S. CHRITCHFIELD.

BURGLAR ALARM.

APPLICATION FILED JULY 1, 1909.

956,288. **Patented Apr. 26, 1910.**

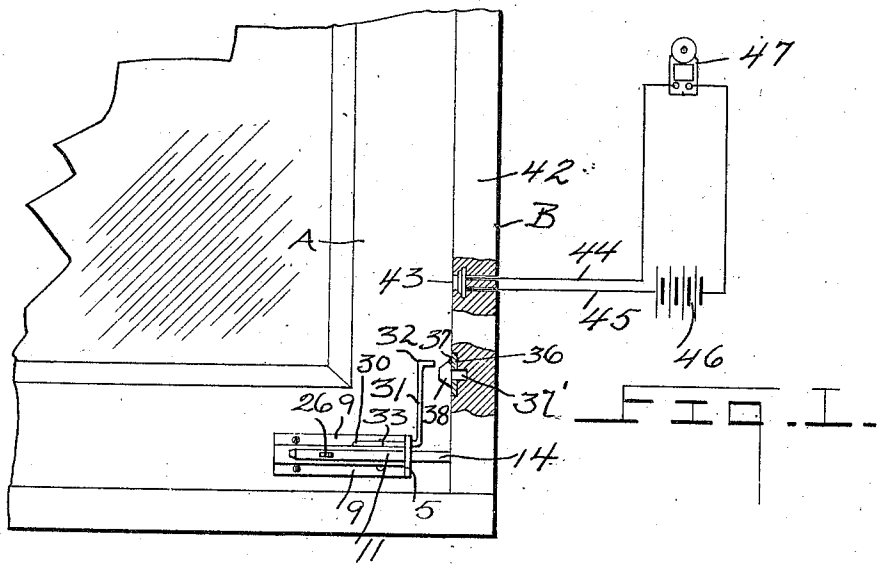

FIG. 2.

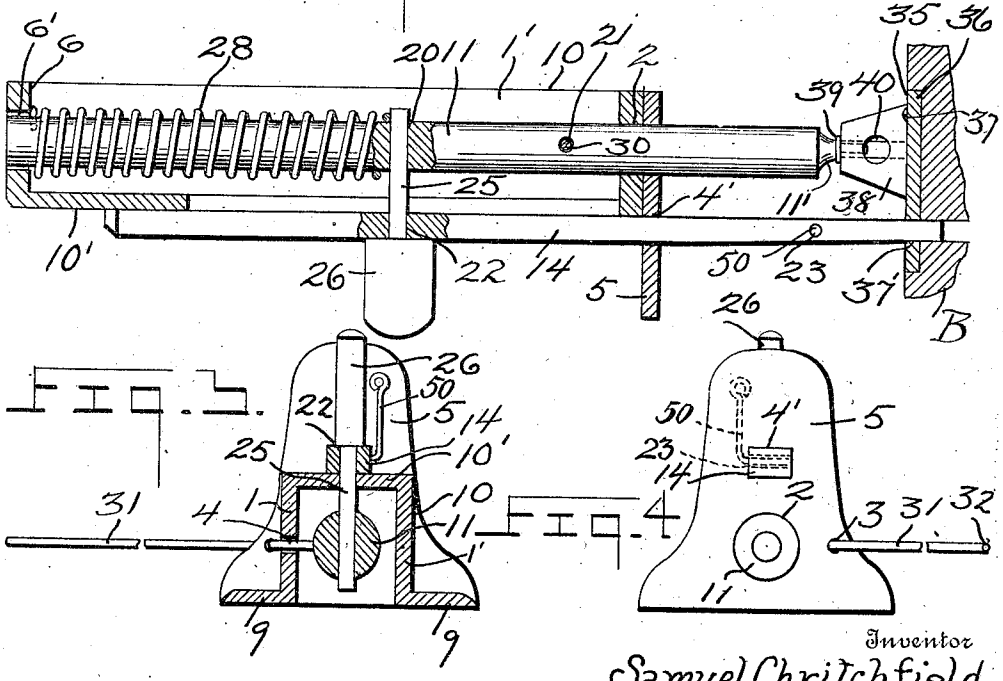

FIG. 3.

FIG. 4.

Witnesses

E. E. Johansen.

M. L. Lowe.

Inventor

Samuel Chritchfield

By Woodward & Chandlee

Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL CHRITCHFIELD, OF NATIONAL MILITARY HOME, OHIO.

BURGLAR-ALARM.

956,288. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed July 1, 1909. Serial No. 505,360.

To all whom it may concern:

Be it known that I, SAMUEL CHRITCHFIELD, a citizen of the United States, residing at National Military Home, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to certain new and useful improvements in burglar alarms.

The object of my invention is to provide an alarm mechanism, arranged to be secured to a door, window, drawer or the like to operate an audible alarm at the point where the alarm mechanism is located as well as being arranged to operate a second alarm at a point distant from the location of the primary alarm mechanism.

A further object of my invention is to provide a device arranged to be secured to a moving member, such as a door, window, drawer or the like, so arranged that when said member is moved, a cap will be discharged, while at the same time the device will close a normally open electric circuit to operate a signal to give a second alarm at a point remote from the location of the first alarm.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claims, it being understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like characters of reference indicate similar parts in the several views, Figure 1 shows a fragmentary portion of a window frame provided with my alarm, Fig. 2 shows a detached horizontal sectional view through the alarm mechanism, Fig. 3 is a transverse sectional view through the operating mechanism, Fig. 4 is a front view of the housing disclosing the location of the several plunging members.

In carrying out the object of my invention, I employ a suitable housing 10, comprising two similar sides, a top and two end plates. This housing is provided with the two securing flanges 9, 9 having suitable screw openings, the end plate 5 being projected upward beyond the top plate 10′ of the housing. The top plate 10′ has a longitudinal slot, while one of the sides of the housing as the one marked 1 is also provided with a slot as is shown at 4, the remaining side 1′ being imperforate. The rear plate 6 is provided with a central opening 6′, which registers with a similar opening 2 within the front plate 5 as shown. Slidably held within the openings 6′ and 2, is the bolt 11, this bolt having its forward end reduced as shown at 11′ while approximately mid-length the bolt is provided with the opening 20 square in outline and the pin opening 21. As shown the top 10′ of the housing is flat and held in alinement with the top 10′ is a square opening 4′ within the front plate 5.

Slidably held to the top 10′ is a plunger 14 rectangular in cross section which is arranged to project through the opening 4′ as shown. This plunger 14 is provided with two openings marked 22 and 23 respectively, the opening 22 being square in cross section and held within this opening 22 and passing through the slot within the plate top 10′ and extending through the bolt opening 20, is the square stem 25 of the operating handle 26, this stem 25 extending through the bolt as shown.

Surrounding the bolt 11 and held between the stem 25 and the rear plate 6, is the protractile spring 28.

The plunger 14 is guided within the rectangular opening 4′ as disclosed. In referring to the drawings it will be noted that the plunger 14 extends a considerable distance beyond the end 11′ of the bolt.

Held within the pin opening 21 within the bolt, is the securing end 30 of an approximately L-shaped resilient member 31 forming a contact arm, the upper end 32 of which is held approximately in alinement with the end of the plunger 14. The portion 33 of this contact maker extends through the opening 3 within the front plate 5 of the housing and is slidably guided therein.

The housing as described is secured to a suitable part of the window sash A as shown in Fig. 1 for instance, and fixed to the window frame B at a point above the location of the housing, is the rub plate 35 having the securing flange 36 through which the screws 37 are carried in securing this rub plate. This plate is preferably countersunk within the side stile of the window frame B. As shown in the drawings, this rub plate is provided with the square opening 37′ of a

size to receive the projecting end of the plunger 14, and held adjacent to this opening 37′ is the lug 38 having a central bore within which is held a cartridge 39, a vent opening 40 leading from the cartridge-receiving opening to permit the escape of the gases when the cartridge 39 is exploded. Located above the rub plate at a suitable point, is an ordinary push button 43 carried within the frame 42, from which push button extend the two electric conductors 44 and 45 which are led to a suitable electric bell 47.

The circuit formed by means of the conductors 44 and 45 is provided with a suitable battery 46.

The bell 47 is located at any suitable point where it is desired that the alarm should be given in case the window or other member to which the alarm operating mechanism is secured is actuated.

When it is desired to set the alarm mechanism, the stop pin 50 which is normally held within the opening 23 within the plunger 14 is removed. This pin is located and held to the rear of the upper portion of the front plate 5, so as to hold the mechanism in an inoperative position. On the removal of this pin 50, the plunger as well as the connected bolt is forced forward so that the end of the plunger 14 contacts with the side stile of the window frame. Now the instrumentalities are so arranged that the opening 37′ within the rub plate is in the path of the forward end of the plunger 14, so that when the window is raised the plunger end finally plunges through this opening 37 being propelled by means of the spring 28, in which operation the end of the bolt contacts with the cap or blank cartridge 39 within the lug 38 and explodes the same. At the same time that the forward end of the bolt came in contact with the cartridge 39 the upper end 32 of the yielding contact arm is forcibly carried against the push button 43 and held in contact therewith to close the normally open circuit and thus ring the electric bell 47. The bell 47 will be rung as long as the arm is in contact with the push botton. The window then is held in a locked position by means of the plunger 14.

From the foregoing it will be noted that I provide the window or other member with an auxiliary lock or bolt-mechanism arranged to actuate an explosive as well as an electric alarm.

Having thus described my said invention, what I claim as new and desire to secure by United States Letters Patent is:

1. The combination with a window sash and frame, of a housing carried by said sash, a bolt slidably held within said housing, a spring to normally force said bolt in one direction, a plunger slidably held to said housing, means to connect said plunger to said bolt, a resilient member carried by said bolt, a normally open electric circuit arranged to be closed by said resilient member in one of its positions, and a cartridge holder secured to said frame in the path of said bolt, an opening being located in said frame, adjacent to said cartridge holder in the path of said plunger.

2. The combination with a movable housing, of a spring bolt held within said housing and projecting beyond one end thereof, a plunger slidably held to said housing, an operating stem connecting said plunger to said bolt, a resilient member carried by said bolt, a terminal of a normally open electric circuit in the path of said resilient member, a rub plate provided with a plunger opening in the path of said plunger and a cartridge holding lug placed proximal to said plunger opening and in the path of said bolt, as and for the purpose set forth.

3. In a device of the character described, the combination of the following instrumentalities, to wit: a movable housing, a bolt slidably held within said housing and projecting beyond one end thereof, a protractile spring surrounding said bolt to normally force said bolt in one direction, said housing having a top and a side slot, a plunger slidably held to the side of said housing, an operating pin carried by said plunger and passing through said side slot, and secured to said bolt and serving as a stop to said spring, a resilient member carried by said bolt and extending through said top slot, a rub plate having a plunger opening in the path of the plunger, a cartridge receiving lug in the path of said bolt, and a contact maker of a normally open electric circuit in the path of said resilient member, all arranged substantially as and for the purpose set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

his
SAMUEL × CHRITCHFIELD.
mark

Witnesses of mark:
PETER SARAZIN,
CHRISTOPHER C. CLOUD.