W. H. REIFF.

AUTOMATIC ALARM.

APPLICATION FILED FEB. 10, 1909.

941,950. Patented Nov. 30, 1909.

Fig. 1.

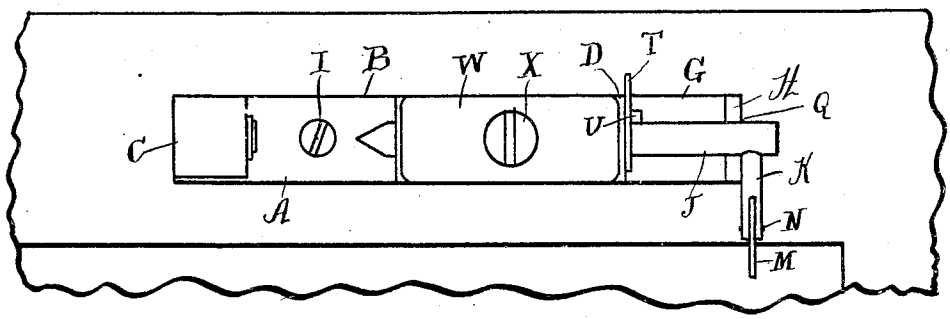


Fig. 8.

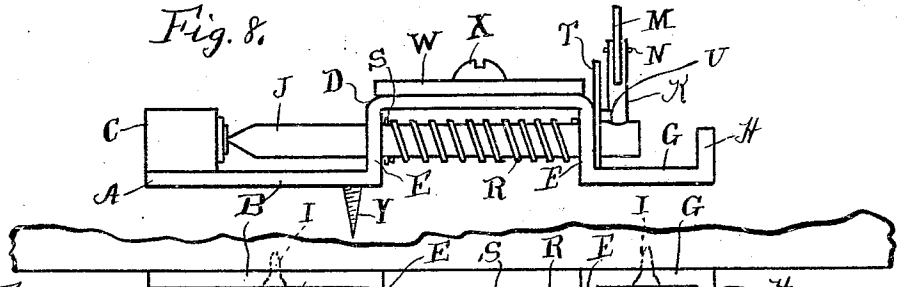


Fig. 2.

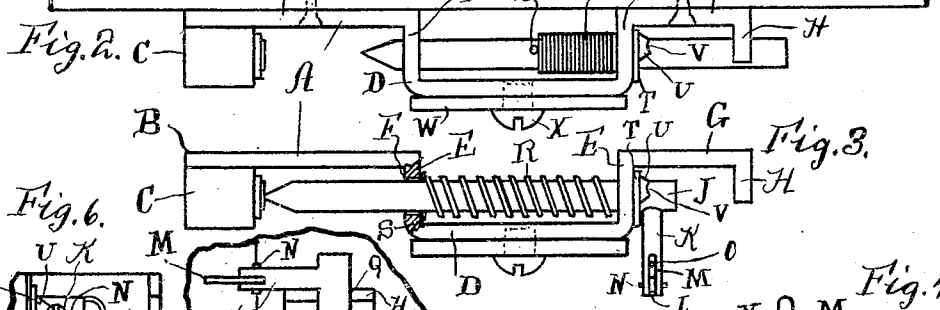


Fig. 3.

Fig. 6.

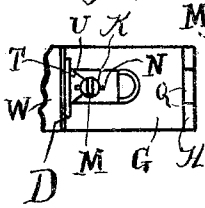


Fig. 5.

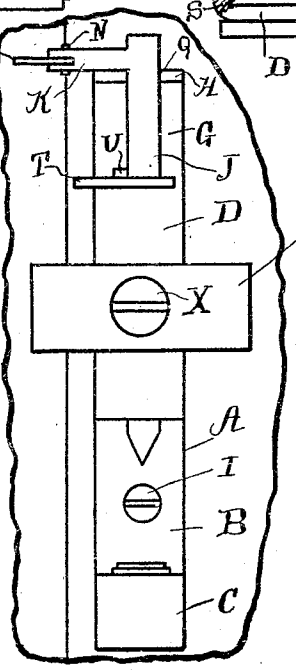


Fig. 7.

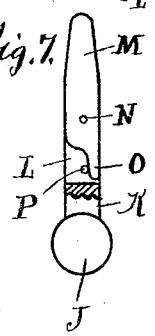
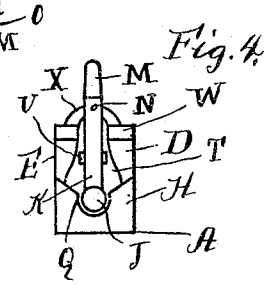


Fig. 4.



WITNESSES

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AUTOMATIC ALARM.

941,950. Specification of Letters Patent. Patented Nov. 30, 1909.

Application filed February 10, 1909. Serial No. 477,113.

To all whom it may concern:

Be it known that I, WILLIAM H. REIFF, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Automatic Alarms, of which the following is a specification.

My invention relates to a new and useful improvement in automatic alarms, and has for its object to provide an exceedingly simple and effective device of this character which will be operated when a door is opened, and when operated will fire a cartridge that will frighten the person opening the door or window and alarm others in its vicinity.

Another object of my invention is to provide a device of this character which may be placed on the door jamb within the room and allow the person within the room to pass out, but should any one try to enter the room the alarm will be fired.

A still further object of the invention is to provide an automatic alarm which may be used by traveling people without their having to carry screws and screw driver, and one which may remain loaded after being taken from the door jamb but which cannot be fired until set.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a front elevation of my improved automatic alarm showing it attached to the door jamb above the door. Fig. 2, a side elevation thereof. Fig. 3, a similar view detached, showing it in the position it assumes when firing a cartridge. Fig. 4, an end view thereof. Fig. 5, a front elevation showing it attached to the jamb at the side of the door. Fig. 6, a similar view of the upper end showing the arm of the firing pin resting on the protector. Fig. 7, a view partly in elevation and partly in section of the firing pin and arm showing the trigger which allows a person to leave the room, but cannot enter without firing the alarm, and Fig. 8, a side elevation of a slightly modified form of my device.

In carrying out my invention as here embodied, A represents a frame, which is preferably made of sheet steel so bent as to produce a base B, provided with a cartridge holder C, a housing D, the sides E of which are at right angles to the base B and which are provided with openings F, and an auxiliary base G, the end of which is bent at right angles thereto to produce the lug H. Passing through the base B and the auxiliary base G are a number of screws I for attaching the alarm to the jamb of a door.

Loosely mounted in the sides E of the housing D is a reciprocative firing pin J, having secured thereto an arm K, provided with a slot L, in which is pivoted the trigger M, by means of the pin N. With the lower end of the trigger M is formed the finger O, which is adapted to engage with the pin P passing through the arm K in proximity to the lower extremity of the slot L. When the firing pin J is drawn outward it registers with the approximately V-shaped recess Q formed in the lug H, and when said firing pin has been drawn outward a certain distance it may be turned until the arm K bears against the lug H.

Encircling the firing pin J within the housing D is a spiral spring R, which bears against one end of the housing and a pin S extending through the firing pin J.

In order that the cartridge may not be fired while the device is not in use, I provide a safety plate T which is loosely mounted upon the firing pin between the housing and the lug H, said plate being provided with a projection U, in which is formed the curved notch V.

W denotes a turn button pivoted to the housing D by means of the screw X, which acts as a temporary lock or holder for the door after the alarm has been fired.

In my modified form of alarm as shown in Fig. 8, I permanently attach to the base B the screw Y, so that by placing the alarm on the jamb at the point where it is desired to attach it and using the frame as a handle it may be revolved, thus threading the screw Y into the door jamb thereby placing the alarm in position for use. This form of the device is especially adapted to the use of

traveling persons who do not wish to carry a screw driver and screws, and when the person is leaving the room the alarm may be readily removed.

In practice the alarm may be attached to the door jamb either above or at the side of the door as shown in Figs. 1 and 5. When placed above the door as shown in Fig. 1 it is fastened to the jamb a sufficient distance above the door to prevent said door from coming in contact with the arm K, the firing pin J is then drawn back against the action of the spiral spring R until the arm K is outside of the lug H, at which time the firing pin J is turned until the arm K extends downward in back of said lug, a cartridge Z is placed in the cartridge holder C and the projection U formed with the safety plate T is drawn out of alinement with the arm K. Now if a person is on the inside and the door is closed, he may lift the trigger M which will allow him to open said door, and when he passes out and draws the door closed, the trigger M will ride upon the top of the door, allowing it to close, and when closed the trigger M will at once drop back in position, so that the finger O rests against the pin P, then when the door is opened said door will engage with the trigger M, and as the finger O formed therewith is resting against the pin P it cannot move without moving the arm K to which it is pivoted, and when said arm is moved a sufficient distance it will disengage from the lug H and the spring R will at once force the firing pin J toward the cartridge Z, which will be fired, thus notifying any one within hearing distance that some one has entered a room.

When the alarm is placed on the jamb to one side of the door it is unnecessary to use the trigger M, as the alarm may be placed close enough to the door so that the arm K will reach over the edge of said door, so that when the door is opened it will move the arm around until it disengages from the lug H, at which time it will be fired, as hereinbefore described. When placed as here described the person using it must remain in the room, and when the person is to remain in the room the turn button W may be turned at right angles to the housing D, so that after the alarm has been fired the door will come in contact with the turn button W, thus temporarily holding the door and allowing the person in the room to prepare for the intruder.

Of course I do not wish to be limited to the exact details of construction here shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

1. In an automatic alarm, a frame so bent as to form a base, a housing, the sides of which have openings formed therein, an auxiliary base and a lug having a virtually V-shaped notch formed therein, a cartridge holder mounted on the base, a firing pin passing through the openings in the sides of the housing, a pin passing through the firing pin within the housing, a spiral spring entwined about the firing pin within the housing, one end of which rests against one side of the housing, the other end against the pin passing through said firing pin, an arm secured to the firing pin having a slot formed therein, said arm adapted to engage with the lug for holding the firing pin in a retracted position, a pin spanning said slot, a trigger pivoted upon said pin and having a finger on its inner end, another pin passing through the arm in proximity to the lower extremity of the slot with which the finger is adapted to engage, and means for securing the alarm to a door jamb.

2. In a device of the character described, the combination with a frame so bent as to form a base, a housing an auxiliary base and a lug, a cartridge holder, a spring actuated firing pin, of an arm secured to the firing pin having a slot formed therein, a trigger movably mounted within said slot, and means for limiting the pivotal movement of said trigger in one direction.

3. In a device of the character described, the combination with a frame so bent as to form a base, a housing, an auxiliary base and a lug, of a firing pin slidably mounted in the ends of said housing, a laterally extending arm mounted on said firing pin adapted to be engaged with said lug, said arm having a slot formed therein, a trigger having a finger formed at its inner end mounted within said slot, a pin passing through the arm in proximity to the lower extremity of the slot with which the finger is adapted to engage, and a spring contained in the housing and tending normally to maintain said plunger in close relation to the cartridge chamber.

4. In a device of the character described, the combination with a frame so bent as to form a base, a housing, an auxiliary base and a lug, a cartridge holder mounted on said base, of a spring actuated firing pin, an arm on said firing pin adapted to engage the lug, a safety plate loosely mounted upon said firing pin between the housing and the arm, and an extension having a curved notch with which the arm is adapted to register for preventing the contact of the firing pin with the cartridge.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM H. REIFF.

Witnesses:

WILLIAM H. ROSE,

EDWD. E. NICHOLAS.