

No. 713,782.

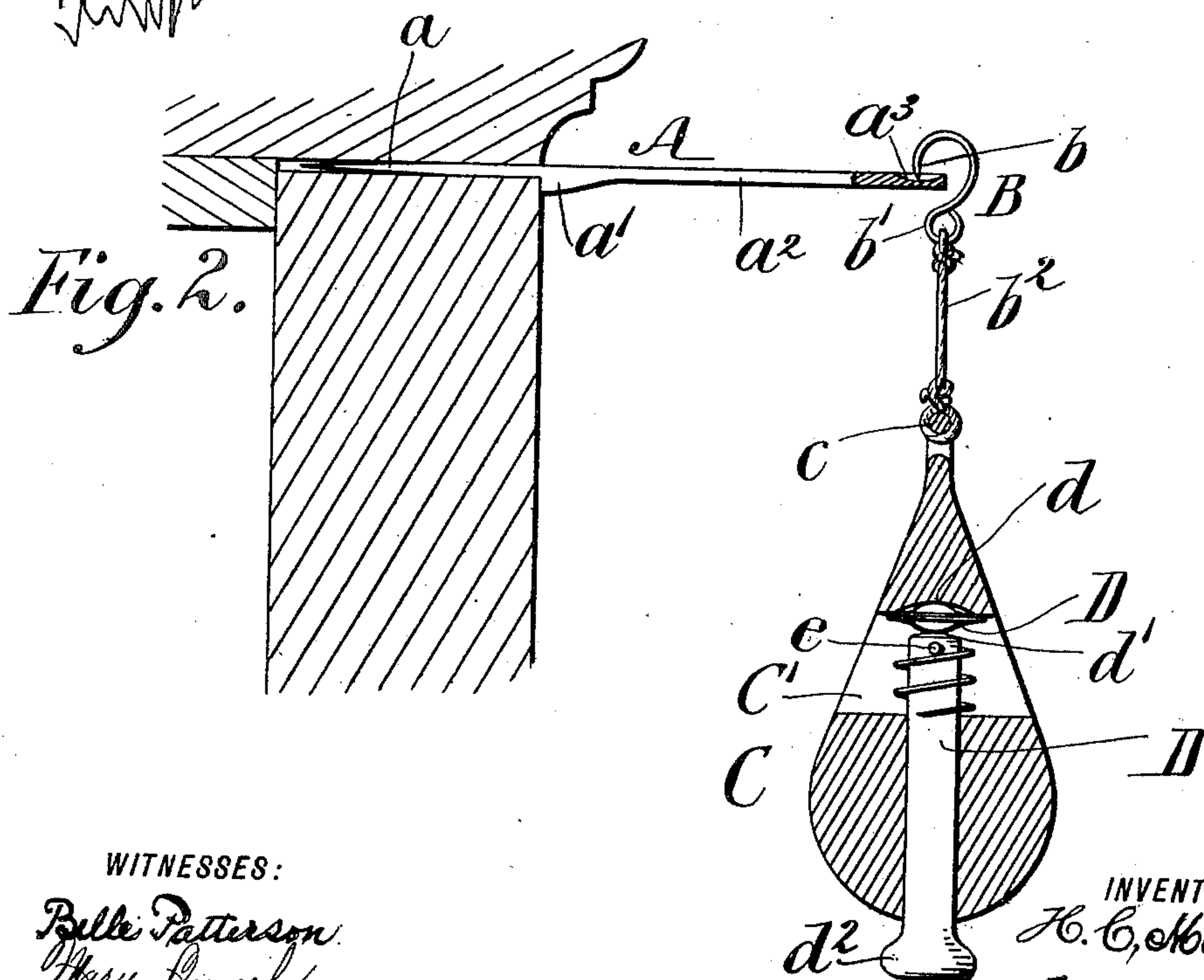
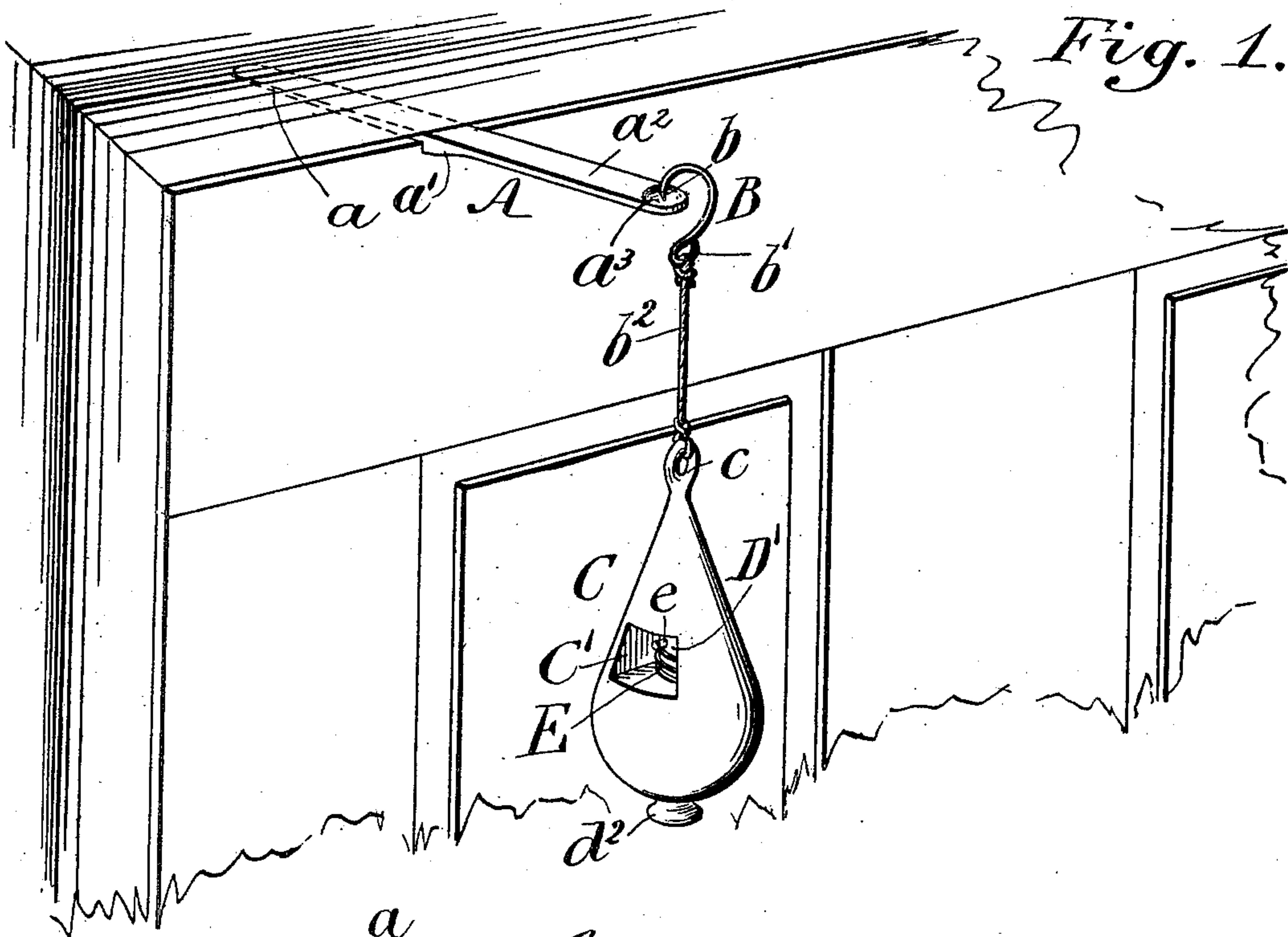
H. C. MACDONALD.

Patented Nov. 18, 1902.

BURGLAR ALARM.

(Application filed Oct. 26, 1901.)

(No Model.)



WITNESSES:

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 713,782, dated November 18, 1902.

Application filed October 26, 1901. Serial No. 80,063. (No model.)

to all whom it may concern:

Be it known that I, HAROLD C. MACDONALD, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

The subject of the present invention is an improved burglar-alarm, and has for its prominent objects the production of a device of the character mentioned which will not only be simple and inexpensive, but can be readily and conveniently applied to indicate the surreptitious opening of a door, blind, or even window.

An efficient form of the invention comprises a shank or thin metal bar adapted to be inserted and held between the top edge of a door and its jamb, the projecting portion of said shank or bar having a depression utilized for the engagement of a hook flexibly suspending a bob or pear-shaped weight provided with a firing-pin and anvil, the latter being peculiarly disposed in the upper tapering portion of the bob and relative to a transverse opening therein, the firing-pin being normally spring-elevated with a gentle force, the arrangement being such that upon the opening of the door in either direction the shank or bar will be released from its clamped position, thereby permitting the bob or weight to drop, so that the head of its firing-pin will come in contact with the floor and cause said pin to explode a detonating-cap placed and held by the gently-pressed pin in position on the anvil.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the upper portion of a closed door and its jamb and showing my improved burglar-alarm adjusted in position. Fig. 2 is a transverse vertical section of the parts illustrated in Fig. 1, the section being taken in a plane centrally through the bob or weight.

The improved burglar-alarm comprises principally two parts, to wit: a metal shank or thin bar adapted to be clamped between the door and its jamb and a detonating bob

or weight designed to be suspended from the projecting portion of the shank or bar. The shank is designated by A and is presented by an extended thin metal bar comparatively narrow in width. One portion a of this bar tapers off to a thin edge to form a tongue for facilitating its insertion and clamping between the door and jamb, the inserted movement being limited by a stop or shoulder a' on the under side of the bar and which is intended to bear against the door-face contiguous to its top edge. The remainder of the bar is presented by a thicker projecting portion a^2 , having a circular depression a^3 in its upper side, near its extremity, the bottom of said depression being rounded, as most clearly indicated in Fig. 2.

The point b of a hook B is intended to engage this depression a^3 , the hook being held in the position shown in both figures by a bob or pear-shaped weight C, suspended from the hook-eye b' by a short flexible suspensory or cord b^2 , attached to said hook-eye b' and to an eye c in the upper tapered end of the weight.

A transverse opening C' , extending horizontally through the median portion of the weight, permits a detonating-cap D to be adjusted in position between an anvil d , formed by an upper concaved surface, and the upper end d' of a firing-pin D' , which plays vertically through the lower part of the weight, the upper end of which extends into the opening C' , as aforesaid, while the lower end extends down below the base of the weight, where it is fashioned into a head d^2 . A spiral spring E embraces that portion of the firing-pin which is within the opening C' , said spring acting with gentle expansion between the bottom of the opening and a little transverse abutment e in the upper end of the pin. By this arrangement the spring gently operates to so normally hold the pin as to retain the detonating-cap against the anvil.

From the foregoing description the purpose and functions of the device will be readily apparent. The tapered tongue a of the shank is inserted between the door and its jamb, so that the said shank will be firmly supported, so that the portion a^2 will extend horizontally at the door-top. A detonating-cap being placed in position between the anvil and the

end of the firing-pin, as previously described, the hook B, with the suspended bob or weight attached, has its point engaged with the depression a^3 in the shank, and the weight will hang as illustrated. Upon the opening of the door irrespective of the direction, the shank will be released from its clamped position and tilted by the weight, the hook B will be disengaged, permitting the weight to drop, the heavier end of which will so hold it in falling that the headed end of the firing-pin will come in contact with the floor, driving the pin inward, exploding the cap, and making sufficient noise to direct attention to the fact of the door having been opened. By making the transverse opening C' of about the size indicated and by locating the same as illustrated the under side of the upper conical part of the bob or weight presents an area that admits of the anvil-forming concavity therein extending practically over the entire surface of said under part, thus facilitating the introduction and centering of the cap to a nicety to insure its perfect detonation and permitting the ready removal of adhering fragments of the same when exploded. The gentleness of the spring E is so graduated that while it will suffice to retain the cap in position against the anvil after being inserted it will not tend to premature explosion and, moreover, can easily yield to a comparative slight pull of the fingers.

Obviously the improved burglar-alarm can be utilized in any connection where the shank can be clamped between a fixed and movable part.

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

1. In a burglar-alarm, the combination with the bar A, formed with the thin tapered part a , the shoulder a' , the thick part a^2 , and the depression a^3 , of the pear-shaped weight C, formed with the transverse opening C' , concaved anvil d , formed in the under side of the upper tapered part of the weight at the top of the opening C' , eye c , and bored with a channel in the lower heavier part of said weight and communicating with the said opening C' , a firing-pin D' , working in said channel, projecting into said transverse opening, formed with a rounded surface at its upper end d' , and the head d^2 , a hook engaging the said depression a^3 , and means for connecting

the said hook and weight; all substantially as and for the purpose set forth. 55

2. In a burglar-alarm, the combination with the bar A, formed with the thin tapered part a , the shoulder a' , the thick part a^2 , and the depression a^3 , of the weight C, formed with the transverse opening C' , concaved anvil d , formed with under side of the upper tapered part of the weight at the top of the opening C' , eye c , and bored with a channel, communicating in the lower heavier part of said weight and with said transverse opening; a firing-pin D' , working in said channel, projecting into said transverse opening, having its upper end d' , formed with a rounded surface, and the head d^2 , at its lower end; a spring E, embracing said firing-pin in said transverse opening, and by its resilience normally pressing said pin against said anvil with a gentle force, a hook engaging said depression a^3 , and a flexible connection attaching said hook to said weight, all substantially as and for the purpose set forth. 60 65 70 75

3. A burglar-alarm, consisting of two separate parts; to be used, each, in connection with the other; the one part consisting of a bar formed with a tapering shank to fit in between the edge of a door and the casing thereof, a shoulder to rest against said door, and a depression for the engagement of a hook; the other part consisting of a weight, formed with a transverse opening comprising a concaved anvil, formed in the under side of the upper tapered portion of said weight, the lower portion of the latter bored with a channel in the lower heavier part of said weight and communicating with said transverse opening, a firing-pin working in said channel, and detonating a cartridge in said transverse opening, a hook engaging said depression in said bar, and by means of a proper connection holding said weight in suspension, so that said hook may be displaced by the opening of said door, all substantially as and for the purpose set forth. 80 85 90 95

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of October, 1901. 100

HAROLD C. MACDONALD.

Witnesses:

BELLE PATTERSON,
MARY LYNCH.