(No Model.) 2 Sheets—Sheet 1.

# E. HARMON.

## ALARM BOLT.

No. 384,761. Patented June 19, 1888.

Fig. 1.

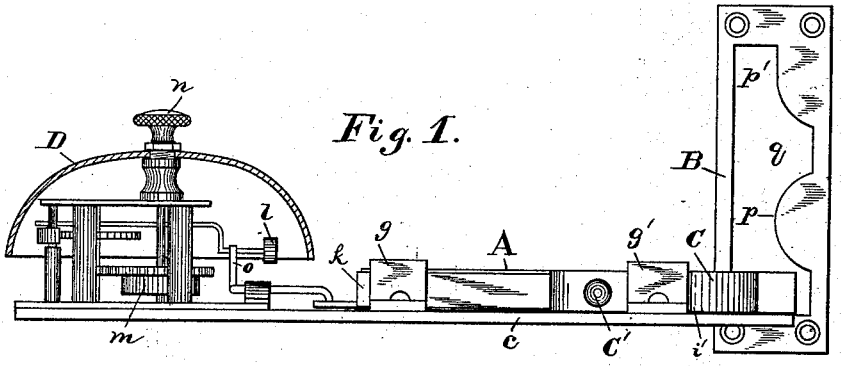



Fig. 2.

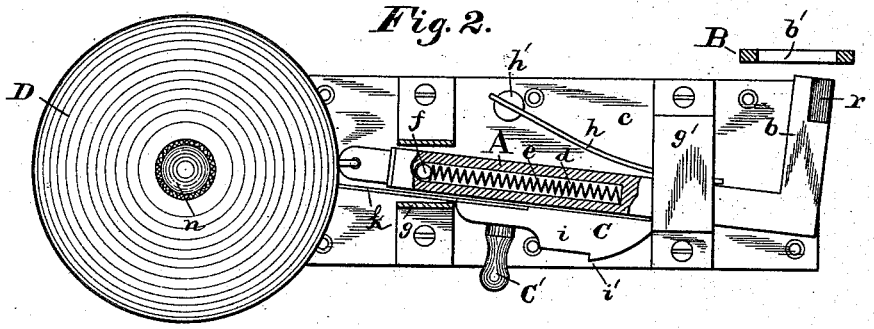



Fig. 3.

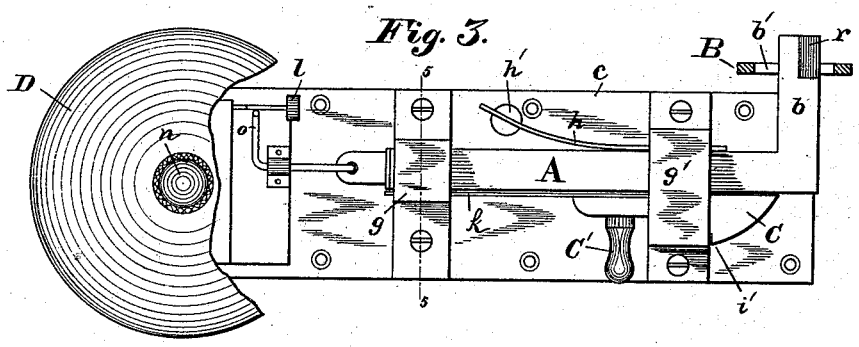
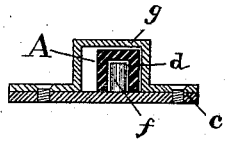



Fig. 5.



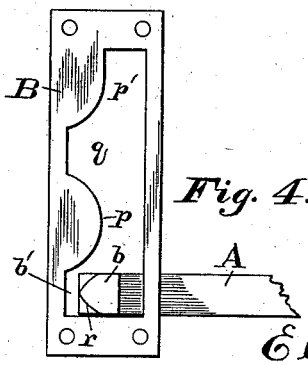




Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

# E. HARMON.

## ALARM BOLT.

No. 384,761. Patented June 19, 1888.

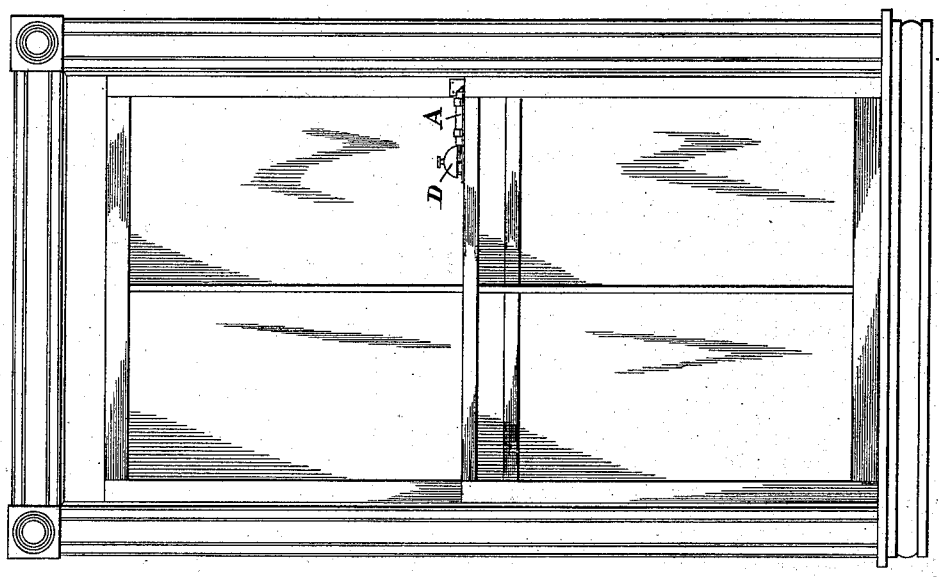


Fig. 7.

Fig. 8.

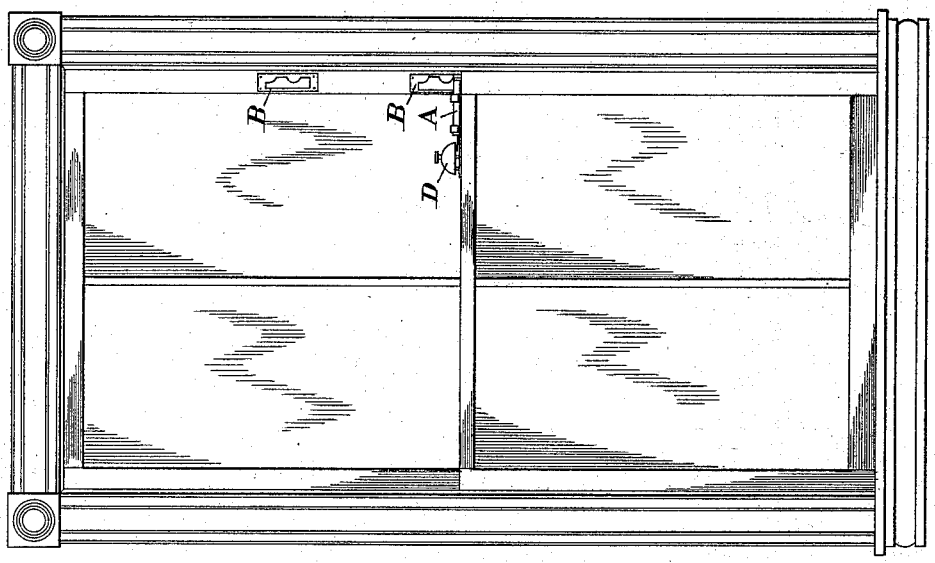


Fig. 6.

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# UNITED STATES PATENT OFFICE.

ELEAZER HARMON, OF BALTIMORE, MARYLAND.

## ALARM-BOLT.

SPECIFICATION forming part of Letters Patent No. 384,761, dated June 19, 1888.

Application filed February 17, 1888. Serial No. 264,390. (No model.)

*To all whom it may concern:*

Be it known that I, ELEAZER HARMON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Alarm-Bolts for Windows, of which the following is a specification.

My invention relates to a bolt for window-sash, and has for its object to provide an alarm bolt or lock so constructed as to readily permit a person on the inside to shift the bolt without sounding the alarm, while if the attempt to shift it be made by a person on the outside, where access cannot be had to the knob, the alarm will sound.

One form of device embodying the invention is shown in the drawings, in which—

Figure 1 is a side view of the bolt and catch-plate, the gong being in section to better illustrate the connection or contact of the bolt parts and the gong-hammer. Fig. 2 is a top view of the alarm-bolt, showing the bolt disconnected from the catch-plate. Fig. 3 is a top view of the bolt, showing it connected or engaged with the catch-plate. Fig. 4 is a view of the catch-plate, showing the reverse side from that seen in Fig. 1, and also showing the end of the bolt engaged therewith. Fig. 5 is a cross-section. Fig. 6 shows the alarm-bolt applied to a window-sash and the sash closed. Fig. 7 shows the same as Fig. 5, but illustrates that the bolt may be employed to lock one sash while it is partly open. Fig. 8 is a horizontal cross-section of the window-sash above the meeting-rail.

While an alarm-gong is here shown, the present invention does not relate to such a device nor to any particular construction of one. Such devices are well known, and so far as a device of this kind, as an element, may enter into any patentable combination covered by this patent, it will be sufficient here to state that any kind of a gong may be used which comprises a striking-hammer operated by a spring wound up after the fashion of clock-work.

The letter A designates the bolt, which has a right-angled shape—in other words, the bolt comprises a shank, A, having at one end a lateral prong, *b*, which engages with the hole *b'* in the catch-plate B. The bolt is movably secured to a base-plate, *c*, which is designed to be attached to the sash, preferably on top of the meeting-rail of the lower sash, and the catch-plate B to be attached on the upper sash. The shank of the bolt has on its lower side, which is in contact with the base-plate, a longitudinal slot, *d*, which contains a spiral spring, *e*. (See Fig. 2 where the top of the bolt is broken away to show the slot and spring.) A pin, *f*, is fixed rigidly in the base-plate and projects up into the said slot *d* of the bolt, and one end of the spring *e* bears on the pin and the other end bears on the bolt. A loop or keeper, *g*, is attached to the base-plate and passes over the bolt A, where the pin is, and another keeper, *g'*, is likewise attached and is broad enough to allow the prong end of the bolt to move laterally. This construction allows the bolt to move endwise, the spring *e* serving to keep it projected normally in one direction. It also allows the prong end *b* to swing or have lateral movement, the pin *f* at the other end of the bolt serving as a pivot.

A plate spring, *h*, has one end fixed to a stud, *h'*, on the base-plate, and its free end bears on the side of the bolt. This spring *h* presses the bolt laterally and tends to keep the bolt-prong *b* disconnected from the catch-plate B, as shown in Fig. 2. A locking-wedge, C, is provided with a knob, C', and has position on the side of the bolt opposite the plate-spring *h*, and is movable back and forward in the broad keeper *g'*. When it is drawn back, as shown in Fig. 2, the bolt is moved sidewise or laterally by the spring *h*, and when the wedge is moved forward, as shown in Fig. 3, the bolt is forced against the pressure of the said spring *h* and the bolt-spring *b* engages with catch-plate B.

The locking-wedge C has on the side remote from the bolt a depression, *i*, which forms a side shoulder, *i'*, adjoining the widest part of the wedge. When the wedge is forward, as in Fig. 3, the depression *i* is in contact with the side of the keeper *g'*, and the said shoulder *i'* is beyond the edge of the keeper and is kept in engagement therewith by the spring *h*, and then acts as a lock to keep the bolt-prong *b* engaged with the catch-plate. The locking-wedge C, while movable, is confined in some suitable way to prevent it from becoming de-

tached. In the present instance a thin bar, *k*, is attached to it and extends loosely through the keeper *g*. When the wedge is moved, the said bar *k* also moves in the keeper and serves to confine the wedge to its proper position.

The gong D here shown is of the well-known bell form; but any other known form may be used. It is unnecessary to describe minutely the mechanism of the gong, as it is well known. The hammer *l* is arranged to strike the gong D and thereby sound the alarm. The spring *m*, which imparts movement to the gong-hammer *l*, is wound up by the thumb-button *n*, and the hammer is then in readiness to strike. A trigger, *o*, is connected with the bolt A, and its end projects in the path of the hammer-stroke, as shown in Figs. 1 and 3. While the trigger *o* is in contact with the hammer *l* the latter cannot strike; but when the bolt A is moved endwise toward the gong (which is permissible by the yielding of the spring *e*) the trigger *o* will become disconnected from the hammer *l*, and the latter will then strike the gong with rapid blows.

The catch-plate B has a hole, *b'*, to receive the end of the bolt. A catch-plate of any shape or having any form of hole may be used. In the present instance it has a hole, *b'*, broad enough at its lower part to permit the bolt A, while its end *b* is in the hole, as in Fig. 3, to move endwise and cause a disconnection of the trigger *o* from the hammer *l* and sound the alarm. The catch-plate also has a cam-edge, *p*, at one side, which reduces the breadth of the hole. A second broad space, *q*, is above the cam-edge *p*, and above this space is another cam-edge *p'*. The side of the bolt-prong is beveled, as at *r*. It will now be seen that if the bolt-prong is engaged with the catch-plate at the lower broad part of the hole *b'* and the lower sash be raised slightly or the upper sash be lowered slightly, the effect will be that the cam-edge *p*, acting on the bolt-prong, will move the bolt A endwise toward the gong, and this movement will disconnect the trigger *o* from the hammer *l*, whereupon the gong will sound. The cam-edge *p* merely causes the gong to sound. It does not disengage the bolt-prong from the catch-plate.

If desired, the sashes may be locked while one of them is partly open, as shown in Fig. 7. This is done by having the bolt-prong *b* engaged with the second broad space, *q*, in the catch-plate.

Instead of one catch-plate, two may be used on the same sash.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. An alarm-bolt having a reciprocating curvilinear movement, a trigger connected with the inner end of said bolt, the outer end of the same being turned at an angle for engagement with a keeper located in a plane at right angles to the position of the bolt, substantially as shown and described.

2. An alarm-bolt having a longitudinal recess therein, a retracting-spring located in said recess, and a strut-spring and locking-wedge engaging with opposite sides of the bolt, substantially as specified.

3. An alarm-bolt having a recessed lower side, a retracting-spring, a strut-spring engaging with one side of the bolt to give it a lateral thrust, and a locking-wedge on the opposite side thereof, substantially as specified.

4. A locking-bolt having its outer end terminating in an angle and its under side recessed and containing a retracting-spring, a trigger on the inner end of and engaging with a gong-hammer, a keeper located in a plane at right angles to the path of the bolt, and a locking-wedge engaging the side of the bolt and locking the same in the keeper, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

ELEAZER HARMON.

Witnesses:
JNO. T. MADDOX,
JOHN E. MORRIS.