(No Model.)

W. W. CLIMENSON.

BURGLAR ALARM.

No. 488,162. Patented Dec. 13, 1892.

Fig. 1.

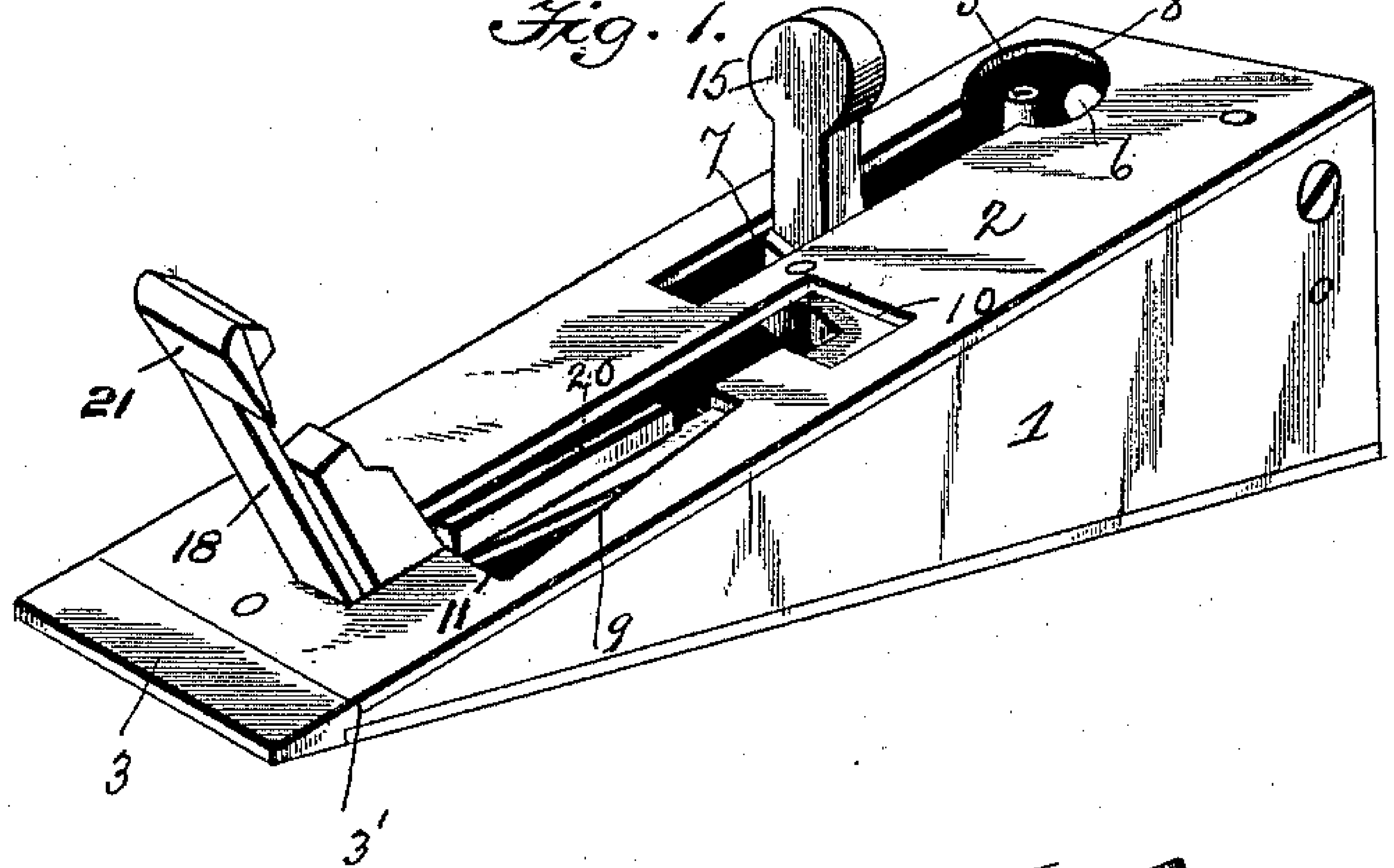


Fig. 2.

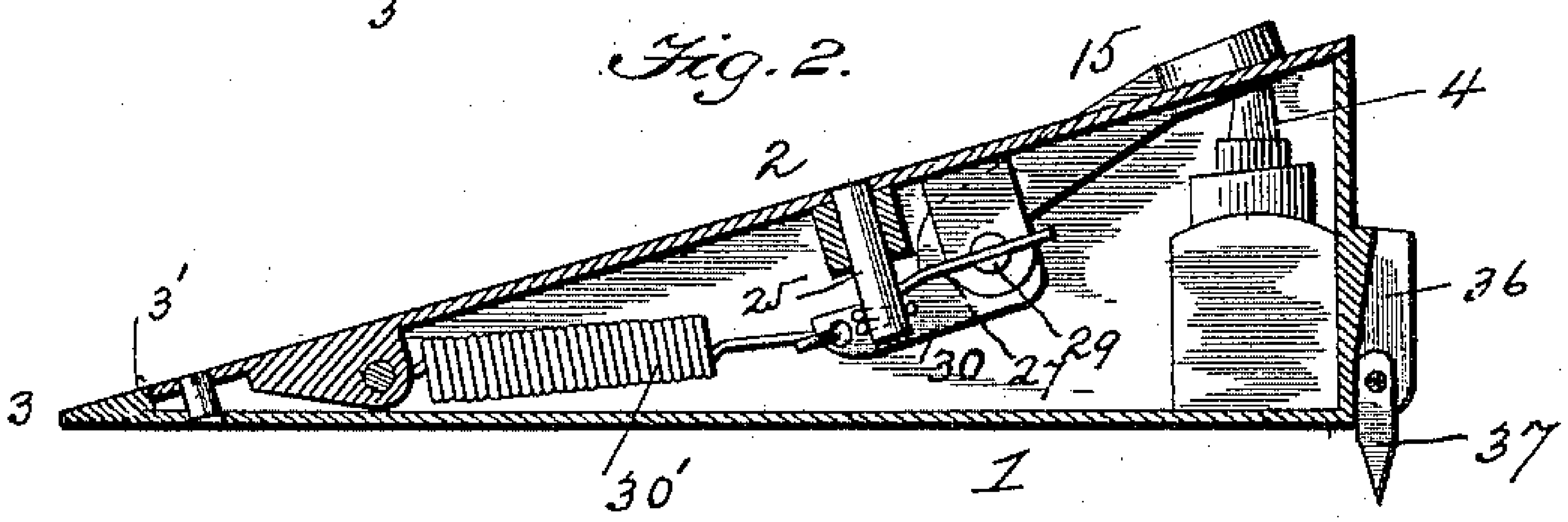


Fig. 3.

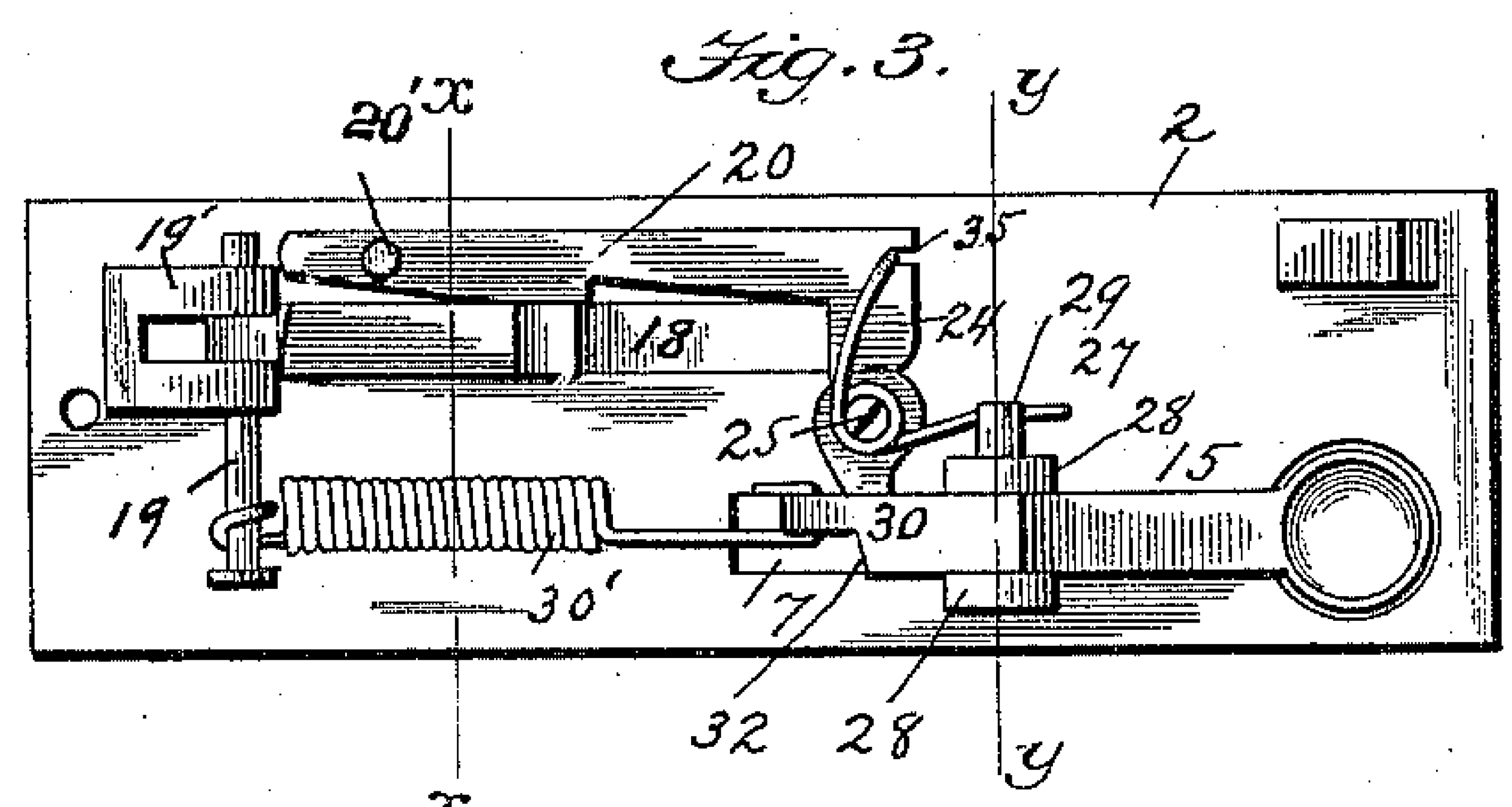


Fig. 4.

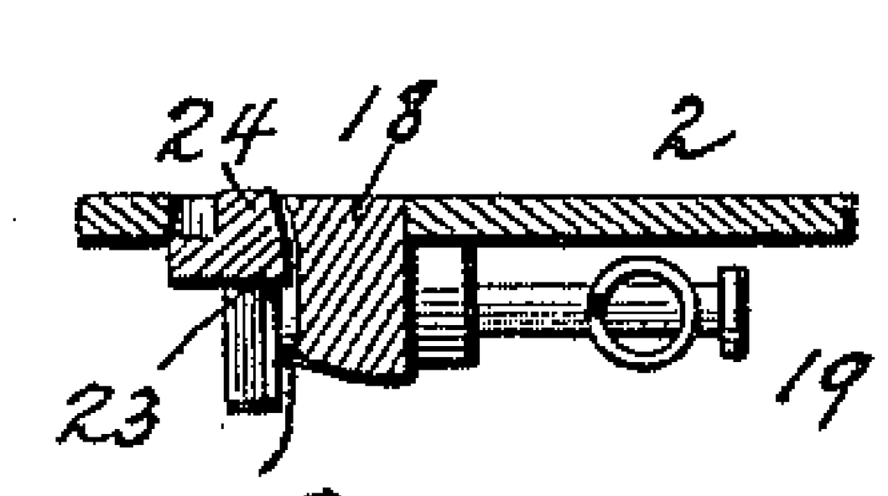
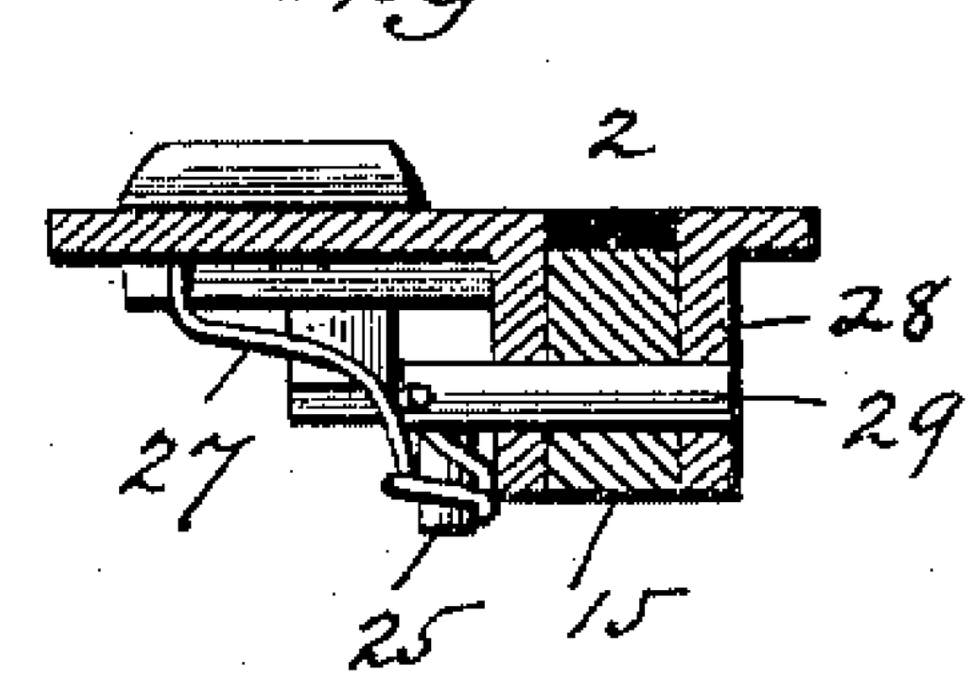


Fig. 5.



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UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 488,162, dated December 13, 1892.

Application filed December 2, 1891. Serial No. 413,817. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. CLIMENSON, of Honey Brook, county of Chester, State of Pennsylvania, have invented a new and useful Improvement in Burglar-Alarms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My present invention relates to a device designed to prevent the entrance of burglars to a room or apartment and to warn the occupant of the room or the household of such surreptitious entrance; and its object is to provide a portable implement adapted to be carried by a traveler or to be used by any person, which can be easily and readily placed in position without liability of being displaced when the door is forced open, and which is effective and reliable in operation in exploding a cartridge or percussion-cap.

In burglar-alarms of that class known as "detonating alarms" it has generally been proposed to provide means simply for exploding a cartridge or cap; but in my improved implement I combine with the exploding mechanism a novel form of casing and provide the same with means which effectually prevent the door from being opened after the cap or cartridge has been exploded.

With the foregoing ends in view the invention consists, first, in the mechanism for exploding the cartridge or cap, and, secondly, in a wedge-shaped casing, which has a tooth or spur adapted to hold the casing in position, the exploding mechanism comprising a pivoted hammer or trigger formed with an offset or shoulder, a dog or detent pivoted within the casing in such proximity to the pivoted end of the hammer that it can take in rear of the shoulder or offset thereon, an operating-lever, also fulcrumed within the casing and adapted to be depressed by the opening of a door, and an arm rigid with one end of the dog or detent and having a cam or inclined surface in the path of the operating-lever, which impinges against the arm or piece in its descent and thereby forces the detent away from the shoulder and releases the hammer.

The invention further consists in the peculiar construction and arrangement of parts and combinations of devices, which will be hereinafter fully described, and pointed out in the claims.

The accompanying drawings fully illustrate my invention, in which—

Figure 1 is a perspective view of my improved alarm and wedge adjusted in position in rear of a door. Fig. 2 is a longitudinal sectional view taken centrally through the casing. Fig. 3 is a plan view of the top plate removed from the casing and showing the arrangement of the exploding mechanism on the inside of the casing. Fig. 4 is a transverse sectional view on the plane indicated by the dotted line *x x* of Fig. 3, showing the spring for holding the detent and operating-arm in position and which also holds the fulcrum pin or shaft of the hammer from displacement. Fig. 5 is a cross-section on line *y y* of Fig. 3.

Like numerals of reference denote corresponding parts in all the figures of the drawings.

In the drawings, 1 designates the casing or base of my improved alarm and wedge for doors. In the preferred embodiment of my invention I make this casing in the form of a wedge and with a removable top plate 2, which carries or supports all the operating parts of the exploding mechanism. This casing, except the top plate 2, which is removable, is cast or formed of a single piece of metal, and at its reduced end the casing or base has a solid flange 3, which forms a shoulder 3′, against which one end of the removable top plate bears. In the other larger end of the casing I provide a vertical solid post or stud 4, which may be cast integral with the base or casing, or it may be secured rigidly and firmly therein by any suitable means. The upper end of this post is reduced to form a nipple 5, on which a percussion-cap, a cartridge, or other explosive can be fitted, and thus held in position in the path of the hammer to be exploded thereby and cause a detonation to awaken the occupant of a room or warn the household. This post is preferably located in one corner of the casing, and opposite to the nipple is an opening or perfo-

ration 6, through which the flash and smoke of the exploded cap can escape. The top plate 2 of the casing or base is secured in position by screws or in any other desired manner, and it is provided with two longitudinal slots 7 9, which are formed in the top plate out of line with each other, one end of the slot 7 having an enlargement 8, while the other slot 9 has a lateral enlargement 10, and an inclined opening 11 below the lateral enlargement 10.

In the slot 7 with the rounded end operates the hammer or trigger 15 of my improved exploding mechanism, and in the other slot 9 operates the lever, which is to be depressed by the door. In this slot 9, jointly with the operating-lever 18, works the operating piece or arm 20, the latter being disconnected from the operating-lever and fitting in the inclined enlargement 11 of the slot 9.

The operating-lever 18 is pivoted or fulcrumed at its inner end within the casing on a pivot or bolt 19, which is secured in a pair of lugs 19′, which are integral with the top plate of the casing, the pivoted end of the lever being between the lugs, as shown in Fig. 3. The free end of this lever 19 is provided with an integral thumb-piece 21, that is adapted to partially fit in the lateral right-angled part of the slot 9, but which will not wholly enter the slot, thereby arresting the inward movement of the operating-lever and preventing the same from moving to such extent as to prevent ready access to the thumb-piece for readily raising the operating-lever to an operative position. This operating-lever is further provided on one of its lateral faces with an inclined or cam surface 22, which projects beyond the face or side edges of the lever, and said cam-surface is adapted to impinge or bear, when the operating-lever is depressed, against a corresponding or similar cam-surface 23 on the lateral edge or face of the arm 20 of the detent or dog 24, whereby the operating-lever is adapted to move the arm sufficiently to insure the dog moving out of engagement with the shoulder or lug on the hammer 15. This detent or dog 24 is fulcrumed or pivoted at an intermediate point of its length on a vertical post or standard 25, which is rigidly secured to the cover or top plate of the casing, and the lower extremity of this rigid post is extended or projected below the detent for the purpose of forming a support for the tension-spring 27, presently referred to. The arm 20 is rigid with one end of the detent or dog and lies at right angles thereto, so that the arm 20 and the detent 24 form the two arms of a bell-crank lever, the dog being pivoted between its ends, so that the end opposite to the arm 20 is adapted to take in rear of the shoulder on the hammer. The arm 20 is not pivoted to the casing and is simply made rigid with one end of the dog 24; but this arm 20 has a depending pin 20′, which is adapted to have a bearing on the bottom of the casing. The hammer 15 is fitted between a pair of lugs 28 28, which are integral with the top plate or cover, and said hammer is fulcrumed at a point a short distance from its inner end on a shaft or bolt 29, which is supported in the lugs 28, thus forming a heel 30 on the hammer. To this heel is connected one end of a coiled retracting-spring 30′, which has its other end fastened to an extended end of the pivot of the operating-lever. (See Fig. 3.)

At one side of the heel of the hammer I provide the shoulder or rib 32, and when the hammer is raised to its operative position the shoulder is forced into such juxtaposition to the detent that the latter will take in the rear of the shoulder, and thereby hold the hammer in its raised position. One end of the pivot or shaft for the hammer 15 is extended beyond the lug in which it is fitted, and this extended end of the bolt or shaft is provided with a notch or groove in which one end of the spring 27 is fitted. In the arm of the detent to which the arm 20 is united is formed a notch 35 to receive the other end of the spring 27, and this spring thus serves a two-fold purpose—*i. e.*, to hold the detent and its arm 20 in position and to prevent the shaft or bolt of the hammer from working loose and falling out of position, which it would be liable to do, owing to the violent motion to which it is subjected under the strain of the retracting-spring.

On the vertical wall at the larger end of the wedge-shaped casing I provide a pair of vertical lugs or ways 36, which are made integral with the casing, and between these lugs or ways is pivoted a tooth or spur 37, which is adapted to lie snugly between the lugs when it is turned up and the implement is to be carried around; but at the same time this tooth can be turned down so as to project below the bottom of the casing, whereby the tooth or spur can be forced or pressed into the floor or carpet and thus hold the casing from being forced out of position when the door is opened.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings; but it may be briefly summarized, as follows: The cap or cartridge is first placed on the vertical post, the operating-lever raised, and the hammer is lifted against its spring-tension, so that the detent will take in the rear of its shoulder, after which the implement is placed on the floor with its tapering end close to the door and with the free end of the lever in contact or close proximity to the door, the spur being forced into the floor or carpet. Should the door be forced open, it will ride upon the inclined casing and depress the operating-lever, so that the latter will move the arm 20 and the detent sufficiently to release the hammer, thus permitting the retracting-spring to forcibly depress the hammer against the cap or cartridge, causing an explosion sufficiently loud to awaken the occupant of the room or arouse the household. At the

same time the tapering casing acts to wedge the door and prevent the burglar from entering the room, the spur holding the casing against displacement when pressed upon by the door.

The device can be compactly folded, so that it can be readily carried, and I have found that it is reliable and efficient in service and is, furthermore, cheap of manufacture.

Various slight changes in the form and proportion of parts and details of construction may be made without departing from the spirit or sacrificing the advantages of my invention.

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

1. In a detonating burglar-alarm, a wedge-shaped casing provided with means for holding the same in place and with a slotted cover or top plate, the pivoted hammer, a spring within the casing and connected to the heel of the hammer, the operating-lever, also pivoted with the casing and having the lateral cam-surface, the pivoted detent, and an arm rigid with the detent and lying normally in the path of the operating-lever, substantially as described.

2. As an article of manufacture, a burglar-alarm comprising the casing having its inclined top provided with slots, a spring-controlled trigger pivoted within the case, an operating-lever fulcrumed in the casing and adapted when extended to be operated by the opening of a door, and a detent fulcrumed in the casing close to the trigger to engage with the heel thereof when the latter is raised and provided with an arm which lies at right angles to the detent and in the path of the door-lever to be moved laterally by said lever when the same is depressed and thus release the detent from the trigger, substantially as and for the purpose described.

3. As an article of manufacture, a burglar-alarm comprising the casing having its inclined top provided with slots, a trigger pivoted in the casing and having one end of its fulcrum-pin notched, the spring connected to the heel of the trigger, the door-lever, also fulcrumed in the casing, the fixed post, the detent pivoted on said post to have one end engage with the heel of the trigger and provided with an angular arm that lies in the path of the door-lever, and a spring coiled around said fixed post and having one end bearing against the detent and its other end connected to the notched fulcrum-pin of the trigger, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand this 21st day of November, A. D. 1891.

WM. W. CLIMENSON.

Witnesses:
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A. B. PATTERSON.