(No Model.)

G. H. HODGKINS.

BURGLAR ALARM.

No. 429,762. Patented June 10, 1890.

Fig. 1.

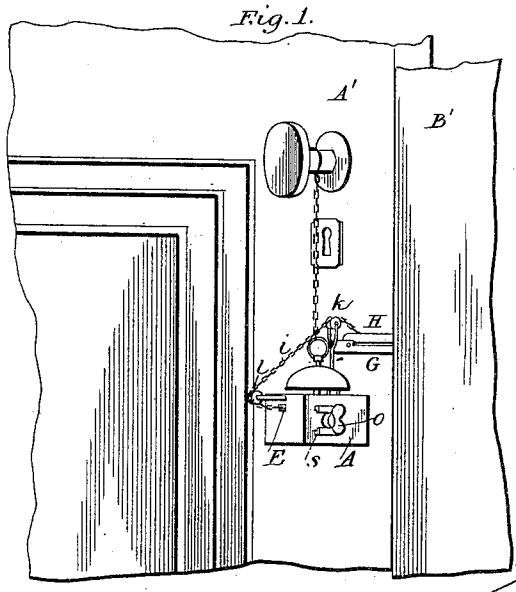
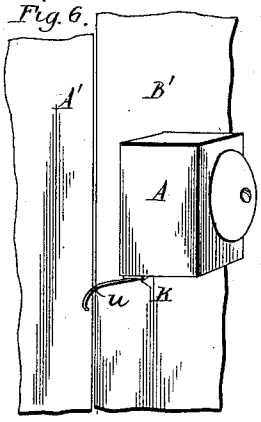


Fig. 6.



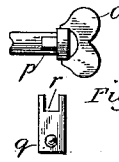


Fig. 3.

Fig. 4.

Fig. 2.

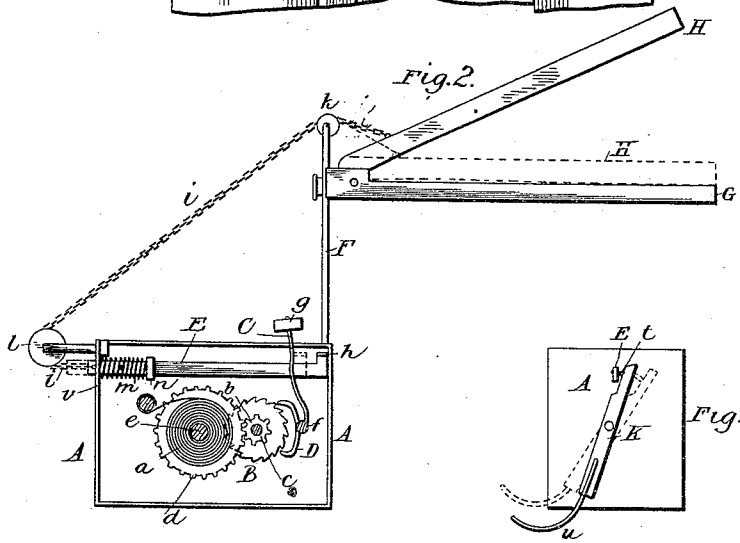


Fig. 5.

Fig. 7.

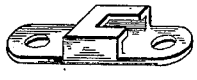


Fig. 8.

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 429,762, dated June 10, 1890.

Application filed August 5, 1889. Serial No. 319,814. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HERVEY HODGKINS, of Peabody, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Burglar-Alarms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 of reference marked thereon, which form a part of this specification.

My invention relates to that class of burglar-alarms which are adapted to be sounded by the release of mechanism caused by the opening of a door or window.

My improvements consist in having in connection with the ordinary clock-work-alarm mechanism a sliding spring-bar for bearing against the arm of the striking-hammer when pulled out against the action of its spring, and thus lock the hammer-arm, and also when said bar is released and it has been slid back by its spring out of engagement with the hammer-arm the latter will be unlocked and the hammer will be free to strike; and my improvements consist, also, in certain details of construction, as more particularly hereinafter described.

In the accompanying drawings, Figure 1 illustrates a perspective view of my improved alarm as applied to a door. Fig. 2 illustrates a side elevation enlarged with one side of the casing broken away. Figs. 3 and 4 illustrate details. Fig. 5 is a perspective view of a modification as applied to a door or window. Fig. 6 is an end view of the same, and Figs. 7 and 8 are details of the modification shown in Figs. 5 and 6.

Similar letters represent similar parts in all of the figures.

A is the box or casing of an ordinary clock-work alarm, and B is the escapement wheel or ratchet, which is connected with the main-spring *a* in the ordinary manner by intermediate gearing—as, for example, that shown in Fig. 2, the pinion *b* on the ratchet-shaft *c* engaging with the gear *d* on the spring-shaft *e*.

C is the hammer-arm fixed to the rock-shaft *f*, and having the hammer *g* at its upper end, and D is the oscillating escapement-dog secured to the shaft *f* and adapted to engage with the escapement-wheel B.

E is a bar suspended in suitable guideways longitudinally in the casing A, one end of which has a transverse right-angled arm *h* extending back of the hammer-arm C, while the other end extends through and beyond the casing.

Extending back of the casing A, from an upright F, secured to the same, are two wedge-shaped arms G H, the upper one H being pivoted near its forward end to the arm G, which is firmly attached to the upright F. A chain or cord *i* connects the upper arm H with the forward end of the bar E, passing over and guided by suitable pulleys *k l*. When the arm H is drawn down against the arm G, as shown in Fig. 1 and in dotted lines in Fig. 2, it will, through the chain or cord *i*, pull out the bar E, and the arm *h* will be drawn against the hammer-arm C, so that the dog D will be in fixed engagement with the escapement-wheel B. A coil tension-spring *m* encircles the front end of the bar E, and is retained in position by the front wall of the casing and a collar *n* on said bar E. This spring tends constantly to force the bar E back and its arm *h* out of contact with the hammer-arm C, so as to allow the ratchet-wheel B to cause the dog D, and thereby the hammer-arm C, to oscillate. This action of the spring *m* also, by means of the chain *i*, raises the arm H.

When the alarm is to be applied to a door, it may be suspended from the door-knob by a chain. The arm H is drawn down against the arm G, and the two arms G and H are then forced into the crack between the door A′ and its frame B′. (See Fig. 1.) The binding-contact of the door-frame and door against the arms will retain them in position with the arm H against the arm G, and the arm *h* of the bar E against the hammer-arm C, locking the latter. The mainspring *a* is wound up by the handle O on the shaft *e*, and said spring will be locked or prevented from unwinding by the aforesaid locking mechanism, which is retained in lock by the binding-contact of the door and the door-frame, as aforesaid. Then when the door is opened the arm H will be released and the spring *m* will force the bar E and its arm *h* out of contact with the hammer-arm C, thus releasing the dog D from the

ratchet B, unlocking the same and allowing the mainspring *a* to unwind, when the rotation of the ratchet B will cause the oscillation of the dog D and the hammer-arm C, so as to strike the bell.

The outer portion *p* of the shank of the handle *o*, by which the mainspring *a* is wound, may have two plane parallel sides, and a flat piece of metal *q*, having a mortise *r* in one of its ends and a handle-knob near its other end, may serve as a key to lock the shaft *e* and the mainspring *a* by the mortise *r*, fitting over the plane sides of the shank *p*. A dovetailed guide *s* is fixed to the casing A, in which slides the piece *q*.

In place of the two arms G H (shown in Fig. 5) and the support F, the pulleys *k l* and chain *i*, a lever or trigger K, having a lateral pin *t* near its upper end and a curved arm U extending from its lower end, may be pivoted to the casing A below the bar E. The pin *t* is adapted to enter a hole *v* in the arm E when the latter has been drawn out so as to lock the hammer-arm C. Then when the pin *t* is withdrawn from the hole *v* the hammer-arm C will be released and the alarm will strike. The alarm is adapted to be attached to the frame of the door or window, so that the opening of the door or window will cause the latter to bear against the curved part *u* of the trigger K and release the pin *t* from the hole *v* in the bar E.

Fig. 1 shows the alarm as applied to a door-frame, A′ being the door and B′ the frame.

A very convenient way of attaching the casing to the door or window frame is by means of a dovetailed mortise-socket, Fig. 7, to be secured to the frame, and a projecting lug or tenon, Fig. 8, secured to the casing A.

What I claim as my invention is—

1. In a burglar-alarm, the combination of the oscillating hammer-arm and means for oscillating the same, two wedge-shaped arms for entering the crack between a door or window and its frame, or between the two sashes of a window, one of said arms being pivotally connected and the other arm being rigid, a spring-lock for bearing against the hammer-arm to prevent its oscillation, and a cord or chain connecting said lock with the pivotal wedge-shaped arm for holding said lock against the hammer or for releasing the same, all as set forth.

2. In a burglar-alarm, the combination of the oscillating hammer-arm and means for oscillating the same, the spring-bar E, having the lateral arm *h* for bearing against the hammer-arm, a chain or cord *i*, attached to the outer end of the bar E, the wedge-shaped arms G H, the pivotal arm H being attached to the chain or cord *i*, and guides for said chain or cord between the bar E and the arm H, all as set forth.

3. In combination with the shaft *e* of the mainspring and the handle *o* for attachment to said shaft and for turning the same, and having the shank *p* with the parallel plane faces, the mortised piece *q*, with its mortise *r*, for fitting over the plane faces of the shank to lock the same, the shank *e* and the mainspring *a*, all as set forth.

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Witnesses:
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