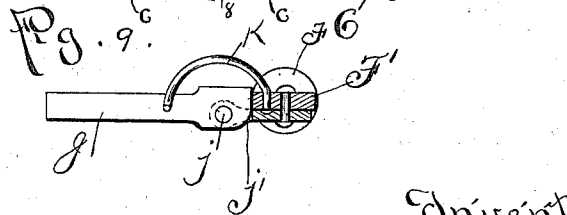
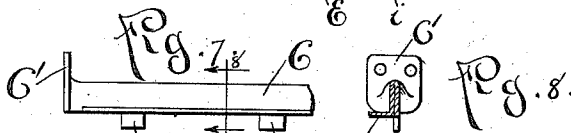
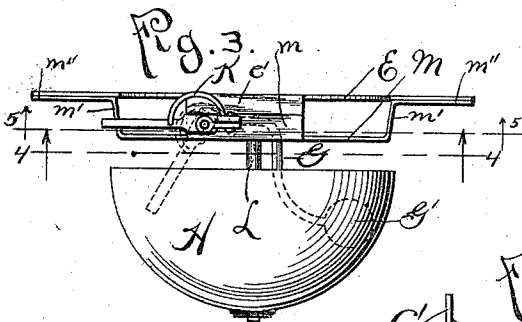
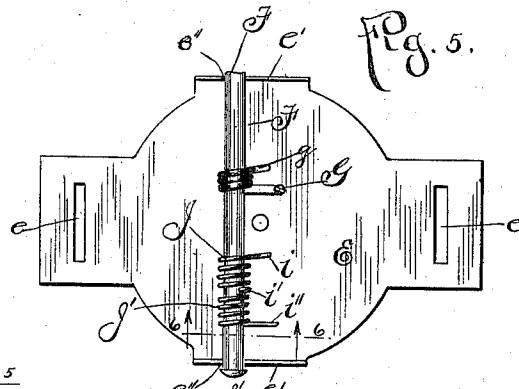
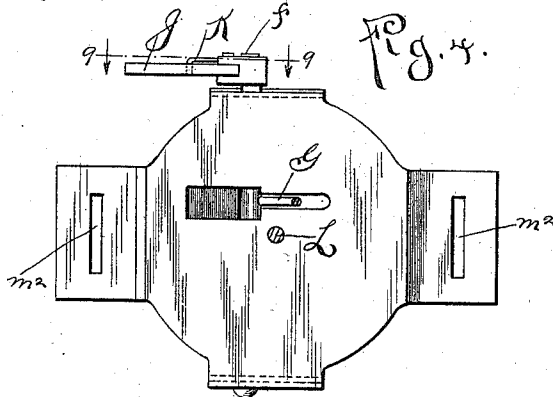
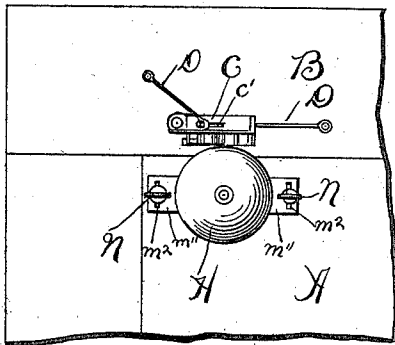
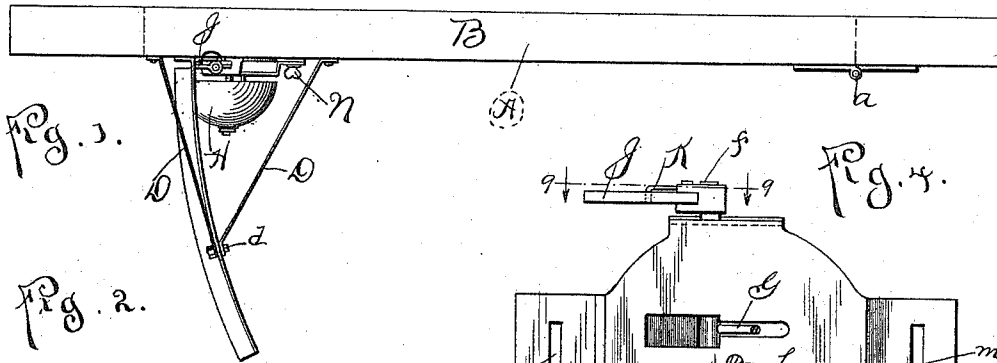


(No Model.)

A. S. WESTER.
BURGLAR ALARM.

No. 577,903.

Patented Mar. 2, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

AUGUST S. WESTER, OF CHICAGO, ILLINOIS.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 577,903, dated March 2, 1897.

Application filed May 19, 1896. Serial No. 592,171. (No model.)

To all whom it may concern:

Be it known that I, AUGUST S. WESTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification.

The subject of the present invention is a burglar-alarm which is adapted to be applied to either a door or a window, so that when the door or window is opened an alarm will be sounded.

The invention consists in the features of novelty that are particularly pointed out in the claims hereinafter, and in order that it may be fully understood I will describe it with reference to the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 is a plan view of a door-frame, the position of the door being indicated by dotted lines, and of the improved burglar-alarm applied thereto. Fig. 2 is a front elevation of the improved burglar-alarm and of portions of a door and its frame to which the alarm is applied. Fig. 3 is a plan view of the improved burglar-alarm on a somewhat larger scale. Figs. 4 and 5 are sections thereof on the lines 4 4 and 5 5, respectively, Fig. 3, looking in the direction of the arrows. Fig. 6 is a sectional elevation of some of the parts, on a still larger scale, on the line 6 6, Fig. 5. Fig. 7 is an elevation of a fragment of the toothed rack. Fig. 8 is a transverse section thereof on the line 8 8, Fig. 7, looking in the direction of the arrows. Fig. 9 is a sectional elevation, the plane of the section being indicated by the line 9 9, Fig. 4, showing some of the parts in detail and on a larger scale.

A represents the door, and B the door-frame. To the latter is secured a rack C, which is preferably made of sheet metal bent to the cross-sectional shape shown in Fig. 8, its teeth c being formed on the margin of one of the laps or folds of the metal. One end of this rack is provided with a flange C', which is screwed or otherwise secured to the door-frame, its outer end being sustained by braces D, each of which is secured to the door-frame at one end and at the other end is secured to the rack by means of a bolt d, which passes through a slot c' in the rack. This slot en-

ables the slight adjustment of the parts that may be necessary in order to bring the rack to the proper position with relation to the trigger of the alarm. Where the device is used in connection with a door, the rack is slightly curved, so that it is concentric with the axis of the hinge shown at a. Where the device is used on a window, the rack is without any curvature, it being the intention in each instance to have the rack lie in the path traveled by the trigger of the alarm, whether this path be curved or straight.

E represents a base-plate having parallel slots e at opposite sides and having parallel flanges e', which project upward and are provided with notches e'' for receiving a shaft F, to which is secured the hammer G G' for striking the bell H. Preferably the arm G of the hammer is made of a piece of wire, which is passed through a transverse hole formed through the shaft F and is wrapped one or more times around the shaft, so as to prevent endwise movement of the arm, the end of the wire being continued toward the base-plate, as shown at g, for the purpose of forming a stop for limiting the movement of the shaft in the direction which tends to carry the hammer into contact with the bell. I desire to have it understood, however, that the invention is not limited to a stop of this particular construction, and any device which will hold the hammer normally out of contact with the bell and which will permit it to strike the bell when under the influence of the actuating-spring I is within the scope of my invention.

In the drawings I have shown a coiled spring, one end i of which is secured to the base-plate E and the other end i' of which is secured to the shaft, the spring being so disposed that it has a constant tendency to move the hammer into contact with the bell. I have also shown a coiled spring I', having one of its ends i'' secured to the base-plate E and its other end secured to the shaft, this spring I' being so disposed that it exerts its force in opposition to the force of the spring I. For convenience both of these springs are formed of a single piece of wire, which near its middle passes through a perforation of the shaft, and upon opposite sides of this middle portion it is coiled around the shaft

in opposite directions, its two extremities i and i' being secured to the base-plate, as already described. It is the intention that these two springs shall be so disposed that normally they will hold the hammer about in the position indicated by dotted lines in Fig. 3, *i. e.*, a short distance away from the bell. When the shaft is partially rotated in the direction which moves the hammer farther away from the bell, the spring I will be wound tighter and the spring I' will be partially unwound, both being thereby put under tension, so that when the shaft is released the two springs, acting in conjunction, will throw the hammer into contact with the bell. With springs thus arranged the stop g , above described, may be dispensed with.

To the projecting end f of the shaft is pivotally secured by any suitable means a trigger J. Preferably the pivot j of this trigger is carried by a head F' , suitably secured to the shaft, and the heel j' of the trigger is so shaped that it forms a stop which comes in contact with the head F' and prevents the movement of the trigger in one direction beyond the position shown in Fig. 9, while permitting it to be moved in the other direction, as shown by dotted lines in Fig. 3. A spring K, secured at one end to the head F' and at the other end to the trigger, holds the latter normally in the position shown in Fig. 9, while permitting it to yield and assume the position shown in Fig. 3 whenever this becomes necessary to the operation of the device.

The bell H is carried by a post L, which is secured to a cap-plate M, having downturned flanges m , that fit over the flanges e' of the base-plate and are notched for receiving the shaft F. The cap-plate is also provided with downturned portions m' , which meet the base-plate, and with tongues m'' , having slots m^2 , which register with the slots e of the base-plate. Thumb-screws N pass through the slots m^2 and e and screw into the door or other part to which the alarm is to be secured and hold the two plates E and M in proper positions with relation to each other and at the same time secure the alarm to the door so that its position thereon may be adjusted. The alarm is secured to the door or other part in such position that the trigger J will have contact with the teeth of the rack C, so that when the trigger is brought into engagement with said teeth in succession the pressure of each tooth upon the trigger will partially rotate the shaft F in the direction which causes the hammer to move away from the bell, and when the trigger passes the tooth the spring or springs will throw the hammer into contact with the bell in the manner already de-

scribed, this action being repeated by each tooth as the teeth are successively engaged and passed by the trigger. It is in order to permit the return movement of the alarm that the trigger J is pivoted. When so pivoted, as it comes into contact with the teeth in succession it will yield, as indicated by dotted lines in Fig. 3, and pass them, the spring K immediately restoring it to normal position. When it is desired to throw the alarm out of operative position, it is simply necessary to loosen the thumb-screws N and shift the position of the alarm so that the trigger is no longer in the path of the teeth of the rack.

I have shown my invention as being embodied in an alarm applied to a door, but it is manifest that without any alteration whatever in its construction it may be applied to a window, in which case the bell is secured to the top of the lower sash and the rack is secured to one of the stiles of the window.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In an alarm, the combination of a base-plate having flanges projecting upward and provided with notches, a cap-plate having flanges projecting downward and provided with notches corresponding with the notches aforesaid, a shaft journaled in said notches, a hammer carried by the shaft, a spring for actuating the shaft, and a trigger carried by the shaft, substantially as set forth.

2. In an alarm, the combination of a bell, a hammer, a shaft carrying the hammer, a spring operatively connected with the shaft, means for holding the hammer out of contact with the bell, a pivoted trigger carried by the shaft and a rack adapted to engage the trigger, substantially as set forth.

3. In an alarm, the combination of a bell, a hammer, a shaft carrying the hammer, a spring operatively connected with the shaft, a stop for holding the hammer normally out of contact with the bell, a pivoted trigger carried by the shaft, and a rack adapted to engage the trigger, substantially as set forth.

4. In an alarm, the combination of a bell, a hammer, a shaft carrying the hammer, a spring operatively connected with the shaft, a pivoted trigger carried by the shaft, a stop for limiting the movement of the trigger in one direction, a spring for holding the trigger in normal position and permitting it to yield in the other direction, and a rack adapted to engage the trigger, substantially as set forth.

AUGUST S. WESTER.

Witnesses:

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