3	Exposure	2	$451	
		Short circuit	1	536	
					987
Barber-shops	3	Exposure	3		2,158
Barns	57	Carburettor back-firing	1	$866	
		Defective wiring	1	5,729	
		Exposure	4	1,238	
		Gasoline explosion	1	2,750	
		Incendiary	2	6,945	
		Lamp upset	1	1,209	
		Lantern upset	1	1,592	
		Lightning	1	30	
		Short circuit	1	500	
		Smokers' carelessness	1	910	
		Sparks from bonfire	2	436	
		Sparks from bush fire	8	7,117	

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
		Sparks from chimney	1	$108	
		Spontaneous combustion	5	8,003	
		Unknown	27	39,621	
					$77,054
Barracks	5	Defective chimney	1	$6,000	
		Smokers' carelessness	2	9	
		Spontaneous combustion	1	798	
		Stove-pipe insufficiently protected	1	100	
					6,907
Bicycle-repair shops	1		1		75
Blacksmith-shops	6	Defective furnace	1	$5,961	
		Electrical appliances	1	206	
		Sparks from forge	2	3,876	
		Unknown	2	1,115	
					11,158
Boarding-houses	10	Defective match	1	$25	
		Electrical appliances	2	18	
		Live coals	1	5	
		Smokers' carelessness	2	20	
		Sparks from chimney	2	22	
		Spontaneous combustion	1	25	
		Unknown	1	6,000	
					6,115
Boat-building works	1	Unknown	1		3,261
Boat-houses	2	Exposure	1	$7	
		Tar boiling over	1	300	
					307
Bridges	6	Incendiary	2	$500	
		Smokers' carelessness	2	301	
		Unknown	2	6,513	
					7,314
Bunk-houses	5	Mattress too near stove	1	$600	
		Sparks from chimney	1	23	
		Sparks from mill burner	1	289	
		Unknown	2	18,106	
					19,018
Canneries	2	Incendiary	1	$46,880	
		Unknown	1	19,878	
					66,758
Cereal plants	1	Spontaneous combustion	1		59
Chicken-houses	21	Ashes against wood	2	$856	
		Defective brooder	3	760	
		Defective stove	1	200	
		Exposure	2	380	
		Lantern upset	2	1,794	
		Smokers' carelessness	2	1,612	
		Sparks from bonfire	1	325	
		Stove insufficiently protected	2	155	
		Unknown	6	7,047	
					13,129
Churches	12	Ashes against wood	1	$100	
		Defective chimney	1	9,461	
		Defective furnace-pipe	1	60	
		Defective wiring	1	88,661	
		Exposure	1	30	
		Gasoline-torch carelessness	1	103	
		Incendiary	2	25,861	
		Lightning	1	25	
		Sparks from furnace	1	840	
		Thawing pipes	1	15	
		Unknown	1	15	
					125,171

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
Clubs	12	Smokers' carelessness	7	$4,855	
		Sparks from chimney	3	215	
		Tar boiling over	1	1,250	
		Unknown	1	29	
					$6,349
Coal-chutes	1	Unknown	1		1,500
Cooperages	2	Sparks from stove	1	$450	
		Spontaneous combustion	1	220	
					670
Dairies	2	Live coals	1	$25	
		Unknown	1	729	
					754
Dry-cleaning establishments	5	Gasoline carelessness	1	$300	
		Gasoline explosion	1	594	
		Match carelessness	1	648	
		Static electricity	2	228	
					1,770
Dwellings	1,648	Ashes against wood	11	$3,945	
		Brush and comb, drying in oven, ignited	1	7	
		Candle carelessness	10	1,997	
		Chair too near stove	1	20	
		Children playing with fire	3	974	
		Clothes too near fireplace	3	36	
		Clothes too near furnace	2	13	
		Clothes too near stove or stove-pipe	52	8,332	
		Coal-gas explosion	3	743	
		Curtains from candle	10	385	
		Curtains from lamp	2	1,036	
		Curtains from stove	1	4,901	
		Defective chimney	123	91,830	
		Defective fireplace	23	2,151	
		Defective furnace or furnace-pipe	2	2,662	
		Defective match	1	5	
		Defective oil-burner	1	25	
		Defective stove or stove-pipe	23	18,834	
		Defective wiring	12	18,185	
		Electrical appliances	89	11,507	
		Ether explosion	1	29	
		Explosion of child's steam toy	1	26	
		Exposure	53	31,019	
		Fire-crackers	13	7,157	
		Furnace or furnace-pipe insufficiently protected	6	3,708	
		Gas-furnace back-firing	1	25	
		Gasoline carelessness	12	7,214	
		Gasoline explosion	2	723	
		Gasoline-torch carelessness	1	1,479	
		Grease on stove	20	2,623	
		Hot soldering-iron carelessness	1	7	
		Incendiary	25	34,494	
		Lamp explosion	2	2,970	
		Lamp upset	6	10,050	
		Lantern upset	1	197	
		Lightning	4	2,526	
		Live coals	26	470	
		Match carelessness	17	1,339	
		Matches, children with	25	3,752	
		Matches, mice with	2	3,254	
		Oil-furnace back-firing	1	30	
		Oil-stove explosion	1	135	
		Paper from stove	1	10	
		Short circuit	18	21,161	
		Smokers' carelessness	274	17,681	
		Sparks from bonfire	3	425	
		Sparks from burning rubbish	2	1,633	

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
		Sparks from bush fire	28	$80,168	
		Sparks from chimney	181	103,239	
		Sparks from fireplace	176	10,179	
		Sparks from furnace or furnace-pipe	5	33,425	
		Sparks from motor	1	25	
		Sparks from stove or stove-pipe	48	38,172	
		Spontaneous combustion	13	6,412	
		Static electricity	1	48	
		Stove explosion	5	1,183	
		Stove-lid fell on floor	1	15	
		Stove or stove-pipe insufficiently protected	80	63,041	
		Sulphur burning	2	86	
		Sun's rays	1	40	
		Tar boiling over	2	594	
		Thawing pipes	1	15	
		Unknown	196	351,110	
		Water in lime	1	27	
		Wood too near furnace	4	405	
		Wood too near stove	10	2,705	
					$1,012,614
Elevators (grain)	1	Incendiary	1		26,452
Factories (box)	1	Sparks from mill burner	1		30
Factories (gypsum and alabastine)	1	Electrical appliances	1		275
Factories (mattress)	1	Sparks from furnace	1		13,529
Factories (roofing material)	1	Tar boiling over	1		4,008
Factories (sash and door)	2	Unknown	2		1,659
Factories (tent and awning)	1	Sparks from motor	1		5,800
Factories (vinegar)	1	Defective wiring	1		2,548
Fertilizer plants	2	Lightning	1	$39,745	
		Spontaneous combustion	1	17,027	
					56,772
Fire-halls	1	Smokers' carelessness	1		30
Foundries	5	Boiler insufficiently protected	1	$3,131	
		Exposure	1	12	
		Sparks from chimney	1	18	
		Sparks from cupola	1	308	
		Sparks from forge	1	3,438	
					6,907
Fruit-packing plants	1	Exposure	1		1,151
Garages	49	Carburettor back-firing	1	$1,950	
		Defective wiring	1	19	
		Exposure	8	3,740	
		Gasoline carelessness	4	8,582	
		Grease on stove	1	1,151	
		Short circuit	7	11,001	
		Smokers' carelessness	5	3,869	
		Sparks from chimney	1	5	
		Sparks from motor	1	1,035	
		Spontaneous combustion	4	3,105	
		Unknown	16	76,257	
					110,714
Gasoline-stations	2	Coat hung on compressor-pipe	1	$27	
		Gasoline carelessness	1	250	
					277
Greenhouses	1	Unknown	1		1,000
Halls	13	Defective wiring	1	$50	
		Exposure	1	2,200	
		Matches, children with	1	379	
		Smokers' carelessness	4	60	
		Stove insufficiently protected	1	22	
		Unknown	5	9,856	
					12,567

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
Hospitals	5	Defective chimney	1	$41	
		Short circuit	1	316	
		Spontaneous combustion	1	30	
		Stove explosion	1	37	
		Unknown	1	31,500	
					$31,924
Hotels	65	Candle carelessness	1	$7,468	
		Defective furnace-pipe	1	175	
		Electrical appliances	2	384	
		Exposure	6	56,389	
		Incendiary	2	8,635	
		Short circuit	1	1,236	
		Smokers' carelessness	39	1,494	
		Sparks from chimney	2	28,683	
		Sparks from stove or stove-pipe	2	207	
		Spontaneous combustion	1	5,603	
		Stove insufficiently protected	1	15	
		Unknown	7	77,003	
					187,292
House-boats	3	Sparks from stove-pipe	1	$2	
		Stove-pipe insufficiently protected	1	500	
		Unknown	1	756	
					1,258
Launches	2	Gasoline carelessness	1	$450	
		Gasoline-torch carelessness	1	62	
					512
Laundries	4	Exposure	1	$1,302	
		Overheating of machinery bearings	1	664	
		Sparks from chimney	1	1,000	
		Unknown	1	153	
					3,119
Lime plants	1	Unknown	1	.....	6,069
Logging camps	6	Friction of logging-cable	2	$23,253	
		Sparks from bush fire	3	18,773	
		Sparks from engine	1	2,532	
					44,558
Lumber-piles	1	Unknown	1	.....	20
Lumber-yards	2	Unknown	2	.....	742
Machine-shops	5	Furnace insufficiently protected	1	$15	
		Gas-burner insufficiently protected	1	15	
		Unknown	2	121	
		Varnish boiling over	1	10	
					161
Meat-packing plants	1	Short circuit	1	.....	159
Motor-cycles	1	Carburettor back-firing	1	.....	397
Offices	10	Defective furnace	1	$50	
		Defective stove-pipe	1	22	
		Grease on stove	1	288	
		Incendiary	1	80	
		Smokers' carelessness	3	175	
		Unknown	3	4,242	
					4,857
Oil-houses	1	Exposure	1	.....	2,128
Oil-refining plants	1	Unknown	1	.....	226
Oil-tankers	1	Spontaneous combustion	1	.....	4,844
Pole camps	3	Sparks from bonfire	1	$373	
		Sparks from bush fire	2	24,661	
					25,034
Pool-rooms	2	Smokers' carelessness	1	$881	
		Unknown	1	1,030	
					1,911
Post-offices	1	Exposure	1	.....	59

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
Power-houses	4	Defective motor	1	$2,125	
		Lightning	1	1,664	
		Short circuit	1	1,000	
		Unknown	1	6,400	
					$11,189
Printing-offices	1	Overheated motor	1		42
Railway-stations	3	Defective wiring	1	$20	
		Sparks from bonfire	1	10	
		Unknown	1	12	
					42
Restaurants	20	Exposure	5	$17,715	
		Grease on stove	1	140	
		Incendiary	2	395	
		Short circuit	1	92	
		Smokers' carelessness	2	19	
		Sparks from stove	1	2,845	
		Stove or stove-pipe insufficiently protected	2	2,335	
		Unknown	6	13,633	
					37,174
Rinks	1	Unknown	1		18
Rooming-houses	30	Curtains from stove	2	$29	
		Defective chimney	2	2,190	
		Defective stove	1	17	
		Defective wiring	1	1,587	
		Electrical appliances	2	13	
		Exposure	1	57	
		Gas-plate insufficiently protected	1	271	
		Smokers' carelessness	14	3,821	
		Sparks from chimney	3	252	
		Sparks from fireplace	2	29	
		Unknown	1	20	
					8,286
Round-houses	1	Unknown	1		2,336
Sawmills	20	Incendiary	3	$17,314	
		Overheating of machinery bearings	1	139,420	
		Sparks from boiler	5	147,215	
		Sparks from mill burner	2	89,145	
		Spontaneous combustion	1	2,894	
		Unknown	8	118,838	
					514,826
Schools	14	Curtains from candle	1	$1	
		Defective chimney	1	425	
		Exposure	1	1,219	
		Gas-plate insufficiently protected	1	10	
		Incendiary	1	2,234	
		Match carelessness	1	50	
		Matches, children with	1	100	
		Short circuit	1	50	
		Sparks from chimney	1	55	
		Stove-pipe insufficiently protected	1	16	
		Unknown	4	13,725	
					17,885
Sheds	22	Candle carelessness	1	$80	
		Defective fireplace	1	337	
		Defective stove-pipe	1	170	
		Exposure	3	836	
		Gasoline carelessness	1	75	
		Matches, children with	3	185	
		Oil-stove explosion	1	402	
		Short circuit	1	80	
		Sparks from bush fire	1	409	
		Sparks from stove	1	618	
		Stove-pipe insufficiently protected	1	40	
		Unknown	7	1,911	
					5,143

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
Shingle-mills	6	Overheated dry-kiln	2	$21,701	
		Sparks from boiler	1	370	
		Sparks from mill burner	1	25	
		Spontaneous combustion	1	58	
		Unknown	1	41,224	
					$63,378
Shipyards	1	Defective wiring	1		1,000
Smelting plants	9	Boiler insufficiently protected	1	$150	
		Furnace-pipe insufficiently protected	1	25	
		Gas explosion	1	1,000	
		Overheated electric motor	1	100	
		Short circuit	1	50	
		Sparks from furnace	2	1,300	
		Sparks from locomotive	1	50	
		Tar boiling over	1	25	
					2,700
Stables	7	Exposure	2	$250	
		Gasoline carelessness	1	85	
		Incendiary	1	20	
		Stove insufficiently protected	1	330	
		Unknown	2	550	
					1,235
Steam-baths	1	Spontaneous combustion	1		4,818
Stockyards	1	Unknown	1		17,653
Stores	95	Ashes against wood	1	$110	
		Clothes too near stove	2	47	
		Defective chimney	4	6,408	
		Defective oil-burner	1	79	
		Defective stove-pipe	1	15	
		Defective wiring	1	1,925	
		Electrical appliances	4	7,034	
		Exposure	9	7,619	
		Gasoline carelessness	2	1,659	
		Incendiary	3	9,974	
		Match carelessness	7	402	
		Paper from stove	1	1,155	
		Rubbish too near stove	1	190	
		Short circuit	3	2,401	
		Smokers' carelessness	28	6,187	
		Sparks from chimney	5	1,103	
		Sparks from stove	1	6,953	
		Stove insufficiently protected	4	5,064	
		Unknown	17	54,498	
					112,823
Stores and apartments	11	Defective chimney	2	$9,856	
		Fire-crackers	1	88	
		Matches, children with	1	83	
		Short circuit	1	2,229	
		Smokers' carelessness	3	120	
		Sparks from fireplace	1	5	
		Spontaneous combustion	1	61	
		Stove-pipe insufficiently protected	1	10	
					12,452
Stores and dwellings	36	Clothes too near stove	2	$61	
		Defective chimney	3	1,260	
		Defective stove-pipe	1	68	
		Defective wiring	2	3,804	
		Electrical appliances	1	70	
		Exposure	6	12,444	
		Gasoline carelessness	2	2,920	
		Grease on stove	1	27	
		Incendiary	1	14	
		Smokers' carelessness	6	88	
		Sparks from fireplace	1	4	

TABLE IV.—CLASSIFICATION OF PROPERTY BURNED AND CAUSES—*Continued.*

Property.		Causes.		Amount of Loss.	
		Sparks from stove	2	$115	
		Stove or stove-pipe insufficiently protected	2	1,510	
		Unknown	6	19,480	
					$41,865
Stores and halls	1	Unknown	1		1,807
Stores and hotels	1	Smokers' carelessness	1		25
Stores and offices	18	Ashes against wood	1	$1,900	
		Candle carelessness	1	20,911	
		Defective oil-burner	1	240	
		Smokers' carelessness	9	1,348	
		Spontaneous combustion	1	422	
		Unknown	5	27,830	
					52,651
Stores, offices, and rooms	4	Incendiary	1	$4,905	
		Short circuit	1	75	
		Smokers' carelessness	1	10	
		Unknown	1	23,704	
					28,694
Stores and rooms	36	Ashes against wood	1	$23	
		Defective chimney	2	7,913	
		Defective wiring	1	1,531	
		Electrical appliances	1	4	
		Exposure	3	326	
		Grease on stove	2	250	
		Incendiary	2	16,702	
		Short circuit	1	3,500	
		Smokers' carelessness	10	4,067	
		Sparks from fireplace	1	30	
		Sparks from stove	2	673	
		Stove or stove-pipe insufficiently protected	2	693	
		Unknown	7	68,388	
		Wood too near stove	1	40	
					104,140
Street-cars	1	Short circuit	1		6,061
Theatres	9	Defective belt	1	$97	
		Defective film	3	513	
		Defective wiring	1	10,566	
		Sparks from chimney	1	10	
		Unknown	3	1,165	
					12,351
Tobacco plants	1	Unknown	1		800
Tractors	2	Gasoline carelessness	1	$560	
		Tar boiling over	1	60	
					620
Tug-boats	2	Carburettor back-firing	1	$5,000	
		Gasoline explosion	1	5,000	
					10,000
Warehouses	21	Ashes against wood	1	$475	
		Exposure	2	3,516	
		Incendiary	2	1,510	
		Oil-furnace back-firing	1	1,105	
		Smokers' carelessness	3	2,862	
		Sparks from bush fire	1	6,000	
		Tar boiling over	2	213	
		Unknown	9	41,829	
					57,510
Wharves	1	Acetylene-torch carelessness	1		155
Wood-staining plants	1	Samples ignited from gas-heater	1		25
Wood-working plants	1	Smokers' carelessness	1		60
Totals	2,680		2,680		$3,162,394

TABLE V.—SUMMARY.

	Fires reported.					Amount of Loss.				
	City Municipalities (33).	District Municipalities (28).	Village Municipalities (14).	Fire Districts (12).	Totals.	City Municipalities.	District Municipalities.	Village Municipalities.	Fire Districts.	Totals.
1931.										
January	141	41	7	37	226	$107,553	$18,270	$14,326	$44,972	$185,121
February	117	28	1	21	167	294,122	85,760	3,881	36,101	419,864
March	141	52	3	36	232	60,869	90,900	10,139	40,920	202,828
April	145	53	2	50	250	65,007	54,417	1,835	159,947	281,206
May	141	39	10	28	218	25,345	64,293	24,802	136,586	251,026
June	120	31	5	40	196	69,690	32,152	11,716	90,017	203,575
July	142	49	7	49	247	102,343	90,540	10,035	302,496	505,414
August	130	40	1	72	243	48,512	75,199	50	188,944	312,705
September	104	29	3	50	186	63,708	46,158	245	185,397	295,508
October	154	34	2	38	228	80,192	30,570	1,436	27,235	139,433
November	156	39	.....	33	228	62,670	41,115	.....	61,936	165,721
December	182	48	3	26	259	77,717	56,712	251	65,313	199,993
Totals, 1931	1,673	483	44	480	2,680	$1,057,728	$686,086	$78,716	$1,339,864	$3,162,394
Totals, 1930	1,764	468	20	460	2,712	2,139,926	1,135,883	19,121	1,406,160	4,701,090
Totals, 1929	1,583	370	14	419	2,386	2,264,496	391,798	13,384	1,520,422	4,190,100
Totals, 1928	1,095	729	19	353	2,196	1,074,509	565,846	58,392	968,807	2,667,554
Totals, 1927	1,019	610	33	360	2,022	942,053	703,540	95,432	881,970	2,622,995
	7,134	2,660	130	2,072	11,996	$7,478,712	$3,483,153	$265,045	$6,117,223	$17,344,133

TABLE VI.—LOSS OF LIFE, 1927–1931.

Occupancy.	Cause of Fire.	Loss of Life.	
		Adults.	Children.
Club	Tar boiling over	1	....
Dwelling	Defective wiring	....	1
Dwelling	Unknown	1	1
Hotel	Unknown	2	....
Store and dwelling	Stove-pipe insufficiently protected	2	....
Totals, 1931		6	2
Totals, 1930		8	5
Totals, 1929		5	....
Totals, 1928		16	....
Totals, 1927		8	4

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