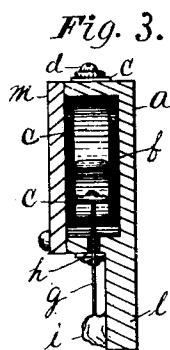
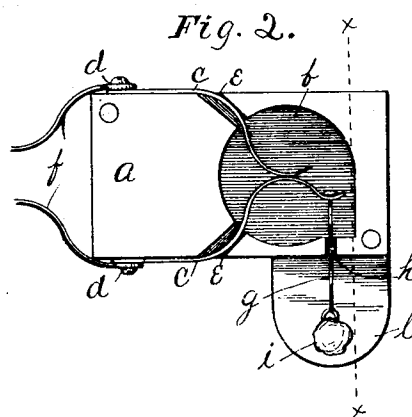
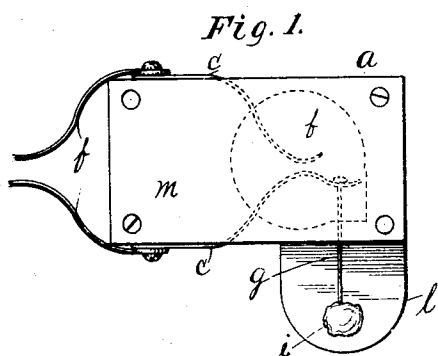


(No Model.)

J. HAVARD.  
AUTOMATIC FIRE ALARM.

No. 501,653.

Patented July 18, 1893.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH HAVARD, OF NEW BEDFORD, MASSACHUSETTS.

## AUTOMATIC FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 501,653, dated July 18, 1893.

Application filed May 10, 1893. Serial No. 473,662. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH HAVARD, a subject of the Queen of Great Britain, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented a new and useful Automatic Fire-Alarm, of which the following is a specification.

The object of my invention is to provide a device, by means of which, an alarm of fire is given automatically, when the atmosphere in any part of a building, has reached a given point of heat.

The accompanying drawings, illustrate my invention, in which—

Figure 1. represents a front view, as it appears when attached to a wall, showing in dotted lines, the circuit, broken. Fig. 2. represents a front view, with the cover of the device removed, to show the internal construction, and showing the circuit, closed. Fig. 3. is a view of the same in cross-section through the line *x, x*.

Similar letters refer to similar parts in the several views.

*a*, represents a box, composed of suitable, non-conducting material, having the slots *e, e*, in its sides, leading to the interior *b*, and having a cover *m*, and the projection *l*.

*c, c*, are strips of metal, secured to the sides of the box *a*, by screws *d, d*, and extending through the slots *e, e*, to the interior *b*, where they normally come in contact with each other by the spring of the metal.

*g*, is a wire, attached to the interior end of one of the strips *c*, leading to the outside of the box *a*, through a hole *h*, where its end is adapted to be secured to the part *l*, by a bit of wax; or metal which softens at a low heat; or provided with a loop, to which a thread is attached, as hereinafter described.

*f, f*, are wires, secured in contact with the strips *c, c*, leading to a battery and alarm bell, neither of which is shown.

The operation is as follows:—The device, having the strips *c, c*, disconnected (as shown in Fig. 1.) by the wire *g*, which is secured by wax, fusible metal, or a thread; is secured against the ceiling or the wall of the several rooms in a building, and connected by wires *f, f*, to a battery, and an alarm bell which are situated preferably, in some one of the rooms which is usually or continually occupied. Now, should a fire occur in any one of said rooms, the heat from the same would soften the wax, or fuse the metal, or burn the thread, and release the wire *g*, and allow the strips *c*, to come together and complete the circuit, and give the alarm.

I claim—

In an electric alarm, an automatic circuit closer, consisting of a box composed of non-conducting material having slots in its sides, and provided with a projection *l*; strips of spring metal secured to the sides of said box, and extending through said slots to the interior of the box, where they normally come in contact by the spring of the metal; a wire, connected with one of said springs, extending to the outside of said box and over the projection *l*, and provided with a loop whereby the said strips may be held out of contact, by fusible metal, wax, or a cord; for the purpose, as shown and described.

JOSEPH HAVARD.

Witnesses:

JOSEPH C. PATNAUDE,  
HENRY W. MASON.