

S. H. HARRINGTON.
BURGLAR-ALARM.

No. 177,637.

Patented May 23, 1876.

Fig. 1.

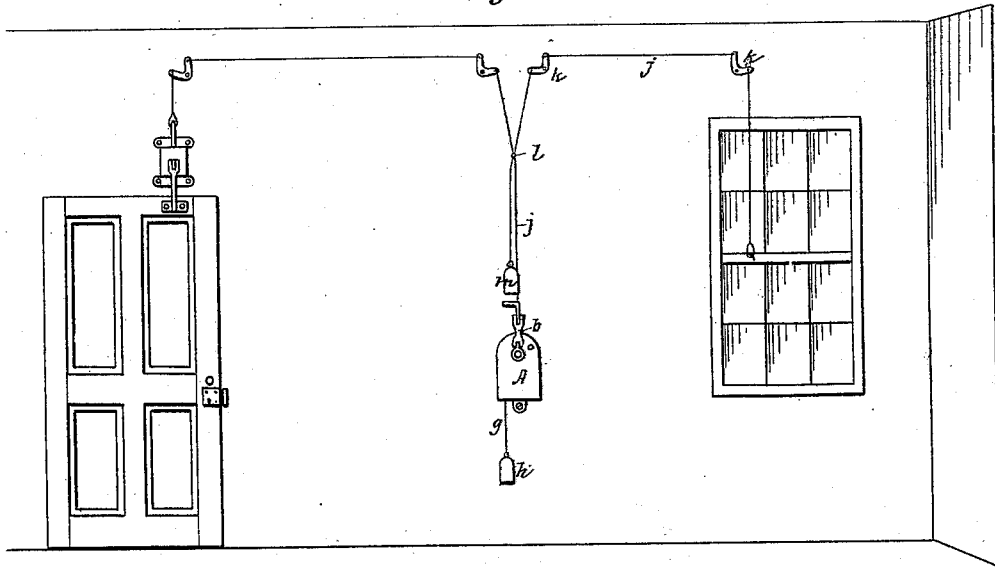


Fig. 2.

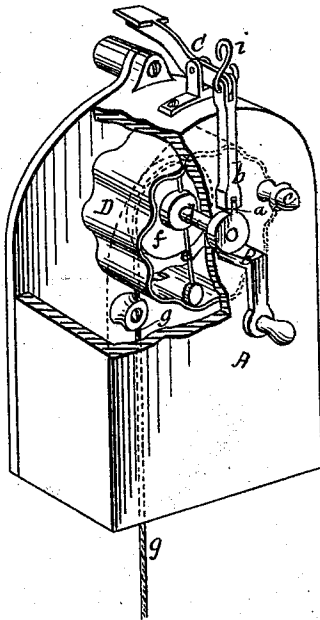
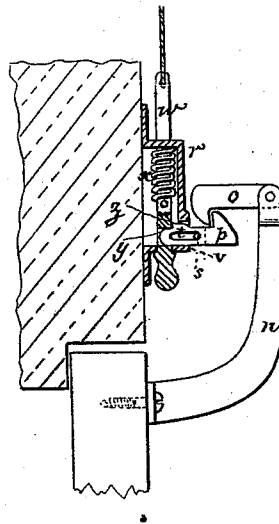


Fig. 3.



Witnesses:

Ewell A. Dick,
J. N. Campbell.

Inventor:

Saml H Harrington
by atty. Pollock & Bailey

UNITED STATES PATENT OFFICE.

SAMUEL H. HARRINGTON, OF BALTIMORE, MARYLAND, ASSIGNOR TO
HIMSELF AND ALONZO M. G. GORTON, OF SAME PLACE.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **177,637**, dated May 23, 1876; application filed
May 8, 1876.

To all whom it may concern:

Be it known that I, SAMUEL H. HARRINGTON, of Baltimore, county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification:

This invention relates, principally, to means whereby the alarm, whether electric or mechanical, is automatically caused to operate upon disturbance of any of the portions of the room or building with which it is connected.

I combine with the arbor of the alarm, or with the hub of the crank mounted thereon, a lever, or a lever and a jointed arm, there being formed upon the one a spline or projection, and on the other a fork, which straddles the projection, in such a manner that after the arbor is rotated to set the alarm it may engage the lever, and be thereby held from rotating until the lever is tripped. The latter operation releases the arbor, and the alarm is thus set free and permitted to sound. With the lever I combine a system of cords or wire, and also a weight, the cord system being so arranged that the tension of the cord will trip the lever. The weight is supplemental, and is designed to operate in case the cord should be cut, or caused in any way to separate.

The nature of my invention, and the manner in which the same is or may be carried into effect, will be understood by reference to the accompanying drawing, in which—

Figure 1 is a diagram illustrative of the method of applying my improved apparatus. Fig. 2 is a perspective view of the alarm proper, a portion of the box being broken away to show the interior works. Fig. 3 is a vertical central section of a latching device designed to set the apparatus upon closing of the door of the apartment, as hereinafter explained.

I have above stated that my improvements apply equally well to either mechanical or electric alarms.

The box A shown in the drawing is of the same pattern and size as that employed by the district telegraph companies in the various cities of the United States. It may contain the ordinary district telegraph apparatus, and be connected with the central station in

the usual way. B is the crank or handle, by which the apparatus is operated. On the hub of the crank, or on the arbor on which it is mounted, is formed a spline or projection, *a*. On top of the box is mounted a lever, C, from the front end of which hangs a jointed arm or continuation, *b*, the lower end of which is forked, and is adapted to engage the projection *a*.

After turning the crank to the proper extent to set the alarm, the forked lever is engaged with the projection, as indicated in Fig. 2, and the crank is thus prevented from moving. The stress of the driving-spring or weight of the apparatus will serve to keep the two parts engaged. The crank will thus be held until the lever is tripped, so as to raise its front end. This will disengage the parts, and the crank will revolve until arrested by the stop-pin *c*, which is located just at or beyond the point to which the crank should travel to give a burglar-alarm to the central station. This stop-pin is movable, and can be removed from the box whenever desired.

In case a mechanical alarm is used the stop-pin will not be needed. Such an alarm is shown in the drawing. It consists of a fluted or corrugated cylinder, D, of resonant metal, axially through which passes the arbor *d*. The cylinder is supported by the back of the box. On the arbor is mounted one or more spring-hammers, *e*, which, when the arbor is revolved, strikes against the series inwardly of projecting ribs of the cylinder, and thus sounds an alarm. The arbor may be revolved by weight or spring-power. I prefer the former. To this end I mount on the arbor a flanged pulley, *f*, to the periphery of which is made fast a cord, *g*, that extends through the bottom of the box and supports a weight, *h*.

The cord is wound up on the pulley by revolving the crank B. When, after this, the crank is released, the weight *h* will cause the arbor to revolve, and, consequently, will sound the alarm.

A mechanical alarm of this kind is simple of construction and effective in operation.

The lever C is connected with the various portions of the room to be protected by a system of cords or wire. (Illustrated in Fig. 1.)

To the front end of the lever, by means of a hook, *i*, Fig. 2, or otherwise, is attached a cord, *j*, which, through the intermediary of bell-cranks *k*, fixed to the wall of the apartment, leads to the window, and is attached to the lower sash by means of a snap-hook or otherwise. At a point, *l*, on the cord *j*, is suspended a weight, *m*, which hangs over and in immediate proximity to the rear end of lever *C*.

When the window is closed the cord *j* is under sufficient tension to hold the weight up away from the lever; but if the window be opened the cord will slacken, the weight *m* will drop on the lever, and the latter will be tripped and disengaged from the crank. If, on the other hand, the cord *j* be arranged to be drawn and not loosened by the opening of the window—as can be readily done—the front end of the lever will thereby be drawn up by the cord, with the like result of freeing the alarm.

At the point *l* the cord *j* branches, the one part leading to the window, the other part to the door. As it is desirable to provide a suitable and convenient means of setting the alarm when the occupant of the room leaves it and closes the door, I provide a device such as shown in Fig. 3.

On the door, near the top thereof, I mount on a bracket, *n*, a hinged latch, *o*. On the door-jamb above I secure a catch adapted to engage the latch, and consisting of a hook, *p*, supported and adapted to slide horizontally in a frame, *r*, being connected therewith by a pin, *s*, in the frame, which enters a slot, *t*, in the hook. The under part of the hook rests on a shelf, *v*, of such dimension that when the hook is pulled out as far as permitted by its slot it will be free to turn and drop, moving on the pin *s* as its axis.

In rear of the horizontal hook is a vertical rod, *w*, which is adapted to move up and down in guides in the frame, and is combined with a spring, *x*, that tends to force the rod downward. When the rod is pushed up to its full extent against the pressure of the spring a slot, *y*, in it is brought opposite the rear end of the hook until further movement is arrested by a shoulder, *z*. In this position the hook upholds the rod. To the upper end of the rod is attached the cord *j* that connects the door with the alarm. When the door is closed

the hinged latch *o* rides over and engages the hook, as seen in Fig. 3. If, now, the door be opened the latch will draw the hook forward, thus disengaging it from the rod, which, by its spring, will be forced violently downward, thus jerking the cord *j*, and, consequently, disengaging the lever *C* from the crank.

The above illustration will suffice to show in what manner my invention may be carried into effect.

The apparatus described may, also, if desired, be used as a fire-alarm, inasmuch as the cord or wire, if parted or expanded at one point, will slacken sufficiently to allow the weight *m* to drop and trip the lever. If wire be used it may be in part composed of a metal fusible at a comparatively low temperature.

Having described my invention and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the alarm and the locking-lever, constructed and arranged as herein described to engage the crank of the alarm or the arbor on which the same is mounted, and operated to release the same at the time and in the manner set forth.

2. In combination with the locking-lever, the system of cords or wire, and the weight arranged and operating as described, so that the lever shall be caused to release the alarm when the cord is either slackened or tightened.

3. The described device for automatically setting the alarm, consisting of the hinged latch on the one part, and the sliding rod, its spring, and the sliding and dropping hook on the other parts, said members being combined and arranged for joint operation, as shown and set forth.

4. The combination, in their supporting-frame, of the sliding spring-impelled rod, and the sliding and dropping hook, arranged to enter a slot in the rod, and to uphold the latter against the pressure of its spring, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SAMUEL H. HARRINGTON.

Witnesses:

ALONZO M. G. GORTON,
HENRY TAYLOR.