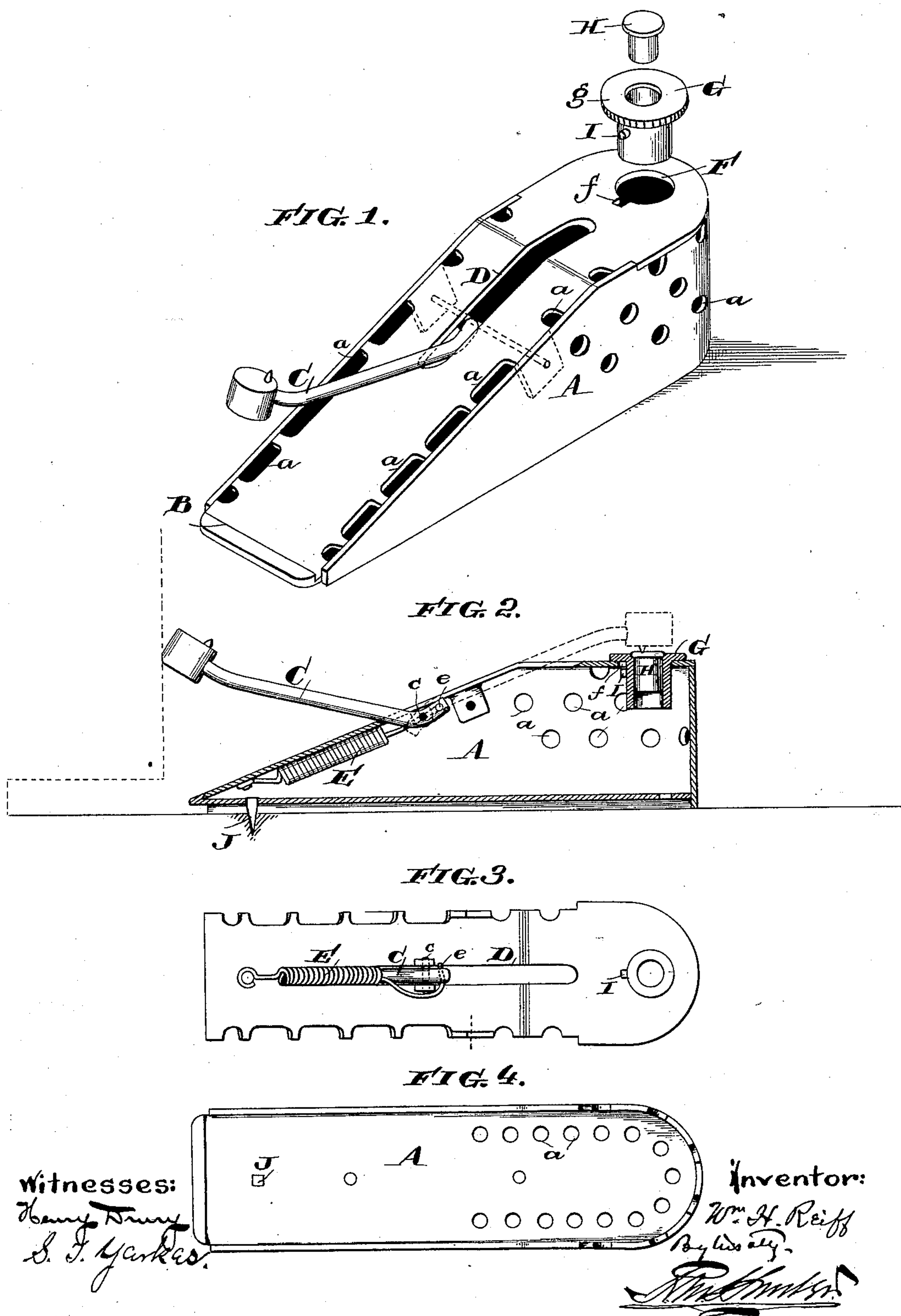


(No Model.)

W. H. REIFF.  
BURGLAR ALARM.

No. 428,693.

Patented May 27, 1890.



# UNITED STATES PATENT OFFICE.

WILLIAM H. REIFF, OF PHILADELPHIA, PENNSYLVANIA.

## BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 428,693, dated May 27, 1890.

Application filed January 27, 1890. Serial No. 338,239. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. REIFF, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Cap-Exploding Burglar-Alarms, of which the following is a specification.

My invention relates to burglar-alarms; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

More particularly my invention relates to cap-exploding burglar-alarms which are operated by the opening of a door or similar object, so as to explode a cap and give notice of the opening of the door.

The object of my invention is also to produce a convenient portable alarm which may be carried from place to place, so as to be available for use for the protection of travelers in public hotels, &c.

In carrying out my invention I employ a suitable box-shaped support, provided with a pivoted hammer and adapted to receive a suitable cartridge. This device is of such a character that it may be placed upon the floor adjacent to the door of the room with the hammer adjusted, so that any appreciable movement of the door will actuate the hammer and cause it to strike the cartridge or cap and give an alarm.

My invention also consists in certain improvements in the formation of the device, whereby after the door has been moved a sufficient distance to actuate the trigger or hammer further progress of the door will be arrested, so that it operates not only to give warning of the movement of the door, but also prevents it being further opened to a sufficient degree to admit the entrance of a person from the outside.

My invention also consists in certain improvements in the construction and arrangement of the parts, which are hereinafter more fully set forth.

In the drawings, Figure 1 is a perspective view of my improved apparatus with the cartridge and cartridge-holder removed from the support therefor. Fig. 2 is a sectional side elevation of the same, illustrating the actuation of the trigger by the movement of the

door. Fig. 3 is an inverted plan view of the upper portion or top of the device, and Fig. 4 is an inverted plan view of the apparatus.

A is a suitable box-shaped frame, which is preferably formed with its rearward portion inclined or wedge-shaped. This box-shaped portion is provided with a number of holes or openings *a*, to admit the escape of the smoke and gas due to the explosion of the cap from the interior of the box and to give greater freedom to the sound. The top or cover of the box A is provided with a slot or opening D.

C is a hammer or trigger having one of its ends projecting through the slot or opening D in the cover and pivoted to the under surface of the cover, as indicated at *c*.

E is a suitable spring carried by the box A and connected at *e* to the end of the trigger C beyond its pivot-point *c*.

F is an opening in the surface of the box A to receive a tubular cartridge-holder G, located at that portion of the box A which will be struck by the end of the hammer C when the latter is operated.

H is the cartridge which is fitted in the tubular holder G.

I prefer to make the cartridge-holder G removable from the box A, so that when desired the alarm may be unloaded by the removal of the cartridge-holder G. It will be seen that by this construction any tampering or playing with the device will be prevented, as the removal of the cartridge holder or support will render it impossible for any person to insert the cartridge or cap in the apparatus.

The tubular portion of the cartridge-holder G fits into the hole F, and is supported thereby by means of the collar or flange *l*.

I is the pin carried by the tubular portion of the cartridge-holder to prevent the cartridge-holder from dropping out of the hole F, which is provided with a small extension or slot *f* to admit the pin or projection I.

J is a pin carried by the base of the box A, which is adapted to be inserted in the floor for the purpose of holding the box in place.

The spring E is so connected with the end of the hammer or trigger C that when the latter is turned back into its extreme position, as shown in Figs. 1 and 2, it will not op-



erate the trigger; but the moment the trigger is moved slightly the spring acting upon the trigger will snap it down upon the cartridge H, as indicated in dotted lines in Fig. 2, with the stem of the trigger fitting in the slot D.

I do not limit myself to any particular form or arrangement of the spring for operating the trigger, as it is apparent that any other suitable form may be substituted for that shown without in the least departing from the principles of my invention.

It will be observed that when the trigger is drawn back into its extreme position its edge projects slightly beyond the end of the box-edge, as shown in Fig. 2, the object of this being that the door shall come in contact with the trigger and operate it before it comes in contact with the box.

The operation of the device will now be readily understood. When it is desired to employ the alarm, it is placed upon the floor or before the object against the opening of which it is intended to guard, removed a slight distance therefrom. The pin J being forced into the floor so as to hold the box in place, the trigger is now turned back or "cocked," and the cartridge is placed in the cartridge-hole. As heretofore explained, the end of the trigger projects a slight distance beyond the end of the box, as illustrated in Fig. 2. It will now be seen that the moment the door or other object is moved to a sufficient extent to touch the trigger and slightly move it so that the spring E can operate, the trigger C will instantly be snapped down upon the cartridge H and will explode it. If after the explosion the door is further opened, its lower edge, coming in contact with the inclined surface or wedge portion of the box A, will be arrested and prevented from opening sufficiently to admit the entrance of a person.

It will be seen that the device is small and light, and may be carried in the pocket or

valise and adjusted in position whenever desired.

While I prefer the details of construction which are here shown, I do not limit my invention to them, as it is apparent that they may be varied in many ways without departing from the principles of my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the box or support A, the spring-actuated hammer C, pivoted thereto, and the removable cartridge-support G, carried by the box A and located under the hammer C, the cartridge-support being removable from the box A to prevent loading the alarm.

2. The combination, with the cartridge-holder G, provided with a supporting collar or flange *g* and a locking-pin I, located below the collar, of the box or support A, having an aperture F to receive the removable cartridge-holder G, which is supported therein by the flange or collar *g*, the aperture being provided with a slot *f* to admit the locking-pin I, and a pivoted spring-actuated hammer carried by the box or support A and adapted to strike the cartridge in the cartridge-holder.

3. The combination of the box A, provided with a cap-support and having an inclined face and the slot D, with the hammer C, pivoted within the slot D and having an arm arranged at an angle to the hammer C, and the spring E, attached to the box A upon the side of the pivot-point *c* farthest from the inclined arm and connected to said arm at *e*, substantially as and for the purpose specified.

In testimony of which invention I have hereto set my hand.

WILLIAM H. REIFF.

Witnesses:

ERNEST HOWARD HUNTER,  
MAURICE H. HOLMES.