

(No Model.)

L. B. BURRILL.
 DETONATING BURGLAR ALARM.

No. 530,012.

Patented Nov. 27, 1894.

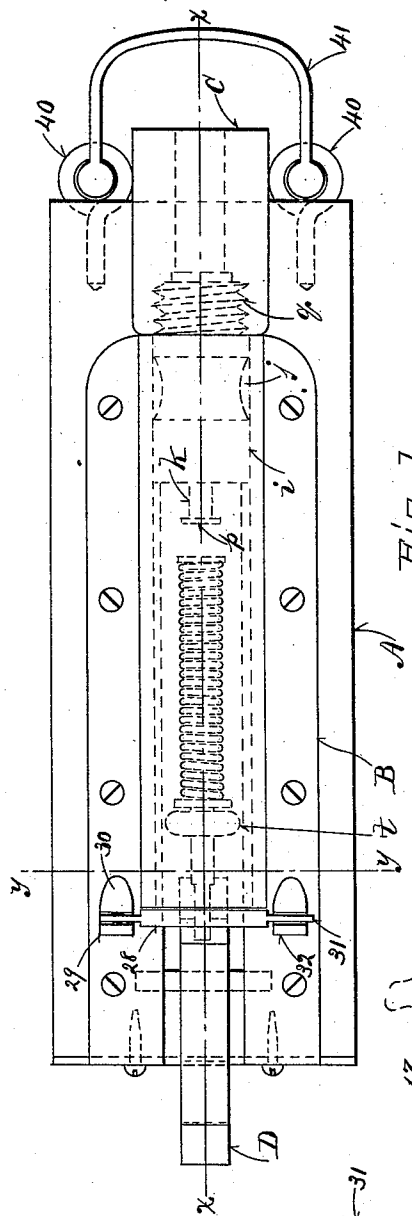


Fig. 1.

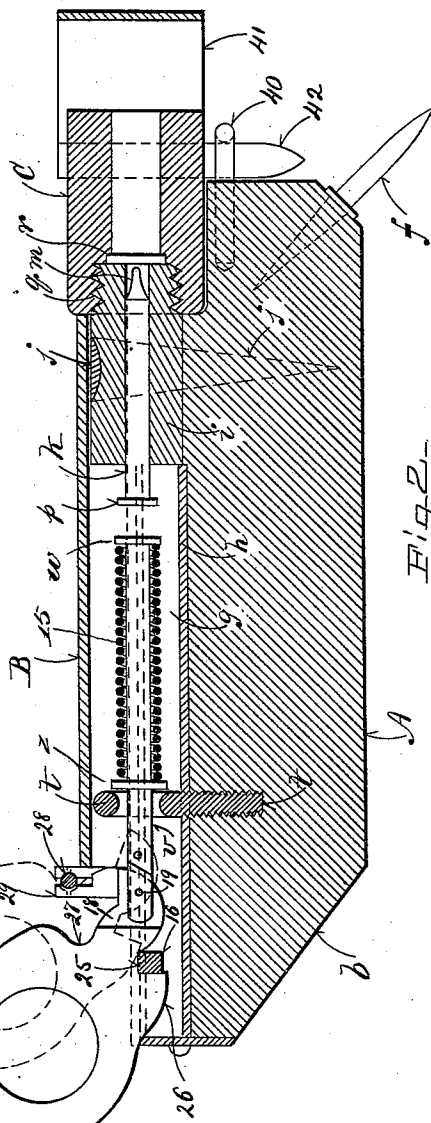


Fig. 2.

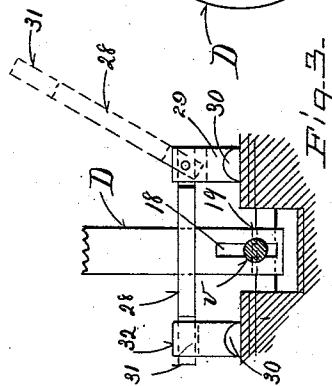


Fig. 3.

WITNESSES:
 J. M. Shute,
 C. L. Maas.

INVENTOR=
 Lemuel B. Burrill,
 By N. A. Shaw & Co.,
 ATTYS

UNITED STATES PATENT OFFICE.

LEMUEL B. BURRILL, OF CAMBRIDGE, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO ROBERT H. GRAY, OF BOSTON, MASSACHUSETTS.

DETONATING BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 530,012, dated November 27, 1894.

Application filed May 25, 1894. Serial No. 512,440. (No model.)

To all whom it may concern:

Be it known that I, LEMUEL B. BURRILL, of Cambridge, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Explosive Burglar-Alarms, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved burglar alarm; Fig. 2, a vertical longitudinal section of the same taken on line *x, x*, in Fig. 1; and Fig. 3 a vertical transverse section taken on line *y, y*, in Fig. 1.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to an improvement in that class of burglar alarms in which an explosive cartridge is employed, the object being to produce a simple, cheap, portable device of this character and one which may be easily adjusted in position on the floor of an apartment so that the attempted opening of the door will discharge the cartridge, while at the same time the device will serve as a fastener for said door.

In the drawings, A represents a block preferably of wood and rectangular in shape which forms the body or support of the alarm. The rear end of said block is beveled or chamfered at, *b*. The forward end of the block is provided with two downwardly projecting brads, *f*, arranged at an angle of about forty-five degrees and which are designed to penetrate the floor of the room and hold the devices in position, as hereinafter described. The block is chambered longitudinally and centrally at, *g*, and preferably has a brass bushing, *h*, inserted therein. A firing-pin block, *i*, is secured in the forward end of the chamber by means of a staple, *j*, which straddles it and is driven into the block, A. A firing-pin, *k*, slides longitudinally through a suitable opening in said block, its forward end being reduced at, *m*, to form a point for engaging the cartridge cap and its rear end having a head, *p*.

The forward or outer end of the block, *i*, is exteriorly screw-threaded at, *q*, and a cartridge barrel, C, is fitted to turn onto said threaded portion, said barrel projecting slightly beyond the block, A, and adapted to contain the cartridge, *r*, held in this position to be exploded by the pin, *k*. In the rear end of the chamber, *g*, a screw-eye or guide, *t*, is arranged. The chamber is covered by a cap-plate, B, secured by screws or other suitable means to the body, A, said plate also covering the pin-block, *i*. A trigger mechanism comprises a rod, *v*, fitted to slide through the eye, *t*, in alignment with the firing-pin and having a head, *w*, on its inner end and a loose collar, *z*, for engaging said eye. Between said collar, *z*, and the head, *w*, a coiled spring, 15, is mounted around the rod and is fitted to act expansively to drive the rod against the firing-pin. Running transversely across the chamber near its outer end there is a catch-bar, 16.

The trigger proper, D, comprises a finger loop having a central opening for the finger and a boss or projection, 17, against which the thumb can bear. An arm, 18, on said loop is pivoted at, 19, to the rod, *v*, the lower edge of said arm being curved to form an indentation, 25, making a shoulder, 26, which will engage the catch-bar and lock the trigger. Above the arm, 18, there is an indentation, 27, in the edge of the trigger to engage a safety-bar, 28, which is pivoted by an end in a standard, 29, on the cap-plate; said standard being provided with a foot or brace, 30, cast integral therewith to strengthen the standard against the pull of the trigger. The free end, 31, rests in a slotted standard, 32, on the cap-plate at the opposite side of the trigger so that said bar when in position transects the course of the trigger and will engage in the indentation, 27, therein. Said bar can be thrown outward into the position shown by dotted lines in Fig. 3 to free the trigger.

At the forward end of the body, A, two screw-eyes, 40, are inserted. A curved or U-shaped guard-plate, 41, has legs, 42, which may be disposed in said eyes placing the guard in front of the muzzle of the barrel, C. This plate is detachable and designed to stop the wadding from the cartridge.

In use, the barrel is turned off from the block, *i*, and a blank cartridge, *r*, is inserted therein. Then the barrel is replaced and the guard, 41, adjusted in position. The latch, 28, is now thrown downward into the path of the trigger to prevent accidental discharge. The trigger is drawn outward and its catch, 26, engaged with the bar, 16, compressing the spring, 15, the parts being in the position shown in Fig. 2 with the rear end of the trigger projecting beyond the rear end of the body of the alarm. The device is now disposed on the floor with the trigger nearly in contact with the door and the brads, *f*, penetrating the floor sufficiently to prevent the device from being accidentally displaced. The guard latch, 28, is then thrown upward and as soon as the door is opened sufficiently to engage the trigger its catch, 26 will be disengaged from the catch-bar, 16, permitting the spring, 15, to act and drive the rod, *v*, into contact with the firing-pin which being thrown forward thereby will explode the cartridge in a manner which will be understood without a more explicit description. The latch, 28, is so arranged that should the trigger be accidentally released it will not permit the rod, *v*, to be thrown forward sufficiently far to engage the firing-pin while loading the device. The guard-plate, 41, stops the wadding from the exploded cartridge.

It will be seen that my improved device is readily portable and serves in addition to

being an alarm as a lock to the door, the pressure applied to the rear end of the body of the alarm driving the brads, *f*, more securely into the floor and blocking the door.

Having thus explained my invention, what I claim is—

1. In an alarm of the class described the portable body, A, and its cartridge exploding mechanism in combination with the barrel; the U-shaped guard, 41, and devices for detachably securing said guard to said body across the line of fire of said barrel, substantially as set forth.

2. In an alarm of the class described, the portable body, A, in combination with the pin-block, *i*, the barrel, C, detachably secured to said block; the loose horizontal firing pin in said block; the spring-pushed rod, *v*, for actuating said pin; the trigger, D, pivoted to said rod and projecting beyond the end of the body when set; and the catch-bar, 16, for locking said trigger.

3. In an alarm of the class described, the portable body, A, in combination with the spring-pushed rod, *v*, the trigger, D, pivoted to said rod; the catch-bar, 16; and the latch, 28, all being arranged to operate substantially as described.

LEMUEL B. BURRILL.

Witnesses:

O. M. SHAW,

JOHN F. NEWTON, Jr.