CURTIS & TUFTS.

Burglar Alarm.

No. 31,957. Patented April 9, 1861.

Fig. 3.

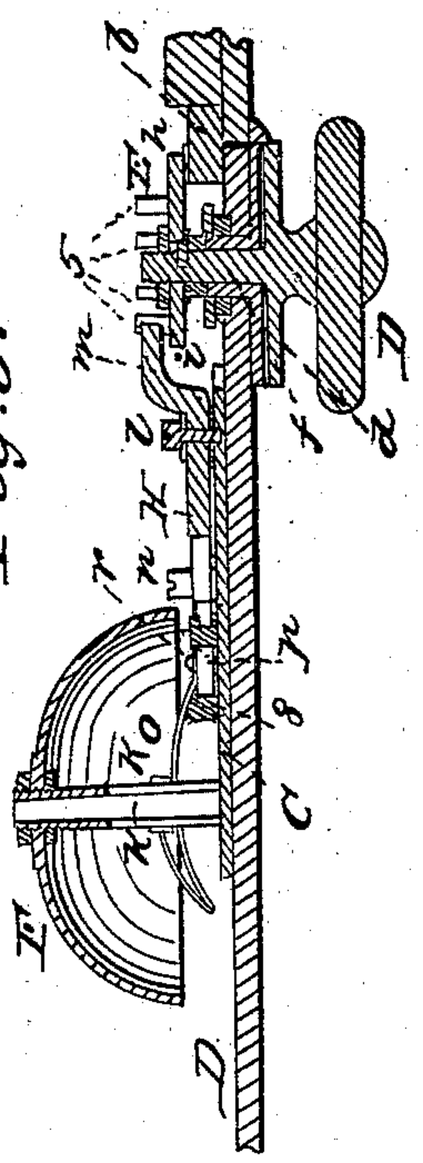


Fig. 1.

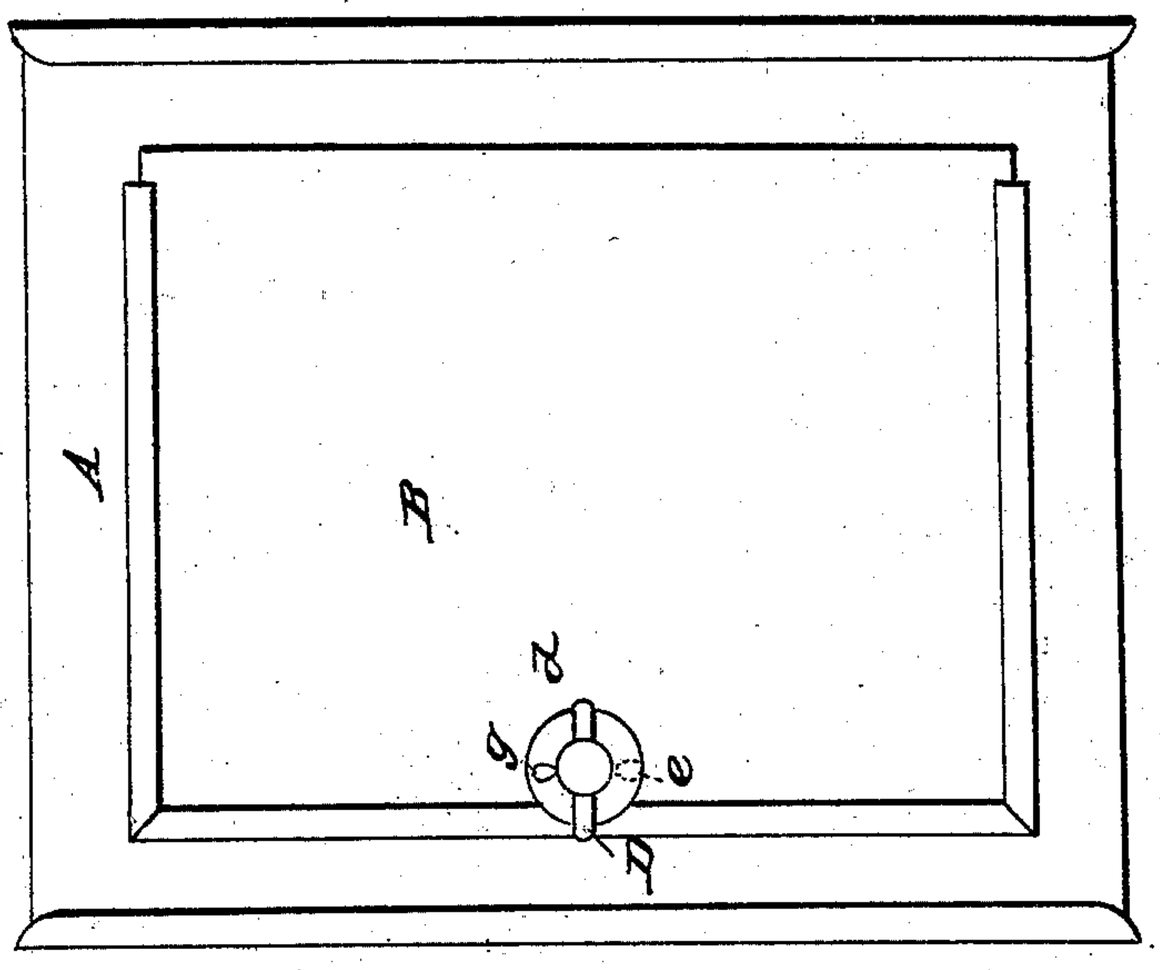


Fig. 4.

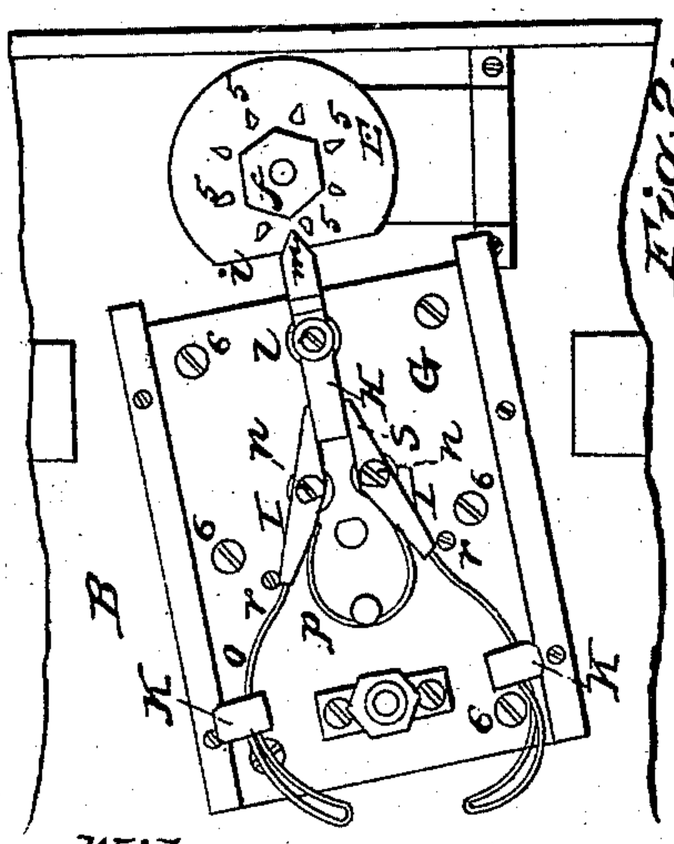
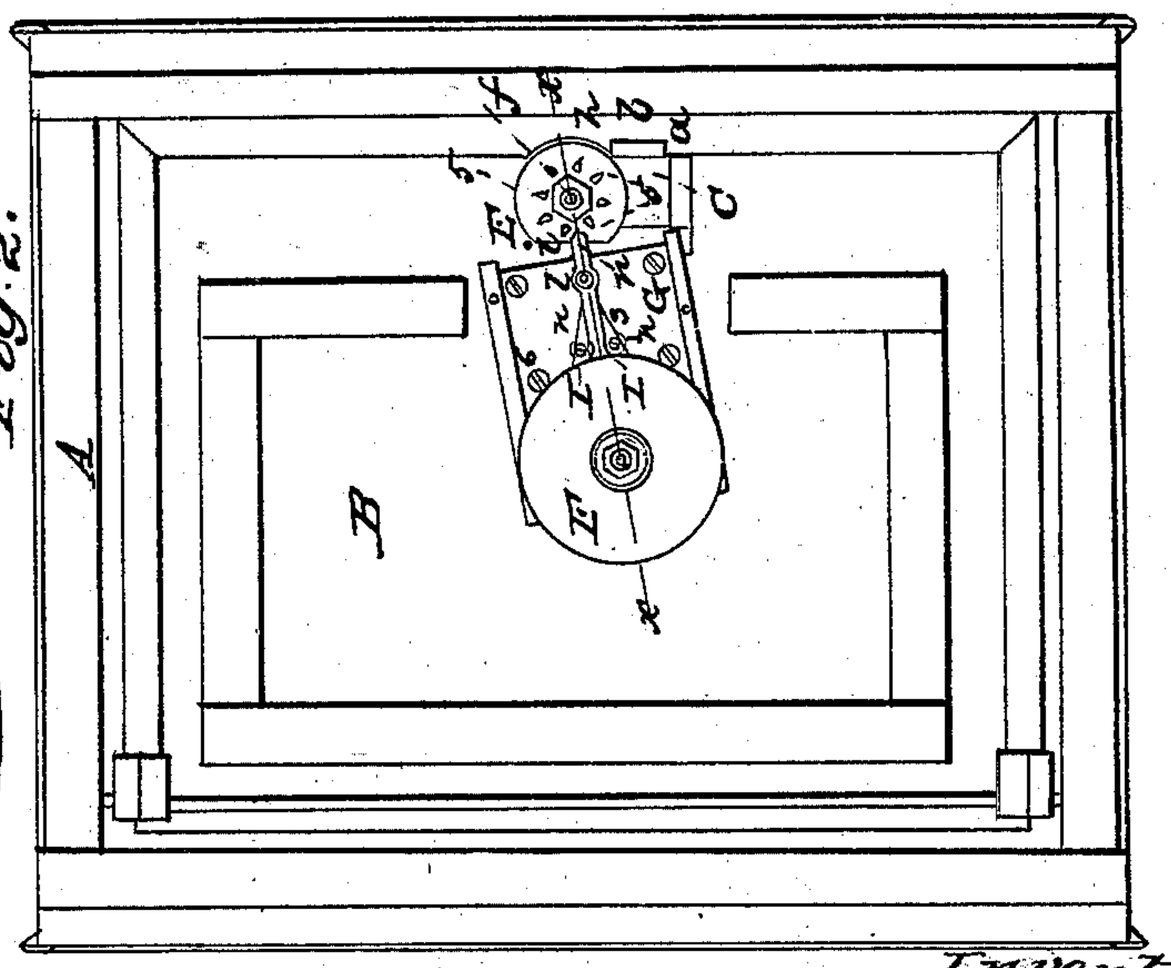


Fig. 2.



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UNITED STATES PATENT OFFICE.

H. CURTIS AND A. TUFTS, OF CHARLESTOWN, MASSACHUSETTS.

DOOR-ALARM.

Specification of Letters Patent No. 31,957, dated April 9, 1861.

To all whom it may concern:

Be it known that we, H. CURTIS and ALFRED TUFTS, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented an Improved Alarm for Locks and Doors of Safes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of a safe door with our improved alarm lock attached. Fig. 2 is a rear or inside view of the same. Fig. 3 is a section on the line *x*, *x*, of Fig. 2 (enlarged). Fig. 4 is an elevation of a part of the inner side of the door, with the lock and alarm apparatus (enlarged), the bell being removed to show the parts beneath it.

Our present invention consists in so arranging the escutcheon of a lock, in combination with an alarm, that it cannot be turned to disclose the key hole without sounding the alarm; while the escutcheon itself or a plate connected therewith becomes an auxiliary fastening, which can only be unlocked by turning the escutcheon to disclose the keyhole of the principal lock.

That others skilled in the art may understand and use our invention we will proceed to describe the manner in which we have carried out the same.

In the said drawings A represents the front of a safe—B the door, to the inner side of which is attached the lock C, the bolt *a* when locked, shooting behind the door frame *b*. Immediately above the lock C is a spindle *f* which passes through the door, and is turned by a handle D. To this spindle is attached on the outside of the door an escutchion *d* which covers the key hole (shown dotted at *e* Fig. 1) and has a hole *g* in one side. On the inside of the door a disk E is attached to the spindle *f*. It is of a sufficient diameter to extend over the edge of the door frame as at *h* Figs. 2 and 3 but is cut away on the opposite edge at *i*, so that it must be turned around with the side *i* next to the door frame, before the door will open. This disk has a series of pins 6 projecting from its face.

The alarm apparatus consists of a bell F and a striking mechanism, which is operated by the revolutions of the disk E, as will now be described.

The bell F is supported on a standard *k* rising from a plate G which is secured by screws 6 to the inner side of the door. A lever H is pivoted at *l* to the plate G, its end *m* is beveled off on each side, and intercepts the path of the pins 5 as the disk E is revolved. A lever I pivoted at *n* is placed on each side of the lever H and to the rear of it, the ends *s* of these levers overlapping and lying in contact with the sides of the lever H.

To the rear end of each lever I is attached a bent wire *o* to which is attached a hammer K for striking the bell; these hammers as seen in Fig. 3 lie just within the rim of the bell. A bent spring *p* is attached at 8, at the middle of its length to the plate G, and presses with each of its ends against one of the levers I, forcing them outward until arrested by stops *r*, which are pins projecting from the plate G. These stops *r* keep the hammers K at a proper distance from the bell, the spring of the rods *o* allowing the hammers to strike the bell when the levers I are vibrated. Two levers I are used, so that whichever way the disk E is turned, one of these levers will be operated by the pins 5 vibrating the lever H.

The following is the operation of this alarm:—The hole *g* in the escutcheon *d* being over the key hole *e*, the door B is closed and locked by the lock C, and the key is withdrawn. The spindle *f* is then revolved half way around by the handle D, into the position shown in the drawings; this covers the key hole *e* and brings the portion *h* of the disk E behind the edge of the door frame *b*. This not only covers the key hole to prevent the lock from being tampered with, but also secures the door; so that if the lower part of the escutcheon which covers the key hole, should be cut away by burglars and the lock C be picked, the door would still be fast, and could not be opened in any case until the spindle *f* is revolved. As the disk E is turned (in either direction) a pin 5 strikes the end *m* of the lever H and vibrates it a short distance, when the beveled end of the lever slips off from the pin, and this lever is returned to its place by the pressure of the spring *p* on one of the levers I; the vibration of the lever I as the spring *p* returns it to its place against the stop *r*, striking the bell with the hammer K. Thus as each pin 5 passes the end of the lever H the bell is struck and an alarm sounded.

The escutcheon *d*, instead of the desk E may be employed to fasten the door, one side

of the escutcheon being cut away like the disk, and its opposite side turning under a projecting part of the door frame.

The above described fastening and alarm is intended for the doors and safes of banks and other buildings where a watchman sleeps on the premises, who would be alarmed by the bell F if burglars should attempt to unlock the door B. They may also be applied with advantage to small safes (for silver, jewels and other valuables), such as are sometimes placed in the sleeping rooms of private dwellings. As these however are generally not too heavy to be carried off by the burglars if they should gain access to the room, they should be bolted to the floor or wall, by a bolt to be operated from the inside of the safe, before the door is closed and locked. These light safes, in case of fire may be carried off by the owner, by unlocking the door and withdrawing the bolt which retains them in place.

What we claim as our invention and desire to secure by Letters Patent is—

The escutcheon *d* and disk E in combination with an alarm apparatus operating substantially as described; when the disk E is used not only to sound the alarm, when it is revolved in either direction, but also as a fastening for the door, as specified.

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