J. K. RISSEL.

EXPLOSION BURGLAR ALARM.

APPLICATION FILED DEC. 16, 1908.

932,642. Patented Aug. 31, 1909.

Fig. 1.

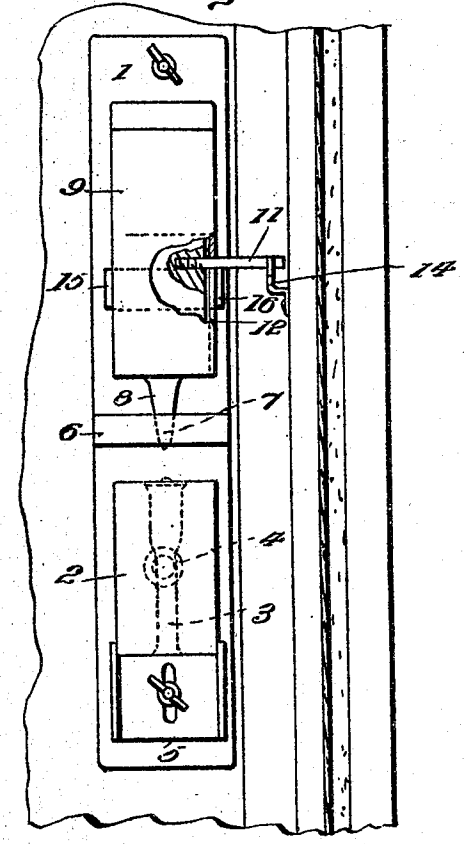


Fig. 2.

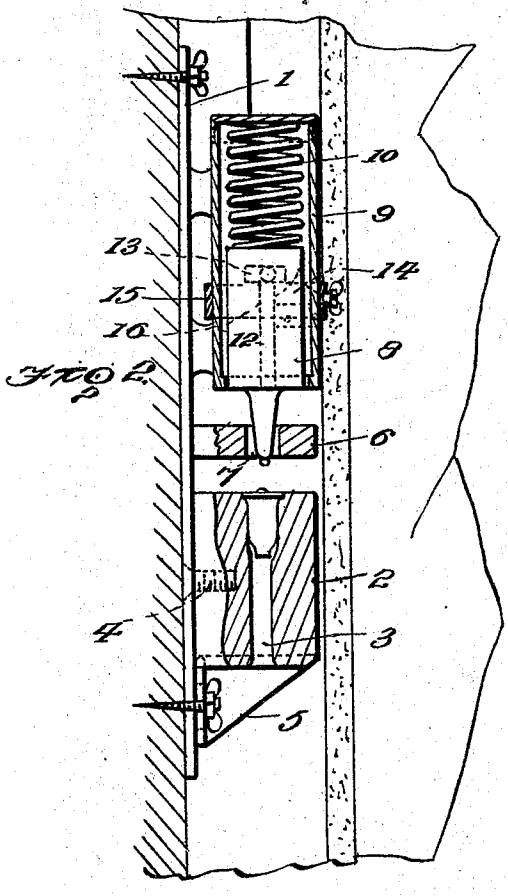


Fig. 3.

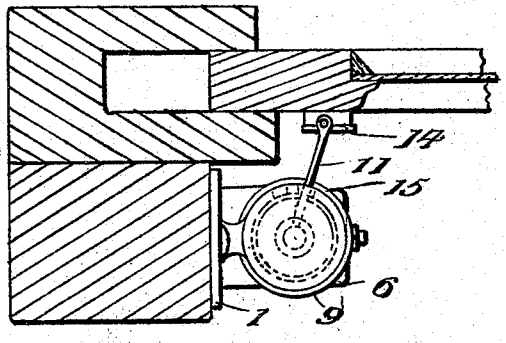
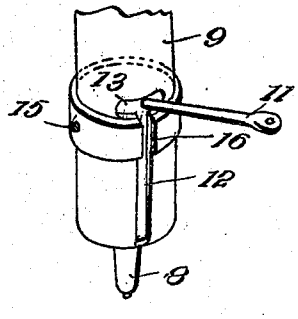


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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EXPLOSION BURGLAR-ALARM.

932,642. Specification of Letters Patent. Patented Aug. 31, 1909.

Application filed December 16, 1908. Serial No. 467,877.

To all whom it may concern:

Be it known that I, JONAS K. RISSEL, citizen of the United States, residing at Potts Grove, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Explosion Burglar-Alarms, of which the following is a specification.

This invention comprehends certain new and useful improvements in alarms of that type designed to be applied to windows or doors or the like to automatically sound a warning upon the attempt of a burglar to force an entrance therethrough, and the invention has for its object an improved device of this character which is susceptible of being advantageously employed upon the doors or windows of dwelling houses and also to be used in connection with the doors of chicken coops or the like; which is compact in structure, and hence may be conveniently carried in the satchel of a traveler, and which may be readily secured in operative relation to the window or other movable element to be equipped therewith, the device being intended to explode a blank cartridge and awaken the occupants of a house and apprise them of the attempted burglary, and the explosion also serving to frighten off the thief, without inflicting any injury upon him.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe, and then point out the novel features thereof in the appended claims.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a front elevation, parts being broken away, of a burglar alarm constructed in accordance with my invention; Fig. 2 is a vertical section thereof; Fig. 3 is a top plan view; and, Fig. 4 is a detail perspective view showing the sleeve applied to the barrel, with its slot in registry with the bayonet slot of the barrel, so as not to interfere with the action of the device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

My improved alarm consists essentially of a base plate 1 which is preferably made of metal, although not necessarily so, and which is designed to be detachably secured in a substantially vertical position to a wall or other suitable support through the instrumentality of screws or like fastening means. Carried at the lower end of this base plate 1 is a cartridge holder 2 which is preferably in the form of a cubical block of metal and which is formed with a longitudinal central bore 3 arranged at its upper end for the reception of a blank cartridge or other charge to be exploded. A pivot screw 4 or the like passes through the base plate 1 from the rear side thereof, and is engaged with the cartridge holder 2 in order to admit of the same being turned laterally for a purpose to be presently disclosed, the cartridge holder being normally maintained in substantially vertical position by a stop 5 of approved form. In the present instance, the stop 5 consists of a longitudinally slotted plate which is held in adjusted position upon the base by a winged screw mounted in the slot, and which is formed with forwardly disposed side flanges or wings adapted to embrace the lower portion of the cartridge holder to positively prevent the same from turning about its pivot 4.

A transverse guide bracket 6 is disposed forwardly from the base plate 1 in slightly spaced relation to the upper end of the cartridge holder 2 and is formed with a longitudinal aperture 7 which is substantially in vertical alinement with the bore 3 and in which is slidingly mounted the lower extremity of a vertically reciprocating plunger 8. The plunger 8 is also mounted in a case or barrel 9 that is secured longitudinally of the base plate above the guide bracket 6 and has its upper end closed, as shown, an expansion spring 10 being positioned within the barrel and interposed between the closed end thereof and the adjacent end of the plunger 8, in order to normally exert pressure upon the latter to slide the plunger vertically downwardly. An actuating arm 11 is rigidly secured to the plunger 8, preferably in proximity to the upper end of the same, and extends readily outwardly through a bayonet slot provided in the barrel 9, the slot being somewhat T-shaped in form, and

the main portion 12 of the slot leading longitudinally from the lower end of the barrel, while the cross portion 13 is disposed laterally on opposite sides of the main portion and is arranged to have the actuating arm 11 positioned therein so as to hold the plunger 8 retracted against the compression of the coil spring 10 and thus "set" the device. The actuating arm 11 is of a suitable length to extend from the alarm device to the door or other movable element to which the invention is applied, the arm bearing against the door, or being otherwise arranged in operative relation thereto, so as to be moved laterally in the cross portion 13 of the slot by and upon the movement of the door by a person attempting to effect an entrance therethrough. When the device is employed in connection with a window, the sash is preferably equipped with a vertically disposed trip member 14 that has oppositely inclined bearing surfaces, either one of which is arranged to engage the actuating arm.

In the present instance, the drawing shows the invention applied to a window, and from the foregoing description, in connection with the accompanying drawing, it will be apparent that should an outsider move the sash upwardly in an attempt to effect an entrance through the window, the corresponding bearing surface of the trip member 14 would engage the actuating arm 11, and the latter would ride laterally upon such bearing surface and would hence be moved out of the cross slot 13. This movement of course releases the plunger 8, and the same is shot downwardly by the force of the expansion spring 10, the actuating arm 11 traveling, in this position, through the main portion 12 of the slot, and the lower extremity of the plunger being projected downwardly beyond the bearing bracket 6 so as to impinge against and effect the explosion of the blank cartridge arranged within the bore 3. This explosion serves to awaken the occupants of the house and apprise them of the attempted entrance, and also serves to frighten off the burglar who was tampering with the window. In order to again set the alarm device after operation, the actuating arm 11 is grasped and moved vertically upwardly in the main portion 12 of the slot to retract the plunger 8, the arm and the plunger being then turned slightly in one direction to position the former in one of the cross portions 13 and thus hold the plunger retracted against the compression of the spring 10. The cartridge holder 2 is then turned laterally about its horizontal pivot 4 a sufficient degree to move the upper end of the bore 3 to one side of the superposed guide bracket 6, which thus admits of the shell of the exploded cartridge being conveniently extracted and a new cartridge substituted therefor, the holder being returned to its vertical position and sustained therein by the stop 5, whereupon the device is again ready for use.

In the preferred construction of my invention, I provide a sleeve 15 which incases the barrel 9 and which is formed with a longitudinal slot 16 arranged for registry with the main portion 12 of the bayonet slot in the barrel. The actuating arm 11 also passes through the slot 16, and the said sleeve is designed to be turned relatively to the barrel, when occasion demands, so as to move the slot 16 out of registry with the main portion 12 and hence prevent the device from becoming accidentally operated. A set screw works in the sleeve and is arranged to impinge against the case 9 to hold the sleeve in adjusted position.

From the foregoing description, in connection with the accompanying drawings, it will be apparent that I have provided an improved alarm which may be employed upon dwelling houses and is susceptible of various other uses that will at once present themselves to those for whom the device is intended; which is positive in action and serves to frighten off a burglar without inflicting injury; which embodies to a marked degree the characteristics of simplicity, durability and efficiency of construction and operation, and which consists of comparatively few parts that are compact in form and may be easily and cheaply manufactured and readily assembled.

Having thus described the invention, what I claim is:

1. In an explosion burglar alarm, the combination of a case formed with a slot, a plunger mounted in the case and movable therein to explode the charge, the plunger being provided with a projection operating in the slot, and an element coöperating with the case and formed with a slot adapted to be held in or out of registry with the first named slot in the path of the projection.

2. In a burglar alarm, the combination of a holder for a charge, a case formed with a slot, a plunger mounted in the case and spring pressed toward the holder to explode the charge, the plunger being provided with a projection operating in the slot, a movable sleeve mounted on the case and arranged in one position to close the slot to prevent the plunger from moving under the influence of the spring, and means for holding the sleeve in adjusted position.

3. In a burglar alarm the combination of a base, a charge holder pivotally connected to the base, a plunger for exploding the charge, and a stop consisting of a plate adjustable on the base toward or away from the holder, the plate being formed with outstanding flanges or wings adapted to embrace the charge holder and prevent the same from turning about its pivot.

4. An alarm device of the character described, comprising a base, a cartridge holder carried by the base, a barrel also secured to the base and formed with a bayonet slot, a plunger mounted in the barrel, a spring normally acting upon the plunger to project the same against the cartridge, an actuating arm secured to the plunger and extending outwardly through the slot and adapted in one position to hold the plunger retracted against the force of the spring, and a sleeve encircling the barrel and formed with a slot adapted to be held in or out of registry with the bayonet slot, as and for the purpose specified.

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

JONAS K. RISSEL. [L. S.]

Witnesses:
I. B. GEHRIG,
WM. P. WENDLE.