(No Model.)

T. R. HACKWORTH & W. C. McLELLAN.

FIRE ALARM.

No. 528,160. Patented Oct. 30, 1894.

Fig. 1.

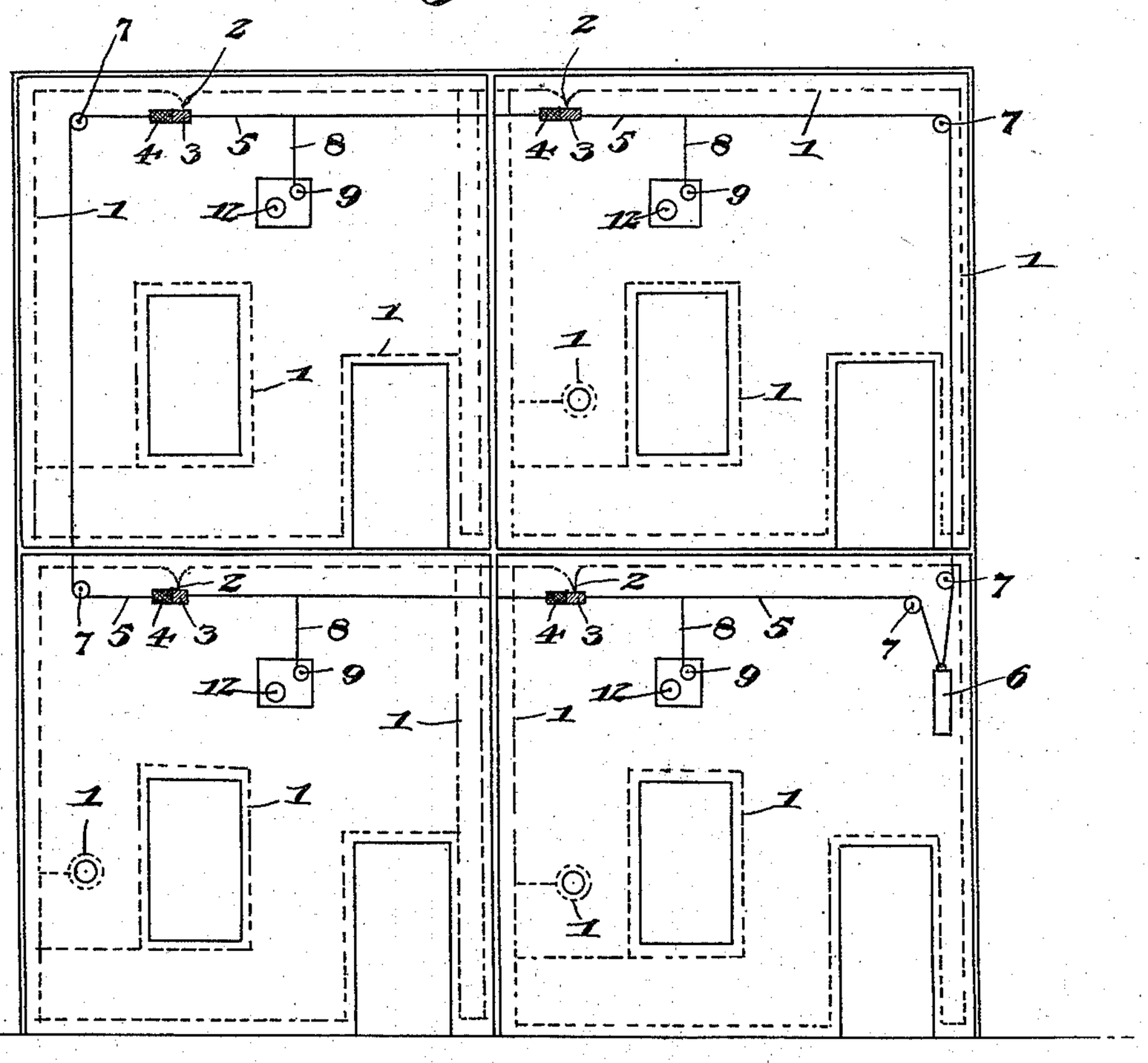


Fig. 2.

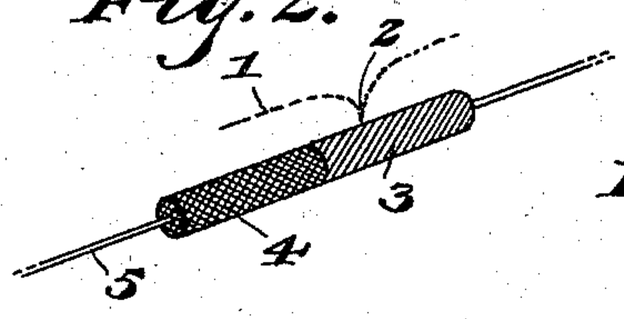
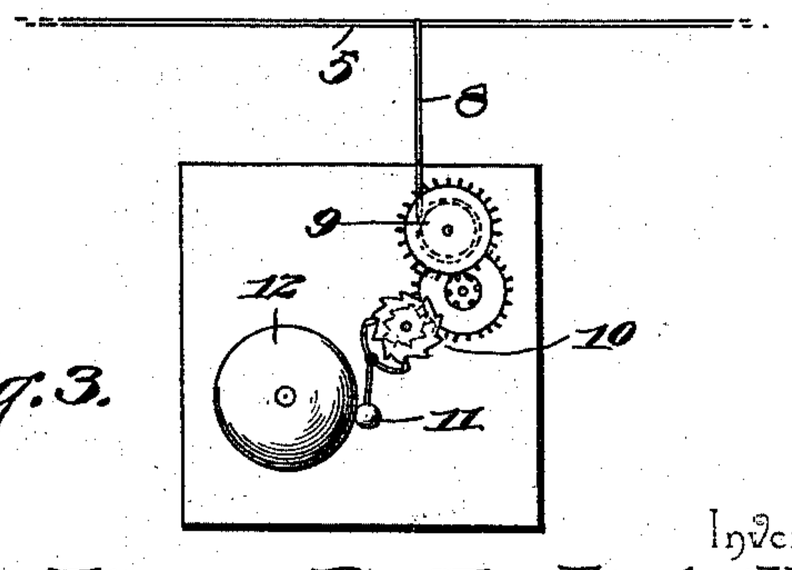


Fig. 3.



Inventors;
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Witnesses
B. L. Ober.
[illegible]

By their Attorneys.
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS R. HACKWORTH AND WILLIAM C. McLELLAN, OF SOUTH PITTSBURG, TENNESSEE, ASSIGNORS OF ONE-FOURTH TO THOMAS S. RICHARDS, OF SAME PLACE.

FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 528,160, dated October 30, 1894.

Application filed May 28, 1894. Serial No. 512,777. (No model.)

To all whom it may concern:

Be it known that we, THOMAS R. HACKWORTH and WILLIAM C. McLELLAN, citizens of the United States, residing at South Pittsburg, in the county of Marion and State of Tennessee, have invented a new and useful Fire-Alarm, of which the following is a specification.

Our invention relates to a fire alarm, the object in view being to provide a simple, inexpensive, and efficient device, whereby the existence of a fire in a room or other part of a building is indicated by an alarm mechanism actuated by means normally held at rest by a flexible connection having fusible and combustible links exposed to the heat, and adapted when effected to release said means.

A further object is to provide a common means for actuating a series of alarm mechanisms located respectively in different parts or rooms of the building, whereby said alarm mechanisms are actuated simultaneously upon the appearance of fire in any portion of the building protected by the improved alarm.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a diagrammatic representation of a building fitted with a fire-alarm embodying our invention. Fig. 2 is a detail view of one of the fusible and combustible links of the flexible connection. Fig. 3 is a similar view of one of the alarm mechanisms.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a fuse made of magnesium or material qualified for carrying and transmitting flame, which is arranged in the angles of each room and compartment of the building adjacent to each door and window opening, adjacent to each fireplace, around the stove-pipe openings, and in similar exposed places, which are liable to be affected by fire, and the ends 2 of the fuse are connected to a link comprising a fusible portion 3 and a combustible portion 4, said link forming a part of a flexible connection 5, such as a wire attached to an operating means 6. This operating means may consist of a weight, as shown in the accompanying drawings, or other equivalent device, and the connection 5 preferably consists of an endless wire carried by direction pulleys 7, and connected at both extremities to the said operating device. Connected to this endless wire, or other connection, is a cord 8 reeled upon a drum 9 of an alarm mechanism 10, having any preferred construction, and provided with a hammer 11 to strike a gong or other alarm-bell 12, whereby when the connection 5 is severed at any point the actuating device operating through the connection draws upon the cord 8 and sounds the alarm.

It will be understood that one of these alarm-mechanisms is arranged in each room or in each living room of the building, and in other suitable parts of the building; that the fuses 1 are correspondingly arranged in each room or other part of the building; and that a combined fusible and combustible link is disposed adjacent to each alarm mechanism, whereby an ignited fuse carries the heat promptly to the link. The combustible member of the link is designed to serve in case of the failure of the fusible member thereof to melt by the heat conveyed thereto by the fuse.

It will be understood that the object in employing an endless flexible connection for the actuating device is that all of the alarm mechanisms may be operated simultaneously irrespective of the room or part of the building in which the fire occurs.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having described our invention, what we claim is—

1. In a fire-alarm system, the combination of continuous fuses, a flexible connection provided at intervals with fusible and com-

bustible links to which the extremities of said fuses are attached, alarm mechanisms connected to the flexible connection, and adapted to be sounded when said connections are slacked, and means for maintaining the connection under tension, substantially as specified.

2. In a fire-alarm system, the combination of fuses, an endless flexible connection, actuating means for maintaining said connection under tension, fusible and combustible links arranged in the flexible member to which the fuses are attached, and alarm mechanisms, drums, and cords reeled on said drums and attached to the flexible connection, substantially as specified.

3. In a fire-alarm system, the combination of fuses, an endless flexible connection, links arranged at intervals in said connection and consisting of fusible and combustible members, the fusible or combustible members being connected to said fuses, alarm mechanisms having operating cords connected with said connection, and means for maintaining the connection under tension, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

THOMAS R. HACKWORTH.
WILLIAM C. McLELLAN.

Witnesses:
J. B. PHILLIPS,
G. E. DENTHRIDGE.