(No Model.)

H. D. SAUL.

BURGLAR ALARM.

No. 348,781. Patented Sept. 7, 1886.

Fig. 1.

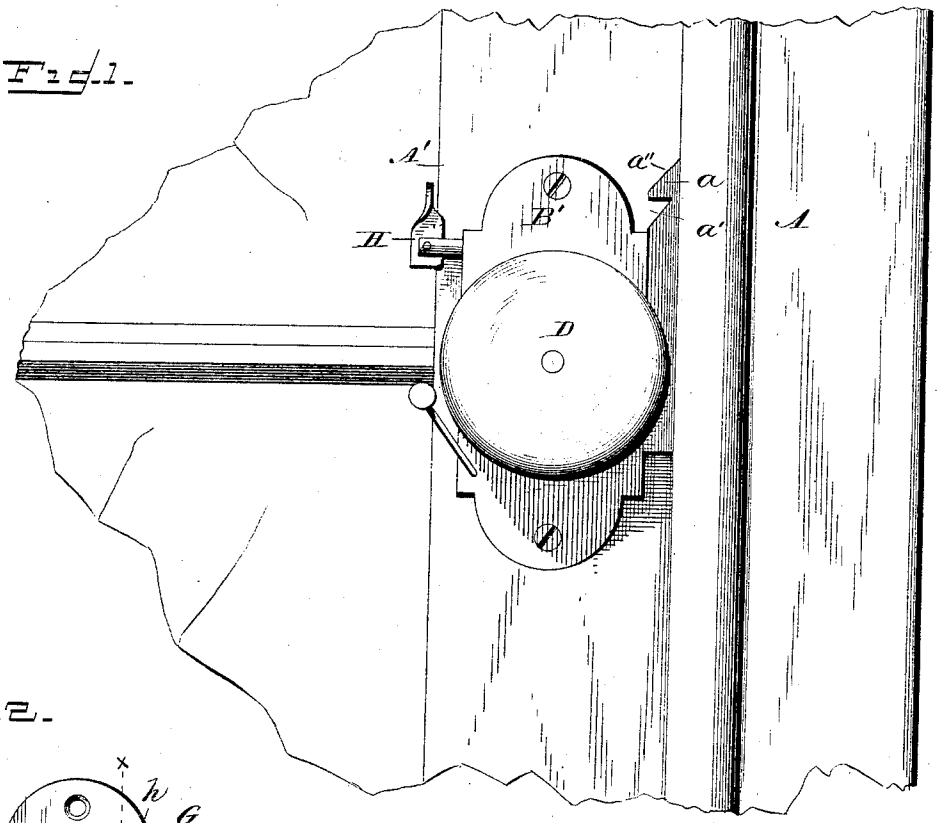


Fig. 2.

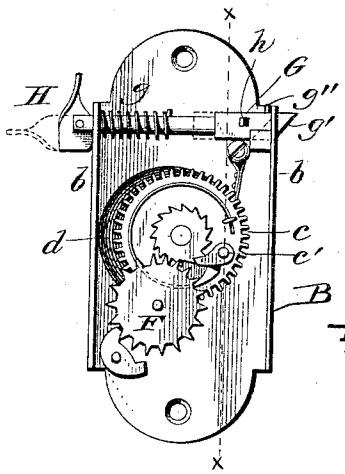


Fig. 3.

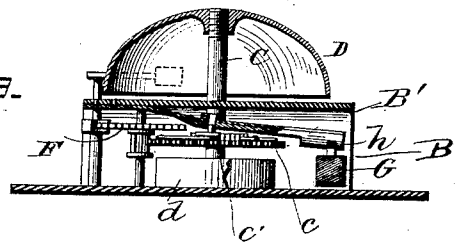
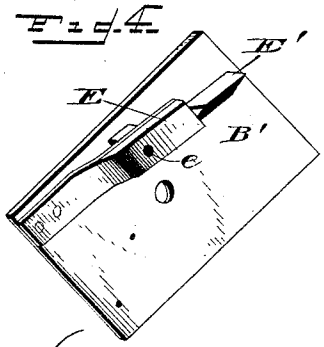


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 348,781, dated September 7, 1886.

Application filed May 20, 1886. Serial No. 202,764. (No model.)

To all whom it may concern:

Be it known that I, HERMAN D. SAUL, a citizen of the United States of America, residing at Thomaston, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Burglar-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in burglar-alarms for windows, the object of my invention being to provide a means whereby an alarm will be given when a window is raised or lowered; and to this end my invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side view of my improved burglar-alarm, showing the same applied to a window. Fig. 2 is an interior view showing the operating mechanism. Fig. 3 is a sectional view taken through the line *x x* of Fig. 2; and Fig. 4 is a detail perspective view.

A refers to the window-frame, within which the sash A′ slides, said window-frame adjacent to the sash being provided with a block, *a*, which is rigidly attached thereto by means of screws. This block *a* is provided with a recess, *a′*, and an upper inclined edge, *a″*, the purposes of which will be hereinafter fully set forth.

B refers to the casing or supporting-frame of the alarm mechanism, which is of ordinary construction, and is provided with upwardly-projecting side pieces, *b b*, which serve as supports for a top plate, B′. This casing supports a central shaft, C, which projects through and above the top plate, and is screw-threaded for the reception of the bell or gong D, said bell or gong also serving as a means for winding the spring *d*, which is attached to the lower portion of the shaft C within the casing. This shaft has loosely mounted thereon a cog-wheel, *c*, to which is attached a spring-pawl, which engages with a ratchet-wheel which is secured rigidly to the shaft. The pin *c′* of the spring-pawl projects above the plane of the ratchet-wheel, so as to engage with a spring-bar, E, which is provided with a perforation, *e*, for the purpose, as will be hereinafter set forth. The cog-wheel *c* engages with a pinion attached under the toothed wheel F, with which the pallet attached to the shaft of the bell-hammer engages, so as to vibrate said shaft. The upper portion of the casing is provided with a spring-bolt, G, which projects through the side pieces, *b*, thereof, suitable perforations in said side pieces serving as guides for said bolt. The outer end of this bolt is bifurcated, and has attached thereto a pivoted locking-plate, H, which is placed vertically when it is desired to place the bolt in a position to set the alarm mechanism, and when said latch is turned to a horizontal position, as shown in dotted lines in Fig. 2, the bolt will be withdrawn within the casing, so as not to strike against the block *a*, thereby placing the alarm mechanism unset. The bolt G has its rear portion encircled by a spiral spring, *g*, which bears against one of the side pieces and a pin attached to the bolt, so as to have a tendency to throw the end *g′* out of the casing, the outward movement of the said bolt being limited by a pin, *g″*, attached to its forward end. The side of this bolt near its front end is provided with a projecting pin, *h*, having beveled sides, said pin being adapted to engage with an angular block, E′, attached to the spring-bar E, so that when the bolt G is moved in either direction the pin *h*, bearing upon the side of the block E′, will elevate the same, so as to raise the spring-bar E.

The spring-bar E, hereinbefore referred to, is attached to the inner side of the covering-plate B′, and extends over the cog-wheel *c*, so that the perforation *e* therein will be in the path of the upwardly-projecting pin *c′*, which carries the spring-pawl. The triangular block E′, which is attached to the bar E, lies in the path of the pin *h*, which projects from the side of the bolt G.

In order to set the device the pivoted locking-plate H is turned to a vertical position, as shown in Fig. 2, thus allowing the opposite end of the spring-bolt to project through the casing, the alarm mechanism being first wound

by turning the bell. When the window is closed, the end of the spring-bolt will bear against the side of the plate *a*, the triangular blocks lying to one side of the pin *h*. When the sash-frame is moved, the sliding bolt will spring into the recess *a'* of the plate *a*, which movement will raise the spring-bar E and cause an alarm to be sounded. The bolt G will prevent the sash being fully raised until the bolt is withdrawn from the recess. As soon as the pin *c'* is released, the alarm mechanism will vibrate the bell-hammer and will cause the alarm to be sounded, which alarm will sound until the wheel C makes a complete rotation. During the day the alarm can be unset by simply turning the locking-plate H.

I claim—

1. The improved burglar-alarm for window-sashes, consisting of a casing which is adapted to be attached to the sliding sash, said casing inclosing a spring and train of gearing, a bell-hammer adapted to be vibrated by the same, one of the wheels of the train having a projecting pin, the spring-bar E, provided with a perforation, *e*, adapted to engage with the projecting pin, and an angular end, E', in combination with a sliding bolt with a projecting pin, *h*, which engages with the end E' of the spring-bar, so as to elevate the same, substantially as shown, and for the purpose set forth.

2. The combination, in a burglar-alarm, of a casing inclosing a spring-operated mechanism for vibrating a bell-hammer, spring-bar for releasing the train of gearing, and a bell, D, attached to the winding-shaft of the spring, substantially as shown, and for the purpose set forth.

3. The combination, in a burglar-alarm, of a spring-actuated train of gearing for vibrating a bell-hammer, a spring-bolt, G, having a projecting pin, *h*, and a locking-plate, H, secured thereto, and a spring-bar, E, having an angular portion, E', adapted to engage with a pin, *h*, of the sliding bolt, so as to elevate the said spring-bar, said spring-bar having a perforation, *e*, which engages with a projecting pin attached to the main wheel of the gearing, substantially as shown, and for the purpose set forth.

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

HERMAN D. SAUL.

Witnesses:

ALBERT P. BRADSTREET,

FRANK W. ETHERIDGE.