March 8, 1949. J. COLARDO 2,463,745

ALARM FOR FIRE DETECTION

Filed Nov. 6, 1946

Fig. 1.

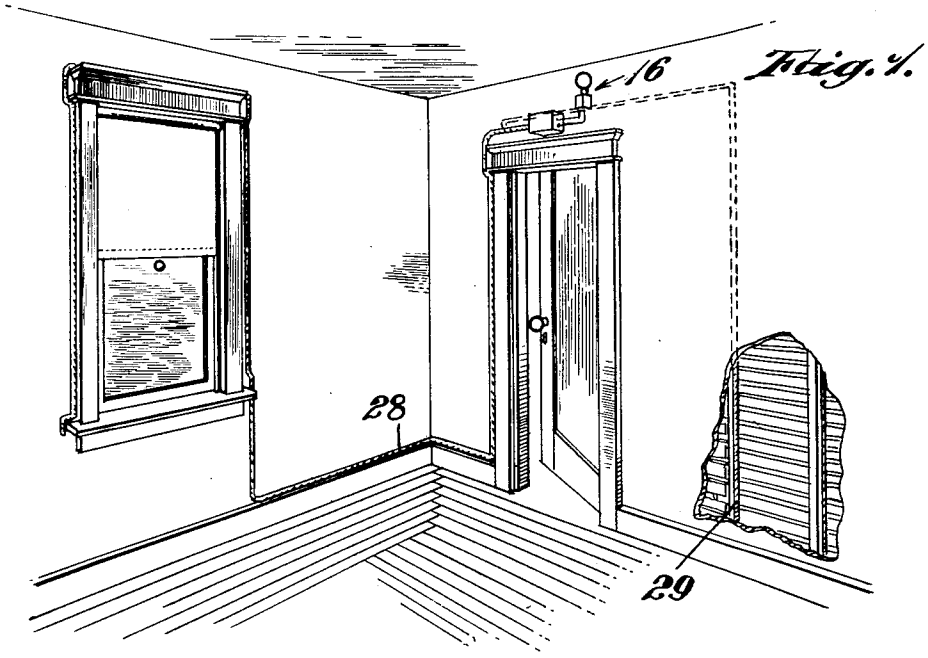


Fig. 2.

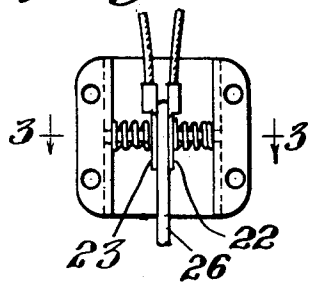


Fig. 3.

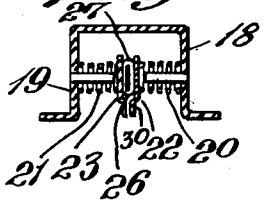


Fig. 4.

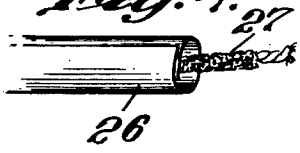


Fig. 5.

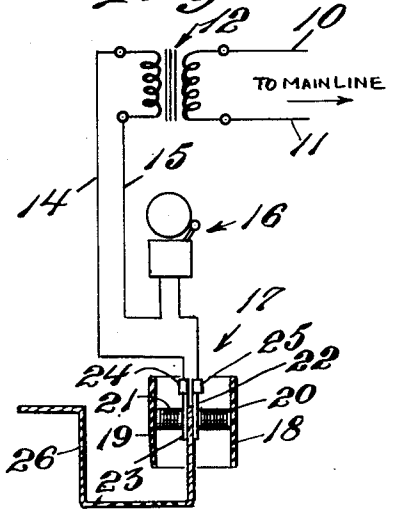


Fig. 6.



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ALARM FOR FIRE DETECTION

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4 Claims. (Cl. 200—142)

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This invention relates to an alarm device for automatic operation upon the occurrence of a fire.

Homes are usually not provided with any means of indicating a fire should one occur. Some alarm systems have been attempted in public buildings such as hotels and the like. These are usually of such a complicated nature that the cost involved prohibits their use in dwellings.

An object of this invention is to provide a very simple alarm system which may be manufactured and supplied inexpensively so that it will be within the reach of the average householder.

Another object of this invention is to provide an alarm system which may be operated from many different locations in a single room or a single dwelling.

Another object of this invention is to provide an alarm system which will operate directly from the house current which is continually in operation.

With these and other objects in view, the invention consists of certain novel features of construction as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a perspective view with parts broken away illustrating the alarm system provided in a room or a dwelling.

Fig. 2 is a top plan view of the switch unit of the system.

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Fig. 4 is a perspective view illustrating the fuse which is utilized.

Fig. 5 is a diagrammatic view illustratng the wiring of the system.

Fig. 6 is a plan view of the fragmental portion of the fuse.

In proceeding with this invention, I provide some sort of alarm device at a location where it will be readily heard by the occupant of the dwelling which it is desired should be protected. This alarm is electrically actuated; and, in the electric circuit, there is provided a switch which is held open by some electric insulating material which will be destroyed or removed upon the application of heat thereto. This material is connected with a fuse which may be led into a plurality of different locations about the dwelling and which will be of such a nature that heat

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sufficient to ignite the same will cause the flame to travel very rapidly to the switch to operate the same.

With reference to the drawings, and particularly the diagrammatic view shown in Fig. 5, leads to the house current are designated 10 and 11 which energize a transformer 12 from which leads 14 and 15 extend to the alarm device designated generally 16 and shown as a bell in this particular instance. Interposed in one of the leads to the bell; and, in this case, interposed in the lead 14, there is a switch designated generally 17 which consists of spaced walls 18 and 19 against which springs 20 and 21 abut to press upon the contacts 22 and 23 urging them toward each other. These contacts are connected to the line in which they are inserted as at 24 and 25. When these contacts are in engagement, the circuit will be completed and the alarm or bell 16 will be actuated.

I space the contacts 22 and 23 by an insulating material, such as a paper tube 26 or any inflammable insulating material that may be desired. This insulating material has a powder fuse 27 located within this tubular formation, and this tube or fuse or both may be led, as shown at 28 or 29, to some part of the dwelling which it is desired should be protected. As soon as fire reaches this fuse, it becomes quickly ignited and travels rapidly to the location between the contacts 22 and 23 and either permits the insulating paper 26 to collapse and the offset portions 30 of the contacts to move together under influence of the springs 20 and 21 or the burning of the paper 26 with like effect causing the circuit to be completed and the bell to be operated to indicate to the occupants of the dwelling that a fire has broken out in some location therein.

I claim:

1. An alarm device for fire detection comprising an electric circuit including a casing having opposite side walls, a guide post secured to each of said walls and extending towards and in line with each other with their free ends spaced from each other, a pair of contacts positioned in the space between said posts, a combustible fuse comprising paper and means to assist the combustion of said paper, one end of which is interposed between said contacts and means comprising a compression spring encircling each of said posts and abutting said contacts to urge the

contacts to move towards each other, to hold said fuse therebetween, and to move said contacts into engagement with each other upon said fuse being destroyed.

2. An alarm device as set forth in claim 1 wherein said fuse comprises an inflammable tube having a powder fuse located therein.

3. An alarm device as set forth in claim 1 wherein said contacts are held and supported in position only by compression springs.

4. An alarm device as set forth in claim 1 wherein said fuse is led about a building a substantial distance from said contacts.

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