

1,374,684.

Patented Apr. 12, 1921.

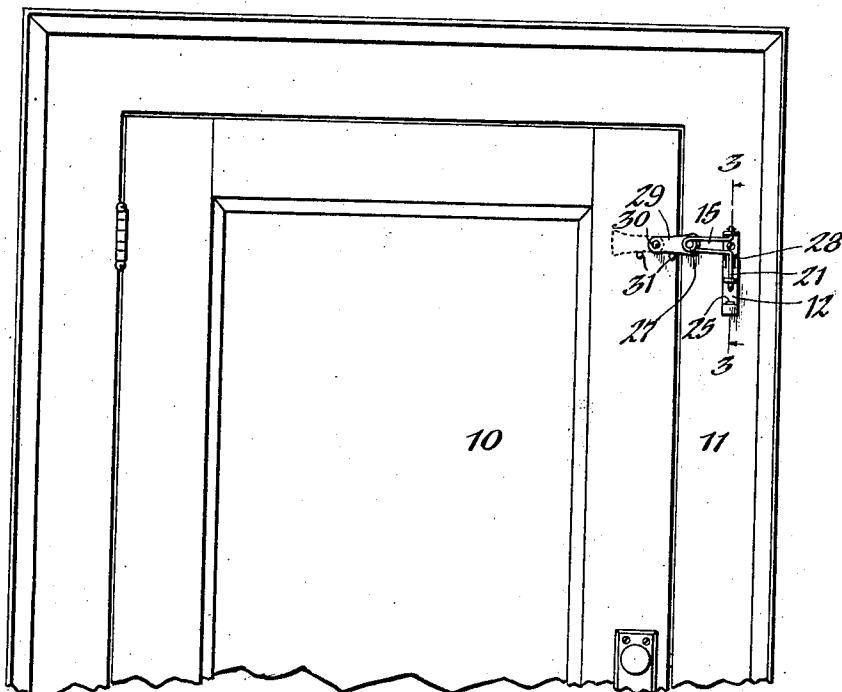


Fig. 1.

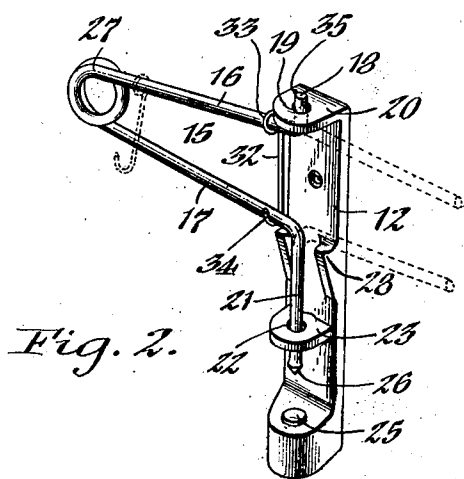


Fig. 2.

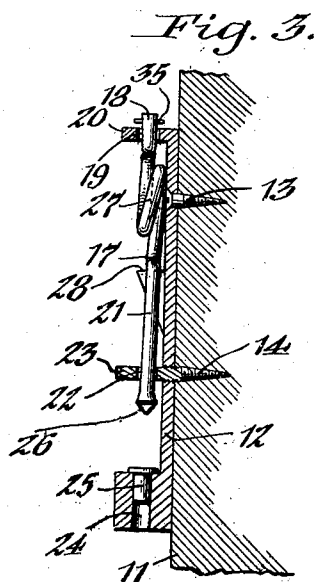


Fig. 3.

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BURGLAR-ALARM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN C. RIECK, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to a burglar alarm which is applicable to doors, windows, etc., and more particularly to that type of alarm wherein a cartridge or other detonating device is exploded when unauthorized persons attempt to open the door or window.

The principal object of the invention is to provide an alarm of this character which is simple in construction, automatic and reliable in operation and which eliminates the use of springs separate from the hammer for firing the cartridge.

A further object is to provide simple means for locking the hammer in its inoperative position when the alarm is not in use.

In the accompanying drawings: Figure 1 is a fragmentary front view of a door and casing showing my improved alarm applied thereto. Fig. 2 is a perspective view of the alarm showing the keeper applied to the trigger arm. Fig. 3 is a vertical section on line 3—3, Fig. 1.

Similar characters of reference indicate corresponding parts in the several views.

10 indicates the door and 11 the door frame or casing on which the improved alarm is mounted and which is actuated by the opening movement of the door.

The alarm consists of a base plate 12 preferably located adjacent the upper end of the door casing 11 and secured thereto by screws 13, 14. Hinged to this base plate is a trip member 15 which is preferably constructed of a single piece of steel wire or similar material. This trip member is provided with an upper leg or arm 16 and a lower resilient trigger arm 17, the upper arm being provided at its inner end with an upwardly-extending pintle 18 which engages an opening 19 in a lug 20 projecting forwardly from the base plate. The trigger arm is provided at its inner end with a hammer 21 extending downwardly therefrom and guided and pivoted in an opening 22 of a lug 23 formed by the head of the screw 14, by which the base plate is secured to the door casing 11. Seated in a socket or holder 24 at the lower

end of the base plate is a cartridge or detonating cap 25 which is in alinement with the firing point 26 at the lower end of the hammer.

The outer free ends of the upper and lower arms 16, 17 are connected together preferably by a spring coil 27 of one or more turns, this construction giving the trigger arm greater resilience and causing the hammer, when released, to strike the cartridge with sufficient force to explode it.

The trigger arm 17 is held in its retracted or cocked position, as shown by full lines in the drawings, by the engagement of its inner portion with one or the other of a pair of teeth or shoulders 28 arranged on the base plate 12 about midway between the upper and lower lugs 20 and 23. These shoulders are spaced apart and arranged on opposite sides of the axis of the hammer. By this arrangement, the trip arm 15 is adaptable to door openings from either the right or the left hand side, inasmuch as the trip arm can be swung to either side of the base plate to face the free edge of the door.

As shown in Fig. 1, the door is preferably provided with a retractable tappet 29 which normally projects beyond the edge of the same and engages behind the trip arm 15, so that when the door is opened the trigger arm is released and the cartridge exploded. the base plate 12 is so located on the casing 11 that the edge of the door will clear the trip arm 15. The tappet 29 is preferably pivoted adjacent the edge of the door by a horizontal pin 30, so that when the alarm is not to be used the tappet can be swung back to the position shown by dotted lines in Fig. 1, in which position it clears the trip arm 15. Stop pins 31 arranged on the door on opposite sides of the pivot 30, limit the downward movement of this tappet.

It will be understood, however, that the tappet may be dispensed with and the base plate 12 so located that the trip member 15 will project into the path of the swinging door and be actuated directly by it. In this case the trigger arm is preferably provided with suitable means for locking or holding it in its strained and retracted position, in order to permit the door to be opened by occupants of the house, and said arm to be swung out of engagement with the active tooth 28, without firing the cartridge. In

the construction shown, this locking device consists of a sliding strap or keeper 32 provided at one end with an eye 33, which encircles the arm 16 of the trip arm, and at its other end with a hook 34 adapted to engage said trigger arm near the active tooth 28, as shown by full lines, thereby preventing said arm from projecting the hammer against the cartridge. To unlock the trigger arm, the keeper is slid outwardly on the arm 16 and its hook disengaged from the trigger-arm, after which the keeper is rotated about the arm 16 and allowed to hang with its back against the trigger arm where it is out of the way, as shown by dotted lines in Fig. 2.

To set burglar alarm, the tappet 29 is swung to the projected position shown by full lines in the drawing. The keeper 32 is shifted to the inoperative position shown by dotted lines in Fig. 2, the trigger-arm 17 is pulled toward the arm 16 above the level of the teeth 28, and the trigger member 15 is swung toward the free edge of the door to bring the trigger arm over the left hand tooth, against which it abuts upon releasing said arm, as shown by full lines in the drawings. In this position, the trigger member overlaps the tappet 29. Should the door be opened by a burglar, the tappet will trip the member 15, disengaging its trigger arm 17 from the active tooth 28 and causing the hammer 21 to be forcibly driven against the cartridge by the reaction of said spring trigger-arm, thus exploding the cartridge.

The pintle 18 of the arm 16 is preferably provided with a cotter pin 35, or other stop, to prevent the same from becoming disen-

gaged from the lug 20 when the strained trigger arm is released.

It will be noted that the hammer, its actuating spring and the trigger element, are integral, forming a unitary structure, which can be cheaply produced, and correspondingly reducing the cost of the device.

I claim as my invention:

1. An alarm comprising a base, a trip-member hinged to said base to swing transversely thereof and consisting of an upper arm having a pintle, a lower trigger-arm movable toward and from said upper arm, and a spring-coil connecting the free ends of said arms, a holder for a detonating device arranged on said base, means on said base for holding said trigger-arm in its strained and retracted position, a perforated guide-lug arranged between said holding means and said holder and having a fastening screw passing through said base, said trigger-arm having an integral extension arranged substantially parallel with said pintle and guided in said perforated lug and said extension forming a hammer which is movable toward and from said holder.

2. A burglar alarm comprising a base, a trip member pivotally mounted on said base and extending laterally therefrom, said member having a yieldable trigger arm, a hammer mounted on said arm, a holder for a detonating device arranged on said base opposite the hammer, means for holding said trigger arm in its retracted position, and a keeper slidably mounted on said trip member and having a hook adapted to engage said trigger arm.

JOHN C. RIECK.