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## DEATHS DUE TO FIRE IN 1953

by

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Summary

An analysis has been made of reports of incidents attended by Fire Brigades during 1953 in which fatal casualties occurred.

Of the total of 464 fatalities reported, 143 resulted from the ignition of personal clothing while being worn and 108 of the casualties in this group were female. Incidents in which bedding was first ignited caused 38 deaths; 20 of these were caused by smokers materials and matches, and 16 by heating apparatus placed too close to the bed. Ninety-one fatal casualties were due to aircraft crashes, 27 of which occurred in one civil aircraft accident.

There were 39 fatalities among children under 5 years old, and 196 among persons over 60 years old. In the latter group 110 deaths were due to the ignition of personal clothing while being worn; 81 of these fatalities were female.

About 60 per cent of the total fatal casualties occurred in private houses and flats, and 28 per cent in the open.

Two hundred and fifty-two casualties occurred in fires that were confined to the room of origin and in 103 of these the fire was confined to personal clothing. Eighty-two fatal casualties occurred in fires that spread beyond the room of origin.

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## DEATHS DUE TO FIRE IN 1953

(An analysis of all reports from Fire Brigades in the United Kingdom of incidents in which fatal casualties occurred)

by

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### INTRODUCTION

An analysis has been made of the reports of incidents attended by Fire Brigades in the United Kingdom during 1953 in which fatal casualties occurred. Data concerning the causes of fire, the injuries received, and the age and sex of the victims have been collected. There were 464 fatalities reported during the year. It should be noted that this figure is not the full total of deaths due to fire, since only those occurring in incidents attended by Fire Brigades have been considered.

### CAUSE OF FIRE

The causes of fire are analysed in Table I in which they are related to the age of the victim, and in Table 2 which shows the injuries received. There were 143 fatal casualties, 31 per cent of the total number, in incidents in which personal clothing was ignited while being worn. One hundred and two of these casualties were caused by coal, gas, or electric fires, forty being due to persons falling on to or knocking over such fires.

Thirty-eight fatalities resulted from ignition of bedding; 20 of these were caused by smokers materials and matches falling on to the bed, and 16 by heating apparatus placed too close to the bed.

Thirteen people received fatal injuries when flammable liquids were ignited, either while being used to draw up a fire or when placed near a source of heat. In two such incidents there were 8 fatal casualties, 7 of them children under 16 years of age.

Twenty-four deaths occurred in fires resulting from road crashes or collisions. In one incident 6 people were killed when the car in which they were travelling was dragged along a railway track after collision with a train and petrol from the fractured tank was ignited by a spark.

There were 91 fatal casualties in aircraft crashes. One civil aircraft crash accounted for 27 of these and the other casualties reported were service men.

### AGES OF CASUALTIES

The overall casualty rate in the United Kingdom during 1953, for persons of all age groups, was approximately 9 per million of population.

There were 39 fatalities among children under 5 years old, a rate of 9 per million children in the age group. Twelve were due to the ignition of personal clothing and 6 to children playing with fire. Five of the children were alone at the time of the incident.

Of the 196 fatal casualties over 60 years old, which correspond to a rate of 24 per million persons in the age group, 140 were due to the ignition of clothing and 84 of these were female. The death rate for men killed as a result of clothing being ignited in this age group was about 8.1 per million, and that for women about 17.4 per million.

Eighty-three of the fatal casualties in this age group appear to have been alone in the house or flat at the time of the incident.

A large proportion of the fatal casualties, 38 per cent, was in the 16-60 age group. This number is swelled, however, by the 70 due to aircraft crashes.

## PREMISES IN WHICH INCIDENTS OCCURRED

An analysis of the premises in which fatal casualties occurred is given in Table 3.

Two hundred and seventy-nine fatalities, 60 per cent of the total, occurred in private houses and flats, and 130 occurred outdoors; this latter number, however, is considerably influenced by the 91 casualties due to aircraft accidents and the 24 due to road crashes.

## EXTENT OF FIRE

Two hundred and fifty-two casualties occurred in fires that were confined to the room of origin and in 103 of these cases personal clothing only was involved. Eighty-two fatal casualties occurred in fires that spread beyond the room of origin.

## CONCLUSIONS

About 30 per cent of the total number of fatal casualties reported by Fire Brigades in 1953 were due to the ignition of clothing and many of these could have been prevented by elementary precautions. One hundred and two of the deaths resulted from the ignition of clothing by coal, gas, or electric fires; in only three instances was the presence of a fire guard specifically mentioned in the report, although this does not necessarily imply the absence of fire guards in all other cases. In one incident it appears that the coal fire was fully guarded, but a spark passed through the guard and ignited the clothing of a child standing near. Eight fatal casualties due to ignition of clothing were caused by persons falling on to, or knocking over, gas or electric fires and it is possible that these would not have been prevented by the use of fire guards. In all other cases, where clothing was ignited due to the wearers standing too close to coal, gas or electric fires, guards fixed on to the fires would probably have prevented the clothing igniting. Almost 75 per cent of the persons over 60 who died as a result of clothing being ignited were women. Although this high proportion is partly accounted for by the fact that there are about 1 million more women than men in this age group, it is probably largely due to the type of clothing worn.

Of the 20 fatal casualties caused by the ignition of bedding by smokers materials or matches, 17 were definitely stated to be due to persons smoking in bed and dropping pipe embers, cigarette ends or lighted matches amongst the bed clothes. In four of these cases it was stated that the occupier was bedridden or an invalid; but even excluding these rather special cases, it can be deduced that the dangers of the practice are not fully appreciated.

It appears that the majority of deaths due to fire occur in small fires, those confined to the room in which they started, or to the clothing of the person involved.

TABLE 1

The cause of fire in relation to age group of the casualties

(Analysis of all reports of incidents attended by Fire Brigades in 1953 in which fatal casualties occurred)

| Cause of fire   | Age group    |           |            |              |             | Total      |
|---|--------------|-----------|------------|--------------|-------------|------------|
|   | Under 5 yrs. | 5-16 yrs. | 16-60 yrs. | Over 60 yrs. | Unknown age |            |
| Ignition of bedding by  |              |           |            |              |             |            |
| Smoking materials and matches   | 4            | 1         | 7          | 13           | -           | 20         |
| Candle or night light .....   | -            | -         | -          | 6            | -           | 6          |
| Open fire .....   | -            | -         | -          | -            | -           | -          |
| Electric fire .....   | 1            | -         | 1          | 3            | -           | 5          |
| Gas fire .....  | -            | -         | -          | -            | -           | -          |
| Oil stove or lamp .....   | -            | -         | 1          | 4            | -           | 5          |
| Electric blanket .....  | -            | -         | 1          | 1            | -           | 2          |
| Ignition of clothing on person  |              |           |            |              |             |            |
| Smoking materials and matches   | -            | -         | 1          | 5            | -           | 6          |
| Candle or night light .....   | -            | -         | -          | 3            | -           | 3          |
| Open fire .....   | 6            | 7         | 3          | 46           | 1           | 63         |
| Gas fire .....  | 1            | -         | 1          | 11           | -           | 13         |
| Electric fire .....   | 3            | 2         | 3          | 18           | -           | 26         |
| Gas cooker or ring .....  | -            | -         | 2          | 11           | -           | 13         |
| Electric cooker or ring .....   | 1            | -         | -          | -            | -           | 1          |
| Oil stove .....   | 1            | -         | 1          | 5            | -           | 7          |
| Slow combustion stove .....   | -            | -         | -          | 5            | -           | 5          |
| Other .....   | -            | -         | -          | 6            | -           | 6          |
| Smoking materials set fire to contents or structure .....                 | -            | -         | 6          | 5            | -           | 11         |
| Fire in grate set fire to contents or structure .....                     | 9            | 5         | 6          | 8            | -           | 28         |
| Inflammable liquid on fire .....  | -            | -         | 2          | 2            | -           | 4          |
| Gas apparatus igniting other contents or structure .....                  | -            | 1         | 5          | 2            | 1           | 9          |
| Electric apparatus igniting other contents .....                          | 1            | -         | 6          | 2            | -           | 9          |
| Electric wires, rails etc. ....   | -            | 2         | 7          | -            | -           | 9          |
| Candle igniting other contents .....                                      | -            | -         | -          | 6            | -           | 6          |
| Oil stove igniting other contents .....                                   | -            | -         | -          | 2            | -           | 2          |
| Fire in grate igniting petrol (other than used for drawing up fire) ..... | 3            | 4         | 2          | -            | -           | 9          |
| Children playing with fire .....  | 6            | 4         | 2          | -            | -           | 12         |
| Collision or motor crash .....  | 2            | -         | 21         | 1            | -           | 24         |
| Aircraft crash .....  | 1            | 2         | 70         | -            | 18          | 91         |
| Other causes .....  | 1            | 2         | 15         | 1            | 1           | 20         |
| Unknown cause .....   | 3            | 2         | 13         | 30           | 1           | 49         |
| <b>Total</b>  | <b>39</b>    | <b>31</b> | <b>176</b> | <b>196</b>   | <b>22</b>   | <b>464</b> |

TABLE 2

## Cause of fire in relation to injuries received

(Analysis of all reports of incidents attended by Fire Brigades  
in 1953 in which fatal casualties occurred)

| Cause of fire   | Nature of injury |                 |                    |           |           |           |           | Total    |            |
|---|------------------|-----------------|--------------------|-----------|-----------|-----------|-----------|----------|------------|
|   | Burns            | Burns and shock | Shock and asphyxia | Multiple  | Asphyxia  | Other     | Unknown   |          | Shock      |
| Ignition of bedding by  |                  |                 |                    |           |           |           |           |          |            |
| Smoking materials and matches .....                                       | 10               | 6               | -                  | -         | 4         | -         | -         | -        | 20         |
| Candle or nightlight ...  | 2                | 3               | 1                  | -         | -         | -         | -         | -        | 6          |
| Open fire .....   | -                | -               | -                  | -         | -         | -         | -         | -        | -          |
| Electric fire .....   | 4                | -               | 1                  | -         | -         | -         | -         | -        | 5          |
| Gas fire .....  | -                | -               | -                  | -         | -         | -         | -         | -        | -          |
| Oil stove or lamp .....   | 2                | 2               | -                  | -         | 1         | -         | -         | -        | 5          |
| Electric blanket .....  | -                | 2               | -                  | -         | -         | -         | -         | -        | 2          |
| Ignition of clothing on person by   |                  |                 |                    |           |           |           |           |          |            |
| Smoking materials and matches .....                                       | 4                | 2               | -                  | -         | -         | -         | -         | -        | 6          |
| Candle or night light ..  | 2                | 1               | -                  | -         | -         | -         | -         | -        | 3          |
| Open fire .....   | 31               | 32              | -                  | -         | -         | -         | -         | -        | 63         |
| Gas fire .....  | 8                | 5               | -                  | -         | -         | -         | -         | -        | 13         |
| Electric fire .....   | 12               | 13              | -                  | -         | -         | 1         | -         | -        | 26         |
| Gas cooker or ring .....  | 3                | 9               | 1                  | -         | -         | -         | -         | -        | 13         |
| Electric cooker or ring   | 1                | -               | -                  | -         | -         | -         | -         | -        | 1          |
| Oil stove or lamp .....   | 4                | 3               | -                  | -         | -         | -         | -         | -        | 7          |
| Slow combustion stove ..  | -                | 4               | -                  | -         | 1         | -         | -         | -        | 5          |
| Other .....   | 3                | 2               | -                  | -         | 1         | -         | -         | -        | 6          |
| Smoking materials set fire to contents or structure .                     | 2                | 4               | 1                  | -         | 3         | 1         | -         | -        | 11         |
| Fire in grate set fire to contents or structure ....                      | 19               | 4               | 3                  | -         | 2         | -         | -         | -        | 28         |
| Inflammable liquid on fire .  | 4                | -               | -                  | -         | -         | -         | -         | -        | 4          |
| Gas apparatus igniting other contents or structure ....                   | 1                | 1               | -                  | -         | -         | 6         | -         | 1        | 9          |
| Electric apparatus igniting other contents .....                          | 7                | 2               | -                  | -         | -         | -         | -         | -        | 9          |
| Electric wires, rails, etc..  | 5                | 2               | 1                  | -         | -         | 1         | -         | -        | 9          |
| Candle igniting other contents .....                                      | 2                | -               | -                  | -         | 2         | 2         | -         | -        | 6          |
| Oil stove igniting other contents .....                                   | 2                | -               | -                  | -         | -         | -         | -         | -        | 2          |
| Fire in grate igniting petrol (other than used for drawing up fire) ..... | 2                | -               | -                  | -         | 3         | 4         | -         | -        | 9          |
| Children playing with fire .  | 5                | 5               | -                  | -         | 1         | -         | 1         | -        | 12         |
| Collision or motor crash ...  | 6                | 1               | -                  | 12        | 1         | 1         | -         | 3        | 24         |
| Aircraft crash .....  | 2                | 1               | -                  | 57        | -         | 1         | 30        | -        | 91         |
| Other causes .....  | 2                | 6               | 1                  | 7         | -         | 2         | 2         | -        | 20         |
| Unknown cause .....   | 19               | 13              | 4                  | 1         | 8         | -         | 3         | 1        | 49         |
| <b>Total</b>  | <b>164</b>       | <b>123</b>      | <b>13</b>          | <b>77</b> | <b>27</b> | <b>19</b> | <b>36</b> | <b>5</b> | <b>464</b> |

TABLE 3

## Occupancy in relation to number of casualties

(Analysis of all reports of incidents attended by Fire Brigades  
in 1953 in which fatal casualties occurred)

| Occupancy                      | Number of<br>Casualties |
|--------------------------------|-------------------------|
| Houses and flats (residential) | 279                     |
| Houseboats, caravans .....     | 5                       |
| Factories, workshops, etc. ... | 31                      |
| Cinemas and theatres .....     | -                       |
| Hospitals, Homes .....         | 3                       |
| Schools .....                  | -                       |
| Outdoors .....                 | 130                     |
| Other .....                    | 16                      |
| Total .....                    | 464                     |