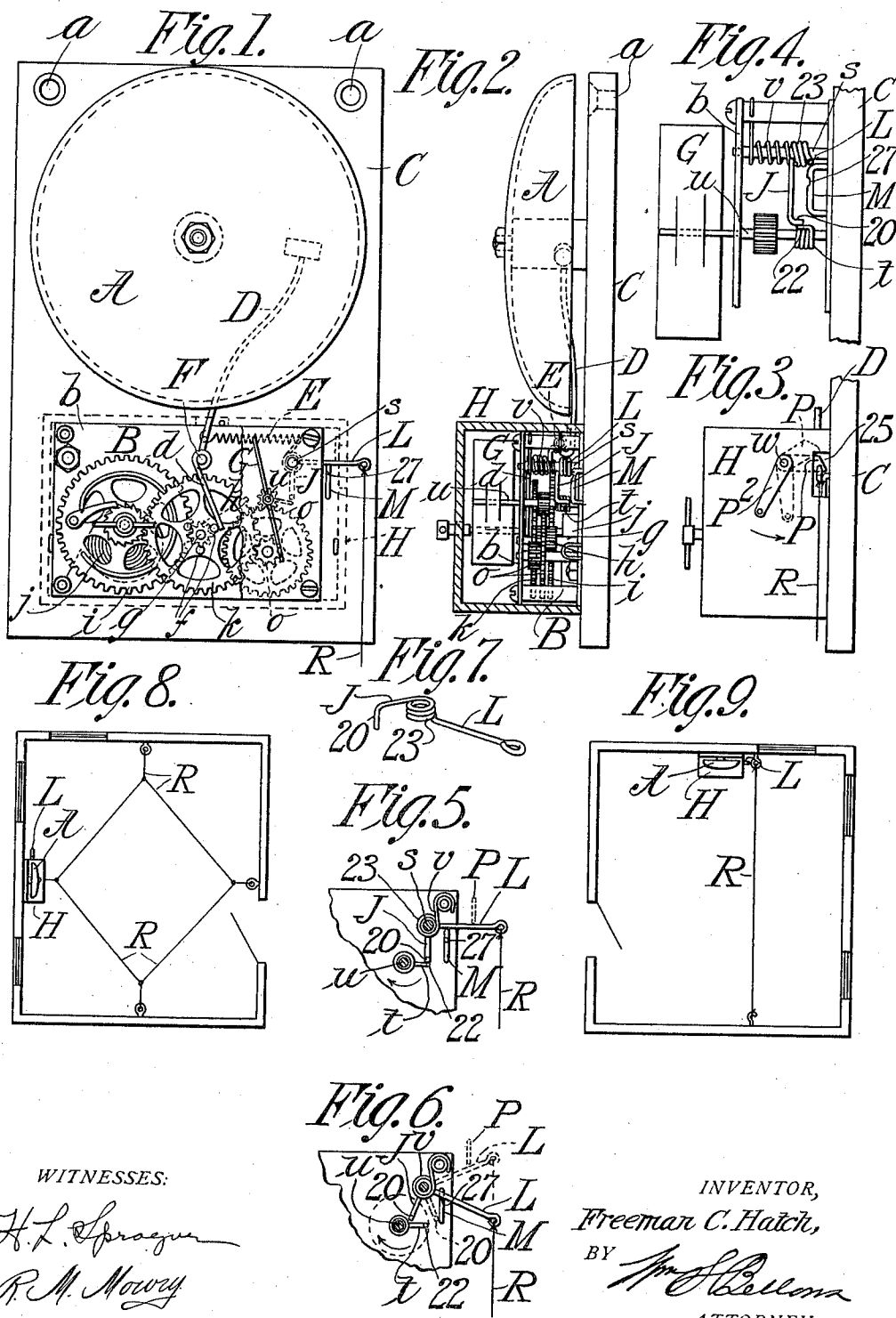


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BURGLAR ALARM.  
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1,039,126.

Patented Sept. 24, 1912.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## BURGLAR-ALARM.

1,039,126.

Specification of Letters Patent. Patented Sept. 24, 1912.

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*To all whom it may concern:*

Be it known that I, FREEMAN C. HATCH, a citizen of the United States of America, and resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a full, clear, and exact description.

This invention which relates to burglar alarms to be installed in rural post offices, stores, and other rooms, comprises an alarm gong, a striker therefor, a motor for actuating the striker, and a movable member adapted to have a position for preventing the striker operating movements of the motor, and a cord having a connection or engagement with the said movable member and extending therefrom across a room in a more or less taut condition so that a draft will be exerted thereon by a burglar or any person unwarrantably in and moving about the room,—the releasing movement so imparted to the stop member releasing the clockworks for its actuation of the striker and sounding of the gong for the giving of the alarm.

The invention, furthermore, comprises means whereby the aforementioned movable member for preventing the operation of the motor and the sounding of the alarm will automatically assume a releasing position to result in the sounding of the alarm in case the cord which has connection with such movable member is cut or severed.

The invention is described in conjunction with the accompanying drawings and is set forth in the claims.

In the drawings:—Figure 1 is a substantially front elevation of the alarm apparatus,—a short portion only of the controlling cord, however, being shown. Fig. 2 is substantially an elevation as seen at the right hand side of the apparatus; Fig. 3 is an outside elevation of a portion of the alarm device as seen at the right of Fig. 1; Fig. 4 is a partial side elevation on a somewhat larger scale showing parts as they appear with the casing, represented in Fig. 3, removed; Figs. 5 and 6 are views to show the different positions of the movable arresting or stop member and to indicate the results or conditions dependent thereon; Fig. 7 is a perspective view of the stop member and the cord controlled arm thereof; Figs. 8 and 9 are plan views or diagrams showing the location of the alarm apparatus in a

room indicating two of the many manners of arranging the controlling cord.

In the drawings, A represents a bell or gong and B a clockworks or equivalent species of motor which with the gong is mounted on a back board or support C which has screw holes *a a* whereby it may be suspended on nails or hooks or fastened by screws at any suitable or convenient place on the wall of a room. The striker D is arranged for coaction with the gong so that when withdrawn therefrom with a swinging motion and then released it may be forcibly returned against and to sound the gong under the reaction of the spring E which is connected therewith. The said striker is carried as a more or less radial or lever like extension of the inner or rear end of a sleeve like part which surrounds a post or arbor F mounted in the frame *b* of the clockworks B, and this sleeve like part has, toward its front end a lever arm *d* which is impinged against by a plurality of cam studs or wipers *f* which are affixed on an arbor *g*, the pinion *h* which is thereon being in mesh with the gear wheel *i* which is impelled by the clock-spring *j*.

On the same arbor *g* which carries the cam *f* is a spur gear wheel *k* which by speed multiplying gearing *o* is operatively connected with the revoluble bladed flier G which is commonly found in clockworks, especially alarm clocks and serves as a governor to regulate and render steady the running down action thereof; and, of course, it will be understood that any element having a position to obstruct the revoluble motion of the flier will prevent the movements of, and hold at rest, the clockworks; and J represents a lever like member which is capable of a partial rotary movement from the pivot stud or post *s* so as to have a position as represented in Fig. 5 in the path of revolution of the arm *t* which is projected radially from the arbor *u* on which the bladed flier is carried; or the lever like stop member J may have a position as represented in the full lines in Fig. 6, to be free and clear of the arm *t* which revolves as one with the flier,—it being pointed out that the arm J has a right angularly turned end 20, as seen in Fig. 4, for engagement with a somewhat similar right angularly turned end 22 of the arm *t*. And the stop member J may, furthermore, have another position as represented by the dotted lines in Fig. 6 so that

the way will be clear for the free and unobstructed revolution of the angular ended arm *t*.

The spring *v* is applied for a torsional effect on the sleeve-like or hub portion 23, of which the arm J is a lever-like extension so that if the parts were not affected or controlled by means to be hereinafter pointed out the parts would have the relative positions represented by the dotted lines in Fig. 6. The sleeve like part or hub 23 from which the stop member J extends also has an arm L which extends at about a right angle to the line of extension of the said member J and projects through an aperture 25 therefor in the end of the box like casing H which incloses the clockworks and devices comprised within the present invention coöperative therewith. The device J, L comprising the stop member and the uniting sleeve like part or hub portion 23 is, as represented in Fig. 7, composed of a single length of comparatively heavy wire, the intermediate portion of which is spirally wound with a plurality of convolutions constituting the hub like portion, while the extremities of the wire are extended at about right angles from each other; and it is to be noted that the arm L while sufficiently rigid to act as a lever member for the device is, on the other hand, slightly resilient so as to yield in a direction across the plane of its swinging movement when forced against the rounded or more or less cam-like corner of the staple part M.

On and journaled through the end of the casing is a short shaft or stud *w* having at its inner end an arm or button P and at its outer end an operating finger or lever P<sup>2</sup>. The button or part P may have a position as represented in Figs. 3 and 5 so that the arm L will be restrained from swinging upwardly and so that the stop member J will be in position to intercept and prevent revolutions of the arm *t* which is to be considered as an appurtenance of the motor or clockworks; or the button P may, when the finger or lever is swung to the dotted line position, Fig. 3, corresponding to which is the position indicated in Fig. 6, leave the stop device free and clear to assume under the torsional action of the spring *v* the position represented in Fig. 6; so here the stop device will have no effect to restrain the free running of the motor and the sounding of the alarm.

The clockworks being wound, the stop device will be set in its position represented in Figs. 1 and 5 so that the clockworks is held against operating and the alarm will be silenced; and a cord R is attached to the eye provided end of the arm L and is arranged by being suitably guided through screw eyes or in any appropriate manner, across a room at any suitable distance above

the floor, the end of this cord being connected at some point in the room farther from the location of the alarm device; and the cord being taut or exerting a slight degree of strain by its weight maintains the arm L in relation to the part M represented in Fig. 4. Now if a person, a burglar for instance, enters the room he will in his movements come in contact with the cord, or web of cords if there be one arranged in the manner shown in Fig. 8, and the excessive draft or strain against the cord will cause a down drawing of the arm L and a swinging of the stop member J out of its engagement with the arm *t* appurtenant to the clockworks, and the latter will be freed and the striker will be repeatedly swung back and forth to sound the gong. In the down drawing of the arm L which, as before stated, is of comparatively heavy wire and somewhat resilient, it will be slightly sprung to the leftward, as Fig. 4 is viewed, to ride over the back of the part M and it will snap by its reaction into the notch or depression 27 so that the stop device L, J, will be restrained in its releasing position, leaving,—even if the straining force on the cord is terminated,—the clockworks free to operate until it is entirely run down, giving a long and loud sounding of the alarm to result in scaring the intruder and to warn the occupants of the premises.

In some cases the button will be set as represented by the full lines in Fig. 3, while if elected it may be set as represented by the dotted lines in Fig. 3 and to have the position indicated in Fig. 6; and under the latter conditions if the cord should be cut or broken, the spring *v* would be effective on the stop device to throw it to the dotted line position, Fig. 6, which also is a releasing one; and thus, again, the clockworks would operate and the alarm be sounded with the same certainty as heretofore described under conditions established by the draft on the cord and the placing of the stop device in the position represented by the full lines in Fig. 6.

While throughout this specification, and in the claims, the portion of the device indicated by the letter *u* is referred to as a "cord," it is, of course, to be understood that it is employed in the sense of any suitable flexible connection; and to include manifest equivalents such, for instance, as a light chain, or a thread.

The alarm apparatus may be concealed on the wall behind a curtain, map, or picture, and during the day-time, or whenever the same is to be in disuse, the cord may be wrapped or folded up and located in any suitable place in the room, usually, however, without being disconnected from its operative engagement, direct or otherwise, with the arm L.

Various changes and departures may be made from the precise arrangements shown and described without departing from the spirit of my invention or sacrificing any of the advantages thereof.

I claim:—

1. In an apparatus of the character described, an alarm or signaling apparatus, actuating means therefor, a device for restraining the actuating means from operating, and adapted to be moved to a releasing position in one direction, and also movable in the reverse direction to a releasing position, a spring for throwing it to its reversed releasing position, a cord connected with the restraining device, adapted to be extended across a room, and by draft thereon to move the restraining device in the first mentioned direction to its releasing position, and a shiftable button adapted to have positions respectively to permit and prevent the aforementioned reversed releasing movements of the restraining device.

2. In an apparatus of the character described, an alarm or signaling device, actuating means therefor, a rotatively mounted device for restraining the actuating means comprising an arm to intercept the path of the movable part of the actuating means, and a resilient arm, a part on which the resilient arm may have a riding engagement with spring pressure provided with a detent portion, a cord adapted to be connected with said resilient arm so that when

under draft it will draw such arm into its riding engagement with said part to place its restraining arm in a releasing position, and a spring operative on the restraining device for moving it to a releasing position in a direction the reverse from that imparted to it by the cord.

3. In an apparatus of the character described, an alarm or signaling device, actuating means therefor, a rotatively mounted device for restraining the actuating means, comprising an arm to intercept the path of the movable part of the actuating means, and a resilient arm, a part on which the resilient arm may have a riding engagement with spring pressure provided with a detent portion, a cord adapted to be connected with said resilient arm so that when under draft it will draw such arm into its riding engagement with said part to place its restraining arm in a releasing position, a spring operative on the restraining device for moving it to a releasing position in a direction the reverse from that imparted to it by the cord, and a button or stop for preventing the movement of the restraining device under the reaction of said spring to its release position.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

FREEMAN C. HATCH.

Witnesses:

WM. S. BELLOWS,  
G. R. DRISCOLL.