M. A. Holland. Burglar Alarm for Windows.

[45.] Fig. 1.

No. 118,940. Patented Sep. 12, 1871.

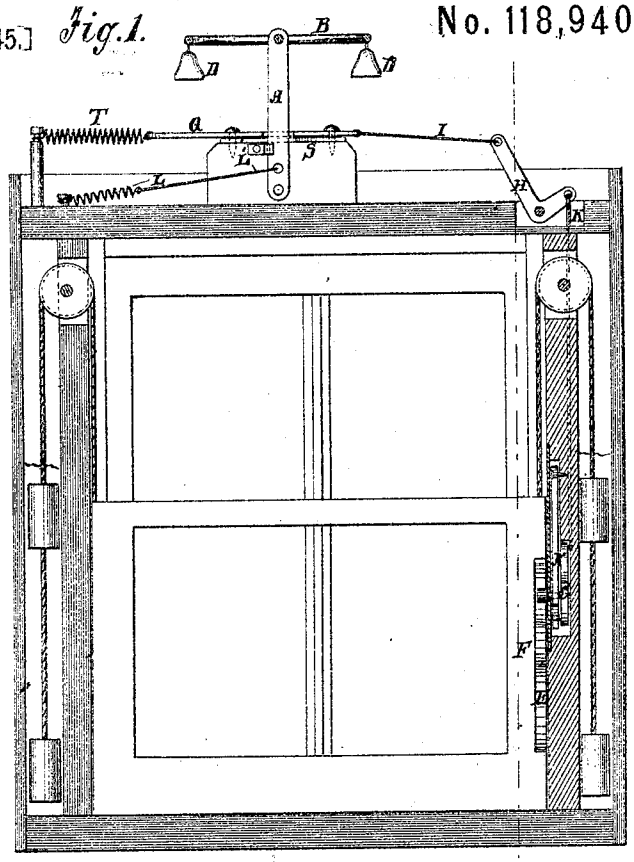


Fig. 2

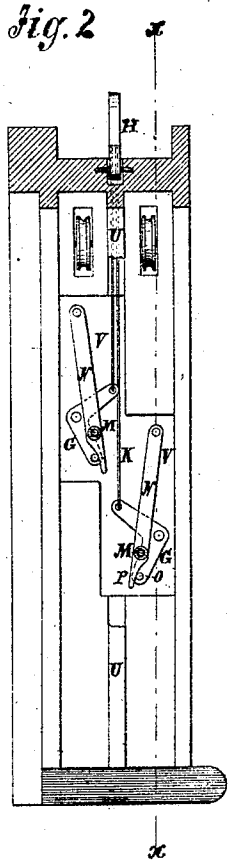


Fig. 3.

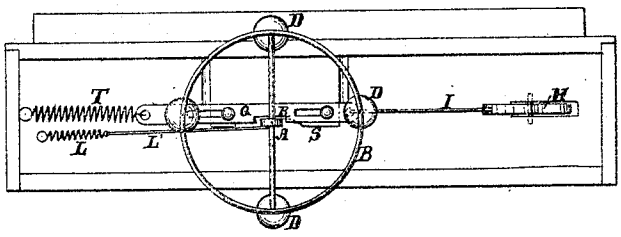
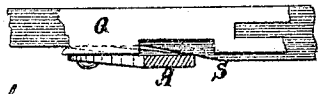


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

MARY A. HOLLAND, OF PASSAIC, NEW JERSEY.

IMPROVEMENT IN BURGLAR-ALARMS FOR WINDOWS.

Specification forming part of Letters Patent No. 118,940, dated September 12, 1871.

To all whom it may concern:

Be it known that I, Miss MARY A. HOLLAND, of Passaic, in the county of Passaic and State of New Jersey, have invented a new and Improved Burglar-Alarm for Windows; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in alarm-attachments to windows for ringing bells when they are raised; and it consists in the hereinafter-described arrangement of apparatus for imparting a vibrating movement to a vertical bell-supporting rack or frame by means of a cam or notched plate on the window-sash and a spring.

Figure 1 is a sectional elevation of a window with the improved apparatus applied, the section being taken on the line *x x* of Fig. 2. Fig. 2 is a sectional elevation on the line *y y* of Fig. 1. Fig. 3 is a top view. Fig. 4 is an elevation of the face of the stile of a sash, showing the application of the notched or cam-plate; and Fig. 5 is an enlarged detail view of some of the parts shown in the top view.

A is a vertical bar, with a ring, B, on its upper end, mounted in a chamber above the window-frame on a pivot, C, for vibrating, to shake or agitate or otherwise sound bells, the said bells being preferably suspended from the ring; but they may be otherwise suspended. This bar is to be set in motion by a cam-plate on the face of the window-stile F, fronting the wall of the window-frame, through the medium of bell-cranks G H and connecting-cords or wires I K, and it is moved in the other direction by a spring, L, which pulls it back against a stop, L′, where it remains until set in motion by the movement of the window. This spring holds the roller M, acted on by the cam-plate in the bottom of one of the notches in said plate, so that the movements of the points thereof over the roller cause the aforesaid movement of the bell-rack against the action of the spring. Instead of placing the roller M on the end of one arm of the bell-crank G; I prefer to place it near the end of a long bar, N, pivoted to the window-frame at one end, and acting at the other on a pin, O, in said bell-crank, for communicating the motion to the latter through the medium of said arm, which, having a curved face, P, where it bears against said pin, is better adapted for the sliding of the pin on it, caused by the vibration of the bell-crank around its axis, than the cam-bar would be; but, of course, the roller M may be placed on the pin of the bell-crank and be acted on in like manner by the cam-bar. Both the upper and lower sashes are to be caused to sound the alarm, and they are both provided with a set of apparatus for working it, and both sets of apparatus are connected to the bell-crank H at the top of the window-frame. The bell-cord I may be connected to the bar A directly for moving it; but, in order to employ a tripping device for allowing the bell-rack to fly back suddenly against the stop L′, under the action of the spring L, it is connected to the sliding bar Q, having a notch, R, in one edge, which works against the side of bar A, so as to engage it and draw it forward when the slide is moved by the bell-crank H. Before the end of this movement the bar A comes against a fixed incline, S, under said plate Q, which disengages or trips it from the notch R and allows spring L to draw it back quickly without being obstructed by the bell-cranks, which, together with the sliding-bar Q, are brought back by the strong spring T. The cranks G of the two sashes are so arranged that the cords or wires connecting them with the bell-crank H extend along the bottom of the groove formed in the window-frame for the middle stop-piece U, between the sash, so that no labor is needed to provide space for them, or at least not more than for slightly deepening the groove, and admit of readily applying the apparatus to windows already built; or, instead of deepening the groove, the stop may be dressed off slightly to provide the space.

By reason of this arrangement of the bell-cranks G they vibrate in a plane parallel with the plane of the cross-section of Fig. 2, so that shallow recesses only are required for them. The apparatus is therefore well adapted for applying to any window with but very little labor, for the recesses V for the bell-cranks G and bars N may be readily cut in the wall of the window-frame, while the cam-plates may be applied to the sash by simply reducing one of the stiles and screwing them on.

The bell-rack, tripping apparatus, and the bell-crank H may be readily put in the space above

the window-frame on the removal of the top-facing thereof. Of course the bells may be arranged elsewhere, the wires or cords being conducted to them.

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

1. The combination of the cam-plates E upon the sash, and the bell-cranks G, either connected by the bars N or not, for the purpose of sounding an alarm, substantially in the manner shown and described.

2. The arrangement of the bell-rack-supporting arm A, notched slide Q, incline S, stop L′, springs L and T, and the bell-crank connection I, all substantially as specified.

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