E. EHLIN.
FIRE ALARM.

No. 30,624. Patented Nov. 13, 1860.

Fig. 2.

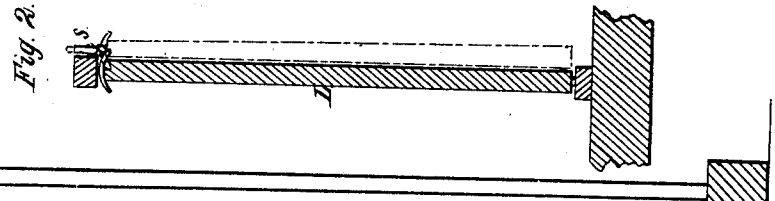
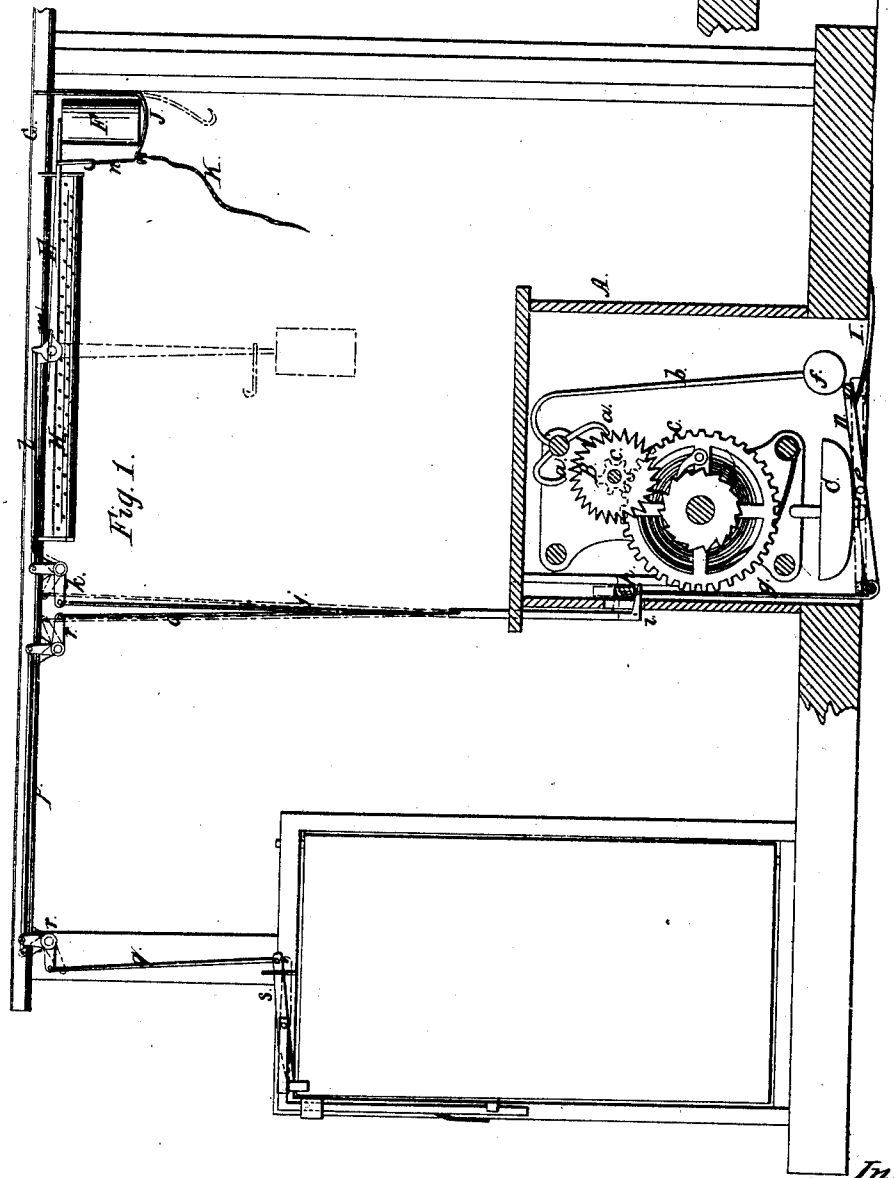


Fig. 1.



Witnesses.
J. W. Bonsley
R. S. Spencer

Inventor.
E. Ehlin
by Munn & Co
attys

UNITED STATES PATENT OFFICE.

E. EHLIN, OF BOSTON, MASSACHUSETTS.

FIRE-ALARM.

Specification of Letters Patent No. 30,624, dated November 13, 1860.

To all whom it may concern:

Be it known that I, E. EHLIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Fire-Alarm; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1, is a side sectional view of my invention. Fig. 2, is a section of a door showing the application of the invention to a burglar alarm.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in the employment or use of a fuse connected with an alarm substantially as hereinafter described, whereby the fuse in case of a building taking fire will conduct the flame to a thread or fuse which holds a weight connected with the alarm-mechanism and igniting the weight-sustaining thread or fuse, will cause the weight to be liberated, the alarm mechanism to be actuated and the alarm sounded.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a box in which an alarm mechanism is placed, said alarm being composed of a ratchet or escape wheel B, pallets *a*, *a*, with crutch *b*, attached to the crutch serving as the tongue of a bell C, the escape wheel being actuated by gearing *c*, connected with a coil spring *d*. These parts are precisely similar to that comprising the alarm mechanism of an ordinary clock.

In the lower part of the box A, just below the bell C, there is placed a frame D, which is pivoted at *e*. One end of this frame is directly underneath the hammer *f* of the bell which hammer is attached to crutch *b*, and the opposite end is connected by a rod *g*, to a cross bar *h*, under which one or more hooks *i*, catch. One of these hooks *i*, is connected at its upper end by a rod *j*, to a bent lever *k*, the opposite end of which is connected by a rod *l*, to a lever E, which has a weight F, at its outer end. The lever E, is connected with a cock in a pipe or tube *m*, which forms a connection between a water pipe G, and a perforated pipe H.

Against the back end of the frame D, there bears a spring I, and this spring has a tendency to keep the back part of the frame against the hammer *f*, thereby preventing the movement of the same. This will be fully understood by referring to Fig. 1.

The weight F, when the alarm is not in operation rests on a hinged or pivoted rod J, the outer end of which is sustained by a thread or fuse *n* connected with lever E, and to the outer end of the weight sustaining rod J, there is attached a fuse K, which may have any number of branch fuses connected to it so that they may extend through a building and be within every apartment.

From the above description it will be seen that in case of a building taking fire the fuse K, will on being ignited conduct the flame direct to the thread or fuse *n*, and the latter, on being burned liberates the weight F, which descends by its gravity to the position shown in red in Fig. 1, and actuates the lever E, the latter opening the cock in the tube *m*, and allowing the water to descend from pipe G, into H and at the same time actuating the bent lever *k*, and causing the hook *i* to be elevated and the back or inner end of the frame D to be depressed thereby liberating the hammer *f*, and causing the alarm to be sounded.

The spring *d*, of the alarm is wound up by a key in the usual way. The invention may have a burglar-detecting attachment applied to it by simply employing one or more extra hooks *i* and connecting them with a window or door L, by means of rods *o*, *p*, *q*, bent levers *r*, and levers *s*, the latter being so arranged as to be actuated by a window or door on being opened. This latter arrangement however is similar to many other plans devised for the same end.

I would remark that perforated pipes H may be placed in different parts of a building and arranged in every compartment if desired, the water supply pipe G, of course extending through the building and having pipes H, connected with it at the desired points.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—

1. The employment or use of a fuse K in connection with a weight-sustaining com-

bustible thread or fuse *n* applied to a lever and weight E, F, connected with an alarm to operate substantially as and for the purpose set forth.

2. In connection with the fuse K, applied as herein shown and described, the perforated pipe H, one or more, and water-supply pipe G, connected by a tube *m*, provided with a cock which is connected to the lever E, to operate as and for the purpose set forth.

E. EHLIN.

Witnesses:
HORACE G. HUTCHIN,
JOSEPH A. CUTTER.