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DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

AND

FIRE OFFICES' COMMITTEE

JOINT FIRE RESEARCH ORGANIZATION

STATISTICAL ANALYSIS

OF

REPORTS OF FIRES ATTENDED BY

FIRE BRIGADES IN THE UNITED KINGDOM

DURING 1959

(Prepared by the Joint Fire Research Organization for the Home Office, the Scottish Home Department and the Ministry of Home Affairs, Northern Ireland)

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January 1961

Fire Research Station

BOREHAM WOOD

Hertfordshire

(Telephone: Elstree 1341)

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PREFACE

Tables of statistics relating to fires attended by National and Local Authority Fire Services in the United Kingdom have been compiled annually since 1946. Summary tables have been published in the Annual Reports of the Joint Fire Research Organization.

With the agreement of the Home Office, the Scottish Home Department and the Ministry of Home Affairs, Northern Ireland, the tables for 1959 contained in this volume are generally available to interested persons.

By arrangement with the Home Office, the Scottish Home Department, the Ministry of Home Affairs, Northern Ireland, and Local Authorities, reports are received on all fires (other than chimney fires confined to chimneys) attended by a Local Authority Fire Brigade in the United Kingdom. The tables are compiled from these reports. They do not give information on all the fires that occur, but they give a useful assessment of all the fires to which Fire Brigades are called.

For this statistical analysis, a one-in-four sample has been used for all reports relating to fires in 1959, other than those of fires confined to grassland, heathland, and railway embankments, for which, on account of their exceptional number in 1959 and substantial homogeneity, a one-in-ten sample was used. Details of the method of selecting the sample, and information on the possible sampling errors involved, are given in the Appendix.

The tables are divided into four sections. The first section provides a summary of the United Kingdom fires for the years 1955-1959. More detailed statistical information for 1959 is given in sections II, III and IV for England and Wales, Scotland and Northern Ireland respectively.

Where percentages are given, these have been rounded up to the nearest tenth so that the sums of the constituents are not always equal to 100.

The monthly distributions of fire incidents are given diagrammatically in Figures 1 and 2. Figure 3 indicates the changes in annual incidence of fire in various indoor hazards for the period 1949-1959.

The total number of fires attended by Fire Brigades in the United Kingdom, excluding chimney fires confined to chimneys, increased from 101 912 in 1958 to 237 814 in 1959. In general, the number of fires in each hazard was greater in 1959 than in 1958 though there were several exceptions and the number in Navy, Army, Air Force and Fire Service establishments decreased by about a quarter. The greatest increase occurred in grassland, heathland and railway embankments, where it was more than five fold. In previous years, the numbers of fires in buildings and the numbers in hazards other than buildings have generally been of the same order, but in 1959, the numbers in buildings were only one quarter of the total.

Similarly, the numbers of fires due to most of the individual causes, were generally greater in 1959 than in 1958 but there were several exceptions and some downward trends apparent in previous years continued in 1959. Among these were fires ignited by "fire in grate", those attributed to gas heaters and those associated with electric refrigerators.

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Statistics of fires attended by Fire Brigades in the United Kingdom

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SECTION I

Table 1

HAZARD IN WHICH FIRE STARTED

Reports from Fire Brigades in the United Kingdom, 1955-1959

Hazard in which fire started	No. of fires				
	1955	1956	1957	1958	1959
Fires in buildings					
Industrial and agricultural premises	9 408	9 564	9 507	9 096	11 852
Gas, water, electricity and sewage undertakings	192	228	204	176	208
Transport and communications	2 148	1 940	1 966	2 124	2 644
Commercial premises	3 872	3 808	3 834	3 776	4 396
Offices, Government and other	636	568	542	628	684
Navy, Army, Air Force and Fire Service establishments	432	440	426	452	344
Professional establishments, public institutions	1 816	1 916	1 906	1 860	2 320
Places of public entertainment	616	748	753	744	864
Private residential houses and flats	23 520	24 468	22 767	24 332	26 640
Clubs, hotels, restaurants, public houses	2 888	2 560	2 813	2 812	2 896
Other buildings	4 964	5 224	5 976	5 992	8 480
TOTAL FIRES IN BUILDINGS	50 492	51 464	50 694	51 992	61 328
Fires other than those in buildings					
Crops, standing or stooked, ricks, stacks, etc.	3 596	1 484	1 974	1 316	4 452
Grassland, heathland, railway embankments	35 636	38 680	34 160	21 904	122 398
Woods, forests, plantations	724	1 352	1 703	412	3 288
Other hazards of agriculture and forestry	5 572	5 256	5 011	2 352	7 780
Aircraft	100	116	83	84	68
Railway rolling stock, etc.	616	452	530	328	768
Road vehicles	7 920	7 792	7 551	8 168	10 324
Ships and river craft; marine structures	652	712	658	572	668
Refuse	7 340	7 096	7 913	6 956	13 592
Outdoor storage	3 620	3 584	3 739	2 884	5 800
Other fires	5 504	5 180	5 268	4 944	7 348
TOTAL FIRES OTHER THAN THOSE IN BUILDINGS	71 280	71 704	68 590	49 920	176 486
TOTAL FIRES ATTENDED	121 772	123 168	119 284	101 912	237 814

SECTION I

Table 2A

SUPPOSED CAUSES OF FIRES IN BUILDINGS

Reports from Fire Brigades in the United Kingdom, 1955-1959

Supposed cause of fire	No. of fires				
	1955	1956	1957	1958	1959
Ashes, soot	1 088	984	952	996	1 288
Brazier	68	152	72	56	100
Camp fire, fire in open air	12	12	5	4	12
Candle	308	380	323	396	412
Chimney on fire, not confined to chimney	3 164	3 148	2 689	2 768	2 948
Chimney, sparks from (outside building)	416	456	387	244	288
Cooker, cooking range, oven, other than electric, town gas or oil	380	352	457	284	564
Electric cooker	976	1 184	1 335	1 452	1 864
fire, heater, radiator	1 416	1 288	1 090	1 320	1 248
iron	364	272	305	224	236
motor	268	324	322	372	316
refrigerator	880	752	800	788	732
wire and cable	2 536	2 416	2 043	2 436	2 936
wireless, television	540	604	680	692	756
other apparatus	1 772	1 792	2 030	2 028	2 336
Explosives, fireworks	272	268	292	384	516
Fire in grate igniting -					
bedding, clothing, linen	1 064	1 124	937	932	824
furniture and furnishings	1 116	1 052	839	812	792
structural timber under hearth	2 472	2 084	1 422	1 596	1 368
other materials	2 724	2 728	2 169	2 244	2 032
Fish frying range (all fuels)	936	924	960	1 012	928
Flue	956	948	747	700	748
Furnace (coal or coke)	64	64	44	48	48
Gas (town) burner, jet, ring	400	376	304	280	240
cooker	1 360	1 552	1 589	1 592	1 692
fire, heater, radiator	304	264	209	208	180
other apparatus	640	684	518	676	704
Incubator, brooder (all fuels)	720	764	576	680	624
Intentional burning of grassland, gorse, etc.	28	72	20	16	132
Lightning	104	132	249	196	164
Lime	-	12	6	8	16
Locomotives, sparks from	336	264	290	224	424
Malicious ignition (1)	244	312	357	396	424
Matches	924	844	681	616	760
Matches, children with(4)	3 192	3 464	4 675	4 716	6 468
Mechanical heat or sparks	588	616	590	576	724
Metal, hot	212	148	179	156	176
Naked light(2)	584	504	599	620	636
Oil blow lamp	1 036	1 204	845	776	1 008
engine (including petrol)	256	248	181	152	176
lamp, stove	1 224	1 844	1 948	3 036	3 404
tractor	80	76	90	92	68
other apparatus	200	308	261	312	360
Oxyacetylene cutting and welding apparatus	336	384	389	412	532
Rubbish burning	872	848	980	1 028	1 828
Slow combustion stove igniting -					
structural woodwork	400	408	297	276	320
other materials	1 032	1 096	1 005	960	984
Smoking materials	4 412	4 440	4 971	5 264	6 940
Spontaneous combustion	364	160	308	276	224
Static electricity	36	20	11	32	28
Steam roller, engine, traction engine	-	-	1	-	-
Sun's rays	120	36	109	36	128
Taper, lighted paper or sticks	380	296	269	264	272
Taper, lighted paper or sticks, children with(4)	156	148	212	316	372
Miscellaneous(3)	1 012	896	860	648	800
Unknown source of ignition	5 148	5 736	6 215	5 364	7 228
TOTAL FIRES IN BUILDINGS	50 492	51 464	50 694	51 992	61 328

Notes (1) Malicious ignition is a general heading for suspected or proven arson or incendiarism.
(2) No further information given in original reports.
(3) Not comparable with the miscellaneous category in Annual Statistical Tables for the years prior to 1954.
(4) A change in definition has increased the number of incidents in these categories in 1957 and succeeding years.

SECTION I

Table 2B

SUPPOSED CAUSES OF FIRES OTHER THAN THOSE IN BUILDINGS

Reports from Fire Brigades in the United Kingdom, 1955-1959

Supposed cause of fire	No. of fires				
	1955	1956	1957	1958	1959
Aircraft, crashed	80	92	63	40	36
Ashes, soot	1 872	1 728	1 719	1 304	2 498
Brazier	168	196	128	116	118
Camp fire, fire in open air	360	240	149	56	248
Candle	20	16	13	24	24
Chimney on fire not confined to chimney	4	12	8	4	4
Chimney, sparks from (outside building)	112	88	79	36	80
Cooker, cooking range, oven, other than electric, town gas or oil	16	16	22	24	36
Electric motor	36	32	54	40	48
wire and cable	2 724	2 812	2 447	2 524	2 848
other apparatus	1 056	1 120	1 087	1 064	1 134
Explosives, fireworks	708	620	530	492	1 784
Fire in grate igniting miscellaneous materials	-	-	-	-	20
Fish frying range (all fuels)	20	16	15	8	16
Flue	116	164	157	144	252
Furnace (coal or coke)	4	4	1	-	4
Gas (town) apparatus	512	392	339	412	320
Incubator, brooder (all fuels)	20	16	16	20	4
Intentional burning of grassland, gorse, etc.	824	1 068	477	604	3 408
Lightning	52	48	113	88	148
Lime	12	20	30	20	28
Locomotives, sparks from	13 340	9 688	17 138	5 596	33 932
Malicious ignition(1)	108	124	123	116	226
Matches	1 256	1 456	583	424	1 560
Matches, children with(4)	15 368	18 220	14 050	15 080	43 610
Mechanical heat or sparks	604	516	581	664	812
Metal, hot	96	56	95	52	138
Naked light(2)	1 252	1 376	1 161	868	7 262
Oil blow lamp	48	60	41	48	54
engine (including petrol)	2 784	2 432	2 358	2 828	3 134
lamp, stove	288	296	282	352	454
tractor	440	292	288	236	456
other apparatus	312	184	221	204	464
Oxyacetylene cutting and welding apparatus	432	476	439	504	704
Rubbish burning	6 940	6 420	5 503	3 532	14 836
Slow combustion stove	332	448	326	348	316
Smoking materials	7 060	6 508	6 757	4 676	28 292
Spontaneous combustion in rubbish	220	112	131	68	360
other materials	660	196	429	196	522
Static electricity	8	-	-	-	-
Steam roller, engine, traction engine	24	16	3	4	22
Sun's rays	296	104	353	28	620
Taper, lighted paper or sticks	176	184	129	80	212
Taper, lighted paper or sticks, children with(4)	52	84	107	156	332
Miscellaneous(3)	336	372	333	328	578
Unknown source of ignition	10 132	13 384	9 712	6 512	24 532
TOTAL FIRES OTHER THAN THOSE IN BUILDINGS	71 280	71 704	68 590	49 920	176 486

Notes (1) Malicious ignition is a general heading for suspected or proven arson or incendiarism.
(2) No further information given in original reports.
(3) Not comparable with the miscellaneous category in Annual Statistical Tables for the years prior to 1954.
(4) A change in definition has increased the number of incidents in these categories in 1957 and succeeding years.

SECTION I

Table 3A

METHOD OF EXTINCTION OF FIRES IN BUILDINGS

Reports from Fire Brigades in the United Kingdom, 1955-1959

	Method of extinction	Extinguished before arrival of Fire Brigade					Extinguished by Fire Brigade					Total				
		1955	1956	1957	1958	1959	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
1	Burned out	844	880	1 032	1 040	1 248	-	-	-	-	-	844	880	1 032	1 040	1 248
2	Removal	1 100	1 268	1 287	1 520	1 464	3 008	2 864	3 040	2 896	3 552	4 108	4 132	4 327	4 416	5 016
3	Automatic sprinkler system	60	48	51	48	52	-	-	-	-	-	60	48	51	48	52
4	Beating	316	204	234	244	236	64	68	68	68	36	380	272	302	312	272
5	Smothering	952	1 076	773	816	824	388	328	298	424	340	1 340	1 404	1 071	1 240	1 164
6	Sand, earth, etc.	188	140	169	336	192	44	80	63	44	40	232	220	232	380	232
7	Water from buckets	3 368	3 668	3 428	3 344	3 696	2 636	2 656	2 118	2 092	2 272	6 004	6 324	5 546	5 436	5 968
8	Water from stirrup or hand pumps	48	40	41	72	44	4 408	4 216	3 472	3 472	3 448	4 456	4 256	3 513	3 544	3 492
9	Chemicals and chemical extinguishers	1 148	1 232	1 269	1 404	1 360	1 916	1 856	1 838	1 908	1 868	3 064	3 088	3 107	3 312	3 228
10	Two or more methods 4-9	436	384	352	436	708	248	156	198	192	536	684	540	550	628	1 244
11	Water from garden hose	216	224	248	156	288	-	-	-	-	-	216	224	248	156	288
12	Hose reel jets (using water in tank only)	40	52	54	48	84	18 568	19 788	20 218	21 412	25 544	18 608	19 840	20 272	21 460	25 628
13	Hose reel jets (using more water than that in tank)	-	4	9	-	8	2 552	2 236	2 258	2 252	3 020	2 552	2 240	2 267	2 252	3 028
14	Jets from inside hose reel or inside hydrant	60	112	93	120	100	100	108	124	120	156	160	220	217	240	256
15	Hose reel jets and jets from inside hose reel or inside hydrant	-	-	-	-	-	28	36	20	16	28	28	36	20	16	28
16	Jets from pumps and hydrants	96	92	89	96	108	6 536	6 464	6 765	6 292	8 952	6 632	6 556	6 854	6 388	9 060
17	Other and undefined methods	616	656	616	648	652	508	528	469	476	472	1 124	1 184	1 085	1 124	1 124
18	TOTAL FIRES IN BUILDINGS	9 488	10 080	9 745	10 328	11 064	41 004	41 384	40 949	41 664	50 264	50 492	51 464	50 694	51 992	61 328

Notes on methods of extinction

1. "Removal" includes occurrences where (a) burning material was removed from the building (b) gas supply was turned off. If the burning material was tackled with methods 3-11 before removing it from the building, then such occurrences were classified under whichever of these methods applied.
2. Methods 11-15 and method 16 include those occurrences in which methods 3-10 and 3-15 respectively may also have been used.
3. "Fires extinguished by the Fire Brigade" include those fires which were tackled but not extinguished before the arrival of the Fire Brigade.

SECTION I

Table 3B

METHOD OF EXTINCTION OF FIRES OTHER THAN THOSE IN BUILDINGS

Reports from Fire Brigades in the United Kingdom, 1955-1959

Method of extinction	Extinguished before arrival of Fire Brigade					Extinguished by Fire Brigade					Total				
	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
1 Burned out	1 572	1 720	1 672	1 504	2 944	-	-	-	-	-	1 572	1 720	1 672	1 504	2 944
2 Removal	508	416	387	416	436	728	664	697	772	780	1 236	1 080	1 084	1 188	1 216
3 Automatic sprinkler system	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Beating	1 432	1 440	1 090	1 180	2 562	11 540	15 456	11 112	11 160	34 790	12 972	16 896	12 202	12 340	37 352
5 Smothering	428	428	415	448	414	56	52	63	76	50	484	480	478	524	464
6 Sand, earth, etc.	312	276	265	404	350	188	192	121	96	220	500	468	386	500	570
7 Water from buckets	1 160	1 136	1 110	916	1 556	620	616	636	392	968	1 780	1 752	1 746	1 308	2 524
8 Water from stirrup or hand pumps	12	16	5	12	4	340	348	322	176	396	352	364	327	188	400
9 Chemicals and chemical extinguishers	1 276	1 176	1 029	1 004	1 290	2 108	1 872	1 796	1 972	2 126	3 384	3 048	2 825	2 976	3 416
10 Two or more methods 4-9	316	260	278	208	382	880	1 020	949	356	1 826	1 196	1 280	1 227	564	2 208
11 Water from garden hose	120	96	136	116	176	-	-	-	-	-	120	96	136	116	176
12 Hose reel jets (using water in tank only)	200	380	304	148	552	31 552	32 120	33 074	20 944	90 356	31 752	32 500	33 378	21 092	90 908
13 Hose reel jets (using more water than that in tank)	8	-	8	12	10	2 896	2 076	2 353	1 180	7 048	2 904	2 076	2 361	1 192	7 058
14 Jets from pumps and hydrants	232	200	242	176	220	12 244	9 288	10 104	5 832	25 342	12 476	9 488	10 346	6 008	25 562
15 Other and undefined methods	356	316	283	320	1 060	196	140	139	100	628	552	456	422	420	1 688
16 TOTAL FIRES OTHER THAN THOSE IN BUILDINGS	7 932	7 860	7 224	6 864	11 956	63 348	63 844	61 366	43 056	164 530	71 280	71 704	68 590	49 920	176 486

Notes on methods of extinction

1. Methods 10-12 and method 13 include those occurrences in which methods 3-9 and 3-12 respectively may also have been used.

2. "Fires extinguished by the Fire Brigade" include those fires which were tackled but not extinguished before the arrival of the Fire Brigade.

SECTION I

Table 4

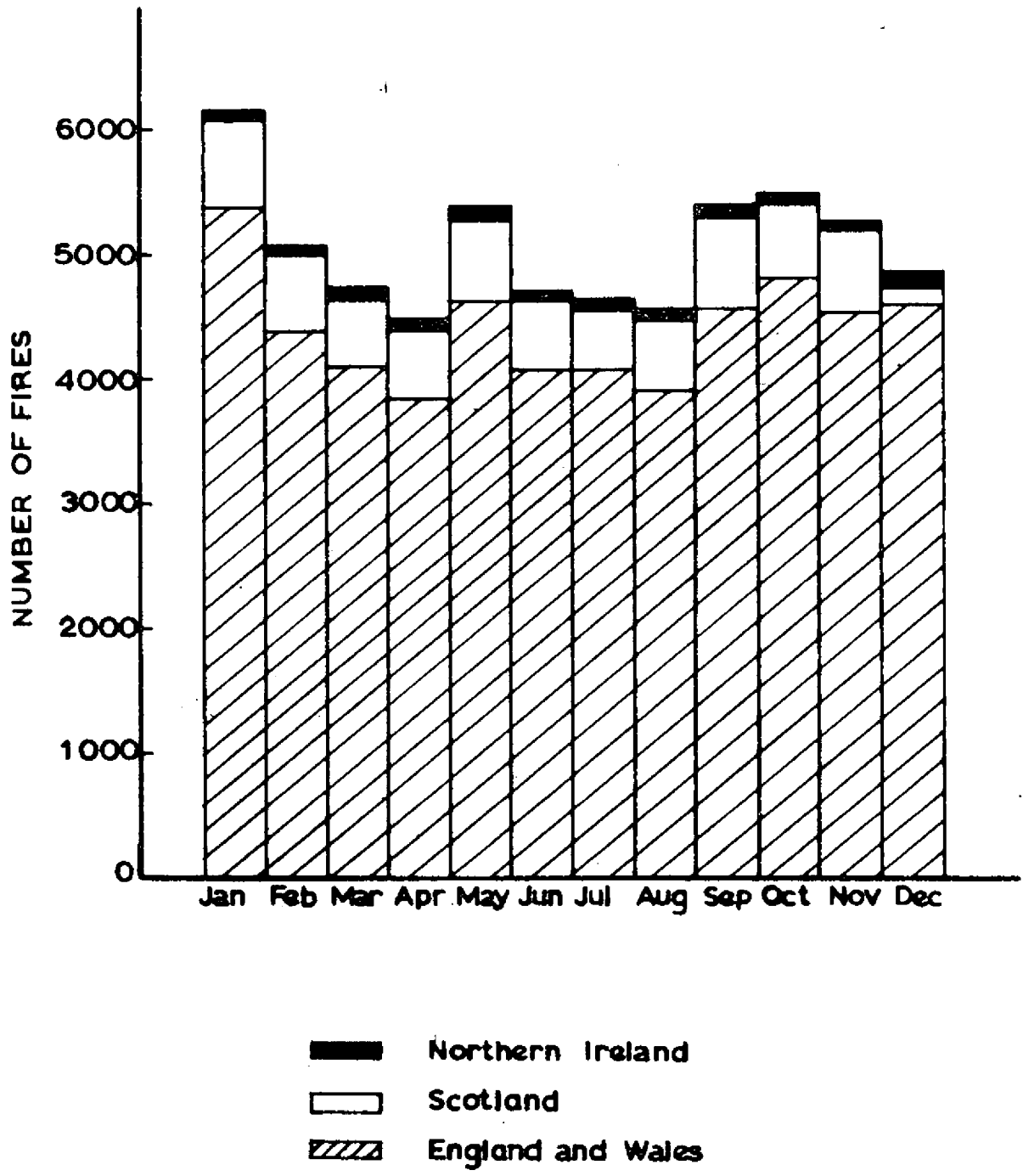
CASUALTIES IN FIRES

Reports from Fire Brigades in the United Kingdom, 1955-1959*

Casualties	England and Wales					Scotland					Northern Ireland					United Kingdom				
	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959	1955	1956	1957	1958	1959
Fatal casualties																				
Fire Brigade	2	2	5	2	-	-	-	-	-	-	-	-	-	-	-	2	2	5	2	-
Other casualties	574	461	439	393	425	50	61	54	51	50	7	5	9	5	12	631	527	502	449	487
Total	576	463	444	395	425	50	61	54	51	50	7	5	9	5	12	633*	529*	507*	451*	487*
Non-fatal casualties †																				
Fire Brigade	347	342	328	285	321	60	25	22	26	32	10	7	8	8	10	417	374	358	319	363
Other casualties	3 065	2 928	2 627	2 683	2 712	218	195	166	168	201	44	47	28	36	32	3 327	3 170	2 821	2 887	2 945
Total	3 412	3 270	2 955	2 968	3 033	278	220	188	194	233	54	54	36	44	42	3 744	3 544	3 179	3 206	3 308
TOTAL CASUALTIES	3 988	3 733	3 399	3 363	3 458	328	281	242	245	283	61	59	45	49	54	4 377	4 073	3 686	3 657	3 795

* The number of fatalities is less than the number of deaths recorded by the Registrar General as being due to conflagration and accidental burns and scalds because although the Fire Brigades most probably attend all occurrences where persons are burnt to death by being trapped in burning buildings, etc., they only attend a proportion of the much larger number of incidents where deaths due to accidental burns and scalds occur.

† Excludes casualties requiring first-aid treatment only.



REPORTS FROM FIRE BRIGADES IN THE UNITED KINGDOM 1959

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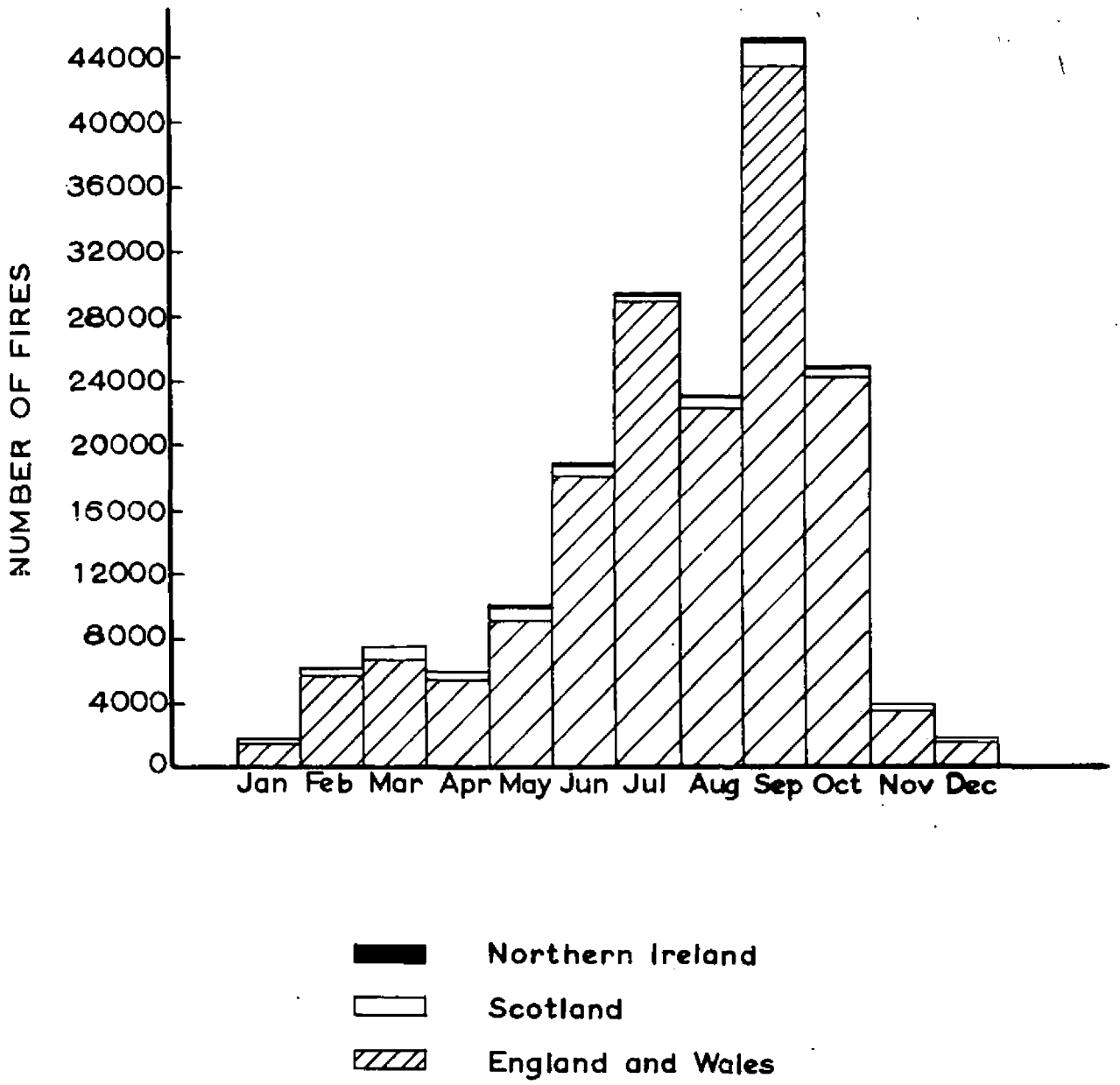
FIG.1. FIRES IN BUILDINGS CLASSIFIED ACCORDING TO THE MONTH IN WHICH THEY OCCURRED



REPORTS FROM FIRE BRIGADES IN THE UNITED KINGDOM 1959

FIG.2. FIRES OTHER THAN THOSE IN BUILDINGS CLASSIFIED ACCORDING TO THE MONTH IN WHICH THEY OCCURRED

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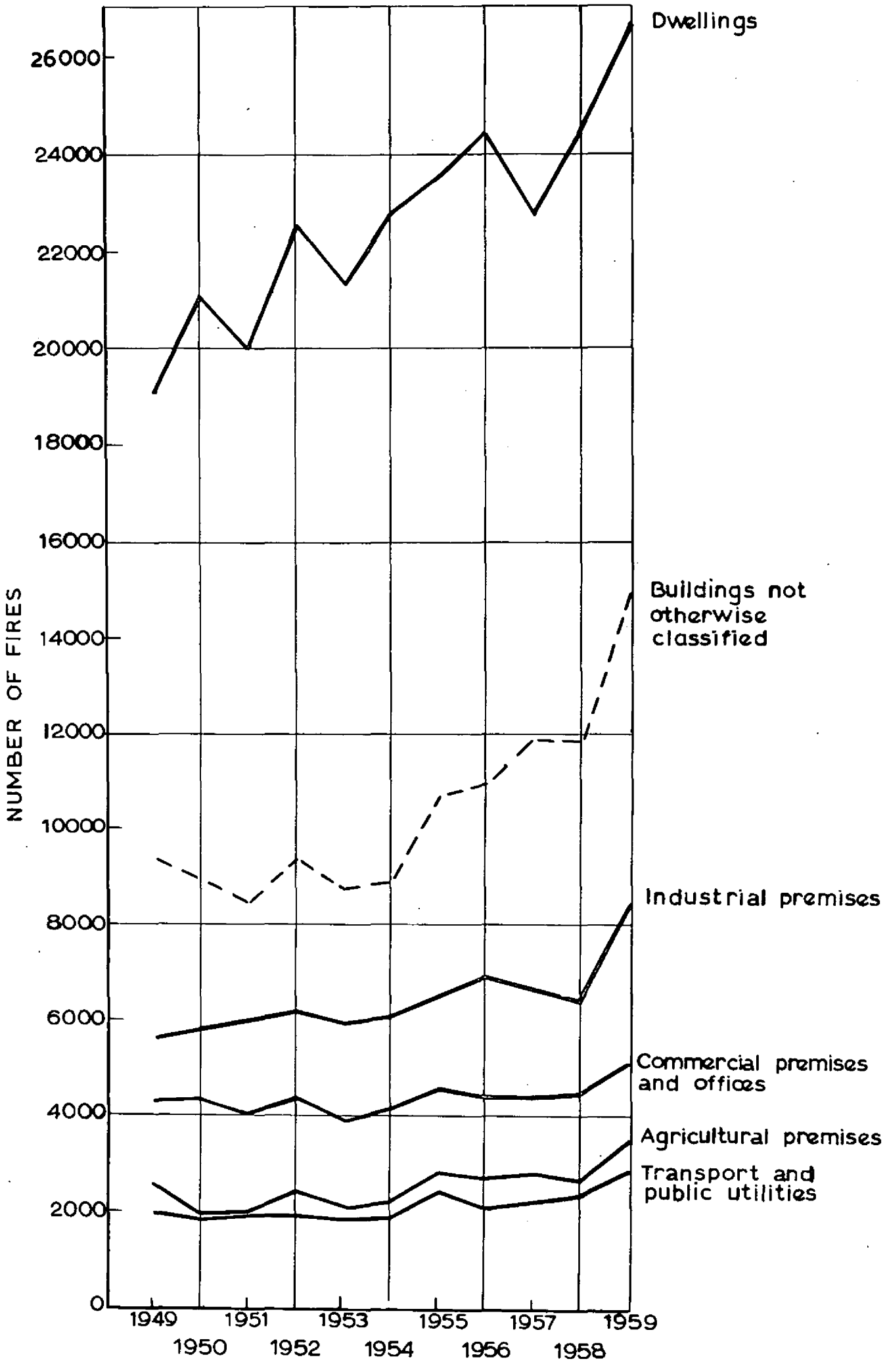

FIG. 3. FIRES IN BUILDINGS ACCORDING TO OCCUPANCY (UNITED KINGDOM 1949-1959)

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SECTION II

STATISTICAL TABLES FOR FIRE BRIGADES IN ENGLAND AND WALES, 1959

Table 1

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from England and Wales, 1959

Method of Calling	County Fire Brigades																													
	Anglesey	Bedfordshire	Berkshire and Reading C.B.	Breconshire and Radnorshire	Buckinghamshire	Caernarvonshire	Cambridgeshire	Cardiganshire and Carmarthenshire	Cheshire	Cornwall	Cumberland	Denbighshire and Montgomeryshire	Derbyshire	Devonshire	Dorsetshire	Durham	Ely, Isle of	Essex	Flintshire	Glamorganshire	Gloucestershire	Hampshire	Herefordshire	Hertfordshire	Huntingdonshire	Kent and Canterbury	Lancashire	Leicestershire and Rutland	Lincolnshire, Holland	Lincolnshire, Kesteven	Lincolnshire, Lindsey
By Special Fire Service methods																														
Automatic fire alarm	-	-	-	-	-	4	-	-	-	-	-	-	24	-	-	-	-	4	-	-	8	-	-	8	-	-	-	-	-	-
Fire and police pillar box	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
Police telephone	-	68	44	-	32	-	60	36	28	-	4	-	24	4	4	-	-	24	-	-	-	-	-	68	-	48	4	60	24	8	40
Private fire telephone	-	12	36	-	12	-	-	-	68	-	-	-	8	-	4	80	-	48	-	40	4	4	-	24	-	60	56	4	-	-	4
Street fire alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	80	80	-	44	4	60	36	96	-	4	-	56	4	8	80	-	120	-	40	12	4	-	100	-	108	64	64	24	8	44
Exchange telephone	132	904	1 052	92	940	244	504	296	2 040	552	276	452	2 168	920	232	1 836	436	3 968	304	1 232	872	1 836	308	1 488	300	3 716	4 104	1 096	276	372	920
Running call	4	44	32	8	48	8	32	12	148	28	28	52	88	36	44	192	32	204	8	88	24	112	8	116	24	188	292	56	12	20	44
Late call	8	-	36	4	20	28	8	4	20	4	4	4	88	4	16	40	-	136	4	72	-	120	8	48	16	208	92	4	8	-	8
Other and undefined methods	274	676	1 090	50	1 186	592	170	360	2 340	1 024	202	418	2 050	724	1 564	2 518	58	8 776	244	674	338	2 984	68	2 520	180	5 146	4 174	814	70	368	588
Total fires attended	418	1 704	2 290	164	2 238	876	774	708	4 644	1 608	514	926	4 450	1 688	1 864	4 666	526	13 204	560	2 106	1 246	5 056	392	4 272	520	9 366	8 726	2 034	390	768	1 604

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION II

Table 1 (contd.)

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from England and Wales, 1959

Method of Calling	County Fire Brigades (Contd.)																								
	London	Merioneth	Middlesex	Monmouthshire	Norfolk	Northamptonshire	Northumberland	Nottinghamshire	Oxfordshire	Pembrokeshire	Peterborough, Soke of	Salop	Scilly, Isles of	Somersetshire	Staffordshire	Suffolk and Ipswich C.B.	Surrey	Sussex, East	Sussex, West	Warwickshire	Westmorland	Wight, Isle of	Wiltshire	Worcestershire and Worcester C.B.	Yorkshire East Riding	Yorkshire North Riding	Yorkshire West Riding
By Special Fire Service methods																										
Automatic fire alarm	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4
Fire and police pillar box	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	4	-	12
Police telephone	8	-	12	8	-	16	32	-	4	-	20	48	-	16	128	36	32	12	32	32	4	-	4	16	16	32	60
Private fire telephone	80	-	92	-	-	-	8	16	-	-	-	16	-	12	12	4	36	4	-	12	-	-	-	8	-	164	28
Street fire alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	92	-	108	8	-	16	40	16	4	-	32	64	-	28	140	40	68	16	32	48	4	-	4	24	20	196	104
Exchange telephone	10 432	64	4 272	460	1 184	860	868	1 832	476	140	184	856	-	816	2 052	1 332	3 224	960	976	1 404	92	192	872	1 196	688	816	3 644
Running call	744	4	192	32	64	108	64	52	64	16	-	68	-	32	180	88	104	48	52	80	4	16	40	84	44	72	312
Late call	52	-	400	12	-	4	-	36	20	-	24	60	-	4	44	4	128	20	16	60	4	4	100	56	4	52	44
Other and undefined methods	3 226	150	4 390	360	774	478	960	2 978	234	234	140	454	-	658	3 310	1 288	5 430	1 280	874	2 320	38	270	436	1 080	260	560	4 900
Total fires attended	14 546	218	9 362	872	2 022	1 466	1 932	4 914	798	390	380	1 502	-	1 538	5 726	2 752	8 954	2 324	1 950	3 912	142	482	1 452	2 440	1 016	1 696	9 004

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION II

Table 1 (Contd.)

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from England and Wales, 1959

Method of Calling	County Borough Fire Brigades																								
	Barnsley	Barrow in Furness	Bath	Birkenhead	Birmingham	Blackburn	Blackpool	Bolton	Bootle	Bournemouth	Bradford	Brighton	Bristol	Burnley	Burton on Trent	Bury	Cardiff	Carlisle	Chester	Coventry	Croydon	Darlington	Derby	Dewsbury	Doncaster	Dudley	Eastbourne
By Special Fire Service methods																											
Automatic fire alarm	-	-	-	-	-	-	-	-	4	-	8	-	4	-	-	-	-	-	-	-	4	-	-	-	-	1	-
Fire and police pillar box	-	-	4	4	4	24	32	40	16	-	4	-	-	24	-	4	64	-	-	-	-	-	4	-	4	4	-
Police telephone	12	24	8	52	160	52	-	32	20	20	120	72	60	4	-	16	36	24	20	72	12	12	12	28	12	40	-
Private fire telephone	-	12	-	28	28	-	20	8	20	-	-	-	16	4	-	-	-	-	4	4	12	-	4	-	-	-	-
Street fire alarm	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-
Total	12	36	12	84	192	76	52	80	60	20	136	72	80	32	-	20	104	24	24	76	28	12	20	28	16	44	-
Exchange telephone	124	164	164	308	2 340	196	336	368	184	176	592	304	784	204	128	160	444	168	168	544	444	300	496	140	168	116	88
Running call	12	20	4	80	172	4	16	12	16	12	44	24	52	12	-	20	20	16	12	20	20	20	24	16	4	4	16
Late call	-	-	16	48	32	4	24	8	68	16	20	28	64	12	4	-	28	4	4	4	44	-	8	-	4	-	-
Other and undefined methods	340	214	48	324	1 928	80	224	178	244	518	484	260	744	80	60	110	188	64	110	1 182	488	78	308	230	324	230	92
Total fires attended	488	434	244	844	4 664	360	652	646	572	742	1 276	688	1 724	340	192	310	784	276	318	1 826	1 024	410	856	414	516	394	196

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION II

Table 1 (Contd.)

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from England and Wales, 1959

Method of Calling	County Borough Fire Brigades (Contd.)																								
	East Ham	Exeter	Gloucester	Great Yarmouth	Grimsby	Halifax	Hastings	Huddersfield	Kingston upon Hull	Leeds	Leicester	Lincoln	Liverpool	Manchester	Merthyr Tydfil	Middlesbrough	Newcastle upon Tyne and Gateshead	Newport (Mon.)	Northampton	Norwich	Nottingham	Oldham	Oxford	Plymouth	Portsmouth	Preston	Rochdale
By Special Fire Service methods																											
Automatic fire alarm	-	-	-	-	-	-	-	-	4	-	8	-	-	8	-	-	-	-	-	-	-	-	-	4	-	-	-
Fire and police pillar box	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	136	-	-	8	-	-	-	-	-	-	4
Police telephone	-	16	-	16	84	20	8	40	124	116	80	40	76	288	8	108	104	56	52	24	76	28	16	28	64	-	36
Private fire telephone	4	-	-	-	-	8	-	-	-	4	12	-	36	20	8	-	4	-	4	-	36	-	4	24	24	-	4
Street fire alarm	4	-	-	-	-	-	-	-	12	-	-	-	200	8	-	24	-	-	-	-	-	-	-	-	-	-	-
Total	8	16	-	16	84	32	8	44	140	120	100	40	312	324	16	132	244	56	56	32	112	28	20	56	88	-	44
Exchange telephone	112	148	164	96	180	216	76	200	588	896	764	248	1 888	1 808	88	272	744	200	212	252	636	320	192	312	380	296	180
Running Call	28	8	4	20	16	28	12	4	40	24	4	8	212	200	20	8	48	24	12	8	16	12	4	32	44	36	-
Late Call	24	12	8	-	-	4	4	4	28	16	4	-	128	208	24	28	12	8	-	20	20	20	12	12	4	8	12
Other and undefined methods	214	64	48	138	122	250	254	330	428	1 170	500	270	554	1 104	110	132	564	174	122	420	974	100	50	294	298	104	112
Total fires attended	386	248	224	270	402	530	354	582	1 224	2 226	1 372	566	3 094	3 644	258	572	1 612	462	402	732	1 758	480	278	706	814	444	348

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION II

Table 1 (Contd.)

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from England and Wales, 1959

Method of Calling	County Borough Fire Brigades (Contd.)																						Total fires attended in England and Wales	
	Rotherham	St. Helens	Salford	Sheffield	Smethwick and West Bromwich	Southampton	Southend	Southport	South Shields	Stockport	Stoke on Trent	Sunderland	Swansea	Tynemouth	Wakefield	Wallasey	Walsall	Warrington	West Ham	West Hartlepool	Wigan	Wolverhampton	York	No.	Per cent
By Special Fire Service methods																								
Automatic fire alarm	-	-	-	-	-	-	-	-	-	4	4	4	-	-	8	-	-	-	4	-	4	-	-	136	0.1
Fire and police pillar box	20	8	-	68	-	-	-	4	-	-	-	-	-	-	-	-	8	-	-	-	4	-	-	532	0.2
Police telephone	4	28	52	36	24	12	16	16	48	28	28	68	28	52	20	68	28	36	16	4	24	52	32	4 296	1.9
Private fire telephone	-	-	8	4	4	-	8	-	-	-	4	-	-	28	-	-	-	-	4	-	-	-	4	1 372	0.6
Street fire alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	0.1
Total	24	36	60	108	28	12	24	20	48	32	36	72	28	80	28	68	36	36	24	4	32	52	36	6 636	3.0
Exchange telephone	96	200	392	752	204	464	276	144	164	292	460	368	236	120	60	164	172	156	536	192	192	244	308	101 028	45.4
Running call	8	12	8	12	32	12	24	8	4	32	28	8	16	20	-	8	8	16	72	28	20	40	16	6 572	2.9
Late call	-	4	56	28	12	4	12	4	4	-	16	4	8	-	4	20	20	12	28	-	-	4	-	3 460	1.6
Other and undefined methods	330	164	118	1 020	390	1 020	220	110	174	360	684	320	240	204	200	274	310	150	362	120	154	274	144	104 704	47.1
Total fires attended	458	416	634	1 920	666	1 512	556	286	394	716	1 224	772	528	424	292	534	546	370	1 022	344	398	614	504	222 400	100.0

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION II

Table 2

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on		
Agriculture		
Farming (not fruit or poultry) and horse and stock rearing	2 360	1.1
Allotments, market gardening, fruit and poultry farming	620	0.3
Total	2 980	1.3
Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	140	0.1
Manufacture of bricks, pottery, glass, etc.	112	0.1
Manufacture of chemicals, dyes, explosives, paints, oils		
Chemicals	220	0.1
Explosives	4	-
Paints, varnish, oils, grease	164	0.1
Miscellaneous	88	-
Total	476	0.2
Manufacture of metals, machines, implements, conveyances		
Smelting, converting, refining, rolling of iron, steel	100	-
Extracting, refining, smelting of other metals	52	-
Founding, other secondary processes in metal working	236	0.1
Engineering (not marine or electrical)	460	0.2
Electrical installations, cables and apparatus	244	0.1
Construction and repair of vehicles	256	0.1
Shipbuilding and repairing, marine engineering	60	-
Cutlery and small tools	48	-
Other metal industries	368	0.2
Total	1 824	0.8
Manufacture of textiles and textile goods (not dress)		
Cotton	328	0.1
Wool, worsted and shoddy	136	0.1
Silk, natural and artificial	8	-
Other or mixed fibres	104	-
Miscellaneous	180	0.1
Textile dyeing, printing, bleaching, finishing	52	-
Total	808	0.4

SECTION II

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Preparation of skins and leather and manufacture of goods of leather and leather substitute (not clothing or footwear)	68	-
Manufacture of clothing (not knitted) including footwear	264	0.1
Manufacture of food, drink, tobacco		
Food	396	0.2
Drink	108	-
Tobacco, cigars, cigarettes, snuff	-	-
Total	504	0.2
Woodworking: manufacture of cane and basket ware, furniture, fittings		
Woodworking and basket ware	316	0.1
Furniture (not metal or basket)	288	0.1
Fittings	32	-
Total	636	0.3
Paper making: manufacture of stationery and stationery requisites, printing and bookbinding	272	0.1
Building, decorating, contracting: slate and stone cutting and dressing	2 164	1.0
Rubber and synthetic rubber	148	0.1
Other manufacturing industries	112	0.1
Gas, water, electricity, sewage	188	0.1
Transport and communication		
Railway - stations etc.	544	0.2
Road - garages, depots, etc.	1 544	0.7
Water - dock buildings other than warehouses	60	-
Air, aerodromes, etc.	12	-
Other communication (post, telephone, wireless)	176	0.1
Total	2 336	1.1

SECTION II

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Commerce		
Departmental stores	128	0.1
Retail shops	3 024	1.4
Wholesale dealers	552	0.2
Dock and other warehouses	40	-
Total	3 744	1.7
Offices, Government and other		
Government departments	84	-
Local authorities	116	0.1
Other offices	372	0.2
Total	572	0.3
Navy, Army and Air Force establishments	312	0.1
Fire Service establishments	28	-
Professional establishments (other than offices); public institutions		
Educational establishments	692	0.3
Hospitals, homes, etc. for the care of the sick and infirm	660	0.3
Places of worship	228	0.1
Other public and professional services	516	0.2
Total	2 096	0.9
Places of public entertainment		
Cinemas and theatres	204	0.1
Other places of entertainment	572	0.3
Total	776	0.4
Private residential and personal service (including hotels and catering)		
Private residential houses	18 440	8.3
Private residential flats and maisonettes	4 400	2.0
Clubs, hotels, restaurants, public houses	2 532	1.1
Private huts, unoccupied houses, personal service	2 640	1.2
Total	28 012	12.6
Miscellaneous	4 500	2.0
Undefined	12	-
Total fires in buildings	53 084	23.9

SECTION II

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires other than those in buildings		
Agriculture and Forestry		
Crops, standing or stooked (including hay fields)	2 316	1.0
Crops, ricks and stacks	1 820	0.8
Agricultural machinery	652	0.3
Agricultural waste	608	0.3
Other agricultural hazards	856	0.4
Allotments and gardens	1 644	0.7
Railway embankments	21 530	9.7
Grassland, heathland	97 186	43.7
Woods, forests, plantations	3 128	1.4
Single trees	3 344	1.5
Felled timber	328	0.1
Total	133 412	60.0
Transport and communication		
Aircraft	68	-
Railway, rolling stock etc.	684	0.3
Road vehicles - electrically driven	96	-
- oil, petrol or gas driven	9 312	4.2
- other	112	0.1
Water vessels - craft on inland waters	136	0.1
- ships in dock	352	0.2
- ships at sea	8	-
- marine structures	72	-
Total	10 840	4.9
Outdoor storage		
Chemicals, explosives, ammunition, oils grease	548	0.2
Coal and coke	132	0.1
Refuse	13 092	5.9
Timber	2 852	1.3
Cotton, metal, packing materials, rubber, etc.	1 784	0.8
Total	18 408	8.3
Other outdoor structures	6 656	3.0
Total fires other than those in buildings	169 316	76.1
Total fires attended	222 400	100.0

SECTION II

Table 3

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from England and Wales 1959

Hazard in which fire started	County Fire Brigades																										
	Anglesey	Bedfordshire	Berkshire and Reading C.B.	Breconshire and Radnorshire	Buckinghamshire	Caernarvonshire	Cambridgeshire	Cardiganshire and Carmarthenshire	Cheshire	Cornwall	Cumberland	Denbigh and Montgomery	Derbyshire	Devonshire	Dorsetshire	Durham	Ely, Isle of	Essex	Flintshire	Glamorganshire	Gloucestershire	Hampshire	Herefordshire	Hertfordshire	Huntingdonshire	Kent and Canterbury C.B.	Lancashire	Leicestershire and Rutland
Fires in buildings																											
Industrial premises	-	40	56	8	84	4	16	12	120	16	16	12	112	32	28	96	16	172	24	92	56	60	12	92	12	128	548	36
Commercial premises and offices	4	16	20	8	28	4	12	24	64	4	12	16	28	16	12	72	4	148	8	72	36	32	-	68	4	80	184	28
Transport and public utilities	-	12	20	-	20	-	16	12	76	8	4	4	24	12	8	80	4	88	8	76	20	64	8	28	4	56	204	32
Dwellings	24	172	140	52	180	56	80	68	396	148	76	100	232	232	120	368	36	704	68	416	160	288	60	256	28	796	916	104
Other buildings	20	116	148	16	136	36	76	84	256	80	68	88	152	132	92	308	28	512	56	208	140	240	64	204	32	504	792	88
Total	48	356	384	84	448	100	200	200	912	256	176	220	548	424	260	924	88	1 624	164	864	412	684	144	648	80	1 564	2 644	288
Fires not in buildings																											
Agriculture, grassland, forestry	350	1 064	1 646	64	1 562	708	454	416	3 132	1 192	226	610	3 526	1 060	1 456	3 126	370	10 172	320	958	610	3 920	180	3 000	372	6 590	4 426	1 622
Transport	8	88	76	16	112	12	52	44	188	52	48	40	132	88	72	184	24	432	32	96	88	152	40	216	32	432	472	56
Outdoor storage including refuse	-	100	104	-	100	32	52	24	340	68	12	40	176	84	44	240	32	684	28	128	44	188	20	300	16	592	936	48
Other outdoor hazards	12	96	80	-	16	24	16	24	72	40	52	16	68	32	32	192	12	292	16	60	92	112	8	108	20	188	248	20
Total	370	1 348	1 906	80	1 790	776	574	508	3 732	1 352	338	706	3 902	1 264	1 604	3 742	438	11 580	396	1 242	834	4 372	248	3 624	440	7 802	6 082	1 746
Total fires attended	418	1 704	2 290	164	2 238	876	774	708	4 644	1 608	514	926	4 450	1 688	1 864	4 666	526	13 204	560	2 106	1 246	5 056	392	4 272	520	9 366	8 726	2 034

SECTION II

Table 3 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from England and Wales 1959

Hazard in which fire started	County Fire Brigades (Contd.)																												
	Lincolnshire (Holland)	Lincolnshire (Kesteven)	Lincolnshire (Lindsey)	London	Merioneth	Middlesex	Monmouthshire	Norfolk	Northamptonshire	Northumberland	Nottinghamshire	Oxfordshire	Pembrokeshire	Peterborough, Soke of	Salop	Scilly, Isles of	Somersetshire	Staffordshire	Suffolk and Ipswich C.B.	Surrey	Sussex, East	Sussex, West	Warwickshire	Westmorland	Wight, Isle of	Wiltshire	Worcestershire and Worcester C.B.	Yorkshire (East Riding)	Yorkshire (North Riding)	Yorkshire (West Riding)
Fires in buildings																													
Industrial premises	16	12	8	968	4	292	16	36	24	36	56	16	4	20	24	-	44	136	40	116	8	32	68	12	4	88	80	12	100	304
Commercial premises and offices	4	8	20	616	4	212	28	8	8	44	68	8	12	8	20	-	20	40	40	88	28	8	24	-	8	12	28	16	32	112
Transport and public utilities	4	-	8	152	-	140	4	16	8	44	40	4	-	-	24	-	16	48	4	68	28	20	28	-	8	20	24	16	28	88
Dwellings	32	24	160	2 524	28	1 236	140	156	120	212	140	116	44	44	124	-	228	272	236	556	224	196	152	16	48	160	228	52	124	600
Other buildings	48	28	72	1 780	4	584	84	128	92	84	188	80	28	36	160	-	204	236	132	368	108	140	180	20	36	188	184	64	144	456
Total	104	72	268	6 040	40	2 464	272	344	252	420	492	224	88	108	352	-	512	732	452	1 196	396	396	452	48	104	468	544	160	428	1 560
Fires not in buildings																													
Agriculture, grassland, forestry	238	592	1 164	3 362	158	5 078	524	1 522	1 022	1 268	4 074	462	242	208	1 022	-	846	4 406	2 060	6 842	1 756	1 326	3 076	46	338	724	1 624	664	952	6 428
Transport	8	44	80	1 076	4	608	36	76	68	88	172	36	20	24	68	-	104	180	100	200	48	76	160	28	8	84	96	56	96	304
Outdoor storage including refuse	20	48	44	3 100	4	896	24	64	104	104	128	40	28	32	40	-	40	248	112	544	88	112	192	4	20	116	104	116	132	508
Other outdoor hazards	20	12	48	968	12	316	16	16	20	52	48	36	12	8	20	-	36	160	28	172	36	40	32	16	12	60	72	20	88	204
Total	286	696	1 336	8 506	178	6 898	600	1 678	1 214	1 512	4 422	574	302	272	1 150	-	1 026	4 994	2 300	7 758	1 928	1 554	3 460	94	378	984	1 896	856	1 268	7 444
Total fires attended	390	768	1 604	14 546	218	9 362	872	2 022	1 466	1 932	4 914	798	390	380	1 502	-	1 538	5 726	2 752	8 954	2 324	1 950	3 912	142	482	1 452	2 440	1 016	1 696	9 004

Table 3 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from England and Wales 1959

Hazard in which fire started	County Borough Fire Brigades																							
	Barnsley	Barrow in Furness	Bath	Birkenhead	Birmingham	Blackburn	Blackpool	Bolton	Bootle	Bournemouth	Bradford	Brighton	Bristol	Burnley	Burton on Trent	Bury	Cardiff	Carlisle	Chester	Coventry	Croydon	Darlington	Derby	Dewsbury	Doncaster	Dudley
Fires in buildings																										
Industrial premises	4	4	16	32	344	40	24	48	40	8	56	12	88	8	24	28	40	16	8	48	48	4	48	20	8	16
Commercial premises and offices	16	4	4	36	100	16	24	40	12	8	44	12	28	20	-	8	40	8	20	24	16	4	20	8	8	16
Transport and public utilities	4	4	8	4	40	-	-	16	12	4	8	4	32	12	4	12	16	4	8	32	24	12	8	-	4	-
Dwellings	24	32	28	128	692	76	104	100	84	56	196	124	236	60	24	36	168	40	36	104	184	56	284	24	24	32
Other buildings	36	16	24	40	376	60	76	96	28	60	120	84	128	68	20	28	84	40	24	76	92	36	44	16	40	16
Total	84	60	80	240	1 552	192	228	300	176	136	424	236	512	168	72	112	348	108	96	284	364	112	404	68	84	80
Fires not in buildings																										
Agriculture, grassland, forestry	344	226	76	300	2 224	88	228	190	248	526	516	312	872	96	92	134	228	128	134	1 302	532	178	328	258	356	262
Transport	12	44	28	88	256	12	52	60	40	44	84	48	120	16	16	8	68	12	20	84	52	40	60	20	36	12
Outdoor storage including refuse	36	88	44	184	448	64	116	80	64	16	224	72	180	36	4	40	120	20	52	120	48	60	44	60	28	36
Other outdoor hazards	12	16	16	32	184	4	28	16	44	20	28	20	40	24	8	16	20	8	16	36	28	20	20	8	12	4
Total	404	374	164	604	3 112	168	424	346	396	606	852	452	1 212	172	120	198	436	168	222	1 542	660	298	452	346	432	314
Total fires attended	488	434	244	844	4 664	360	652	646	572	742	1 276	688	1 724	340	192	310	784	276	318	1 826	1 024	410	856	414	516	394

(86986)

SECTION II

Table 3 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from England and Wales 1959

Hazard in which fire started	County Borough Fire Brigades (Contd.)																								
	Eastbourne	East Ham	Exeter	Gloucester	Great Yarmouth	Grimsby	Halifax	Hastings	Huddersfield	Kingston upon Hull	Leeds	Leicester	Lincoln	Liverpool	Manchester	Merthyr Tydfil	Middlesbrough	Newcastle on Tyne and Gateshead	Newport (Mon.)	Northampton	Norwich	Nottingham	Oldham	Oxford	Plymouth	Portsmouth
Fires in buildings																										
Industrial premises	4	4	12	4	4	16	44	-	56	96	168	44	4	172	188	36	24	100	20	24	8	56	84	28	36	32
Commercial premises and offices	12	16	8	4	20	16	12	12	20	24	52	20	-	132	180	8	24	52	28	12	20	48	20	16	20	40
Transport and public utilities	-	-	4	12	-	-	8	4	8	20	36	8	4	32	24	12	16	24	28	8	8	12	12	-	4	8
Dwellings	20	64	44	24	12	36	92	36	64	180	264	204	40	656	676	36	108	240	60	64	60	156	100	56	80	120
Other buildings	16	20	28	44	16	56	44	24	24	128	196	116	24	452	404	12	76	172	36	40	20	184	44	32	72	120
Total	52	104	96	88	52	124	200	76	172	448	716	392	72	1 444	1 472	104	248	588	172	148	116	456	260	132	212	320
Fires not in buildings																										
Agriculture, grassland, forestry	96	210	92	72	138	130	262	258	358	468	1 214	720	358	790	1 236	110	184	616	190	166	500	1 026	116	78	318	318
Transport	8	44	24	24	24	32	8	16	24	72	48	88	28	216	232	20	48	100	40	36	28	84	16	24	60	56
Outdoor storage including refuse	36	16	32	24	44	104	44	4	12	184	172	124	100	428	544	8	72	232	44	52	80	148	76	28	92	88
Other outdoor hazards	4	12	4	16	12	12	16	-	16	52	76	48	8	216	160	16	20	76	16	-	8	44	12	16	24	32
Total	144	282	152	136	218	278	330	278	410	776	1 510	980	494	1 650	2 172	154	324	1 024	290	254	616	1 302	220	146	494	494
Total fires attended	196	386	248	224	270	402	530	354	582	1 224	2 226	1 372	566	3 094	3 644	258	572	1 612	462	402	732	1 758	480	278	706	814

SECTION II

Table 3 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from England and Wales 1959

Hazard in which fire started	County Borough Fire Brigades (Contd.)																								
	Preston	Rochdale	Rotherham	St. Helens	Salford	Sheffield	Smethwick and West Bromwich	Southampton	Southend	Southport	South Shields	Stockport	Stoke on Trent	Sunderland	Swansea	Tynemouth	Wakefield	Wallasey	Walsall	Warrington	West Ham	West Hartlepool	Wigan	Wolverhampton	York	Total fires in England and Wales
Fires in buildings																										
Industrial premises	36	32	20	12	24	132	40	56	12	8	8	48	60	36	12	24	20	8	20	20	36	20	24	32	12	7 524
Commercial premises and offices	16	16	8	12	40	52	20	24	12	32	8	8	32	20	20	12	8	12	16	8	24	4	4	16	12	4 316
Transport and public utilities	8	16	4	8	16	24	4	8	20	-	8	4	8	12	20	8	-	4	-	8	12	12	12	8	8	2 524
Dwellings	96	60	28	60	160	220	64	132	76	60	64	80	72	144	92	36	24	64	36	36	100	44	56	84	48	22 848
Other buildings	28	32	8	32	96	172	32	48	60	20	44	48	64	84	44	48	8	56	44	16	64	40	32	48	44	15 872
Total	184	156	68	124	336	600	160	268	180	120	132	188	236	296	188	128	60	144	116	88	236	120	128	188	124	53 084
Fires not in buildings																										
Agriculture, grassland, forestry	104	108	342	188	126	1 068	418	1 008	268	130	174	352	800	328	240	204	200	270	322	194	382	124	170	310	224	133 412
Transport	32	4	12	12	52	84	16	76	32	4	8	40	56	36	32	40	4	28	56	36	92	28	36	40	20	10 840
Outdoor storage including refuse	108	68	20	88	108	116	64	148	48	16	52	132	88	80	28	48	20	64	44	28	248	52	40	68	116	18 408
Other outdoor hazards	16	12	16	4	12	52	8	12	28	16	28	4	44	32	40	4	8	28	8	24	64	20	24	8	20	6 656
Total	260	192	390	292	298	1 320	506	1 244	376	166	262	528	988	476	340	296	232	390	430	282	786	224	270	426	380	169 316
Total fires attended	444	348	458	416	634	1 920	666	1 512	556	286	394	716	1 224	772	528	424	292	534	546	370	1 022	344	398	614	504	222 400

SECTION II

Table 4

SUPPOSED CAUSE OF FIRES

Reports from England and Wales, 1959

Each item in the list of supposed causes of fire given in this table represents a group of causes which have a common source of ignition. In some cases the groups have been divided into sub-groups according to the nature of the material first ignited and in others according to the act with the source of ignition which led to the outbreak of fire. Certain causes were specified for the first time in 1954; the miscellaneous item is therefore not comparable with those for years previous to 1954.

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Aircraft, crashed	-	-	36	-	36	-
Ashes, soot	784	0.4	2 376	1.1	3 160	1.4
Brazier	80	-	102	-	182	0.1
Camp fire, fire in open air[1]	12	-	236	0.1	248	0.1
Candle	356	0.2	20	-	376	0.2
Chimney on fire, not confined to chimney	2 328	1.0	4	-	2 332	1.0
Chimney, sparks from (outside building)	216	0.1	62	-	278	0.1
Cooker, cooking range, oven other than electric, town gas or oil[1]	464	0.2	36	-	500	0.2
Electric cooker	1 592	0.7	-	-	1 592	0.7
fire, heater, radiator	1 112	0.4	24	-	1 136	0.5
Electric iron	200	0.1	-	-	200	0.1
motor	288	0.1	32	-	320	0.1
refrigerator	680	0.3	16	-	696	0.3
television	404	0.2	-	-	404	0.2
wire and cable, other than lead to apparatus	2 332	1.0	2 390	1.1	4 722	2.1
Electric wire and cable, lead to apparatus	168	0.1	226	0.1	394	0.2
wireless	268	0.1	4	-	272	0.1
other apparatus	2 136	1.0	1 066	0.5	3 202	1.4
Explosives, fireworks	500	0.2	1 698	0.8	2 198	1.0
Fire in grate igniting bedding, clothing, linen	748	0.3	-	-	748	0.3
Fire in grate igniting:-						
furniture, furnishings	608	0.3	-	-	608	0.3
structural timber under hearth	1 160	0.5	-	-	1 160	0.5
Other materials	1 676	0.8	12	-	1 688	0.8
Fish frying range (all fuels)	828	0.4	12	-	840	0.4
Flue	696	0.3	244	0.1	940	0.4
Furnace (coal or coke)	36	-	-	-	36	-
Gas (town) burner, jet, ring	192	0.1	32	-	224	0.1
cooker	1 408	0.6	8	-	1 416	0.6
fire, heater, radiator	156	0.1	-	-	156	0.1
Other apparatus	612	0.3	280	0.1	892	0.4

SECTION II

Table 4 (Contd.)

SUPPOSED CAUSE OF FIRE

Reports from England and Wales, 1959

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Incubator, brooder, (all fuels)	560	0.3	-	-	560	0.3
Intentional burning of grassland, gorse, etc.	112	0.1	3 124	1.4	3 236	1.5
Lightning	152	0.1	136	0.1	288	0.1
Lime	12	-	28	-	40	-
Locomotives, sparks from	388	0.2	32 830	14.8	33 218	14.9
Malicious ignition(1) (2)	400	0.2	222	0.1	622	0.3
Matches	708	0.3	1 508	0.7	2 216	1.0
Matches, children with(5)	5 808	2.6	42 064	18.9	47 872	21.5
Mechanical heat or sparks	680	0.3	716	0.3	1 396	0.6
Metal, hot	172	0.1	126	0.1	298	0.1
Naked light(1)(3)	368	0.2	6 898	3.1	7 266	3.3
Oil, blow lamp	896	0.4	42	-	938	0.4
engine (including petrol)	168	0.1	2 958	1.3	3 126	1.4
lamp	176	0.1	288	0.1	464	0.2
stove	3 000	1.3	138	0.1	3 138	1.4
tractor	56	-	432	0.2	488	0.2
other apparatus	324	0.1	448	0.2	772	0.3
Oxyacetylene cutting and welding apparatus	460	0.2	640	0.3	1 100	0.5
Rubbish burning	1 664	0.7	14 532	6.5	16 196	7.3
Slow combustion stove igniting						
structural woodwork	280	0.1	-	-	280	0.1
other materials	880	0.4	272	0.1	1 152	0.5
Smoking materials	6 080	2.7	27 606	12.4	33 686	15.1
Spontaneous combustion in rubbish	4	-	356	0.2	360	0.2
Spontaneous combustion in other materials	212	0.1	514	0.2	726	0.3
Static electricity	28	-	-	-	28	-
Steam roller, engine, traction engine	-	-	22	-	22	-
Sun's rays	116	0.1	598	0.3	714	0.3
Taper, lighted paper or sticks	228	0.1	182	0.1	410	0.2
Taper, lighted paper or sticks, children with(5)	148	0.1	102	-	250	0.1
Miscellaneous(4)	716	0.3	546	0.2	1 262	0.6
Unknown source of ignition	6 248	2.8	23 072	10.4	29 320	13.2
Total number of fires	53 084	23.9	169 316	76.1	222 400	100.0

Notes: (1) Causes specified for the first time in the Annual Statistical Tables for 1954.
(2) Malicious ignition is a general heading for suspected or proven arson or incendiarism.
(3) No further information given in original reports.
(4) Not comparable with the years prior to 1954.
(5) A change in definition has increased the number of incidents in these categories in 1957 and succeeding years.

SECTION II

Table 5A

SUPPOSED CAUSE OF FIRES IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Row No.
		Hazard in which fire started																												
			Agriculture	Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	Manufacture of bricks, pottery, glass, etc.	Manufacture of chemicals, explosives, paints, oils	Manufacture of metals, machines, implements, conveyances	Manufacture of textiles and textile goods (not dress)	Manufacture of clothing (not knitted) including footwear, and goods of leather and leather substitute; preparation of skins and leather	Manufacture of food, drink, tobacco	Woodworking; manufacture of cane and basket ware, furniture, fittings	Paper making; manufacture of stationery and stationery requisites, printing and bookbinding	Building, decorating, contracting; slate and stone cutting and dressing	Other manufacturing industries, including rubber and synthetic rubber	Gas, water, electricity, sewage	Transport and communication	Commerce; retail shops, including departmental stores	Commerce; wholesale dealers and warehouses	Offices; Government and other	Navy, Army, Air Force establishments	Fire Service establishments	Professional establishments (other than offices), public institutions	Places of public entertainment	Private residential houses	Private residential flats and maisonettes	Clubs, hotels, restaurants, public houses	Private huts, unoccupied houses, personal service	Miscellaneous and undefined	Total	
1	Ashes, soot		16	4	-	-	12	4	4	4	4	8	8	-	4	8	40	4	24	4	-	36	8	92	324	8	160	8	784	1
2	Brazier		-	4	-	-	-	-	-	4	-	-	28	-	8	16	4	4	-	-	-	4	-	-	-	-	4	4	80	2
3	Camp fire, fire in open air(1)		4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	12	3
4	Candle		12	-	-	-	-	-	-	-	-	-	-	-	-	16	20	-	-	4	-	4	-	236	28	-	28	8	356	4
5	Chimney on fire, not confined to chimney		-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	12	8	-	12	-	2 044	164	36	12	-	2 328	5
6	Chimney, sparks from (outside building)		20	-	-	-	16	-	4	-	12	-	-	-	-	16	4	-	4	-	-	4	-	92	20	4	20	-	216	6
7	Cooker, cooking range, oven, other than electric, town gas or oil(1)		-	-	-	-	-	4	-	-	-	-	8	-	-	-	4	-	-	4	-	32	-	328	48	36	-	-	464	7
8	Electric, cooker		-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	4	-	4	40	-	1 116	368	48	-	-	1 592	8
9	fire, heater, radiator		8	-	8	-	8	4	8	-	-	-	32	4	-	24	100	24	20	12	8	36	4	656	116	16	20	4	1 112	9
10	iron		-	-	-	-	-	-	16	-	-	-	-	-	-	-	16	-	-	8	-	12	-	104	36	8	-	-	200	10
11	motor		16	-	-	16	20	4	8	12	20	8	-	-	4	-	56	20	20	12	-	8	-	12	28	16	-	-	288	11
12	refrigerator		4	-	-	-	-	4	-	-	-	-	4	8	-	8	360	12	-	8	-	24	8	112	20	116	-	-	680	12

13	Electric, television	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	8	-	332	56	-	-	-	404	13
14	wire and cable other than lead to apparatus	88	-	4	16	64	8	20	40	24	12	36	12	4	176	188	32	60	24	-	104	32	1 032	172	132	32	20	2 332	14
15	wire and cable lead to apparatus	8	-	-	8	4	-	-	-	4	-	-	-	4	16	12	-	4	4	-	4	4	80	16	-	-	-	168	15
16	wireless	-	-	-	-	-	-	-	-	4	-	-	-	4	-	4	-	-	4	-	8	4	168	44	28	-	-	268	16
17	other apparatus	48	16	16	32	164	68	8	36	56	12	8	44	36	104	220	28	20	8	-	120	32	772	124	88	76	-	2 136	17
18	Explosives, fireworks	36	-	-	8	20	-	-	-	4	-	8	-	-	32	36	8	-	4	-	16	8	128	44	8	64	76	500	18
19	Fire in grate, igniting bedding, clothing, linen	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	648	84	8	-	-	748	19
20	furniture and furnishings	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	504	68	24	-	-	608	20
21	structural timber under hearth	-	-	-	-	4	-	4	-	-	4	4	-	-	4	8	8	20	-	-	20	-	732	296	56	-	-	1 160	21
22	other materials	4	4	-	-	8	4	4	-	4	-	8	-	-	-	16	-	4	-	-	24	4	1 336	160	72	12	12	1 676	22
23	Fish frying range (all fuels)	-	4	-	4	24	12	4	12	-	4	-	-	-	-	12	8	-	4	-	28	-	8	-	704	-	-	828	23
24	Flue	52	-	-	4	40	4	-	16	28	4	64	-	-	24	32	8	4	12	-	32	16	256	28	44	16	12	696	24
25	Furnace (coal or coke)	-	-	-	-	24	-	-	4	-	-	-	-	-	-	-	4	-	-	-	4	-	-	-	-	-	-	36	25
26	Gas (town) burner, jet, ring	-	-	-	8	12	-	4	8	-	4	8	-	-	4	36	12	-	-	-	8	4	48	36	-	-	-	192	26
27	cooker	-	-	-	-	4	8	-	4	-	4	4	-	-	8	20	-	4	4	4	44	-	844	376	80	-	-	1 408	27
28	fire, heater, radiator	4	-	-	-	4	-	-	-	4	8	4	-	-	4	8	4	20	-	-	24	-	36	32	4	-	-	156	28
29	other apparatus	-	-	4	32	108	4	-	52	4	4	8	-	16	-	60	4	4	-	-	48	8	148	40	28	40	-	612	29
30	Incubator, brooder (all fuels)	424	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	4	-	20	4	4	96	-	560	30
31	Intentional burning of grassland, gorse, etc.	8	-	-	-	-	-	-	-	8	-	-	-	-	16	-	-	-	-	-	20	4	-	-	-	32	24	112	31
32	Lightning	12	-	4	-	-	-	-	-	-	-	-	-	-	-	8	-	-	4	-	12	-	104	4	-	-	4	152	32
33	Lime	-	-	-	-	-	-	-	4	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	12	33
34	Locomotives, sparks from	12	16	-	4	12	-	-	-	8	-	12	4	-	192	8	20	-	-	-	-	-	8	-	12	16	64	388	34
35	Malicious ignition(1)(2)	56	-	-	4	16	8	4	8	4	8	8	-	-	4	16	12	8	-	-	80	4	56	28	40	24	12	400	35
36	Matches	44	-	-	8	8	8	4	4	12	8	20	-	-	40	64	16	8	-	-	36	12	244	92	20	36	24	708	36
37	Matches, children with(5)	364	4	4	8	36	32	12	20	20	4	440	20	4	176	188	32	12	4	-	152	96	572	120	44	456	2 988	5 808	37
38	Mechanical heat or sparks	4	8	-	40	92	336	20	12	28	20	-	56	8	4	-	20	8	-	-	-	-	4	-	4	16	-	680	38
39	Metal, hot	-	-	-	-	124	-	-	-	-	-	4	4	-	-	-	-	-	-	-	4	-	16	8	-	4	8	172	39
40	Naked light(1)(3)	32	-	4	-	36	8	-	4	-	-	28	-	4	8	44	8	8	-	-	12	20	80	4	8	20	40	368	40
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	

For explanation of notes see page 27.

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SECTION II

Table 5A (Contd.)

SUPPOSED CAUSE OF FIRES IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Row No.	Supposed cause of fire	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Row No.
		Hazard in which fire started																											
		Agriculture	Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	Manufacture of bricks, pottery, glass, etc.	Manufacture of chemicals, explosives, paints, oils	Manufacture of metals, machines, implements, conveyances	Manufacture of textiles and textile goods (not dress)	Manufacture of clothing (not knitted) including footwear, and goods of leather and leather substitute; preparation of skins and leather	Manufacture of food, drink, tobacco	Woodworking; manufacture of cane and basket ware, furniture, fittings	Paper making; manufacture of stationery and stationery requisites, printing and bookbinding	Building, decorating, contracting; slate and stone cutting and dressing	Other manufacturing industries, including rubber and synthetic rubber	Gas, water, electricity, sewage	Transport and communication	Commerce; retail shops, including departmental stores	Commerce; wholesale dealers and warehouses	Offices; Government and other	Navy, Army, Air Force establishments	Fire Service establishments	Professional establishments (other than offices), public institutions	Places of public entertainment	Private residential houses	Private residential flats and maisonettes	Clubs, hotels, restaurants, public houses	Private huts, unoccupied houses, personal service	Miscellaneous and undefined	Total	
41	Oil, blow lamp	12	-	-	-	4	-	-	-	-	-	36	-	-	8	20	-	40	4	-	60	4	612	48	28	12	8	896	41
42	engine (including petrol)	16	-	-	4	12	-	-	4	-	-	12	-	4	72	4	4	8	4	-	4	-	12	-	8	8	-	168	42
43	lamp	24	-	-	-	4	-	-	-	-	-	20	-	-	92	-	-	8	-	-	4	-	8	-	4	12	-	176	43
44	stove	60	-	4	-	60	8	12	8	28	8	60	8	-	176	132	4	8	20	-	28	16	1 612	592	40	128	8	3 000	44
45	tractor	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	45
46	other apparatus	56	-	4	36	32	4	-	20	4	8	12	-	8	24	8	-	4	-	-	16	-	60	4	16	8	-	324	46
47	Oxyacetylene cutting and welding apparatus	12	8	-	12	128	16	-	12	4	8	96	-	4	72	8	8	12	-	-	20	-	4	-	4	4	28	460	47
48	Rubbish burning	152	-	4	4	40	4	4	8	48	4	360	8	4	72	172	24	4	16	-	56	12	92	16	24	308	228	1 664	48
49	Slow combustion stove igniting structural woodwork	28	4	-	-	4	-	-	12	4	-	36	4	-	36	12	12	8	12	-	20	12	44	4	12	16	-	280	49
50	other materials	76	16	4	4	72	20	4	4	24	4	76	4	12	76	56	28	8	16	4	72	12	156	32	72	24	4	880	50
51	Smoking materials	252	12	16	24	244	64	112	60	112	40	304	20	20	312	628	108	112	52	4	328	228	1 528	476	396	276	352	6 080	51
52	Spontaneous combustion in rubbish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	52
53	Spontaneous combustion in other materials	56	8	-	28	12	24	8	12	8	4	-	4	-	8	-	4	-	-	-	8	-	8	-	8	12	-	212	53

54	Static electricity	-	-	-	12	-	-	-	-	-	4	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	28	54
55	Sun's rays	24	-	-	-	4	-	4	-	-	-	4	-	-	4	24	-	-	-	-	-	-	32	4	8	8	-	116	55
56	Taper, lighted paper or sticks	8	-	-	-	8	-	-	4	4	4	4	-	-	16	16	-	-	-	-	8	4	108	16	4	20	4	228	56
57	Taper, lighted paper or sticks, children with(5)	-	-	-	-	-	-	-	4	4	-	4	-	-	4	8	-	-	-	-	4	4	76	4	4	20	12	148	57
58	Miscellaneous and undefined(4)	56	-	16	40	104	36	4	44	36	16	60	16	24	24	12	8	8	8	-	32	4	108	24	16	16	4	716	58
59	Unknown source of ignition	836	28	20	120	236	112	56	68	112	60	336	32	16	432	400	104	92	48	-	400	212	1 012	192	192	580	552	6 248	59
60	Total fires in buildings	2 980	140	112	476	1 824	808	332	504	636	272	2 164	260	188	2 336	3 152	592	572	312	28	2 096	776	18 440	4 400	2 532	2 640	4 512	53 084	60
	Column No.	1	2	3.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	

For explanation of notes see page 27.

SECTION II

Table 5B

SUPPOSED CAUSE OF FIRES OTHER THAN THOSE IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from England and Wales, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Row No.
		Hazard in which fire started											Transport and communications					Outdoor storage							
			Crops	Agricultural machinery	Agricultural waste	Agricultural, other	Gardens and allotments	Railway embankments	Grassland, heathland	Woods, forests, plantations	Single trees	Felled timber	Air	Rail	Road - oil, petrol or gas driven vehicles	Road - other vehicles	Water	Chemicals, explosives, ammunition, oils, grease	Coal and Coke	Refuse	Timber	Other materials	Miscellaneous outdoor structures	Total	
1	Aircraft crashed		-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-	-	36	1
2	Ashes, soot		-	4	16	8	12	38	194	-	8	8	-	44	268	12	28	4	16	1 544	52	28	92	2 376	2
3	Brazier		-	-	-	4	-	-	10	-	-	-	-	-	-	-	-	12	4	-	8	16	48	102	3
4	Camp fire, fire in open air[1]		4	-	-	-	-	-	144	32	32	4	-	-	-	-	-	-	-	4	-	-	16	236	4
5	Candle		-	-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	-	-	12	20	5
6	Chimney on fire, not confined to chimney		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	6
7	Chimney, sparks from (outside building)		4	-	-	-	8	-	14	-	4	-	-	-	-	-	-	-	-	4	12	12	4	62	7
8	Cooker cooking range, oven, other than electric, town gas or oil[1]		-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	28	36	8
9	Electric fire, heater, radiator		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	16	24	9
10	motor		-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	20	32	10
11	refrigerator		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	12	16	11
12	wire and cable other than lead to apparatus		4	72	-	-	4	-	18	-	-	-	-	8	1 820	44	20	12	-	-	-	-	388	2 390	12
13	wire and cable lead to apparatus		-	12	-	-	-	-	10	-	-	-	-	-	200	-	4	-	-	-	-	-	-	226	13
14	wireless		-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	14
15	other apparatus		4	48	-	-	-	4	14	-	-	-	4	4	384	36	64	8	-	-	-	-	496	1 066	15
16	Explosives, fireworks		16	4	4	-	16	10	880	28	292	12	-	-	76	8	-	-	-	84	32	20	216	1 698	16
17	Fire in grate, igniting other materials		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	17
18	Fish frying range (all fuels)		-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	12	18
19	Flue		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	240	244	19
20	Gas (town) burner, jet, ring		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32	20

21	cooker	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	21
22	other apparatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	280	22
23	Intentional burning of grassland, gorse, etc.	12	-	4	8	56	232	2 612	72	40	-	-	12	-	-	-	-	4	8	12	-	52	3 124	23
24	Lightning	32	-	-	-	-	4	4	-	28	-	-	-	-	-	-	-	-	-	-	-	68	136	24
25	Lime	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	4	-	4	4	-	8	28	25
26	Locomotives, sparks from	1 224	-	20	180	84	19 532	10 034	300	12	4	-	340	16	-	-	12	8	120	260	68	616	32 830	26
27	Malicious ignition[1] [2]	48	4	-	-	4	-	70	4	-	-	-	-	48	-	-	-	-	4	8	8	24	222	27
28	Matches	12	-	4	4	16	14	1 014	36	8	8	-	4	72	-	-	28	-	116	16	36	120	1 508	28
29	Matches, children with[5]	384	4	72	132	232	540	30 080	592	1 736	140	-	36	784	8	-	84	12	5 320	712	424	772	42 064	29
30	Mechanical heat or sparks	-	20	-	-	-	-	-	-	-	4	8	8	588	-	4	52	-	-	4	4	24	716	30
31	Metal hot	-	-	-	-	-	-	10	-	-	-	-	28	16	-	4	8	-	-	8	12	40	126	31
32	Naked light[1] [3]	104	-	12	32	-	88	6 150	180	20	8	-	-	32	4	-	8	8	132	40	20	60	6 898	32
33	Oil blow lamp	-	-	-	-	-	-	10	-	-	-	-	-	12	-	-	4	-	-	-	-	16	42	33
34	engine (including petrol)	4	16	-	-	4	-	50	8	-	-	20	4	2 768	-	32	4	4	-	-	4	40	2 958	34
35	lamp	-	-	-	-	-	-	20	-	-	-	-	8	104	8	-	12	-	-	-	4	132	288	35
36	stove	4	-	-	-	-	-	58	4	-	-	-	-	16	-	8	-	-	-	-	-	48	138	36
37	tractor	152	156	-	28	-	-	64	8	4	-	-	-	20	-	-	-	-	-	-	-	-	432	37
38	other apparatus	104	200	-	24	8	-	40	4	8	-	-	-	8	-	28	-	-	-	-	-	24	448	38
39	Oxyacetylene cutting and welding apparatus	16	-	8	4	-	-	32	4	-	-	-	16	84	-	112	32	-	20	120	44	148	640	39
40	Rubbish burning	768	24	232	216	736	194	7 798	360	364	76	-	16	136	8	-	56	16	2 184	796	200	352	14 532	40
41	Slow combustion stove igniting other materials	4	-	4	-	-	-	-	-	-	-	-	-	-	-	12	4	-	8	-	-	240	272	41
42	Smoking materials	368	16	56	100	268	362	21 280	776	188	8	-	44	780	44	124	48	4	1 480	312	432	916	27 606	42
43	Spontaneous combustion in rubbish	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	352	-	-	-	356	43
44	Spontaneous combustion in other materials	160	-	76	-	4	4	34	12	-	-	-	4	8	-	4	20	40	16	12	84	36	514	44
45	Steam roller, engine, traction engine	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	4	-	-	4	-	-	22	45
46	Sun's rays	16	-	8	4	12	-	478	20	-	-	-	-	4	-	4	-	-	36	-	12	4	598	46
47	Taper, lighted paper or sticks	-	-	4	8	8	-	66	-	4	-	-	-	8	-	-	4	-	24	8	16	32	182	47
48	Taper, lighted paper or sticks, children with[5]	4	-	-	-	-	-	14	-	16	-	-	-	8	-	-	-	-	12	12	4	32	102	48
49	Miscellaneous and undefined[4]	8	4	-	-	4	10	164	8	12	-	-	28	40	-	44	24	12	8	16	24	140	546	49
50	Unknown source of ignition	680	68	84	104	168	498	15 806	676	568	56	-	80	980	24	60	104	4	1 612	400	308	792	23 072	50
51	Total fires other than those in buildings	4 136	652	608	856	1 644	21 530	97 186	3 128	3 344	328	68	684	9 312	208	568	548	132	13 092	2 852	1 784	6 656	169 316	51
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

For explanation of notes see page 27.

SECTION II

Table 6

MATERIAL FIRST IGNITED IN FIRES

Reports from England and Wales, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Agriculture and Forestry						
Crops, ricks, stacks						
Barley	-	-	404	0.2	404	0.2
Hay	396	0.2	484	0.2	880	0.4
Straw	216	0.1	500	0.2	716	0.3
Stubble	-	-	1 164	0.5	1 164	0.5
Other	32	-	316	0.2	348	0.2
Loose straw or hay	768	0.3	1 396	0.6	2 164	1.0
Grass, heather, bracken	260	0.1	113 248	50.9	113 508	51.0
Trees, hedges, undergrowth brushwood, bushes (including gorse), twigs, touchwood	28	-	9 296	4.2	9 324	4.2
Other agricultural materials	24	-	528	0.2	552	0.2
Total	1 724	0.8	127 336	57.3	129 060	58.0
Chemicals - gases						
Acetylene	72	-	56	-	128	0.1
Town gas	1 108	0.5	492	0.2	1 600	0.7
Other gases	116	0.1	120	0.1	236	0.1
Total	1 296	0.6	668	0.3	1 964	0.9
Chemicals - oils						
Animal and vegetable oils	160	0.1	-	-	160	0.1
Mineral oil						
Paraffin	2 236	1.0	228	0.1	2 464	1.1
Petrol in vehicles	472	0.2	3 092	1.4	3 564	1.6
Petrol not in vehicles	304	0.1	140	0.1	444	0.2
Other mineral oils	196	0.1	176	0.1	372	0.2
Oil, waste and undefined	500	0.2	620	0.3	1 120	0.5
Total	3 868	1.7	4 256	1.9	8 124	3.6
Chemicals - other						
Celluloid (including films)	-	-	-	-	-	-
Paint, enamel, lacquer, varnish, stains and French polish	136	0.1	24	-	160	0.1
Pitch, tar	64	-	180	0.1	244	0.1
Rubber, vulcanite, ebonite	172	0.1	172	0.1	344	0.2
Other chemicals	876	0.4	452	0.2	1 328	0.6
Total	1 248	0.6	828	0.4	2 076	0.9
Paper, cardboard, wood (not part of a structure	2 860	1.3	1 884	0.8	4 744	2.1
Wood chippings, flour, sawdust, shavings, wool	632	0.3	396	0.2	1 028	0.5
Wood barrels, boxes, cases, firewood etc.	560	0.2	192	0.1	752	0.4
Timber	420	0.2	1 564	0.7	1 984	0.9
Total	4 472	2.0	4 036	1.8	8 508	3.8

SECTION II

Table 6 (Contd.)

MATERIAL FIRST IGNITED IN FIRES

Reports from England and Wales, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Textiles						
Canvas and canvas goods	56	-	280	0.1	336	0.2
Clothing on person	316	0.1	24	-	340	0.2
Clothing not on person	1 436	0.6	124	0.1	1 560	0.7
Cotton	332	0.1	64	-	396	0.2
Jute, hessian, sacking	436	0.2	296	0.1	732	0.3
Rags, (including oily rags)	452	0.2	188	0.1	640	0.3
Tarpaulin, waterproof sheeting, oilskins	140	0.1	580	0.3	720	0.3
Other textiles	268	0.1	104	-	372	0.2
Total	3 436	1.5	1 660	0.7	5 096	2.3
Furniture, furnishings, household goods						
Bedding (inc. bed and bedding)	1 636	0.7	92	-	1 728	0.8
Carpets, rugs	604	0.3	40	-	644	0.3
Curtains	776	0.3	12	-	788	0.4
Furniture	2 288	1.0	56	-	2 344	1.0
Linen articles (unspecified), laundry	408	0.2	12	-	420	0.2
Seating in vehicles	68	-	796	0.4	864	0.4
Other furnishings	916	0.4	52	-	968	0.4
Total	6 696	3.0	1 060	0.5	7 756	3.5
Building materials, structural woodwork						
Building materials other than wood	1 000	0.4	20	-	1 020	0.5
Structural woodwork						
External	1 272	0.6	-	-	1 272	0.6
Internal						
Door, window frame	460	0.2	-	-	460	0.2
Floor, stairs	1 216	0.5	-	-	1 216	0.5
Partitions, linings to walls	744	0.3	-	-	744	0.3
Roof	932	0.4	-	-	932	0.4
Timber in chimney, flue	444	0.7	-	-	444	0.2
Timber under hearth	1 220	0.5	-	-	1 220	0.5
Other fittings	620	0.3	-	-	620	0.3
Not known whether internal or external	696	0.3	-	-	696	0.3
Structural woodwork, other than buildings	4	-	2 088	0.9	2 092	0.9
Total	8 608	3.9	2 108	0.9	10 716	4.8
Miscellaneous						
Coal, coke	80	-	156	0.1	236	0.1
Electrical insulation	3 488	1.6	2 724	1.2	6 212	2.8
Fat (margarine, suet, butter, cooking fat, lard)	2 768	1.2	32	-	2 800	1.3
Food other than fat	512	0.2	32	-	544	0.2
Refuse, rubbish, debris	5 628	2.5	13 944	6.3	19 572	8.8
Soot	496	0.2	12	-	508	0.2
Other	3 276	1.5	3 528	1.6	6 804	3.1
Unknown	5 488	2.5	6 936	3.1	12 424	5.6
Total fires attended	53 084	23.9	169 316	76.1	222 400	100.0

SECTION II

Table 7A

MATERIAL FIRST IGNITED IN FIRES IN BUILDINGS IN RELATION TO THE SUPPOSED CAUSE

Reports from England and Wales, 1959

Row No.	Supposed cause of fire	Material first ignited																																								Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
		Agriculture and Forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood not structural			Textiles							Furniture, furnishings, household goods					Building materials, structural woodwork								Miscellaneous materials								
		Crops, ricks and stacks	Loose straw or hay	Other agricultural material	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing, on person	Clothing, not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork, external	Doors, window frames	Floors, stairs	Partitions, lining to walls	Roof	Timber in chimney, flue	Timber under hearth	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Boot	Other materials	Unknown material	Total	
1	Ashes, soot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	164	24	8	4	-	-	20	20	-	-	-	12	-	-	4	4	44	4	20	12	8	-	20	12	-	-	364	8	36	-	784	1
2	Brazier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	80	2
3	Camp fire, fire in open air	4	4	-	-	-	-	-	-	8	-	-	-	-	-	-	12	36	8	4	8	16	4	-	4	4	-	-	80	32	8	-	28	4	-	-	12	-	4	-	8	-	-	16	-	52	-	356	4
4	Candle	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	8	-	8	4	-	4	180	52	4	-	80	332	16	8	272	260	264	232	44	388	-	4	-	12	8	116	-	2 328	5
5	Chimney on fire not confined to chimney	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	16	8	-	-	8	-	8	4	-	4	180	52	4	-	80	332	16	8	272	260	264	232	44	388	-	4	-	12	8	116	-	2 328	5
66	Chimney, sparks from (outside building)	12	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	-	-	-	-	-	-	28	104	-	-	-	4	-	-	-	-	-	8	-	40	-	216	6
7	Cooker, cooking range, oven (other than electric, town gas or oil)(1)	-	-	-	-	-	20	-	4	-	-	-	-	8	-	-	12	4	44	-	-	32	-	-	-	-	-	-	8	4	-	-	8	-	-	16	8	-	-	-	16	-	-	264	-	4	12	-	464	7
8	Electric cooker	-	-	-	-	4	-	8	-	-	4	-	-	-	-	-	24	12	4	-	-	16	-	-	-	-	-	20	-	16	-	28	4	-	-	4	-	-	-	8	-	40	1	388	-	-	12	-	1 592	8
9	fire, heater, radiator	-	-	-	-	8	-	-	-	12	16	8	-	-	-	-	36	84	16	-	56	116	8	8	8	-	12	268	164	36	-	60	16	-	-	8	4	4	-	4	16	-	32	-	8	-	104	-	1 112	9
10	iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	12	-	-	-	-	8	20	44	4	-	64	-	-	-	12	-	-	-	-	4	-	8	-	-	-	20	-	200	10
11	motor	-	4	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	236	-	-	-	28	-	288	11
12	refrigerator	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	8	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	644	-	-	-	12	-	680	12
13	television	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-	-	-	-	-	300	-	-	-	-	-	404	13
14	wire and cable (other than lead to apparatus)	4	8	-	-	556	-	-	-	52	4	8	8	-	-	-	8	28	36	-	-	8	-	-	-	-	4	32	12	4	12	8	36	4	-	64	28	16	-	-	36	-	1	172	4	16	-	164	-	2 332	14
15	wire and cable (lead to apparatus)	-	-	-	-	-	-	-	4	8	4	4	4	-	-	-	-	8	8	-	-	-	-	-	-	-	-	12	8	4	-	-	4	-	-	-	-	-	-	-	-	-	96	-	-	-	4	-	168	15
16	wireless	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-	4	-	-	-	4	-	184	-	-	-	-	-	268	16
17	other apparatus	4	4	-	-	20	8	4	8	84	16	8	52	20	4	8	48	24	44	8	-	76	24	8	4	-	16	564	32	20	4	48	12	-	12	20	8	24	-	-	20	-	680	24	8	-	168	-	2 136	17
18	Explosives, fireworks	24	20	8	-	-	-	-	4	-	-	-	-	-	-	4	8	32	12	4	4	16	-	12	-	16	-	72	4	-	-	12	32	52	8	8	4	4	-	-	4	-	-	-	76	4	52	4	500	18
19	Fire in grate, igniting bedding, clothing linen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	164	360	-	-	-	-	-	100	-	104	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	748	19
20	furniture and furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	152	360	-	-	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	608	20
21	structural timber under hearth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	160	-	-	-	-	-	-	-	1 160	21
22	other materials	-	4	-	-	8	8	-	20	-	56	12	8	4	-	4	36	212	28	4	-	-	-	4	8	-	4	4	-	-	-	-	36	-	4	168	92	80	184	-	60	4	-	12	32	396	184	-	1 676	22
23	Fish frying range (all fuels)	-	-	-	-	4	-	120	-	-	-	-	-	-	-	-	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	4	-	4	-	-	-	4	544	-	4	4	-	828	22
24	Flue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	12	12	-	20	-	16	8	4	-	12	-	4	-	12	44	-	8	108	60	188	16	4	68	-	-	-	4	-	80	-	696	24
25	Furnace (coal or coke)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	4	4	-	16	-	36	25
26	Gas (town) burner, jet, ring	-	-	-	-	12	-	-	4	4	8	-	-	4	8	8	24	12	4	-	8	8	-	-	-	-	-	12	4	-	-	12	4	-	4	-	4	-	-	-	4	-	-	28	4	-	12	-	192	26
27	cooker	-	-	-	-	144	-	12	-	-	16	8	-	4	12	4	40	12	-	-	8	28	4	-	20	-	-	64	-	20	-	76	4	-	-	28	-	-	-	-	4	-	-	888	-	-	32	-	1 408	27
28	fire, heater, radiator	-	-	-	-	16	-	-	-	-	4	-	-	4	-	4	-	16	4	4	4	4	-	4	-	-	-	32	4	-	-	8	4	-	-	-	-	12	-	-	-	-	-	-	8	4	16	4	156	28
29	other apparatus	-	-	-	-	88	8	4	4	-	4	8	24	20	4	20	60	20	12	-	4	36	-	8	8	-	-	32	12	24	-	56	8	-	-	16	4	12	-	-	8	-	56	-	-	-	52	-	612	29
30	Incubator, brooder (all fuels)	24	140	16	-	-	-	-	104	-	-	-	-	-	-	-	-	4	104	-	-	-	-	8	-	-	-	-	-	-	-	12	-	-	28	4	4	-	-	48	-	8	-	8	-	48	-	560	30
31	Intentional burning of grass-land, gorse, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	80	-	8	-	-	-	-	8	-	-	4	-	4	-	112	31
32	Lightning	4	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	4	-	-	-	-	24	4	-	-	-	24	-	-	4	-	60	-	-	-	8	-	152	32
33	Lime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	12	33
34	Locomotives, sparks from	4	-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	4	-	4	-	-	-	-	28	144	4	8	8	8	-	-	32	4	-	-	20	8	20	-	388	34
35	Malicious ignition (1) (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	400	35
36	Matches	20	20	8	-	96	12	-	48	8	12	-	8	8	-	-	20	136	4	-	12	28	-	4	12	-	8	68	16	4	-	4	-	4	-	-	-	-	-	-	4	-	-	-	64	-	76	4	708	36
37	Matches, children with (5)	212	216	48	-	24	-	-	12	-	-	8	4	-	4	-	24	672	36	112	4	36	8	48	20	12	-	216	76	4	8	16	28	32	4	60	16	20	-	-	88	-	-	-	3 360	-	368	12	5 808	37
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	

For explanation of notes see page 27.

Table 7A (Contd.)

MATERIAL FIRST IGNITED IN FIRES IN BUILDINGS IN RELATION TO THE SUPPOSED CAUSE

Reports from England and Wales, 1959

Row No.	Supposed cause of fire	Material first ignited																																									Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
		Agriculture and Forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood not structural			Textiles							Furniture, furnishings, household goods					Building materials, structural woodwork								Miscellaneous materials								
		Crops, ricks and stacks	Loose straw or hay	Other agricultural material	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing, on person	Clothing, not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork, external	Doors, window frames	Floors, stairs	Partitions, lining to walls	Roof	Timber in chimney, flue	Timber under hearth	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
38	Mechanical heat or sparks	-	-	4	8	-	-	-	-	-	-	-	-	8	-	40	48	16	64	-	-	12	232	12	8	-	88	-	-	8	-	-	-	-	-	-	-	-	-	-	-	8	-	4	-	-	124	-	680	38
39	Metal, hot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	16	-	-	16	-	4	12	4	-	-	20	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	172	39
40	Naked light (1) (3)	24	20	12	4	8	-	-	-	-	-	-	-	-	-	4	-	8	8	4	-	4	-	4	8	-	-	-	8	-	-	-	12	-	-	8	12	-	-	-	-	-	-	68	-	72	-	368	40
41	Oil, blow lamp	4	8	-	-	12	-	4	4	-	20	-	-	-	-	-	-	4	4	-	4	-	-	8	4	-	-	20	-	-	-	-	56	88	328	24	20	100	-	-	24	-	-	-	8	-	148	41	896	41
42	engine (including petrol)	-	-	-	-	-	-	-	20	104	-	-	-	-	-	-	-	-	8	-	-	-	-	8	8	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	12	-	168	42
43	lamp	-	12	-	-	-	-	-	1 920	24	48	-	88	-	-	-	-	40	16	8	12	112	-	8	8	-	-	160	92	68	-	84	12	-	-	36	24	16	-	68	-	-	-	-	96	3 000	44	176	43
44	stove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	16	-	56	44
45	tractor	16	20	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	56	45
46	other apparatus	8	4	4	-	-	-	-	12	8	-	88	56	-	-	-	12	-	12	4	-	4	-	-	8	-	-	4	-	-	-	-	16	12	-	8	8	4	4	-	-	-	4	4	8	-	32	-	324	46
47	Oxyacetylene cutting and welding apparatus	4	-	4	48	16	-	-	4	36	-	8	48	16	4	24	16	28	20	4	-	4	8	8	12	12	8	-	8	-	12	4	12	-	-	4	4	8	-	-	16	8	-	-	8	-	44	-	460	47
48	Rubbish burning	40	40	60	-	-	-	-	-	-	4	-	-	-	-	4	8	72	72	156	4	-	4	8	20	4	8	4	-	-	-	12	100	512	4	68	24	40	-	4	116	4	-	-	180	12	80	-	1 664	48
49	Slow combustion stove igniting structural woodwork	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	68	88	36	8	4	68	-	-	-	-	-	-	-	280	49
50	igniting other materials	-	8	4	8	8	4	-	16	16	20	12	12	-	12	4	48	48	144	40	-	116	8	24	12	-	-	28	12	20	-	28	28	-	-	-	-	-	-	-	-	20	-	4	60	20	96	-	880	50
51	Smoking materials	100	148	48	4	4	-	-	4	16	24	4	12	-	-	8	52	912	244	20	8	272	12	156	156	64	100	696	1 44	52	28	92	32	92	36	80	12	12	-	-	64	-	-	-	1 004	-	468	-	6 080	51
52	Spontaneous combustion in rubbish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	52
53	other materials	48	-	-	-	-	-	4	-	-	-	-	8	4	-	4	8	8	4	-	-	-	-	-	4	68	-	8	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	24	-	-	12	-	212	53
54	Static electricity	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	20	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	54
55	Sun's rays	16	8	-	-	-	-	-	-	-	-	-	-	-	-	-	12	8	4	4	-	-	-	-	-	-	4	28	4	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	116	55
56	Taper, lighted paper or sticks	8	-	-	-	8	-	-	12	-	4	-	-	8	-	-	-	40	4	4	8	16	-	-	-	-	-	20	4	-	-	8	4	20	-	12	4	-	-	-	4	-	-	-	8	8	24	-	228	56
57	Taper, lighted paper or sticks, children with (5)	4	4	4	-	-	-	-	4	-	4	-	-	-	-	-	-	12	4	-	-	12	-	-	-	-	-	16	16	-	-	-	12	-	-	4	-	-	-	-	-	-	-	-	36	-	16	-	148	57
58	Miscellaneous and undefined (4)	8	12	4	-	-	36	-	4	-	8	-	64	8	8	20	40	24	60	4	-	32	8	28	8	8	20	24	24	-	4	24	16	12	8	12	20	32	-	-	12	8	-	16	32	4	64	-	716	58
59	Unknown source of ignition	52	52	8	-	52	20	-	24	24	-	8	16	8	-	12	100	96	48	8	-	20	8	16	12	-	24	40	40	-	-	12	12	28	8	12	8	12	-	-	56	4	-	12	176	-	156	5 064	6 248	59
60	Total fires in buildings	644	768	312	72	1 108	116	160	2 236	472	304	196	500	136	64	172	876	2 860	1 192	420	316	1 436	332	436	452	140	324	3 016	2 288	408	68	916	1 000	1 272	460	1 216	744	932	444	1 220	1 320	80	3 488	3 280	5 628	496	3 276	5 488	53 084	60
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	

For explanation of notes see page 27.

SECTION II

Table 7B .

MATERIAL FIRST IGNITED IN FIRES IN HAZARDS OTHER THAN BUILDINGS IN RELATION TO SUPPOSED CAUSE

Reports from England and Wales 1959

Row No.	Supposed cause of fire	Material first ignited																																						Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
		Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood, not structural			Textiles						Furniture, furnishings, household goods					Building materials, structural woodwork		Miscellaneous material									
		Crops, ricks and stacks	Loose straw or hay	Other agricultural materials	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork external	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
1	Aircraft, crashed	-	4	264	-	-	4	-	-	-	-	-	-	-	8	4	16	180	8	40	-	-	4	-	4	-	20	24	-	-	-	-	-	-	-	116	16	-	-	1 660	4	60	36	36	1
2	Ashes, soot	-	4	10	4	4	-	-	-	-	-	-	-	-	-	-	4	-	-	4	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	4	-	-	2 376	2
3	Brazier	4	-	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	102	3
4	Camp fire, fire in open air (1)	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	-	4	-	236	4
5	Candle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	5
6	Chimney on fire, not confined to chimney	4	-	26	-	-	-	-	-	-	-	-	-	-	-	4	-	-	8	8	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	62	7
7	Chimney, sparks from (outside building)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	36	8
8	Cooker, cooking range, oven, other than electric, town gas, or oil	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	8	-	-	-	-	-	4	4	-	-	-	-	-	4	28	-	-	-	4	-	-	24	9
9	Electric fire, heater, radiator	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	10
10	motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	16	11
11	refrigerator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	wire and cable other than lead to apparatus	-	-	18	-	20	-	-	12	300	8	12	32	-	-	-	-	4	4	-	-	-	8	-	-	-	-	4	8	-	24	-	-	-	32	-	1 812	-	-	-	92	-	2 390	12
13	wire and cable lead to apparatus	-	-	10	-	-	-	-	-	48	-	-	12	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	-	16	-	-	-	4	-	116	-	-	-	12	-	226	13
14	wireless	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	14
15	other apparatus	-	4	18	-	-	-	-	8	156	24	4	32	-	4	-	16	8	-	-	-	-	-	12	8	-	8	8	-	-	28	-	-	-	60	-	612	-	8	-	56	-	1 066	15
16	Explosives, fireworks	16	8	1 194	-	-	4	-	-	4	-	-	-	-	-	-	4	148	12	28	4	-	-	8	-	12	12	-	-	-	24	-	-	-	24	-	-	-	124	-	64	8	1 698	16
17	Fire in grate igniting other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	12	17
18	Fish frying range all fuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	36	-	-	-	-	4	4	-	8	-	4	8	128	-	-	8	-	-	-	24	-	12	18
19	Flue	-	-	-	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	244	19
20	Gas (town) burner, jet, ring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	20
21	cooker	-	-	-	-	264	-	-	-	-	-	-	-	-	4	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	8	21
22	other apparatus	8	8	2 992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	4	-	-	-	-	-	-	-	44	8	4	-	12	-	32	-	3 124	23
23	Intentional burning of grassland, gorse etc.	32	-	32	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	-	-	8	4	40	-	-	-	4	-	136	24
24	Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	-	-	4	-	-	-	4	-	8	-	28	25
25	Lime	980	272	30 082	-	4	-	-	-	-	-	4	16	-	-	4	8	24	32	184	-	4	-	28	-	8	16	-	-	-	-	-	-	-	592	4	8	-	164	-	396	-	32 830	26
26	Locomotives, sparks from	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	222	27
27	Malicious ignition (1) (2)	8	12	1 100	-	12	36	-	-	52	12	-	8	4	-	-	4	84	4	16	-	-	-	8	-	4	8	-	-	-	8	-	-	-	8	-	-	-	108	-	20	-	1 508	28
28	Matches	312	260	32 568	-	12	4	-	20	32	12	4	16	8	4	28	20	744	72	392	8	-	-	8	8	24	28	20	-	16	-	8	-	-	128	-	-	-	6 332	-	668	-	42 064	29
29	Matches children with (5)	-	-	8	-	52	-	-	-	104	4	4	16	-	4	12	68	-	16	-	-	-	-	4	4	-	12	-	4	-	-	-	-	-	8	-	-	-	-	-	304	-	716	30
30	Mechanical heat and sparks	-	4	10	-	-	-	-	-	-	-	-	4	4	4	4	8	8	-	8	-	-	-	4	-	4	-	-	-	-	-	-	-	-	44	-	-	-	4	-	16	-	126	31
31	Metal, hot	84	56	6 414	-	8	-	-	-	4	-	4	4	-	-	-	-	12	8	20	-	4	-	4	-	16	4	-	-	-	12	-	-	-	24	-	-	-	156	-	64	-	6 898	32
32	Naked light (1) (3)	-	-	10	-	4	-	-	-	8	-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	4	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	42	33
33	Oil, blowlamp	4	12	66	-	4	-	-	12	2 132	16	72	140	-	-	-	8	24	-	-	-	16	4	56	64	52	40	24	-	-	-	16	-	-	32	4	40	4	8	-	112	-	2 958	34
34	engine (including petrol)	-	-	20	4	4	-	-	112	20	12	-	-	-	-	-	12	4	-	-	-	4	-	-	-	16	20	8	-	-	12	-	-	-	12	-	12	-	-	-	16	-	288	35
35	lamp																																										
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	

For explanation of notes see page 27.

SECTION II

Table 7B (Contd.)

MATERIAL FIRST IGNITED IN FIRES IN HAZARDS OTHER THAN BUILDINGS IN RELATION TO SUPPOSED CAUSE

Reports from England and Wales 1959

Row No.	Supposed cause of fire	Material first ignited																																					Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
		Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood, not structural			Textiles							Furniture, furnishings, household goods					Building materials, structural woodwork			Miscellaneous material								
		Crops, ricks and stacks	Loose straw or hay	Other agricultural materials	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork external	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
36	Oil stove	4	-	62	-	-	-	-	20	4	-	-	-	-	-	-	8	-	-	-	4	4	-	-	-	4	-	-	-	-	4	-	-	-	8	-	-	-	-	-	16	-	138	36
37	tractor	136	68	84	-	-	-	-	24	72	-	12	4	-	-	-	-	-	-	-	-	-	-	4	4	4	-	-	-	-	-	-	-	-	4	-	8	-	-	-	16	-	432	37
38	other apparatus	48	128	80	-	-	-	-	4	28	-	20	20	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	96	-	448	38
39	Oxyacetylene cutting and welding apparatus	16	8	44	36	12	4	-	-	12	-	4	72	4	12	28	12	-	-	112	-	-	-	8	16	4	8	-	-	-	44	-	-	-	80	4	-	-	24	-	76	-	640	39
40	Rubbish burning	688	248	9 400	4	-	-	-	4	4	8	16	40	4	4	24	24	80	188	528	4	-	-	8	-	28	8	-	-	-	4	4	-	-	284	16	12	-	2 292	4	604	-	14 532	40
41	Slow combustion stove igniting other materials	4	-	-	-	-	-	-	-	-	-	-	-	-	100	4	64	-	-	-	-	8	-	4	-	-	-	8	-	-	-	-	-	-	56	-	-	-	12	-	12	-	272	41
42	Smoking materials	244	248	22 758	4	4	4	-	-	20	28	-	20	-	4	12	8	340	152	68	-	20	16	140	40	332	152	76	32	4	240	20	4	-	280	-	-	-	1 824	-	508	4	27 606	42
43	Spontaneous combustion in rubbish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	356	-	-	-	356	43
44	Spontaneous combustion in other materials	160	-	114	-	-	4	-	-	-	-	-	8	-	-	8	28	8	8	4	-	-	4	4	12	-	32	-	-	-	-	-	-	-	-	48	-	24	-	4	44	-	514	44
45	Steamroller, engine, traction engine	-	-	14	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	45
46	Sun's rays	16	12	506	-	-	-	-	-	-	-	-	4	-	-	-	-	16	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	32	-	8	-	598	46
47	Taper, lighted paper or sticks	-	4	86	-	-	-	-	4	-	-	-	-	-	-	-	4	44	-	4	-	-	-	4	-	-	-	-	-	-	-	-	4	-	4	-	-	-	24	-	-	-	182	47
48	Taper, lighted paper or sticks children with[5]	4	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	36	4	12	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	8	-	-	-	102	48
49	Miscellaneous and undefined (4)	-	-	206	-	8	20	-	-	4	4	12	44	-	28	8	48	12	4	8	4	4	-	4	8	4	-	-	-	-	16	-	-	-	24	44	-	-	4	-	28	-	546	49
50	Unknown source of ignition	96	36	14 580	4	52	16	-	4	84	12	8	32	-	-	24	68	108	32	100	-	4	16	-	4	20	8	-	4	-	48	4	-	-	60	44	4	-	776	-	148	6 716	23 072	50
51	Total fires other than those in buildings	2 868	1 396	123 072	56	492	120	-	228	3 092	140	176	620	24	180	172	452	1 884	588	1 564	24	124	64	296	188	580	384	144	56	12	796	52	20	-	2 088	156	2 724	64	13 944	12	3 528	6 936	169 316	51
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	

For explanation of notes see page 27.

SECTION II

Table 10

PERSONS RESCUED OR ESCAPED BY EMERGENCY MEANS FROM FIRES

Reports from England and Wales, 1959

(Frequencies obtained from results of analysis of all reports)

Appliance or method used	Number of persons
Rescue with Fire Brigade assistance from	
Aircraft	-
Buildings	
Automatic escape lines	10
Escape, hand operated	26
Ladder, extension	37
first floor	5
scaling	10
other or undefined	47
Ladder and line	1
Line	1
Other apparatus	6
Without apparatus	158
Ships	4
Total	305
Rescue without F.B. assistance from	
Aircraft	4
Buildings	
Automatic escape lines	6
Carried or assisted out	248
Ladder	149
Lowered from windows, roof, etc.	64
Other or undefined methods	27
Road vehicles	11
Caravans	3
Total	512
Escape by emergency means from	
Aircraft	
Baled out	5
Method not stated	2
Buildings	
Automatic escape lines	26
Climbing over roof	44
Jumping from upstairs window, roof	172
Ladder	31
Sliding down drainpipe, sheets, rope etc.	30
Through ground floor windows	50
Other or undefined methods	160
Road vehicles	9
Ships	104 (1)
Caravans	5
Trains	2
Total	640
Total persons rescued or escaped	1 457

Note: (1) Includes 98 persons abandoning one ship.

SECTION II

Table 11

NATURE OF INJURIES OF CASUALTIES IN FIRES

Reports from England and Wales, 1959

(Frequencies obtained from results of analysis of all reports)

Nature of injury	Fire Brigade	Other Casualties	Total
Fatal casualties			
Burns and scalds	-	277	277
Overcome by gas or smoke	-	105	105
Other and undefined injuries	-	43	43
Total	-	425	425
Non-fatal casualties**			
Burns and scalds	81	2 058	2 139
Bruises, cuts, abrasions	102	134	236
Dislocations, sprains, fractures	44	21	65
Overcome by gas or smoke	22	137	159
More than one of the above injuries	17	71	88
* Shock	3	230	233
Other and undefined injuries	52	61	113
Total	321	2 712	3 033
Total casualties	321	3 137	3 458

** Excludes casualties requiring first-aid treatment only.

* Casualties who suffered shock in addition to another injury have been classified according to the nature of the other injury.

SECTION II

Table 12

FIRES CLASSIFIED ACCORDING TO THE MONTH IN WHICH THEY OCCURRED

Reports from England and Wales, 1959

Month of occurrence	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
January	5 404	2.4	1 416	0.6	6 820	3.1
February	4 428	2.0	5 662	2.5	10 090	4.5
March	4 104	1.8	6 530	2.9	10 634	4.8
April	3 860	1.7	5 384	2.4	9 244	4.2
May	4 640	2.1	9 122	4.1	13 762	6.2
June	4 080	1.8	18 256	8.2	22 336	10.0
July	4 084	1.8	28 962	13.0	33 046	14.9
August	3 916	1.8	21 286	9.6	25 202	11.3
September	4 580	2.1	43 500	19.6	48 080	21.6
October	4 820	2.2	24 268	10.9	29 088	13.1
November	4 564	2.1	3 448	1.6	8 012	3.6
December	4 604	2.1	1 482	0.7	6 086	2.7
Total fires	53 084	23.9	169 316	76.1	222 400	100.0

SECTION III

STATISTICAL TABLES FOR FIRE BRIGADES IN SCOTLAND, 1959

Table 1

METHOD OF CALLING FIRE BRIGADES TO FIRES
Reports from Scotland, 1959

Method of calling	Fire Brigade											Total	
	Glasgow	Lanark	Central	Western	South Western	South Eastern	Fife	Perth and Kinross	Angus	North Eastern	Northern	No.	Per cent
By Special Fire Service methods													
Automatic fire alarm	16	-	-	-	-	-	-	-	-	-	-	16	0.1
Fire and police pillar box	16	-	-	4	-	4	-	-	-	8	-	32	0.2
Police telephone	460	116	56	172	40	292	52	8	208	84	32	1 520	11.3
Private fire telephone	8	4	8	4	12	12	-	4	4	-	-	56	0.4
Street fire alarm	40	-	-	-	-	-	-	-	-	-	-	40	0.3
Total	540	120	64	180	52	308	52	12	212	92	32	1 664	12.4
Exchange telephone	1 988	880	516	616	584	1 424	420	256	536	836	220	8 276	61.5
Running call	220	36	48	20	24	56	20	4	12	24	4	468	3.5
Late call	12	-	12	-	4	-	16	-	-	-	-	44	0.3
Other and undefined methods	282	338	242	194	210	758	248	90	170	360	110	3 002	22.3
Total fires	3 042	1 374	882	1 010	874	2 546	756	362	930	1 312	366	13 454	100.0

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION III

Table 2

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on		
Agriculture		
Farming (not fruit or poultry) and horse and stock rearing	264	2.0
Allotments, market gardening, fruit and poultry farming	52	0.4
Total	316	2.3
Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	36	0.3
Manufacture of bricks, pottery, glass, etc.	16	0.1
Manufacture of chemicals, dyes, explosives, paint, oils		
Chemicals	12	0.1
Explosives	4	-
Paints, varnish, oils, grease	12	0.1
Miscellaneous	-	-
Total	28	0.2
Manufacture of metals, machines, implements, conveyances		
Smelting, converting, refining, rolling of iron, steel	8	0.1
Extracting, refining, smelting of other metals	-	-
Founding, other secondary processes in metal working	12	0.1
Engineering (not marine or electrical)	32	0.2
Electrical installations, cables and apparatus	12	0.1
Construction and repair of vehicles	16	0.1
Shipbuilding and repairing, marine engineering	28	0.2
Cutlery and small tools	-	-
Other metal industries	28	0.2
Total	136	1.0
Manufacture of textiles and textile goods (not dress)		
Cotton	4	-
Wool, worsted and shoddy	4	-
Silk, natural and artificial	-	-
Other or mixed fibres	20	0.1
Miscellaneous	8	0.1
Textile dyeing, printing, bleaching, finishing	8	0.1
Total	44	0.3

SECTION III

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Preparation of skins and leather and manufacture of goods of leather and leather substitute (not clothing or footwear)	-	-
Manufacture of clothing (not knitted) including footwear	16	0.1
Manufacture of food, drink, tobacco		
Food	80	0.6
Drink	16	0.1
Tobacco, cigars, cigarettes, snuff	4	-
Total	100	0.7
Woodworking: manufacture of cane and basket ware, furniture, fittings		
Woodworking and basket ware	64	0.5
Furniture (not metal or basket)	32	0.2
Fittings	-	-
Total	96	0.7
Paper making: manufacture of stationery and stationery requisites, printing and bookbinding	36	0.3
Building, decorating, contracting: slate and stone cutting and dressing	200	1.5
Rubber and synthetic rubber	12	0.1
Other manufacturing industries	20	0.1
Gas, water, electricity, sewage	16	0.1
Transport and communication		
Railway - stations, etc.	92	0.7
Road - garages, depots, etc.	152	1.1
Water - dock buildings other than warehouses	16	0.1
Air - aerodromes, etc.	4	-
Other communication (post, telephone, wireless)	20	0.1
Total	284	2.1
Commerce		
Departmental stores	8	0.1
Retail shops	504	3.7
Wholesale dealers	60	0.4
Dock and other warehouses	16	0.1
Total	588	4.4

SECTION III

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Offices, Government and other		
Government departments	8	0.1
Local authorities	-	-
Other offices	96	0.7
Total	104	0.8
Navy, Army and Air Force establishments	-	-
Fire Service establishments	-	-
Professional establishments (other than offices): public institutions		
Educational establishments	72	0.5
Hospitals, homes, etc. for the care of the sick and infirm	40	0.3
Places of worship	28	0.2
Other public and professional services	48	0.4
Total	188	1.4
Places of public entertainment		
Cinemas and theatres	20	0.1
Other places of entertainment	64	0.5
Total	84	0.6
Private residential and personal service (including hotels and catering)		
Private residential houses	1 216	9.0
Private residential flats and maisonettes	2 136	15.9
Clubs, hotels, restaurants, public houses	320	2.4
Private huts, unoccupied houses, personal service	640	4.8
Total	4 312	32.0
Miscellaneous	584	4.4
Undefined	20	0.1
Total fires in buildings	7 236	53.8

SECTION III

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires other than those in buildings		
Agriculture and forestry		
Crops, standing or stooked (including hay fields)	48	0.4
Crops, ricks and stacks	200	1.5
Agricultural machinery	48	0.4
Agricultural waste	44	0.3
Other agricultural hazards	60	0.4
Allotments and gardens	16	0.1
Railway embankments	610	4.5
Grassland, heathland	2 636	19.6
Woods, forests, plantations	140	1.0
Single trees	120	0.9
Felled timber	20	0.1
Total	3 942	29.3
Transport and communications		
Aircraft	-	-
Railway rolling stock, etc.	72	0.5
Road vehicles - electrically driven	48	0.4
- oil, petrol or gas driven	608	4.5
- other	-	-
Water vessels - craft on inland waters	4	-
- ships in dock	68	0.5
- ships at sea	4	-
- marine structures	12	0.1
Total	816	6.1
Outdoor storage		
Chemicals, explosives, ammunition, oils, grease	40	0.3
Coal and coke	4	-
Refuse	412	3.1
Timber	280	2.1
Cotton, metal, packing materials, rubber etc.	96	0.7
Total	832	6.2
Other outdoor structures	628	4.7
Total fires other than those in buildings	6 218	46.2
Total fires attended	13 454	100.0

SECTION III

Table 3

FIRES CLASSIFIED ACCORDING TO HAZARDS IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from Scotland, 1959

Hazard in which fire started	Fire Brigades											Total
	Glasgow	Lanark	Central	Western	South Western	South Eastern	Fife	Perth and Kinross	Angus	North Eastern	Northern	
Fires in Buildings												
Industrial premises	184	84	68	112	56	84	40	8	60	36	8	740
Commercial premises and offices	228	72	40	48	44	116	24	8	48	52	12	692
Transport and public utilities	56	36	24	12	32	48	24	12	4	36	16	300
Dwellings	952	280	220	296	192	612	168	72	232	256	72	3 352
Other buildings	752	220	84	108	140	320	92	56	196	128	56	2 152
Total	2 172	692	436	576	464	1 180	348	156	540	508	164	7 236
Fires not in buildings												
Agriculture, grassland and forestry	302	390	282	230	286	1 006	304	142	218	604	178	3 942
Transport	212	80	64	72	52	128	32	40	32	92	12	816
Outdoor storage	156	100	60	88	28	144	44	16	108	80	8	832
Other outdoor hazards	200	112	40	44	44	88	28	8	32	28	4	628
Total	870	682	446	434	410	1 366	408	206	390	804	202	6 218
Total fires attended	3 042	1 374	882	1 010	874	2 546	756	362	930	1 312	366	13 454

SECTION III

Table 4

SUPPOSED CAUSE OF FIRES

Reports from Scotland, 1959

Each item in the list of supposed causes of fire given in this table represents a group of causes which have a common source of ignition. In some cases the groups have been divided into sub-groups according to the nature of the material first ignited and in others according to the act with the source of ignition which led to the outbreak of fire. Certain causes were specified for the first time in 1954, the miscellaneous item is therefore not comparable with those for years previous to 1954.

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Aircraft, crashed	-	-	-	-	-	-
Ashes, soot	500	3.7	122	0.9	622	4.6
Brazier	16	0.1	16	0.1	32	0.2
Camp fire, fire in open air[1]	-	-	12	0.1	12	0.1
Candle	44	0.3	4	-	48	0.4
Chimney on fire, not confined to chimney	576	4.3	-	-	576	4.3
Chimney sparks from (outside building)	48	0.4	14	0.1	62	0.5
Cooker, cooling range, oven, other than electric, town gas, or oil[1]	84	0.6	-	-	84	0.6
Electric cooker	256	1.9	-	-	256	1.9
fire, heater, radiator	124	0.9	-	-	124	0.9
iron	32	0.2	-	-	32	0.2
motor	24	0.2	16	0.1	40	0.3
refrigerator	44	0.3	-	-	44	0.3
television	48	0.4	-	-	48	0.4
wire and cable, other than lead to apparatus	372	2.8	172	1.3	544	4.0
wire and cable, lead to apparatus	24	0.2	8	0.1	32	0.2
wireless	36	0.3	-	-	36	0.3
other apparatus	184	1.4	-	-	184	1.4
Explosives, fireworks	12	0.1	82	0.6	94	0.7
Fire in grate igniting bedding, clothing, linen	76	0.6	-	-	76	0.6
Fire in grate, igniting furniture, furnishings	180	1.3	-	-	180	1.3
structural timber under hearth	172	1.3	-	-	172	1.3
other materials	244	1.8	8	0.1	252	1.9
Fish frying range (all fuels)	72	0.5	4	-	76	0.6
Flue	44	0.3	8	0.1	52	0.4
Furnace (coal or coke)	12	0.1	4	-	16	0.1
Gas (town) burner, jet, ring	48	0.4	-	-	48	0.4
cooker	268	2.0	-	-	268	2.0
fire, heater, radiator	24	0.2	-	-	24	0.2
other apparatus	88	0.7	-	-	88	0.7

SECTION III

Table 4 (Contd.)

SUPPOSED CAUSE OF FIRES

Reports from Scotland, 1959

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Incubator brooder (all fuels)	52	0.4	4	-	56	0.4
Intentional burning of grassland, gorse etc.	16	0.1	270	2.0	286	2.1
Lightning	8	0.1	12	0.1	20	0.1
Lime	4	-	-	-	4	-
Locomotives, sparks from	36	0.3	1 058	7.9	1 094	8.1
Malicious ignition(1)(2)	16	0.1	-	-	16	0.1
Matches	44	0.3	52	0.4	96	0.7
Matches, children with(5)	600	4.5	1 474	11.0	2 074	15.4
Mechanical heat or sparks	32	0.2	96	0.7	128	1.0
Metal, hot	-	-	12	0.1	12	0.1
Naked light(1)(3)	260	1.9	316	2.3	576	4.3
Oil, blowlamp	100	0.7	12	0.1	112	0.8
engine (including petrol)	8	0.1	136	1.0	144	1.1
lamp	24	0.2	12	0.1	36	0.3
stove	160	1.2	8	0.1	168	1.2
tractor	12	0.1	16	0.1	28	0.2
other apparatus	32	0.2	16	0.1	48	0.4
Oxyacetylene cutting and welding apparatus	56	0.4	64	0.5	120	0.9
Rubbish burning	144	1.1	284	2.1	428	3.2
Slow combustion stove igniting structural woodwork	32	0.2	-	-	32	0.2
other material	92	0.7	28	0.2	120	0.9
Smoking materials	804	6.0	638	4.7	1 442	10.7
Spontaneous combustion in rubbish	-	-	-	-	-	-
Spontaneous combustion in other materials	4	-	8	0.1	12	0.1
Static electricity	-	-	-	-	-	-
Steam roller, engine, traction engine	-	-	-	-	-	-
Sun's rays	8	0.1	22	0.2	30	0.2
Taper, lighted paper or sticks	40	0.3	18	0.1	58	0.4
Taper, lighted paper or sticks, children with(5)	224	1.7	230	1.7	454	3.4
Miscellaneous(4)	56	0.4	32	0.2	88	0.6
Unknown source of ignition	720	5.4	930	7.0	1 650	12.3
Total fires attended	7 236	53.8	6 218	46.2	13 454	100.0

Notes. (1) Causes specified for the first time in the Annual Statistical Tables for 1954.

(2) Malicious ignition is a general heading for suspected or proven arson or incendiarism.

(3) No further information given in original reports.

(4) Not comparable with the years prior to 1954.

(5) A change in definition has increased the number of incidents in these categories in 1957 and succeeding years.

SECTION III

Table 5A

SUPPOSED CAUSE OF FIRES IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Row No.
		Hazard in which fire started	Agriculture	Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	Manufacture of bricks, pottery, glass, etc.	Manufacture of chemicals, explosives, paints, oils	Manufacture of metals, machines, implements, conveyances	Manufacture of textiles and textile goods (not dress)	Manufacture of clothing (not knitted) including footwear, and goods of leather and leather substitute; preparation of skins and leather	Manufacture of food, drink, tobacco	Woodworking; manufacture of cane and basket ware, furniture, fittings	Paper making; manufacture of stationery and stationery requisites, printing and bookbinding	Building, decorating, contracting; slate and stone cutting and dressing	Other manufacturing industries, including rubber and synthetic rubber	Gas, water, electricity, sewage	Transport and communication	Commerce; retail shops, including departmental stores	Commerce; wholesale dealers and warehouses	Offices; Government and other	Navy, Army, Air Force establishments	Fire Service establishments	Professional establishments (other that offices), public institutions	Places of public entertainment	Private residential houses	Private residential flats and maisonettes	Clubs, hotels, restaurants, public houses	Private huts, unoccupied houses, personal service	Miscellaneous and undefined	Total	
1	Ashes, soot		-	-	-	-	4	-	-	4	4	-	-	4	-	16	8	-	4	-	-	8	4	12	76	4	348	4	500	1
2	Brazier		-	-	-	-	4	-	-	-	-	-	-	-	-	4	8	-	-	-	-	4	-	4	20	4	-	4	44	3
3	Candle		-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	2
4	Chimney on fire, not confined to chimney		-	-	4	-	-	-	-	-	8	-	-	-	-	-	16	-	4	-	-	-	-	164	360	16	-	4	576	4
5	Chimney, sparks from (outside building)		4	-	-	-	-	-	-	4	-	4	-	-	-	-	4	4	-	-	-	-	-	28	-	-	-	-	48	5
6	Cooker, cooking range, oven, other than electric town gas or oil (1)		-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	28	52	-	-	-	84	6
7	Electric cooker		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	-	-	-	96	144	4	-	-	256	7
8	fire, heater, radiator		-	-	-	-	8	-	-	4	-	-	-	-	-	4	12	4	8	-	-	-	-	12	68	4	-	-	124	8
9	iron		-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	24	-	-	-	32	9
10	motor		-	-	-	-	4	-	-	-	-	-	-	-	-	4	12	-	-	-	-	-	-	-	-	-	-	4	24	10

11	refrigerator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	8	-	12	-	-	44	11
12	television	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	32	-	-	-	48	12
13	wire and cable other than lead to apparatus	12	-	-	4	-	8	-	4	-	-	-	4	-	12	48	-	8	-	-	4	8	120	112	24	-	4	372	13
14	wire and cable lead to apparatus	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	8	8	-	-	-	24	14
15	wireless	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	16	4	8	-	-	36	15
16	other apparatus	12	-	-	-	16	-	4	4	-	-	8	8	-	20	12	12	12	-	-	-	-	36	32	4	4	-	184	16
17	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	4	12	17
18	Fire in grate, igniting bedding, clothing, linen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	40	32	-	-	-	76	18
19	furniture and furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	120	-	-	-	180	19
20	structural timber under hearth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	8	-	52	96	8	-	-	172	20
21	other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	8	-	-	-	-	-	84	128	4	-	4	244	21
22	Fish frying range (all fuels)	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	64	-	-	72	22
23	Flue	-	8	-	-	4	-	-	8	-	4	4	-	-	-	-	-	-	-	-	4	4	4	-	-	-	4	44	23
24	Furnace (coal or coke)	4	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	12	24
25	Gas (town) burner, jet, ring	-	-	-	-	-	-	4	4	-	-	-	-	-	-	16	4	-	-	-	-	-	8	4	4	4	-	48	25
26	cooker	-	-	-	4	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	4	-	44	184	12	-	-	268	26
27	fire, heater, radiator	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	4	-	8	-	4	-	-	24	27
28	other apparatus	-	-	-	-	-	-	-	20	-	-	-	-	4	4	20	4	-	-	-	-	-	4	24	8	-	-	88	28
29	Incubator, brooder, (all fuels)	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	52	29
30	Intentional burning of grassland, gorse, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	12	16	30
31	Lightning	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	8	31
32	Lime	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	32
33	Locomotives, sparks from	-	-	-	-	-	-	-	-	-	-	-	-	-	20	4	-	-	-	-	-	4	-	-	-	4	4	36	33
34	Malicious ignition(1)(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	4	-	4	-	16	34
35	Matches	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	8	20	-	4	8	44	35
	Column No.	1	2	3	4	3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	

For explanation of notes see page 53.

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SECTION III

Table 5A (Contd.)

SUPPOSED CAUSE OF FIRES IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Row No.
		Hazard in which fire started																												
			Agriculture	Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	Manufacture of bricks, pottery, glass, etc.	Manufacture of chemicals, explosives, paints, oils	Manufacture of metals, machines, implements, conveyances	Manufacture of textiles and textile goods (not dress)	Manufacture of clothing (not knitted) including footwear, and goods of leather and leather substitute; preparation of skins and leather	Manufacture of food, drink, tobacco	Woodworking; manufacture of cane and basket ware, furniture, fittings	Paper making; manufacture of stationery and stationery requisites, printing and bookbinding	Building, decorating, contracting; slate and stone cutting and dressing	Other manufacturing industries, including rubber and synthetic rubber	Gas, water, electricity, sewage	Transport and communication	Commerce; retail shops, including departmental stores	Commerce; wholesale dealers and warehouses	Offices; Government and other	Navy, Army, Air Force establishments	Fire Service establishments	Professional establishments (other than offices), public institutions	Places of public entertainment	Private residential houses	Private residential flats and maisonettes	Clubs, hotels, restaurants, public houses	Private huts, unoccupied houses, personal service	Miscellaneous and undefined	Total	
36	Matches, children with(5)		48	4	4	-	8	-	-	4	4	4	28	-	-	24	28	-	-	-	12	8	8	64	-	68	284	600	36
37	Mechanical heat or sparks		4	-	-	-	4	4	-	-	-	4	-	4	-	4	-	-	-	-	-	-	-	4	4	-	-	32	37
38	Naked light (1)(3)		12	-	-	-	4	-	-	-	4	-	16	-	-	20	24	-	4	-	-	4	8	40	4	40	76	260	38
39	Oil, blow lamp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	64	20	-	4	-	100	39
40	engine (including petrol)		-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	8	40
41	lamp		-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	4	4	4	4	24	41
42	stove		-	-	-	-	4	-	-	-	-	-	-	-	-	24	8	-	-	-	-	-	-	60	56	-	8	160	42
43	tractor		8	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	12	43
44	other apparatus		4	-	-	-	4	-	-	4	-	-	-	-	-	4	4	-	-	-	-	-	-	4	-	-	8	-	32	44
45	Oxyacetylene cutting and welding apparatus		4	4	4	4	16	4	-	4	-	4	4	-	-	4	-	-	-	-	-	4	-	-	-	-	-	56	45

46	Rubbish burning	12	-	-	-	4	-	-	-	8	-	40	-	-	12	16	4	-	-	-	12	-	12	-	-	4	20	144	46
47	Slow combustion stove igniting structural woodwork	-	-	-	-	-	-	-	-	4	-	8	-	-	8	-	-	-	-	-	12	-	-	-	-	-	-	32	47
48	other materials	4	4	-	-	4	-	-	4	8	-	12	-	-	4	4	8	-	-	-	16	-	4	8	4	8	-	92	48
49	Smoking materials	40	4	-	4	20	8	-	8	32	4	20	8	-	40	88	8	28	-	-	36	20	80	232	84	12	28	804	49
50	Spontaneous combustion in other materials	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	50
51	Sun's rays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	8	51
52	Taper, lighted paper or sticks	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	4	4	16	-	-	4	40	52
53	Taper, lighted paper or sticks, children with[5]	-	-	-	-	4	8	-	-	-	8	24	-	-	-	36	-	4	-	-	12	4	4	36	-	32	52	224	53
54	Miscellaneous and undefined[4]	8	4	-	-	-	-	-	12	4	-	-	-	-	-	-	-	-	-	-	-	-	8	12	-	8	-	56	54
55	Unknown source of ignition	84	8	4	8	16	12	4	8	16	4	32	4	8	40	48	8	12	-	-	24	12	84	100	32	68	84	720	55
56	Total fires in buildings	316	36	16	28	136	44	16	100	96	36	200	32	16	284	512	76	104	-	-	188	84	1 216	2 136	320	640	604	7 236	56
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	

For explanation of notes see page 53.

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SECTION III

Table 5B

SUPPOSED CAUSE OF FIRES OTHER THAN THOSE IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Row No.
		Hazard in which fire started											Transport and communications					Outdoor storage							
			Crops	Agricultural machinery	Agricultural waste	Agricultural, other	Gardens and allotments	Railway embankments	Grassland, heathland	Woods, forests, plantations	Single trees	Felled timber	Air	Rail	Road-oil, petrol or gas driven vehicles	Road - other vehicles	Water	Chemicals, explosives, ammunition, oils, grease	Coal and coke	Refuse	Timber	Other materials	Miscellaneous outdoor structures	Total	
1	Ashes, soot		-	-	8	-	-	4	10	-	-	-	-	12	4	-	-	8	4	52	8	4	8	122	1
2	Brazier		-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	4	4	16	2
3	Camp fire, fire in open air(1)		-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	-	-	-	-	-	-	12	3
4	Candle		-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	4
5	Chimney, sparks from (outside building)		4	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5
6	Electric motor		-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	16	6
7	wire and cable other than lead to apparatus		-	20	-	-	-	-	-	-	-	-	-	-	120	-	4	-	-	-	-	-	28	172	7
8	wire and cable lead to apparatus		-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	8	8
9	Explosives, fireworks		-	-	-	-	-	-	58	-	-	-	-	-	12	-	-	4	-	-	-	-	8	82	9
10	Fire in grate igniting other materials		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10
11	Fish frying range (all fuels)		-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	11
12	Flue		-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	12
13	Furnace (coal or coke)		-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13
14	Incubator, brooder, (all fuels)		-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	14
15	Intentional burning of grassland, gorse, etc.		4	8	-	-	-	10	112	8	-	-	-	-	48	20	12	-	-	-	-	-	48	270	15

16	Lightning	8	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	12	16
17	Locomotives, sparks from	32	-	-	8	4	546	268	16	8	-	-	28	4	-	-	-	-	-	24	4	116	1 058	17
18	Matches	12	-	4	4	-	-	20	-	-	-	-	-	4	-	-	-	-	-	-	-	8	52	18
19	Matches children with(5)	44	-	4	12	-	28	914	28	56	4	-	20	24	-	-	-	-	196	52	16	76	1 474	19
20	Mechanical heat or sparks	-	-	-	-	-	-	-	-	-	-	-	4	64	8	-	4	-	-	-	-	16	96	20
21	Metal hot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	4	12	21
22	Naked light (1) (3)	-	-	-	-	-	4	168	8	4	-	-	-	16	-	8	-	-	24	40	20	24	316	22
23	Oil blow lamp	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	12	23
24	engine (including petrol)	-	-	-	-	-	-	20	-	-	-	-	-	112	-	-	-	-	-	-	-	4	136	24
25	lamp	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	12	25
26	stove	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	8	26
27	tractor	-	12	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	27
28	other apparatus	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	16	28
29	Oxyacetylene cutting and welding apparatus	-	-	-	-	-	-	-	-	-	-	-	-	8	-	24	-	-	-	16	-	16	64	29
30	Rubbish burning	28	-	16	8	-	-	60	24	8	12	-	-	4	-	-	-	-	52	44	8	20	284	30
31	Slow combustion stove igniting other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	20	28	31
32	Smoking materials	28	-	8	-	-	-	362	24	4	-	-	4	52	4	8	4	-	16	36	4	84	638	32
33	Spontaneous combustion in other materials	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	33
34	Sun's rays	-	-	-	-	4	-	10	-	-	-	-	-	-	-	-	-	-	-	4	4	-	22	34
35	Taper, lighted paper or sticks	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	8	18	35
36	Taper, lighted paper or sticks children with (5)	-	-	-	-	-	-	134	-	12	-	-	-	8	-	-	-	-	16	4	12	44	230	36
37	Miscellaneous and undefined (4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	4	-	-	-	4	12	32	37
38	Unknown source of ignition	88	-	4	8	4	18	480	16	24	4	-	4	92	-	4	8	-	56	52	12	56	930	38
39	Total fires other than those in buildings	248	48	44	60	16	610	2 636	140	120	20	-	72	608	48	88	40	4	412	280	96	628	6 218	39
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

For explanation of notes see page 53.

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SECTION III

Table 6

MATERIAL FIRST IGNITED IN FIRES

Reports from Scotland, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Agriculture and Forestry						
Crops, ricks, stacks						
Barley	-	-	4	-	4	-
Hay	32	0.2	16	0.1	48	0.4
Straw	16	0.1	48	0.4	64	0.5
Stubble	-	-	28	0.2	28	0.2
Other	4	-	40	0.3	44	0.3
Loose straw or hay	128	1.0	92	0.7	220	1.6
Grass, heather, bracken	16	0.1	3 310	24.6	3 326	24.7
Trees, hedges, undergrowth brushwood, bushes, (including gorse), twigs, touchwood	4	-	204	1.5	208	1.5
Other agricultural materials	8	0.1	44	0.3	52	0.4
Total	208	1.5	3 786	28.1	3 994	29.7
Chemicals - gases						
Acetylene	8	0.1	12	0.1	20	0.1
Town gas	264	2.0	28	0.2	292	2.2
Other gases	8	0.1	4	-	12	0.1
Total	280	2.1	44	0.3	324	2.4
Chemicals - oils						
Animal and vegetable oils	-	-	-	-	-	-
Mineral oil						
Paraffin	148	1.1	12	0.1	160	1.2
Petrol in vehicles	28	0.2	152	1.1	180	1.3
Petrol not in vehicles	32	0.2	20	0.1	52	0.4
Other mineral oils	16	0.1	28	0.2	44	0.3
Oil, waste and undefined	32	0.2	72	0.5	104	0.8
Total	256	1.8	284	2.1	540	4.0
Chemicals - other						
Celluloid (including films)	-	-	-	-	-	-
Paint, enamel, lacquer, varnish, stains and French polish	8	0.1	-	-	8	0.1
Pitch, tar	8	0.1	16	0.1	24	0.2
Rubber, vulcanite, ebonite	28	0.2	8	0.1	36	0.3
Other chemicals	68	0.5	20	0.1	88	0.7
Total	112	0.8	44	0.3	156	1.2
Paper, cardboard, wood (not part of a structure)						
Paper, cardboard	436	3.2	108	0.8	544	4.0
Wood chippings, flour, sawdust, shavings, wool	104	0.8	68	0.5	172	1.3
Wood barrels, boxes, cases, firewood, etc.	108	0.8	16	0.1	124	0.9
Timber	92	0.7	140	1.0	232	1.7
Total	740	5.5	332	1.4	1 072	8.0

SECTION III

Table 6 (Contd.)

MATERIAL FIRST IGNITED IN FIRES

Reports from Scotland, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Textiles						
Canvas and canvas goods	20	0.1	24	0.2	44	0.3
Clothing on person	4	-	-	-	4	-
Clothing not on person	156	1.2	4	-	160	1.2
Cotton	8	0.1	12	0.1	20	0.1
Jute, hessian, sacking	64	0.5	28	0.2	92	0.7
Rags (including oily rags)	44	0.3	16	0.1	60	0.4
Tarpaulin, waterproof sheeting, oilskins	8	0.1	32	0.2	40	0.3
Other textiles	20	0.1	4	-	24	0.2
Total	324	2.4	120	0.8	444	3.3
Furniture, furnishings, household goods						
Bedding (including bed & bedding)	240	1.8	8	0.1	248	1.8
Carpets, rugs	96	0.7	4	-	100	0.7
Curtains	88	0.7	-	-	88	0.7
Furniture	384	2.9	-	-	384	2.9
Linen articles (unspecified), laundry	16	0.1	-	-	16	0.1
Seating in vehicles	4	-	56	0.4	60	0.4
Other furnishings	144	1.1	12	0.1	156	1.2
Total	972	7.2	80	0.6	1 052	7.8
Building materials, structural woodwork						
Building materials other than wood	144	1.1	-	-	144	1.1
Structural woodwork						
External	200	1.5	-	-	200	1.5
Internal						
Door, window frame	92	0.7	-	-	92	0.7
Floor, stairs	232	1.7	-	-	232	1.7
Partitions, linings to walls	168	1.2	-	-	168	1.2
Roof	128	1.0	-	-	128	1.0
Timber in chimney, flue	52	0.4	-	-	52	0.4
Timber under hearth	176	1.3	-	-	176	1.3
Other fittings	140	1.0	-	-	140	1.0
Not known whether internal or external	108	0.8	-	-	108	0.8
Structural woodwork hazards other than buildings	-	-	264	2.0	264	2.0
Total	1 440	10.7	264	2.0	1 704	12.7
Miscellaneous						
Coal, coke	12	0.1	12	0.1	24	0.2
Electrical insulation	356	2.6	224	1.7	580	4.3
Fat (margarine, suet, butter, cooking fat, lard)	468	3.5	4	-	472	3.5
Food other than fat	88	0.7	-	-	88	0.7
Refuse, rubbish, debris	1 060	7.9	480	3.6	1 540	11.4
Soot	36	0.3	-	-	36	0.3
Other	356	2.6	220	1.7	576	4.3
Unknown	528	3.9	324	2.4	852	6.3
Total fires attended	7 236	53.8	6 218	46.2	13 454	100.0

SECTION II

Table 8

METHOD OF EXTINCTION OF FIRES

Reports from England and Wales, 1959

Row No.	Method of extinction	Fires in buildings						Fires other than those in buildings						Total No. of fires		Row No.
		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total				
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	
1	Burned out	-	-	1 180	0.5	1 180	0.5	-	-	2 764	1.2	2 764	1.2	3 944	1.8	1
2	Removal	3 032	1.4	1 272	0.6	4 304	1.9	712	0.3	420	0.2	1 132	0.5	5 436	2.4	2
3	Automatic sprinkler system	-	-	52	-	52	-	-	-	-	-	-	-	52	-	3
4	Beating	36	-	220	0.1	256	0.1	33 388	15.0	2 344	1.1	35 736	16.1	35 992	16.1	4
5	Smothering	320	0.1	752	0.3	1 072	0.5	50	-	384	0.2	434	0.2	1 506	0.7	5
6	Sand, earth, etc.	36	-	160	0.1	196	0.1	200	0.1	326	0.1	526	0.2	722	0.3	6
7	Water from buckets	2 052	0.9	3 296	1.5	5 348	2.4	904	0.4	1 472	0.7	2 376	1.1	7 724	3.5	7
8	Water from stirrup or hand pumps	2 480	1.1	36	-	2 516	1.1	356	0.2	4	-	360	0.2	2 876	1.3	8
9	Chemicals and chemical extinguishers	1 684	0.8	1 260	0.6	2 944	1.3	1 878	0.8	1 198	0.5	3 076	1.4	6 020	2.7	9
10	Two or more methods 4 - 9	452	0.2	636	0.3	1 088	0.5	1 752	0.8	350	0.2	2 102	0.9	3 190	1.4	10
11	Water from garden hose etc.	-	-	248	0.1	248	0.1	-	-	168	0.1	168	0.1	416	0.2	11
12	Hose reel jets (using water in tank only)	22 256	10.0	80	-	22 336	10.0	87 414	39.3	548	0.2	87 962	39.6	110 298	49.6	12
13	Hose reel jets (using more water than that in tank)	2 604	1.2	8	-	2 612	1.2	6 726	3.0	10	-	6 736	3.0	9 348	4.2	13
14	Jets from inside hose reel or inside hydrant	148	0.1	84	-	232	0.1	24	-	8	-	32	-	264	0.1	14
15	Hose reel jets and jets from inside hose reel or inside hydrant	28	-	-	-	28	-	12	-	-	-	12	-	40	-	15
16	Jets from pumps and hydrants	7 564	3.4	92	-	7 656	3.4	24 102	10.8	212	0.1	24 314	10.9	31 970	14.4	16
17	Other and undefined methods	424	0.2	592	0.3	1 016	0.5	568	0.3	1 018	0.5	1 586	0.7	2 602	1.2	17
18	Total fires attended	43 116	19.4	9 968	4.5	53 084	23.9	158 086	71.1	11 230	5.0	169 316	76.1	222 400	100.0	18

Notes on method of extinction -

1. "Removal" includes occurrences where (a) burning material was removed from the building, (b) gas supply was turned off. If the burning material was tackled with methods 3-11 before removing it from the building, then such occurrences were classified under whichever of these methods applied.
2. Methods 11-15 and method 16 include those occurrences in which methods 3-10 and 3-15 respectively may also have been used.
3. "Fires extinguished by Fire Brigade" include those fires which were tackled but not extinguished before the arrival of the Fire Brigade.

SECTION II

Table 9

BEHAVIOUR OF SPRINKLER SYSTEMS AT FIRES

Reports from England and Wales, 1959

(Frequencies observed in the analysis of a one-in-four sample of reports)

Note: These figures are not on a comparable basis with those in tables 1-8 or tables 10-12

Fires in Buildings

Behaviour of sprinklers	Incidents in which the following number of heads were actuated						Total number of incidents
	Nil	1-5	6-10	11-20	More than 20	Number not reported	
Installed but did not operate:-							
(i) Because insufficient heat was generated by the fire	7	-	-	-	-	-	7
(ii) As (i) above since fire was tackled by occupier promptly	54	-	-	-	-	-	54
(iii) Because fire was contained within trunking or machinery	5	-	-	-	-	-	5
(iv) Because system was not in use owing to repairs or alterations etc.	5	-	-	-	-	-	5
(v) Because fire was on outside wall of building	1	-	-	-	-	-	1
(vi) Because system was in bad repair	1	-	-	-	-	-	1
(vii) Because system had not yet been brought into use in new building	1	-	-	-	-	-	1
Total	74	-	-	-	-	-	74
Operated, but did not control fire because:-							
(i) Other means used to extinguish the fire	-	2	-	-	-	-	2
(ii) Fire was out of range of heads	-	-	-	-	-	2	2
(iii) Fire was within false ceiling above the heads	-	1	-	-	-	-	1
(iv) of insufficient water pressure	-	1	-	-	-	-	1
Total	-	4	-	-	-	2	6
Controlled, but did not extinguish the fire	-	35	4	5	6	1	51
Extinguished the fire	-	11	1	-	-	1	13
Number of calls to fires where sprinkler systems were installed	74	50	5	5	6	4	144

Fires not in buildings

There was one fire in a structure belonging to an amusement caterer, the hand operated drencher system with which it was equipped brought the fire under control. The number of heads actuated was not stated.

SECTION III

Table 7A

MATERIAL FIRST IGNITED IN FIRES IN BUILDINGS IN RELATION TO THE SUPPOSED CAUSE

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Material first ignited																																										Row No.
		Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood not structural			Textiles							Furniture, furnishings, household goods					Building materials structural woodwork								Miscellaneous materials								
		Crops, ricks and stacks	Loose straw or hay	Other agricultural material	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish, etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing, on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles (unspecified), laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork, external	Doors, window frames	Floors, stairs	Partitions, lining to walls	Roof	Timber in chimney, flue	Timber under hearth	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
1	Ashes, soot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	16	4	-	-	-	-	4	-	-	4	-	-	-	12	-	4	-	-	4	-	-	-	-	384	-	12	-	500	1
2	Brazier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	4	-	16	2
3	Candle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	3
4	Chimney on fire not confined to chimney	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	-	-	-	-	-	-	36	12	-	88	32	8	68	96	76	36	4	104	-	-	-	-	-	-	576	4
5	Chimney, sparks from (outside building)	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-	-	4	24	-	-	-	-	-	-	-	-	-	-	12	-	48	5
6	Cooker, cooking range, oven (other than electric, town gas or oil) (1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	4	-	-	-	4	-	-	4	-	-	4	-	-	-	-	-	-	56	-	-	4	-	84	6
7	Electric cooker	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	8	4	-	-	-	-	-	-	-	-	-	12	-	-	4	-	-	-	-	-	-	-	-	-	-	220	-	-	-	256	7
8	fire, heater, radiator	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	8	8	-	-	12	-	-	-	-	-	-	40	16	-	12	-	-	8	-	-	-	-	-	-	-	-	-	16	-	124	8
9	iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	4	12	-	4	-	-	8	-	-	-	-	-	-	-	-	-	-	-	32	9
10	motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	24	10
11	refrigerator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	36	-	-	-	44	11
12	television	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	28	-	-	-	48	12
13	wire and cable (other than lead to apparatus)	-	-	-	-	144	-	-	-	4	-	-	-	-	-	-	8	-	4	-	-	-	-	4	-	-	-	8	-	-	-	-	-	8	-	4	-	8	-	176	-	4	-	8	-	372	13
14	wire and cable (lead to apparatus)	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	12	-	-	-	24	14
15	wireless	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	36	15
16	other apparatus	-	8	-	-	-	4	-	-	8	-	4	4	-	-	-	-	-	-	-	4	-	-	-	4	52	12	-	-	8	-	-	-	4	-	-	-	-	-	60	-	-	12	-	184	16
17	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	12	17
18	Fire in grate, igniting bedding, clothing, linen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	8	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	18
19	furniture and furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	136	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	19
20	structural timber under hearth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	-	-	-	-	-	-	-	-	-	172	20
21	other materials	-	-	-	-	8	-	-	8	-	20	-	-	-	-	-	4	32	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	20	4	16	-	40	-	-	-	8	32	8	-	244	21
22	Fish frying range (all fuels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	-	-	-	72	22
23	Flue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	-	-	-	-	-	-	-	-	8	-	-	4	-	8	-	-	4	-	-	4	-	8	-	44	23
24	Furnace (coal or coke)	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	12	24
25	Gas, (town) burner, jet, ring	-	-	-	-	-	-	-	-	-	-	4	4	4	-	-	-	4	-	4	-	-	-	-	-	-	-	4	-	-	4	-	-	4	-	-	-	4	-	-	4	-	-	8	-	48	25
26	cooker	-	-	-	-	24	-	-	4	4	-	-	-	-	-	-	4	-	-	-	4	-	-	-	-	8	-	4	-	12	4	-	-	-	-	-	-	4	-	-	196	-	-	-	268	26
27	fire, heater, radiator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	4	-	-	-	8	-	-	-	-	4	-	-	24	27
28	other apparatus	-	-	-	-	32	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	8	-	-	-	8	-	4	-	-	-	-	-	24	-	-	-	88	28
29	Incubator, brooder (all fuels)	-	12	4	-	-	-	-	-	-	-	-	-	-	-	-	4	16	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	4	-	-	4	-	-	-	-	-	-	-	52	29
30	Intentional burning of grassland, gorse, etc.	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-	-	-	-	-	-	16	30
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	

For explanation of notes see page 53.

SECTION III

Table 7A (Contd.)

MATERIAL FIRST IGNITED IN FIRES IN BUILDINGS IN RELATION TO THE SUPPOSED CAUSE

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Material first ignited																																										Row No.
		Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood not structural			Textiles						Furniture, furnishings, household goods					Building materials structural woodwork								Miscellaneous materials							
		Crops, ricks and stacks	Loose straw or hay	Other agricultural material	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish, etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing, on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles (unspecified), laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork, external	Doors, window frames	Floors, stairs	Partitions, lining to walls	Roof	Timber in chimney, flue	Timber under hearth	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
31	Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	8	-	-	-	-	4	28	-	-	4	-	-	-	-	-	-	-	-	8	31
32	Lime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	32
33	Locomotives, sparks from	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	33
34	Malicious ignition (1) (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	34
35	Matches	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	4	-	-	-	-	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	44	35
36	Matches, children with (5)	28	40	8	-	4	-	-	4	-	-	-	4	-	-	-	4	128	12	12	-	-	-	4	4	-	-	16	-	-	-	-	4	-	-	4	-	-	-	8	-	-	-	284	-	32	-	600	36
37	Mechanical heat or sparks	-	-	-	-	4	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	8	37
38	Naked light (1) (3)	8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	4	16	-	4	-	4	4	-	-	20	12	-	-	-	-	-	12	-	-	-	20	-	-	-	92	-	24	-	260	38
39	Oil, blow lamp	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	40	4	4	8	-	-	-	-	-	-	-	-	-	16	-	100	39
40	engine (including petrol)	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	40
41	lamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	4	-	4	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	24	41
42	stove	-	-	-	-	-	-	108	-	-	-	4	-	-	-	-	-	4	-	-	-	4	-	-	4	-	8	4	-	-	12	-	-	-	-	4	-	-	-	-	-	-	-	-	-	8	-	160	42
43	tractor	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	43
44	other apparatus	4	-	-	-	-	-	4	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	4	-	-	-	-	-	-	-	-	-	4	-	32	44
45	Oxyacetylene cutting and welding apparatus	-	-	-	4	-	-	-	-	-	-	4	-	-	-	8	-	8	-	-	-	-	4	4	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	12	-	56	45
46	Rubbish burning	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	8	12	24	-	-	-	-	4	-	-	-	4	-	-	-	4	28	8	4	4	-	-	-	12	-	-	-	20	-	4	4	144	46
47	Slow combustion stove igniting structural woodwork	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	4	-	20	8	-	-	-	-	-	-	-	-	-	-	-	32	47
48	other materials	-	-	-	-	-	-	4	4	4	-	-	-	-	-	-	12	16	-	-	-	-	8	-	-	-	4	-	4	-	4	4	-	-	-	-	-	-	8	-	-	-	8	-	12	-	92	48
49	Smoking materials	8	40	-	-	-	-	-	-	-	4	4	-	-	-	4	100	84	4	-	44	-	20	16	4	8	132	112	4	4	20	4	8	12	16	8	-	-	-	4	-	-	-	76	-	64	-	804	49
50	Spontaneous combustion in other materials	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	50
51	Sun's rays	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	51
52	Taper, lighted paper or sticks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	-	-	-	-	-	-	-	-	8	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	40	52
53	Taper, lighted paper or sticks, children with (5)	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	4	12	4	20	-	-	-	4	-	-	8	-	4	-	-	4	-	12	4	4	-	4	-	-	12	-	-	-	100	-	20	-	224	53
54	Miscellaneous and undefined (4)	-	-	8	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	8	4	-	-	4	-	-	4	-	-	8	-	-	-	-	-	-	-	12	-	56	54
55	Unknown source of ignition	-	4	-	-	32	-	-	8	-	-	-	-	-	-	4	8	12	4	8	-	-	4	-	-	-	12	8	-	-	-	8	12	4	-	4	-	-	-	16	-	-	-	48	-	24	500	720	55
56	Total fires in buildings	52	128	28	8	264	8	-	148	28	32	16	32	8	8	28	68	436	212	92	4	156	8	64	44	8	40	424	384	16	4	144	144	200	92	232	168	128	52	176	248	12	356	556	1 060	36	356	528	7 236	56
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	

For explanation of notes see page 53.

SECTION III

Table 7B

MATERIAL FIRST IGNITED IN FIRES IN HAZARDS OTHER THAN BUILDINGS IN RELATION TO SUPPOSED CAUSE

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Material first ignited																																				Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
		Agriculture and forestry			Chemicals - gases			Chemicals - oils					Chemicals - other				Paper cardboard, wood not structural			Textiles								Furniture, furnishings, household goods				Building materials, structural woodwork			Miscellaneous material								
		Crops, ricks and stacks	Loose straw or hay	Other agricultural materials	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork external	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
1	Ashes, soot	-	-	22	-	-	-	-	-	-	-	-	8	-	-	-	-	-	4	8	-	-	-	-	-	4	-	-	-	-	-	-	-	12	4	-	-	52	-	8	-	122	1
2	Brazier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	16	2
3	Camp fire, fire in open air (1)	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	12	3
4	Candle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4	4
5	Chimney, sparks from (outside building)	4	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5
6	Electric motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	8	-	16	6
7	wire and cable other than lead to apparatus	-	-	-	-	-	-	-	-	36	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	12	-	108	-	-	-	8	-	172	7
8	wire and cable lead to apparatus	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	4	-	-	-	-	-	8	8
9	Explosives, fireworks	-	-	58	-	4	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	9
10	Fire in grate igniting other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	8	10
11	Fish frying range all fuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	11
12	Flue	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	8	12
13	Furnace coal or coke	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	13
14	Incubator, brooder (all fuels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	14
15	Intentional burning of grassland, gorse, etc.	4	4	130	-	-	-	-	4	8	-	4	-	-	-	-	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-	-	-	16	-	88	-	-	-	-	-	270	15
16	Lightning	8	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	16
17	Locomotives, sparks from	24	28	886	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	4	-	-	-	-	-	-	-	-	88	-	-	-	4	-	8	-	1 058	17
18	Matches	8	8	24	4	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	18
19	Matches children with(5)	40	20	1 026	-	4	-	-	-	-	-	4	4	-	-	-	-	32	12	24	-	-	4	8	-	4	-	-	-	-	12	-	-	-	12	-	-	-	240	-	24	4	1 474	19
20	Mechanical heat and sparks	-	-	-	-	12	-	-	-	-	4	4	24	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	44	-	96	20
21	Metal, hot	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	21
22	Naked light (1) (3)	-	-	184	-	-	-	-	-	-	-	-	-	-	-	-	-	12	16	16	-	-	-	8	-	8	-	-	-	-	8	-	-	-	12	-	-	-	36	-	16	-	316	22
23	Oil, blowlamp	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	12	23
24	engine (including petrol)	-	-	20	-	-	-	-	-	84	4	4	8	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	4	-	136	24
25	lamp	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	12	25
26	stove	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	26
27	tractor	4	4	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	27
28	other apparatus	4	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	28
29	Oxyacetylene cutting and welding apparatus	-	-	-	4	-	-	-	-	-	-	-	8	-	-	4	4	-	8	8	-	-	4	-	-	-	8	-	-	-	-	-	-	-	8	-	-	-	-	8	-	-	64	29
30	Rubbish burning	28	-	124	-	-	-	-	-	-	-	-	-	-	-	-	4	4	20	32	-	-	-	4	-	4	-	-	-	-	-	-	-	-	8	-	-	-	48	-	12	-	284	30
31	Slow combustion stove igniting other materials	-	-	-	-	-	4	-	-	-	-	-	-	-	8	-	8	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	28	31
32	Smoking materials	12	16	410	4	-	4	-	-	-	-	-	-	-	-	-	-	28	16	12	-	4	-	-	-	4	4	4	-	-	12	8	-	-	44	4	-	-	32	-	24	-	638	32
33	Spontaneous combustion in other materials	-	-	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	33
34	Sun's rays	-	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	34
35	Taper, lighted paper or sticks	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	18	35
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	

For explanation of notes see page 53.

SECTION III

Table 7B (Contd.)

MATERIAL FIRST IGNITED IN FIRES IN HAZARDS OTHER THAN BUILDINGS IN RELATION TO SUPPOSED CAUSE

Reports from Scotland, 1959

Row No.	Supposed cause of fire	Material first ignited																																				Row No.
		Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper cardboard, wood not structural		Textiles						Furniture, furnishings, household goods				Building materials, structural woodwork			Miscellaneous material							
		Crops, ricks and stacks	Loose straw or hay	Other agricultural materials	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified) laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork external	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	
36	Taper, lighted paper or sticks children with(5)	-	-	146	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	8	-	-	-	-	-	4	4	-	-	-	-	-	-	24	-	-	-	24	-	12	-	230	36
37	Miscellaneous and undefined (4)	-	-	-	-	-	-	-	-	-	-	-	8	-	4	4	4	-	-	4	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	32	37
38	Unknown source of ignition	-	4	474	-	8	-	-	-	12	4	-	4	-	4	-	-	4	-	12	-	-	-	-	8	-	-	-	-	4	-	-	-	16	-	-	-	36	-	20	320	930	38
39	Total fires other than those in buildings	136	92	3 558	12	28	4	-	12	152	20	28	72	-	16	8	20	08	84	140	-	4	12	28	16	32	28	12	-	-	56	12	-	-	264	12	224	4	480	-	220	324	6 218	39
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	

For explanation of notes see page 53.

SECTION III

Table 8

METHOD OF EXTINCTION OF FIRES

Reports from Scotland, 1959

Row No.	Method of Extinction	Fires in buildings						Fires other than those in buildings						Total No. of fires		Row No.
		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total				
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	
1	Burned out	-	-	64	0.5	64	0.5	-	-	100	0.7	100	0.7	164	1.2	1
2	Removal	464	3.4	180	1.3	644	4.8	64	0.5	12	0.1	76	0.6	720	5.4	2
3	Automatic sprinkler system	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
4	Beating	-	-	16	0.1	16	0.1	1 194	8.9	200	1.5	1 394	10.4	1 410	10.5	4
5	Smothering	20	0.1	60	0.4	80	0.6	-	-	22	0.2	22	0.2	102	0.8	5
6	Sand, earth, etc.	4	-	24	0.2	28	0.2	16	0.1	16	0.1	32	0.2	60	0.4	6
7	Water from buckets	208	1.5	364	2.7	572	4.3	60	0.4	64	0.5	124	0.9	696	5.2	7
8	Water from stirrup or hand pumps	924	6.9	4	-	928	6.9	36	0.3	-	-	36	0.3	964	7.2	8
9	Chemicals and chemical extinguishers	180	1.3	96	0.7	276	2.1	216	1.6	80	0.6	296	2.2	572	4.3	9
10	Two or more methods 4-9	56	0.4	64	0.5	120	0.9	54	0.4	28	0.2	82	0.6	202	1.5	10
11	Water from garden hose, etc.	-	-	36	0.3	36	0.3	-	-	8	0.1	8	0.1	44	0.3	11
12	Hose reel jets (using water in tank only)	2 896	21.5	4	-	2 900	21.6	2 594	19.3	4	-	2 598	19.3	5 498	40.9	12
13	Hose reel jets (using more water than that in tank)	368	2.7	-	-	368	2.7	282	2.1	-	-	282	2.1	650	4.9	13
14	Jets from inside hose reel or inside hydrant	4	-	16	0.1	20	0.1	-	-	-	-	-	-	20	0.1	14
15	Hose reel jets and jets from inside hose reel or inside hydrant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
16	Jets from pumps and hydrants	1 092	8.1	4	-	1 096	8.1	1 102	8.2	8	0.1	1 110	8.3	2 206	16.4	16
17	Other and undefined methods	36	0.3	52	0.4	88	0.7	24	0.2	34	0.3	58	0.4	146	1.1	17
18	Total fires attended	6 252	46.5	984	7.3	7 236	53.8	5 642	41.9	576	4.3	6 218	46.2	13 454	100.0	18

Notes on methods of extinction

1. "Removal" includes occurrences where (a) burning material was removed from the building, (b) gas supply was turned off. If the burning material was tackled with methods 3-11 before removing it from the building, then such occurrences were classified under whichever of these methods applied.

2. Methods 11-15 and method 16 include those occurrences in which methods 3-10 and 3-15 respectively may also have been used.

3. "Fires extinguished by Fire Brigade" include those fires which were tackled but not extinguished before the arrival of the Fire Brigade.

SECTION III

Table 9

BEHAVIOUR OF SPRINKLER SYSTEMS AT FIRES

Reports from Scotland, 1959

(Frequencies observed in the analysis of a one-in-four sample of reports)

Note: These figures are not on a comparable basis with those in tables 1-8 or tables 10-12

Fires in buildings

Behaviour of sprinklers	Incidents in which the following number of heads were actuated						Total Number of incidents
	Nil	1-5	6-10	11-20	More than 20	Number not reported	
Installed but did not operate (i) because insufficient heat was generated by the fire	3	-	-	-	-	-	3
TOTAL	3	-	-	-	-	-	3
Controlled but did not extinguish the fire	-	4	-	-	-	-	4
Extinguished the fire	-	-	-	-	-	-	-
Number of calls to fires where sprinkler systems were installed	3	4	-	-	-	-	7

Fires not in buildings

No fires occurred in premises which were not buildings, where sprinklers were installed.

SECTION III

Table 10

PERSONS RESCUED OR ESCAPED BY EMERGENCY MEANS FROM FIRES

Reports from Scotland, 1959

(Frequencies obtained from results of analysis of all reports)

Appliance or method used	Number of persons
Rescue with Fire Brigade assistance from	
Buildings	
Ladder, extension	3
scaling	4
turntable (mechanical)	1
other or undefined	4
Other apparatus	1
Without apparatus	24
Total	37
Rescue without Fire Brigade assistance from	
Buildings	
Carried or assisted out	76
Jumping Sheet	6
Ladder	4
Lowered from windows, roof, etc.	9
Other or undefined methods	3
Road vehicles	3
Total	101
Escaped by emergency means from	
Aircraft	
Baled out	1
Buildings	
Climbing over roof	1
Jumping from upstairs window, roof	22
Ladder	2
Sliding down drain pipe, sheets, rope, etc.	10
Through ground floor windows	8
Other and undefined methods	2
Total	46
Total persons rescued or escaped	184

SECTION III

Table 11

NATURE OF INJURIES OF CASUALTIES IN FIRES

Reports from Scotland, 1959

(Frequencies obtained from results of analysis of all reports)

Nature of injury	Fire Brigade	Other Casualties	Total
Fatal casualties			
Burns and scalds	-	30	30
Overcome by gas or smoke	-	16	16
Other and undefined injuries	-	4	4
Total	-	50	50
Non-fatal casualties**			
Burns and scalds	2	126	128
Bruises, cuts, abrasions	14	10	24
Dislocations, sprains, fractures	4	8	12
Overcome by gas or smoke	3	23	26
More than one of above injuries	1	9	10
*Shock	-	19	19
Other and undefined injuries	8	6	14
Total	32	201	233
Total casualties	32	251	283

** Excludes casualties requiring first aid treatment only

* Casualties who suffered shock in addition to another injury have been classified according to the nature of the other injury.

SECTION III

Table 12

FIRES CLASSIFIED ACCORDING TO THE MONTH IN WHICH THEY OCCURRED

Reports from Scotland, 1959

Month of occurrence	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
January	720	5.4	174	1.3	894	6.6
February	600	4.5	332	2.5	932	6.9
March	560	4.2	728	5.4	1 288	9.6
April	544	4.0	372	2.8	916	6.8
May	648	4.8	566	4.2	1 214	9.0
June	548	4.1	606	4.5	1 154	8.6
July	472	3.5	410	3.0	882	6.6
August	560	4.2	716	5.3	1 276	9.5
September	732	5.4	1 396	10.3	2 128	15.8
October	608	4.5	570	4.2	1 178	8.8
November	652	4.8	206	1.5	858	6.4
December	592	4.4	142	1.1	734	5.5
Total fires	7 236	53.8	6 218	46.2	13 454	100.0

SECTION IV

STATISTICAL TABLES FOR FIRE BRIGADES IN NORTHERN IRELAND, 1959

Table 1

METHOD OF CALLING FIRE BRIGADES TO FIRES

Reports from Northern Ireland, 1959

Method of calling	Fire Brigade				Total	
	North	South	West	Belfast	No.	Per cent
By Special Fire Service methods						
Automatic fire alarm	-	-	-	-	-	-
Fire and police pillar box	-	-	-	-	-	-
Police telephone	-	-	-	48	48	2.4
Private fire telephone	-	-	-	8	8	0.4
Street fire alarm	-	-	-	-	-	-
Total	-	-	-	56	56	2.9
Exchange Telephone	260	544	304	396	1 504	76.7
Running call	8	12	4	28	52	2.7
Late call	-	-	4	-	4	0.2
Other and undefined methods	60	190	50	44	344	17.6
Total fires attended	328	746	362	524	1 960	100.0

N.B. A change in reporting procedure instituted in 1958 has resulted in an increase in the number of incidents where the method of call was undefined.

SECTION IV

Table 2

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on		
Agriculture		
Farming (not fruit or poultry) and horse and stock rearing	156	8.0
Allotments, market gardening, fruit and poultry farming	8	0.4
Total	164	8.4
Mining quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	-	-
Manufacture of bricks, pottery, glass, etc.	4	0.2
Manufacture of chemicals, dyes, explosives, paints, oils		
Chemicals	8	0.4
Explosives	-	-
Paints, varnish, oil, grease	-	-
Miscellaneous	-	-
Total	8	0.4
Manufacture of metals, machines, implements, conveyances		
Smelting, converting, refining, rolling of iron, steel	-	-
Extracting, refining, smelting of other metals	-	-
Founding, other secondary processes in metal working	-	-
Engineering (not marine or electrical)	-	-
Electrical installations, cables and apparatus	-	-
Construction and repair of vehicles	-	-
Shipbuilding, and repairing, marine engineering	4	0.2
Cutlery and small tools	-	-
Other metal industries	-	-
Total	4	0.2
Manufacture of textiles and textile goods (not dress)		
Cotton	4	0.2
Wool, worsted and shoddy	-	-
Silk, natural and artificial	-	-
Other or mixed fibres	8	0.4
Miscellaneous	4	0.2
Textile dyeing, printing, bleaching, finishing	4	0.2
Total	20	1.0

SECTION IV

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Preparation of skins and leather and manufacture of goods of leather and leather substitute (not clothing or footwear)	4	0.2
Manufacture of clothing (not knitted) including footwear	12	0.6
Manufacture of food, drink, tobacco		
Food	24	1.2
Drink	-	-
Tobacco, cigars, cigarettes, snuff	-	-
Total	24	1.2
Woodworking: manufacture of cane and basket ware, furniture, fittings		
Woodworking and basket ware	-	-
Furniture (not metal or basket)	12	0.6
Fittings	-	-
Total	12	0.6
Paper making: manufacture of stationery and stationery requisites, printing and bookbinding	-	-
Building, decorating, contracting: slate and stone cutting and dressing	32	1.6
Rubber and synthetic rubber	-	-
Other manufacturing industries	4	0.2
Gas, water, electricity, sewage	4	0.2
Transport and communication		
Railway - stations, etc.	4	0.2
Road - garages, depots, etc.	20	1.0
Water - dock buildings other than warehouses	-	-
Air - aerodromes etc.	-	-
Other communication (post, telephone, wireless)	-	-
Total	24	1.2
Commerce		
Departmental stores	-	-
Retail shops	60	3.1
Wholesale dealers	4	0.2
Dock and other warehouses	-	-
Total	64	3.3

SECTION IV

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires in buildings classified according to trade or business carried on (contd.)		
Offices, Government and other		
Government departments	4	0.2
Local authorities	4	0.2
Other offices	-	-
Total	8	0.4
Navy, Army and Air Force establishments	4	0.2
Fire Service establishments	-	-
Professional establishments (other than offices); public institutions		
Educational establishments	12	0.6
Hospitals, homes etc. for care of the sick and infirm	12	0.6
Places of worship	12	0.6
Other public and professional services	-	-
Total	36	1.8
Places of public entertainment		
Cinemas and theatres	-	-
Other places of entertainment	4	0.2
Total	4	0.2
Private residential and personal service (including hotels and catering)		
Private residential houses	400	20.4
Private residential flats and maisonettes	48	2.4
Clubs, hotels, restaurants, public houses	44	2.2
Private huts, unoccupied houses, personal service	40	2.0
Total	532	27.1
Miscellaneous	44	2.2
Undefined	-	-
Total fires in buildings	1 008	51.4

SECTION IV

Table 2 (Contd.)

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Hazard in which fire started	Total	
	No.	Per cent
Fires other than those in buildings		
Agriculture and forestry		
Crops, standing or stooked (including hay fields)	12	0.6
Crops, ricks and stacks	56	2.9
Agricultural machinery	20	1.0
Agricultural waste	-	-
Other agricultural hazards	-	-
Allotments and gardens	4	0.2
Railway embankments	38	1.9
Grassland, heathland	398	20.3
Woods, forests, plantations	20	1.0
Single trees	12	0.6
Felled timber	4	0.2
Total	564	28.8
Transport and communication		
Aircraft	-	-
Railway rolling stock etc.	12	0.6
Road vehicles - electrically driven	-	-
- oil, petrol, or gas driven	148	7.6
Road vehicles - other	-	-
Water vessels - craft on inland waters	-	-
- ships in dock	4	0.2
- ships at sea	-	-
- marine structures	8	0.4
Total	172	8.8
Outdoor storage		
Chemicals, explosives, ammunition, oils, grease	16	0.8
Coal and coke	4	0.2
Refuse	88	4.5
Timber	16	0.8
Cotton, metal, packing materials, rubber etc.	28	1.4
Total	152	7.8
Other outdoor structures	64	3.3
Total fires other than those in buildings	952	48.6
Total fires attended	1 960	100.0

SECTION IV

Table 3

FIRES CLASSIFIED ACCORDING TO HAZARD IN WHICH FIRE STARTED FOR EACH BRIGADE

Reports from Northern Ireland, 1959

Hazard in which fire started	Fire Brigades				Total
	North	South	West	Belfast	
Fires in buildings					
Industrial premises	20	32	8	64	124
Commercial premises and offices	4	12	16	40	72
Transport and public utilities	4	4	4	16	28
Dwellings	88	156	92	112	448
Other buildings	56	144	68	68	336
Total	172	348	188	300	1 008
Fires not in buildings					
Agriculture, grassland, forestry	96	314	110	44	564
Transport	40	48	32	52	172
Outdoor storage	16	24	20	92	152
Other outdoor hazards	4	12	12	36	64
Total	156	398	174	224	952
Total fires attended	328	746	362	524	1 960

SECTION IV

Table 4

SUPPOSED CAUSE OF FIRES

Reports from Northern Ireland, 1959

Each item in the list of supposed causes of fire given in the table represents a group of causes which have a common source of ignition. In some cases the groups have been divided into sub-groups according to the nature of the material first ignited, and in others according to the act with the source of ignition which led to the outbreak of fire. Certain causes were specified for the first time in 1954, the miscellaneous item is therefore not comparable with those for years previous to 1954.

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Aircraft, crashed	-	-	-	-	-	-
Ashes, soot	4	0.2	-	-	4	0.2
Brazier	4	0.2	-	-	4	0.2
Camp fire, fire in open-air[1]	-	-	-	-	-	-
Candle	12	0.6	-	-	12	0.6
Chimney on fire, not confined to chimney	44	2.2	-	-	44	2.2
Chimney, sparks from (outside building)	24	1.2	4	0.2	28	1.4
Cooker, cooking range oven other than electric, town gas, oil[1]	16	0.8	-	-	16	0.8
Electric cooker	16	0.8	-	-	16	0.8
fire, heater, radiator	12	0.6	-	-	12	0.6
iron	4	0.2	-	-	4	0.2
motor	4	0.2	-	-	4	0.2
refrigerator	8	0.4	-	-	8	0.4
television	-	-	-	-	-	-
wire and cable, other than lead to apparatus	40	2.0	52	2.7	92	4.7
wire and cable, lead to apparatus	-	-	-	-	-	-
wireless	-	-	-	-	-	-
other apparatus	16	0.8	24	1.2	40	2.0
Explosives, fireworks	4	0.2	4	0.2	8	0.4
Fire in grate, igniting						
bedding, clothing, linen	-	-	-	-	-	-
furniture, furnishing	4	0.2	-	-	4	0.2
structural timber under hearth	36	1.8	-	-	36	1.8
other materials	112	5.7	-	-	112	5.7
Fish frying range (all fuels)	28	1.4	-	-	28	1.4
Flue	8	0.4	-	-	8	0.4
Furnace (coal or coke)	-	-	-	-	-	-
Gas (town) burner, jet, ring	-	-	-	-	-	-
cooker	16	0.8	-	-	16	0.8
fire, heater, radiator	-	-	-	-	-	-
other apparatus	4	0.2	-	-	4	0.2
Incubator, brooder (all fuels)	12	0.6	-	-	12	0.6

SECTION IV

Table 4 (Contd.)

SUPPOSED CAUSE OF FIRES

Reports from Northern Ireland, 1959

Supposed cause of fire	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Intentional burning of grassland, gorse, etc.	4	0.2	14	0.7	18	0.9
Lightning	4	0.2	-	-	4	0.2
Lime	-	-	-	-	-	-
Locomotives, sparks from	-	-	44	2.2	44	2.2
Malicious ignition (1) (2)	8	0.4	4	0.2	12	0.6
Matches	8	0.4	-	-	8	0.4
Matches, children with (5)	60	3.1	72	3.7	132	6.7
Mechanical heat or sparks	12	0.6	-	-	12	0.6
Metal, hot	4	0.2	-	-	4	0.2
Naked light (1) (3)	8	0.4	48	2.4	56	2.9
Oil blowlamp	12	0.6	-	-	12	0.6
engine (including petrol)	-	-	40	2.0	40	2.0
lamp	12	0.6	4	0.2	16	0.8
stove	32	1.6	4	0.2	36	1.8
tractor	-	-	8	0.4	8	0.4
other apparatus	4	0.2	-	-	4	0.2
Oxyacetylene cutting and welding apparatus	16	0.8	-	-	16	0.8
Rubbish burning	20	1.0	20	1.0	40	2.0
Slow combustion stove igniting structural woodwork	8	0.4	-	-	8	0.4
other materials	12	0.6	16	0.8	28	1.4
Smoking materials	56	2.9	48	2.4	104	5.3
Spontaneous combustion in rubbish	-	-	4	0.2	4	0.2
Spontaneous combustion in other materials	4	0.2	-	-	4	0.2
Static electricity	-	-	-	-	-	-
Steam roller, engine, traction engine	-	-	-	-	-	-
Sun's rays	4	0.2	-	-	4	0.2
Taper, lighted paper or sticks	4	0.2	12	0.6	16	0.8
Taper, lighted paper or sticks, children with (5)	-	-	-	-	-	-
Miscellaneous (4)	28	1.4	-	-	28	1.4
Unknown source of ignition	260	13.3	530	27.0	790	40.3
Total fires attended	1 008	51.4	952	48.6	1 960	100.0

Note. (1) Causes specified for the first time in the Annual Statistical Tables for 1954.
(2) Malicious ignition is a general term for suspected or proven arson or incendiarism.
(3) No further information given in original reports.
(4) Not comparable with the years prior to 1954.
(5) A change in definition has increased the number of incidents in these categories in 1957 and succeeding years.

SECTION IV

Table 5A

SUPPOSED CAUSE OF FIRES IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Row No.	Supposed cause of fire	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Row No.
		Hazard in which fire started	Agriculture	Mining, quarrying and treatment of non-metalliferous mine and quarry products (excluding gas works)	Manufacture of bricks, pottery, glass, etc.	Manufacture of chemicals, explosives, paints, oils	Manufacture of metals, machines, implements, conveyances	Manufacture of textiles and textile goods (not dress)	Manufacture of clothing (not knitted) including footwear, and goods of leather and leather substitute; preparation of skins and leather	Manufacture of food, drink, tobacco	Woodworking; manufacture of cane and basket ware, furniture, fittings	Paper making; manufacture of stationery and stationery requisites, printing and bookbinding	Building, decorating, contracting, slate and stone cutting and dressing	Other manufacturing industries, including rubber and synthetic rubber	Gas, water, electricity, sewage	Transport and communication	Commerce; retail shops, including departmental stores	Commerce; wholesale dealers and warehouses	Offices; Government and other	Navy, Army, Air Force establishments	Fire Service establishments	Professional establishments (other than offices), public institutions	Places of public entertainment	Private residential houses	Private residential flats and maisonettes	Clubs, hotels, restaurants, public houses	Private huts, unoccupied houses, personal service	Miscellaneous and undefined	Total	
1	Ashes, soot		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	1
2	Brazier		4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2
3	Candle		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	-	-	-	-	12	3
4	Chimney on fire, not confined to chimney		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	8	-	-	-	44	4
5	Chimney, sparks from (outside building)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	16	-	4	-	-	24	5
6	Cooker, cooking range, oven, other than electric, town gas or oil[1]		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	8	-	4	-	-	16	6
7	Electric, cooker		-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	4	-	4	8	-	-	-	16	7
8	fire, heater, radiator		-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	4	-	-	-	-	-	4	-	-	-	-	12	8
9	iron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	9
10	motor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10
11	refrigerator		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	8	11
12	wire and cable other than lead to apparatus		12	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	4	-	12	4	4	-	-	40	12
13	other apparatus		-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	16	13

14	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	14
15	Fire in grate, igniting furniture and furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	15
16	structural timber under hearth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	8	-	-	-	36	16
17	other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	96	4	4	4	-	112	17
18	Fish frying range (all fuels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	28	18
19	Flue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	8	19
20	Gas (town) cooker	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	4	-	-	-	16	20
21	other apparatus	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	21
22	Incubator, brooder (all fuels)	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	22
23	Intentional burning of grassland, gorse, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	23
24	Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	24
25	Malicious ignition(1)(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	8	25
26	Matches	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	8	26
27	Matches, children with(5)	24	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4	4	-	8	16	60	27
28	Mechanical heat or sparks	-	-	-	-	-	8	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	28
29	Metal, hot	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	29
30	Naked light(1)(3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	8	30
31	Oil, blow lamp	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	12	31
32	lamp	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	32
33	stove	4	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	12	8	-	-	-	32	33
34	other apparatus	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	34
35	Oxyacetylene cutting and welding apparatus	-	-	-	-	-	-	-	4	-	-	-	-	-	8	4	-	-	-	-	-	-	-	-	-	-	16	35
36	Rubbish burning	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	-	-	4	-	20	36
37	Slow combustion stove igniting structural woodwork	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	37
38	other materials	4	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	38
39	Smoking materials	8	-	-	-	-	4	-	-	-	-	-	-	-	-	8	-	-	-	4	-	32	-	-	-	-	56	39
40	Spontaneous combustion in other materials	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	40
41	Sun's rays	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	41
42	Taper, lighted paper or sticks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	42
43	Miscellaneous and undefined(4)	-	-	-	-	-	4	-	4	-	-	4	-	4	-	-	-	-	-	-	4	-	8	-	-	-	28	43
44	Unknown source of ignition	72	-	-	-	4	-	8	8	8	-	8	-	-	4	28	-	-	4	-	8	4	60	-	-	24	20	260	44
45	Total fires in buildings	164	-	4	8	4	20	16	24	12	-	32	4	4	24	60	4	8	4	-	36	4	400	48	44	40	44	1 008	45
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	

For explanation of notes see page 79.

SECTION IV

Table 5B

SUPPOSED CAUSE OF FIRES OTHER THAN THOSE IN BUILDINGS IN RELATION TO HAZARD IN WHICH FIRE STARTED

Reports from Northern Ireland, 1959

Row No.	Supposed cause of fire	Hazard in which fire started																					Row No.
												Transport and communications					Outdoor storage						
		Crops	Agricultural machinery	Agricultural waste	Agricultural, other	Gardens and allotments	Railway embankments	Grassland, heathland	Woods, forests, plantations	Single trees	Felled timber	Air	Rail	Road-oil, petrol or gas driven vehicles	Road - other vehicles	Water	Chemicals, explosives, ammunition, oils, grease	Coal and coke	Refuse	Timber	Other materials	Miscellaneous outdoor structures	Total	
1	Chimney, sparks from (outside building)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	1
2	Electric wire and cable other than lead to apparatus	-	4	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	8	52	2
3	other apparatus	-	4	-	-	-	-	-	4	-	-	-	-	8	-	-	-	-	-	-	-	8	24	3
4	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	4
5	Intentional burning of grassland, gorse. etc.	4	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5
6	Locomotives, sparks from	-	-	-	-	-	4	24	-	-	-	-	4	-	-	-	-	-	-	-	-	12	44	6
7	Malicious ignition (1) (2)	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	7
8	Matches children with (5)	4	-	-	-	-	10	10	-	4	-	-	8	-	-	-	4	-	16	4	4	8	72	8
9	Naked light (1) (3)	4	-	-	-	-	-	20	-	-	-	-	-	-	-	-	4	-	16	-	-	4	48	9
10	Oil engine (including petrol)	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	10
11	lamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	11
12	stove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	12
13	tractor	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	8	13
14	Rubbish burning	-	-	-	-	-	-	4	4	-	-	-	-	4	-	-	-	-	8	-	-	-	20	14
15	Slow combustion stove igniting other materials	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	8	16	15
16	Smoking materials	8	-	-	-	4	-	16	-	-	-	-	-	4	-	8	4	-	4	-	-	-	48	16
17	Spontaneous combustion in rubbish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4	17
18	Taper, lighted paper or sticks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	12	18
19	Unknown source of ignition	44	8	-	-	-	24	314	12	8	4	-	-	36	-	4	4	4	28	12	20	8	530	19
20	Total fires other than those in buildings	68	20	-	-	4	38	398	20	12	4	-	12	148	-	12	16	4	88	16	28	64	952	20
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

For explanation of notes see page 79

SECTION IV

Table 6

MATERIAL FIRST IGNITED IN FIRES

Reports from Northern Ireland, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Agriculture and Forestry						
Crops, ricks, stacks						
Barley	-	-	-	-	-	-
Hay	32	1.6	12	0.6	44	2.2
Straw	12	0.6	-	-	12	0.6
Stubble	-	-	-	-	-	-
Other	-	-	4	0.2	4	0.2
Loose straw or hay	20	1.0	4	0.2	24	1.2
Grass, heather, bracken	-	-	384	19.6	384	19.6
Trees, hedges, undergrowth, brushwood, bushes (including gorse), twigs, touchwood	-	-	16	0.8	16	0.8
Other agricultural materials	-	-	-	-	-	-
Total	64	3.3	420	21.4	484	24.7
Chemicals - gases						
Acetylene	4	0.2	-	-	4	0.2
Town gas	12	0.6	-	-	12	0.6
Other gases	4	0.2	-	-	4	0.2
Total	20	1.0	-	-	20	1.0
Chemicals - oils						
Animal and vegetable oils	-	-	-	-	-	-
Mineral oil						
Paraffin	24	1.2	8	0.4	32	1.6
Petrol in vehicles	8	0.4	32	1.6	40	2.0
Petrol not in vehicles	12	0.6	8	0.4	20	1.0
Other mineral oils	-	-	4	0.2	4	0.2
Oil waste and undefined	8	0.4	8	0.4	16	0.8
Total	52	2.6	60	3.1	112	5.7
Chemicals - other						
Celluloid (including films)	-	-	-	-	-	-
Paint, enamel, lacquer, varnish, stains and French polish	-	-	-	-	-	-
Pitch, tar	8	0.4	16	0.8	24	1.2
Rubber, vulcanite, ebonite	8	0.4	-	-	8	0.4
Other chemicals	8	0.4	-	-	8	0.4
Total	24	1.2	16	0.8	40	2.0
Paper, cardboard, wood (not part of a structure)						
Paper, cardboard	28	1.4	16	0.8	44	2.2
Wood chippings, flour, sawdust shavings, wool	4	0.2	4	0.2	8	0.4
Wood barrels, boxes, cases, firewood etc.	8	0.4	-	-	8	0.4
Timber	-	-	-	-	-	-
Total	40	2.0	20	1.0	60	3.1

SECTION IV

Table 6 (Contd.)

MATERIAL FIRST IGNITED IN FIRES

Reports from Northern Ireland, 1959

Material first ignited	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Textiles						
Canvas and canvas goods	-	-	-	-	-	-
Clothing on person	-	-	-	-	-	-
Clothing not on person	28	1.4	-	-	28	1.4
Cotton	4	0.2	-	-	4	0.2
Jute, hessian, sacking	4	0.2	-	-	4	0.2
Rags, (including oily rags)	-	-	-	-	-	-
Tarpaulin, waterproof sheeting, oilskins	-	-	8	0.4	8	0.4
Other textiles	8	0.4	4	0.2	12	0.6
Total	44	2.2	12	0.6	56	2.9
Furniture, furnishings, household goods						
Bedding	16	0.8	4	0.2	20	1.0
Carpets, rugs	8	0.4	-	-	8	0.4
Curtains	4	0.2	-	-	4	0.2
Furniture	24	1.2	-	-	24	1.2
Linen articles (unspecified), laundry	-	-	-	-	-	-
Seating in vehicles	-	-	-	-	-	-
Other furnishings	8	0.4	-	-	8	0.4
Total	60	3.1	4	0.2	64	3.3
Building materials, structural woodwork						
Building materials other than wood	36	1.8	-	-	36	1.8
Structural woodwork						
External	28	1.4	-	-	28	1.4
Internal						
Door, window frame	8	0.4	-	-	8	0.4
Floor, stairs	36	1.8	-	-	36	1.8
Partitions, linings to walls	20	1.0	-	-	20	1.0
Roof	36	1.8	-	-	36	1.8
Timber in chimney, flue	16	0.8	-	-	16	0.8
Timber under hearth	36	1.8	-	-	36	1.8
Other fittings	4	0.2	-	-	4	0.2
Not known whether internal or external	12	0.6	-	-	12	0.6
Structural woodwork hazards other than buildings	-	-	16	0.8	16	0.8
Total	232	11.8	16	0.8	248	12.7
Miscellaneous						
Coal, coke	-	-	-	-	-	-
Electrical insulation	36	1.8	68	3.5	104	5.3
Fat (margarine, suet, butter, cooking fat and lard)	64	3.3	-	-	64	3.3
Food other than fat	4	0.2	-	-	4	0.2
Refuse, rubbish, debris	20	1.0	68	3.5	88	4.5
Soot	28	1.4	-	-	28	1.4
Other	60	3.1	24	1.2	84	4.3
Unknown	260	13.3	244	12.4	504	25.7
Total fires attended	1 008	51.4	952	48.6	1 960	100.0

SECTION IV

Table 7A

MATERIAL FIRST IGNITED IN FIRES IN BUILDINGS IN RELATION TO THE SUPPOSED CAUSE

Reports from Northern Ireland, 1959

Row No.	Supposed cause of fire	Crops, ricks and stacks	Loose straw or hay	Other agricultural material	Acetylene	Town gas	Other gases	Animal and vegetable oils	Paraffin	Petrol in vehicles	Petrol not in vehicles	Other mineral oils	Oil, waste and undefined	Paint, enamel, lacquer, varnish, etc.	Pitch, tar	Rubber, vulcanite, ebonite	Other chemicals, including celluloid and celluloid goods	Paper, cardboard	Wooden packing materials	Timber	Clothing, on person	Clothing not on person	Cotton	Jute, hessian, sacking	Rags, including oily rags	Tarpaulins, waterproof sheeting, oilskins	Other textiles including canvas and canvas goods	Soft furnishings	Furniture	Linen articles, (unspecified), laundry	Seating in vehicles	Other furnishings	Building materials other than wood	Structural woodwork, external	Doors, window frames	Floors, stairs	Partitions, lining to walls	Roof	Timber in chimney, flue	Timber under hearth	Other fittings	Coal, coke	Electrical insulation	Food	Refuse, rubbish, debris	Soot	Other materials	Unknown material	Total	Row No.
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
	Material first ignited	Agriculture and forestry			Chemicals - gases			Chemicals - oils						Chemicals - other				Paper, cardboard, wood not structural			Textiles							Furniture, furnishings, household goods					Building materials, structural woodwork								Miscellaneous materials								
1	Ashes, soot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	1
2	Brazier	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2
3	Candle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	12	3
4	Chimney on fire not confined to chimney	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	8	-	-	-	-	4	-	-	-	-	20	8	-	-	-	-	-	-	-	-	-	44	4
5	Chimney, sparks from (outside building)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	12	-	-	-	-	-	-	-	-	-	-	-	-	4	-	24	5
6	Cooker, cooking range, oven (other than electric, town gas or oil) (1)	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	16	6
7	Electric cooker	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	16	7
8	fire, heater, radiator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	12	8
9	iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	9
10	motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	10
11	refrigerator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	8	11
12	wire and cable (other than lead to apparatus)	-	4	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	16	-	-	-	8	-	40	12
13	other apparatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	16	13
14	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	14
15	Fire in grate, igniting furniture and furnishings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	15
16	structural timber under hearth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	36	16
17	other materials	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	8	-	-	-	12	-	4	8	12	8	8	-	4	-	-	-	-	28	8	-	112	17
18	Fish frying range (all fuels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	-	-	-	-	28	18
19	Flue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	8	19
20	Gas (town) cooker	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	16	20
21	other apparatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	21
22	Incubator, brooder (all fuels)	4	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	22
23	Intentional burning of grassland, gorse, etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	23
24	Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	24
25	Malicious ignition (1) (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	25
26	Matches	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	8	26
27	Matches, children with (5)	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4	-	4	-	-	4	-	-	-	4	-	4	-	60	27
28	Mechanical heat or sparks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	-	12	28
29	Metal, hot	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	29
30	Naked light (1) (3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	8	30
31	Oil, blow lamp	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4	-	12	31
32	lamp	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	12	32
33	stove	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	33
34	other apparatus	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	34
35	Oxyacetylene cutting and welding apparatus	-	-	-	4	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	16	35
36	Rubbish burning	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	4	-	-	-	-	-	-	4	-	-	-	20	36
37	Slow combustion stove igniting structural woodwork	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	-	-	8	37
38	other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	12	38
39	Smoking materials	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	8	-	4	-	-	-	8	8	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	12	-	56	39
40	Spontaneous combustion in other materials	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	40
41	Sun's rays	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	41
42	Taper, lighted paper or sticks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	42
43	Miscellaneous and undefined (4)	-	-	-	-	-	4	-	-	-	-	-	4	-	-	4	-	-	4	-	-	4	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	28	43
44	Unknown source of ignition	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	252	260	44
45	Total fires in buildings	44	20	-	4	12	4	-	24	8	12	-	8	-	8	8	8	28	12	-	-	28	4	4	-	-	8	28	24	-	-	8	36	28	8	36	20	36	16	36	1	-	36	6	20	28	60	260	1 008	45
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	

For explanation of notes see page 79

SECTION IV

Table 7B

MATERIAL FIRST IGNITED IN FIRES IN HAZARDS OTHER THAN BUILDINGS IN RELATION TO SUPPOSED CAUSE

Reports from Northern Ireland, 1959

Row No.	Supposed cause of fire	Material first ignited: Agriculture and forestry: Crops, ricks and stacks	Agriculture and forestry: Loose straw or hay	Agriculture and forestry: Other agricultural materials	Chemicals - gases: Acetylene	Chemicals - gases: Town gas	Chemicals - gases: Other gases	Chemicals - oils: Animal and vegetable oils	Chemicals - oils: Paraffin	Chemicals - oils: Petrol in vehicles	Chemicals - oils: Petrol not in vehicles	Chemicals - oils: Other mineral oils	Chemicals - oils: Oils, waste and undefined	Chemicals - other: Paint, enamel, lacquer, varnish etc.	Chemicals - other: Pitch, tar	Chemicals - other: Rubber, vulcanite, ebonite	Chemicals - other: Other chemicals, including celluloid and celluloid goods	Paper, cardboard, wood not structural: Paper, cardboard	Paper, cardboard, wood not structural: Wooden packing materials	Paper, cardboard, wood not structural: Timber	Textiles: Clothing on person	Textiles: Clothing not on person	Textiles: Cotton	Textiles: Jute, hessian, sacking	Textiles: Rags, including oily rags	Textiles: Tarpaulins, waterproof sheeting, oilskins	Textiles: Other textiles including canvas and canvas goods	Furniture, furnishings, household goods: Soft furnishings	Furniture, furnishings, household goods: Furniture	Furniture, furnishings, household goods: Linen articles, (unspecified), laundry	Furniture, furnishings, household goods: Seating in vehicles	Furniture, furnishings, household goods: Other furnishings	Building materials, structural woodwork: Building materials other than wood	Building materials, structural woodwork: Structural woodwork external	Building materials, structural woodwork: Other fittings	Miscellaneous material: Coal, coke	Miscellaneous material: Electrical insulation	Miscellaneous material: Food	Miscellaneous material: Refuse, rubbish, debris	Miscellaneous material: Soot	Miscellaneous material: Other materials	Unknown material	Total	Row No.
1	Chimney, sparks from (outside building)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1
2	Electric wire and cable other than lead to apparatus	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-	-	52	2
3	other apparatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	24	3
4	Explosives, fireworks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	4
5	Intentional burning of grassland, gorse, etc.	-	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	5
6	Locomotives, sparks from	-	-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	44	6
7	Malicious ignition(1)(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	7
8	Matches, children with(5)	4	-	24	-	-	-	-	-	-	-	-	-	-	4	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	24	-	4	72	8
9	Naked light (1) (3)	4	-	20	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	48	9
10	Oil, engine (including petrol)	-	-	-	-	-	-	-	-	28	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	40	10
11	lamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	11
12	stove	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12
13	tractor	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	13
14	Rubbish burning	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	4	20	14
15	Slow combustion stove igniting other materials	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	16	15
16	Smoking materials	8	-	20	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	4	48	16
17	Spontaneous combustion in rubbish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	17
18	Taper, lighted paper or sticks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	12	18
19	Unknown source of ignition	-	-	282	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	240	530	19
20	Total fires other than those in buildings	16	4	400	-	-	-	-	8	32	8	4	8	-	16	-	-	16	4	-	-	-	-	-	-	-	8	4	4	-	-	-	-	-	16	-	68	-	68	-	24	244	952	20
	Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	

For explanation of notes see page 79.

SECTION IV

Table 8

METHOD OF EXTINCTION OF FIRES

Reports from Northern Ireland, 1959

Row No.	Method of extinction	Fires in buildings						Fires other than those in buildings						Total No. of fires		Row No.
		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total		Extinguished by Fire Brigade		Extinguished before arrival of Fire Brigade		Total				
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	
1	Burned out	-	-	4	0.2	4	0.2	-	-	80	4.1	80	4.1	84	4.3	1
2	Removal	56	2.9	12	0.6	68	3.5	4	0.2	4	0.2	8	0.4	76	3.9	2
3	Beating	-	-	-	-	-	-	208	10.6	14	0.7	222	11.3	222	11.3	3
4	Smothering	-	-	12	0.6	12	0.6	-	-	8	0.4	8	0.4	20	1.0	4
5	Sand, earth etc.	-	-	8	0.4	8	0.4	4	0.2	8	0.4	12	0.6	20	1.0	5
6	Water from buckets	12	0.6	36	1.8	48	2.4	4	0.2	20	1.0	24	1.2	72	3.7	6
7	Water from stirrup or hand pumps	44	2.2	4	0.2	48	2.4	4	0.2	-	-	4	0.2	52	2.7	7
8	Chemicals and chemical extinguishers	4	0.2	4	0.2	8	0.4	32	1.6	12	0.6	44	2.2	52	2.7	8
9	Two or more methods 3-8	28	1.4	8	0.4	36	1.8	20	1.0	4	0.2	24	1.2	60	3.1	9
10	Water from garden hose	-	-	4	0.2	4	0.2	-	-	-	-	-	-	4	0.2	10
11	Hose reel jets (using water in tank only)	392	20.0	-	-	392	20.0	348	17.6	-	-	348	17.8	740	37.8	11
12	Hose reel jets (using more water than that in tank)	48	2.4	-	-	48	2.4	40	2.0	-	-	40	2.0	88	4.5	12
13	Jets from inside hose reel or inside hydrant	4	0.2	-	-	4	0.2	-	-	-	-	-	-	4	0.2	13
14	Jets from pumps and hydrants	296	15.1	12	0.6	308	15.7	138	7.0	-	-	138	7.0	446	22.8	14
15	Other and undefined methods	12	0.6	8	0.4	20	1.0	-	-	-	-	-	-	20	1.0	15
16	Total fires attended	896	45.7	112	5.7	1 008	51.4	802	40.9	150	7.7	952	48.6	1 960	100.0	16

Notes on method of extinction

1. "Removal" includes occurrences where (a) burning material was removed from the building, (b) gas supply was turned off. If the burning material was tackled with methods 3-8 before removing it from the building, then such occurrences were classified under whichever of these methods applied.

2. Methods 11 & 12 and method 14 include those occurrences in which methods 3-9 and 3-12 respectively may also have been used.

3. "Fires extinguished by Fire Brigade" include those fires which were tackled but not extinguished before the arrival of the Fire Brigade.

SECTION IV

Table 9

BEHAVIOUR OF SPRINKLER SYSTEMS AT FIRES

Reports from Northern Ireland, 1959

Two incidents occurring in buildings where sprinklers were installed were observed in the one-in-four sample of reports examined. In one fire, 4 sprinklers actuated and controlled the fire and insufficient heat was generated to open the heads in the other incident.

No fires occurred in premises which were not buildings where sprinklers were installed.

SECTION IV

Table 10

PERSONS RESCUED OR ESCAPED BY EMERGENCY MEANS FROM FIRES

Reports from Northern Ireland, 1959

(Frequencies obtained from results of analysis of all reports)

Appliance or method used	No. of persons
Rescue with Fire Brigade assistance from Buildings	
Escape (hand operated)	1
Without apparatus	2
Total	3
Rescue without Fire Brigade assistance from Buildings	
Carried or assisted out	11
Ladder	6
Total	17
Escape by emergency means from Buildings	
Jumping from upstairs window, roof	12
Ladder	1
Through ground floor windows	1
Other or undefined methods	4
Total	18
Total persons rescued or escaped	38

SECTION IV

Table 11

NATURE OF INJURIES OF CASUALTIES IN FIRES

Reports from Northern Ireland, 1959

(Frequencies obtained from results of analysis of all reports)

Nature of Injury	Fire Brigade	Other Casualties	Total
Fatal casualties			
Burns and scalds	-	4	4
Overcome by gas or smoke	-	8	8
Other and undefined injuries	-	-	-
Total	-	12	12
Non-fatal casualties**			
Burns and scalds	-	19	19
Bruises, cuts, abrasions	4	8	12
Dislocations, sprains, fractures	-	-	-
Overcome by gas or smoke	6	-	6
More than one of the above injuries	-	-	-
Shock*	-	2	2
Other and undefined injuries	-	3	3
Total	10	32	42
Total casualties	10	44	54

** Excludes casualties requiring first aid treatment only.

* Casualties who suffered shock in addition to another injury have been classified according to the nature of the other injury.

SECTION IV

Table 12

FIRES CLASSIFIED ACCORDING TO THE MONTH IN WHICH THEY OCCURRED

Reports from Northern Ireland, 1959

Month of occurrence	Fires in buildings		Fires other than those in buildings		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
January	100	5.1	16	0.8	116	5.9
February	92	4.7	12	0.6	104	5.3
March	92	4.7	56	2.9	148	7.6
April	72	3.7	42	2.1	114	5.8
May	116	5.9	90	4.6	206	10.5
June	64	3.3	180	9.2	244	12.4
July	60	3.1	84	4.3	144	7.3
August	64	3.3	132	6.7	196	10.0
September	100	5.1	234	11.9	334	17.0
October	76	3.9	66	3.4	142	7.2
November	60	3.1	20	1.0	80	4.1
December	112	5.7	20	1.0	132	6.7
Total fires	1 008	51.4	952	48.6	1 960	100.0

APPENDIX

SELECTION AND ACCURACY OF SAMPLE

Selection of the Sample

The sample is a stratified random sample. The population of fires is divided by brigade. The brigade groups are further sub-divided into fires confined to grassland, heathland and railway embankments and those which are not. Separate systematic random samples are selected from each of these different groups: i.e. the reports in each group are ordered by time of occurrence and every k^{th} report is chosen, the first report being selected by a random process. Stratification will lead to higher accuracy if the groups are correlated with the factor being measured. If not, the result is at least as good as with a non-stratified sample.

Calculation of Standard Error

Given a finite population of fires where

M = number of fires with a given attribute in the population

N = total number of fires in the population

$P = \frac{M}{N}$ = proportion of fires with a given attribute

The population variance of fires with a given attribute is

$$S^2 = \frac{NP(1-P)}{N-1}$$

Hence

$$\underline{\underline{\text{Var}(P) = \frac{P(1-P)}{N-1}}}$$

And

$$\text{Var}(M) = \text{Var}(NP) = N^2\text{Var}(P)$$

$$= \frac{N^2 \cdot \frac{M}{N}\left(\frac{N-M}{N}\right)}{N-1}$$

i.e. $$\underline{\underline{\text{Var}(M) = \frac{M(N-M)}{N-1}}}$$

Calculation of the Standard Error for Simple Random Sample

m = number of fires with a given attribute in the sample

n = total number of fires in the sample

$p = \frac{m}{n}$ = proportion of fires with a given attribute in the sample

$f = \frac{n}{N}$ = is defined as the sampling fraction

The population variance is

$$S^2 = \frac{NP(1-P)}{N-1}$$

Similarly, the sample variance is

$$s^2 = \frac{np(1-p)}{n-1}$$

where $E(s^2) = S^2$

Variance of p

$$\text{Var}(p) = (1-\frac{n}{N})\frac{S^2}{n} = (1-\frac{n}{N})\frac{NP(1-P)}{(N-1)n}$$

$$\text{Est Var}(p) = (1-\frac{n}{N})\frac{s^2}{n} = (1-\frac{n}{N})\frac{np(1-p)}{(n-1)n}$$

$$\therefore \text{Est Var}(p) = (1-\frac{n}{N})\frac{p(1-p)}{(n-1)}$$

Variance of m

Hence $$\text{Est Var}(m) = (1-\frac{n}{N})\frac{m(n-m)}{(n-1)}$$

The Accuracy of the Estimators

If n is sufficiently large then the properties of the normal distribution can be used and confidence limits set up.

95% confidence limits for M are

$$m-1.96\sqrt{(1-\frac{n}{N})\frac{m(n-m)}{n-1}} < f\,M < m+1.96\sqrt{(1-\frac{n}{N})\frac{m(n-m)}{n-1}}$$

which gives

$$\frac{m}{f}-1.96\sqrt{\frac{(1-f)}{f}\frac{\frac{m}{f}(\frac{n-m}{f}\,\frac{f}{f})}{(\frac{n-1}{f}\,\frac{f}{f})}} < M < m+1.96\sqrt{\frac{(1-f)}{f}\frac{\frac{m}{f}(\frac{n-m}{f}\,\frac{f}{f})}{(\frac{n-1}{f}\,\frac{f}{f})}}$$

95% confidence limits for P are

$$p-1.96\sqrt{(1-\frac{n}{N})\frac{p(1-p)}{n-1}} < P < p+1.96\sqrt{(1-\frac{n}{N})\frac{p(1-p)}{n-1}}$$

which gives

$$p-1.96\sqrt{\frac{(1-f)}{f}\cdot\frac{p(1-p)}{(\frac{n-1}{f}\,\frac{f}{f})}} < P < p+1.96\sqrt{\frac{(1-f)}{f}\cdot\frac{p(1-p)}{(\frac{n-1}{f}\,\frac{f}{f})}}$$

The Sampling Fraction

Year	Sampling Fraction (f)
1954	$\frac{1}{2}$
1955	$\frac{1}{4}$
1956	$\frac{1}{4}$
1957	full sample
1958	$\frac{1}{4}$
1959	$\frac{1}{4}$*

*For 1959 the standard errors can only be calculated for fires in buildings. Fires confined to grassland, heathland and railway embankments have been sampled using a fraction of $\frac{1}{10}$, but these have not been tabulated separately from other fires not in buildings which had a sampling fraction of $\frac{1}{4}$. Separate figures for grassland, heathland and railway embankment fires may be obtained from the Fire Research Station.

Example I

2896 fires in the United Kingdom in 1959 originated in clubs, hotels, restaurants or public houses (Section I, Table 1). The total number of fires in buildings in the country was 61 328.

$$S.E.\left(\frac{m}{f}\right) = \sqrt{\frac{3 \cdot (2896)(61328-2896)}{61324}}$$

$$= \sqrt{8278.28}$$

$$= 91.0$$

95% confidence limits are

$$2896 \pm 1.96(91.0) = 2896 \pm 178$$

There is therefore a 19 to 1 chance that the interval 2718-3074 will include the actual yearly total.

Example II

4.72% of the 61 328 fires in buildings in the United Kingdom in 1959 originated in clubs, hotels, restaurants or public houses (Section I, Table 1).

$$S.E.(p)\% = \sqrt{\frac{3 \cdot (4.72)(95.28)}{61324}}$$

$$= \sqrt{0.022} \quad \%$$

$$= 0.148\%$$

95% confidence limits are

$$4.72\% \pm 1.96(0.148)\% = 4.72\% \pm (0.29)\%$$

There is therefore a 19 to 1 chance that the interval 4.43-5.01 will include the true percentage.