Feb. 11, 1936. H. CHEVIGNY, NÉE ROY 2,030,049

BURGLAR ALARM

Filed March 19, 1934

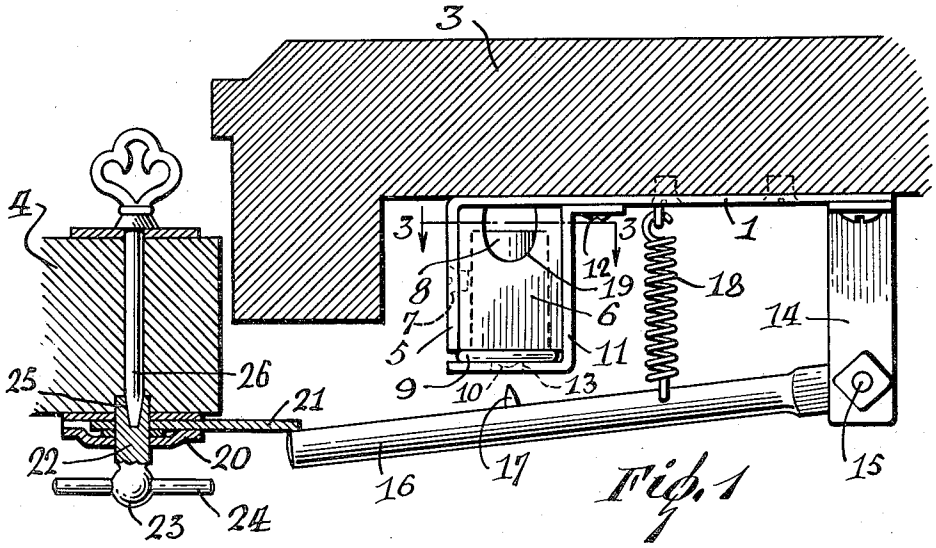


Fig. 1

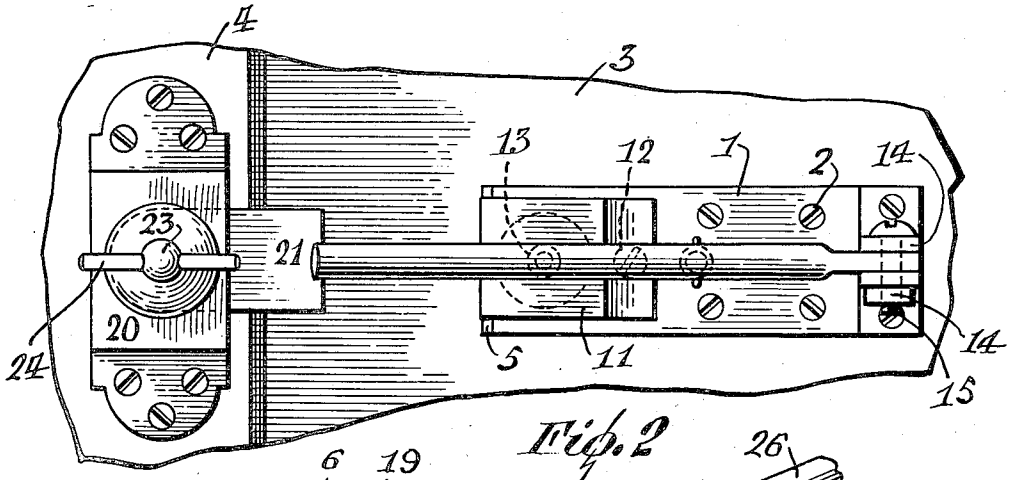


Fig. 2

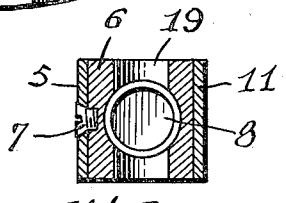


Fig. 3

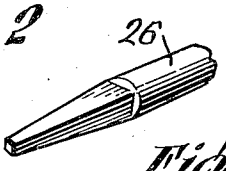


Fig. 4

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BURGLAR ALARM

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Application March 19, 1934, Serial No. 716,239½
In Canada March 22, 1933

5 Claims. (Cl. 116—37)

The present invention pertains to a novel burglar alarm designed for use in connection with doors and windows. The principal object of the invention is to provide an alarm device which operates by firing a cartridge when the door or window is opened by an unauthorized person. The report of the cartridge instantly apprises the occupants or persons outside the dwelling that an unauthorized entry has been made.

In keeping with this object, the invention embodies a suitable carrier for a cartridge on the wall adjacent to the closure. A striking lever is pivoted to the same wall and carries a prong or striking point adapted to strike the cap of the cartridge. A spring normally draws the lever toward the cartridge.

The movable closure member carries a key-operated trigger adapted to swing the lever away from the cartridge and then release it when the closure member is opened. On release of the lever, the spring draws the striking point forcibly against the cartridge cap and thereby causes an explosion. The trigger is adapted to be swung by the key out of its operative position before the closure is opened by a person familiar with the device.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing in which:

Figure 1 is a horizontal section of a door structure showing the device of the invention applied thereto;

Figure 2 is a corresponding side elevation;

Figure 3 is a section on the line 3—3 of Figure 1; and

Figure 4 is a detail perspective view of the end of the key.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figures 1 and 2 is shown a wall 3 in which is hingedly mounted a door 4 in the usual manner. To the wall 3 is secured a plate 1 by means of screws 2, as shown more clearly in Figure 2. The end of the plate nearer the door 4 is bent outwardly at a right angle, as indicated by the numeral 5, and the angle thus formed receives a cartridge box 6 held by a screw 7 passed through the end 5. The box 6 has a cylindrical interior formation to receive a cartridge 8, as may be seen in Figures 1 and 3. The flanged seat 9 of the cartridge bears against the outer end of the box 6, and the cap 10 of the cartridge projects outwardly from the seat.

In order to support and locate the structure accurately, an S-shaped piece of metal 11 has one end secured by a screw 12 to the plate 1 and its other end extending across the seat 9 of the cartridge. The latter end is perforated at 13 to receive cap 10 for a purpose which will presently be described.

The end of the plate 1 farther away from the door 4 carries two L-shaped brackets 14 which in turn support a pivot stud 15. On this member is pivotally mounted a lever 16 carrying a prong or striking point 17 adapted to enter the aperture 13. The lever 16 is adapted to be drawn toward the cartridge by means of a coil spring 18 extending from the lever to a suitable anchorage on the plate 1, as shown in Figure 1. When the prong 17 is caused to strike forcibly against the cap 13 by means which will presently be described, the cartridge is fired, and the gas and smoke are exhausted through ports 19 in the box 6, as shown in Figures 1 and 3.

The free or swinging edge of the door 4 carries a lock plate 20 in which is mounted an outwardly extending trigger 21. A stud 22 is rotatably mounted in the plate 20 and extends into the door proper. The stud also passes through the trigger 21 and is fixed thereto in order that both these parts may turn together. The exposed end of the stud 22 has a head 23 through which is passed a handle 24. These parts, as well as the cartridge supporting and firing structure, are mounted respectively on the inner edge of the door 4 and wall 3.

The end of the stud 22 is concealed within the door and is provided with a square socket 25 adapted to receive the end of the correspondingly shaped key 26 inserted from the outer surface of the door.

In the closing of the door by a person familiar with the equipment, the lever 16 is brought toward the cartridge with insufficient force to cause an explosion by contact of the prong 17 with the cap 10. When the door is closed, the operator turns the key 26 to bring the trigger 21 between the lever 16 and the door jamb, the latter being set back relatively to the cartridge support to provide a space for receiving the trigger, as may be seen by reference to Figure 1. If the door is to be opened from the inside, the trigger is withdrawn from the lever by turning the handle 24. If the door is to be opened by an authorized person familiar with the device, he first turns the key 26 to withdraw the trigger from the lever 4. When, however, the door is opened by an unauthorized person, who ordinarily would not withdraw the trigger, the trigger 21 moving with the

door pushes the lever 16 outwardly, as illustrated in Figure 1, and finally slips off the end of the lever, releasing the latter so that the extended spring 18 draws the striking point 17 forcibly against the cap 10. The resulting explosion warns the occupants, or even persons outside the structure, that something is amiss.

It is to be undertood that the device may be used in like manner in conjunction with a swinging window and also with a sliding window by a proper re-arrangement of the trigger for releasing the striking lever 16.

Although a specific embodiment of the invention has been illustrated and described, it will be undertood that various alterations in the details of the construction may be made without departing from the scope of the invention, as indicated by the appended claims.

What is claimed is:—

1. A burglar alarm comprising, in combination with a wall and closure member movable therein, a cartridge support carried by said wall, a striking lever pivoted to said wall and adapted to fire the cartridge in said support, a tension spring joining said lever to said wall, a trigger carried by said closure member and adapted to swing said lever and then release it on opening of said closure member, and manual means for moving said trigger out the contact with said lever.

2. A burglar alarm comprising, in combination with a wall and closure member movable therein, a cartridge support carried by a plate fixed to said wall, a striking lever pivoted relatively to said plate and adapted to fire the cartridge in said support, a tension spring joining said lever to said plate, a trigger carried by said closure member and adapted to swing said lever and then release it on opening of said closure member, and manual means for moving said trigger out of contact with said lever.

3. A burglar alarm comprising, in combination with a wall and closure member movable therein, a cartridge support carried by a plate fixed to said wall, a striking lever pivoted relatively to said plate and adapted to fire the cartridge in said support, a tension spring urging said lever towards said cartridge, a trigger carried by said closure member and adapted to swing said lever and then release it on the opening of said closure member, a stud rotatably mounted in said closure member and fixed to said trigger, and means for turning said stud to move said trigger out of contact with said lever.

4. A burglar alarm comprising, in combination with a wall and closure member movable therein, a cartridge support carried by a plate fixed to said wall, a striking lever pivoted relatively to said plate and adapted to fire the cartridge in said support, a tension spring urging said lever towards said cartridge, a trigger carried by said closure member and adapted to swing said lever and then release it on opening of said closure member, a stud rotatably mounted in closure member and fixed to said trigger, said stud having a concealed end with a key socket formed therein, and a key insertable from the outer side of said closure member into said socket.

5. A burglar alarm comprising, in combination with a wall and closure member movable therein, a cartridge support carried by a plate fixed to said wall, a second plate attached to said wall and having a portion extending across the end of said support, said portion having an aperture arranged to register with the cap of a cartridge held by said support, a striking lever pivoted relatively to the first plate and having a striking point adapted to enter said aperture, a tension spring urging said lever towards said cartridge, and a trigger carried by said closure member and adapted to swing said lever and then release it on opening of said closure member.

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