

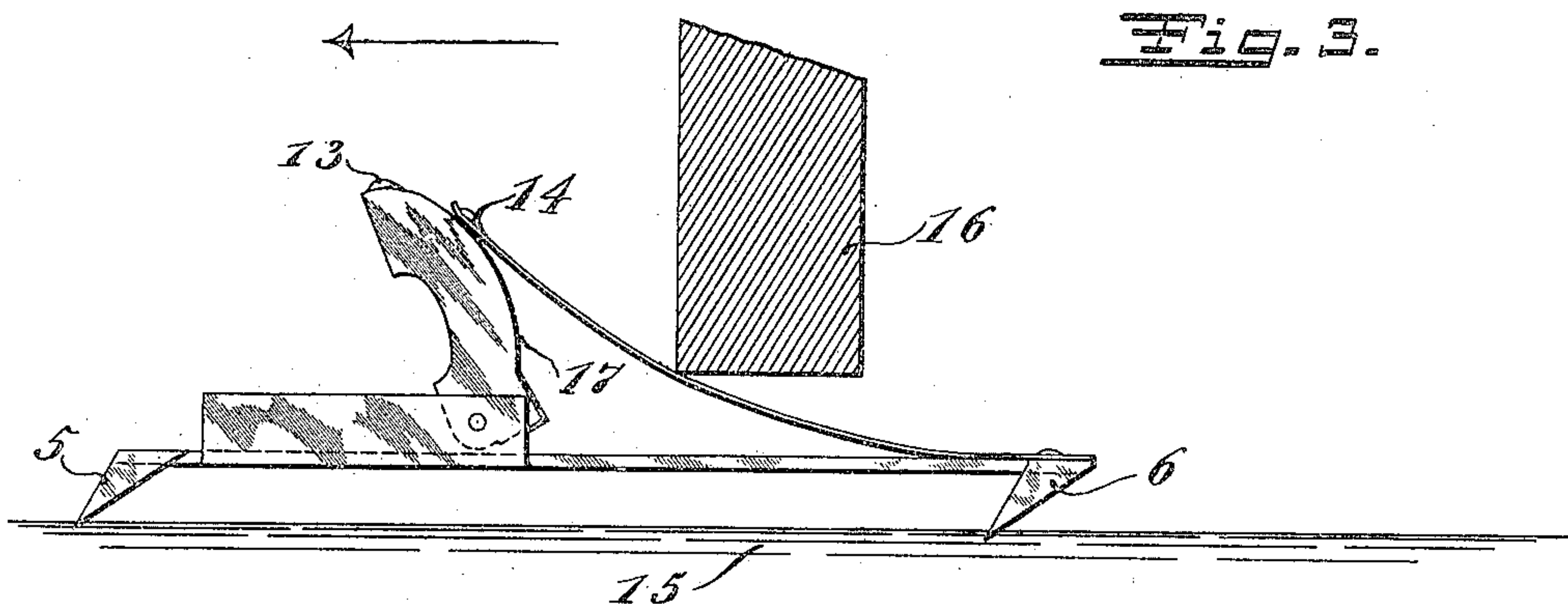
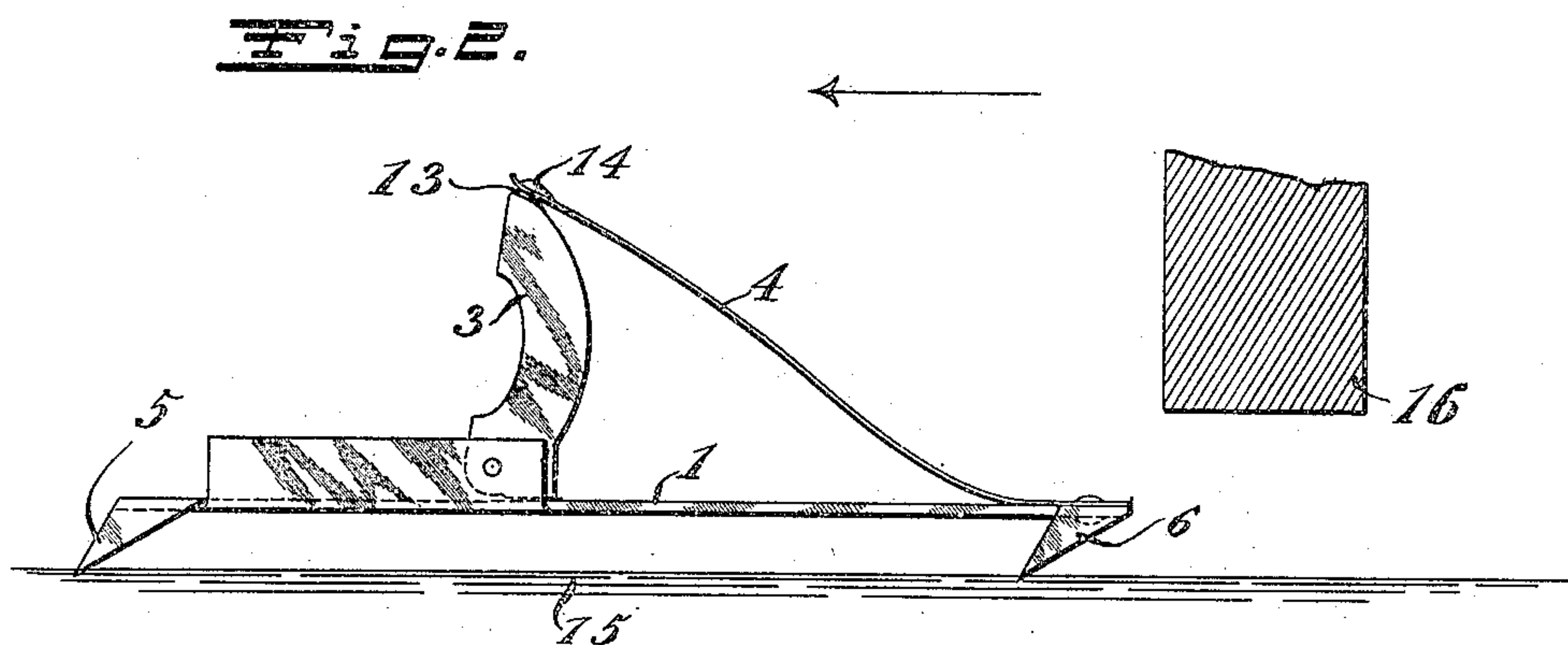
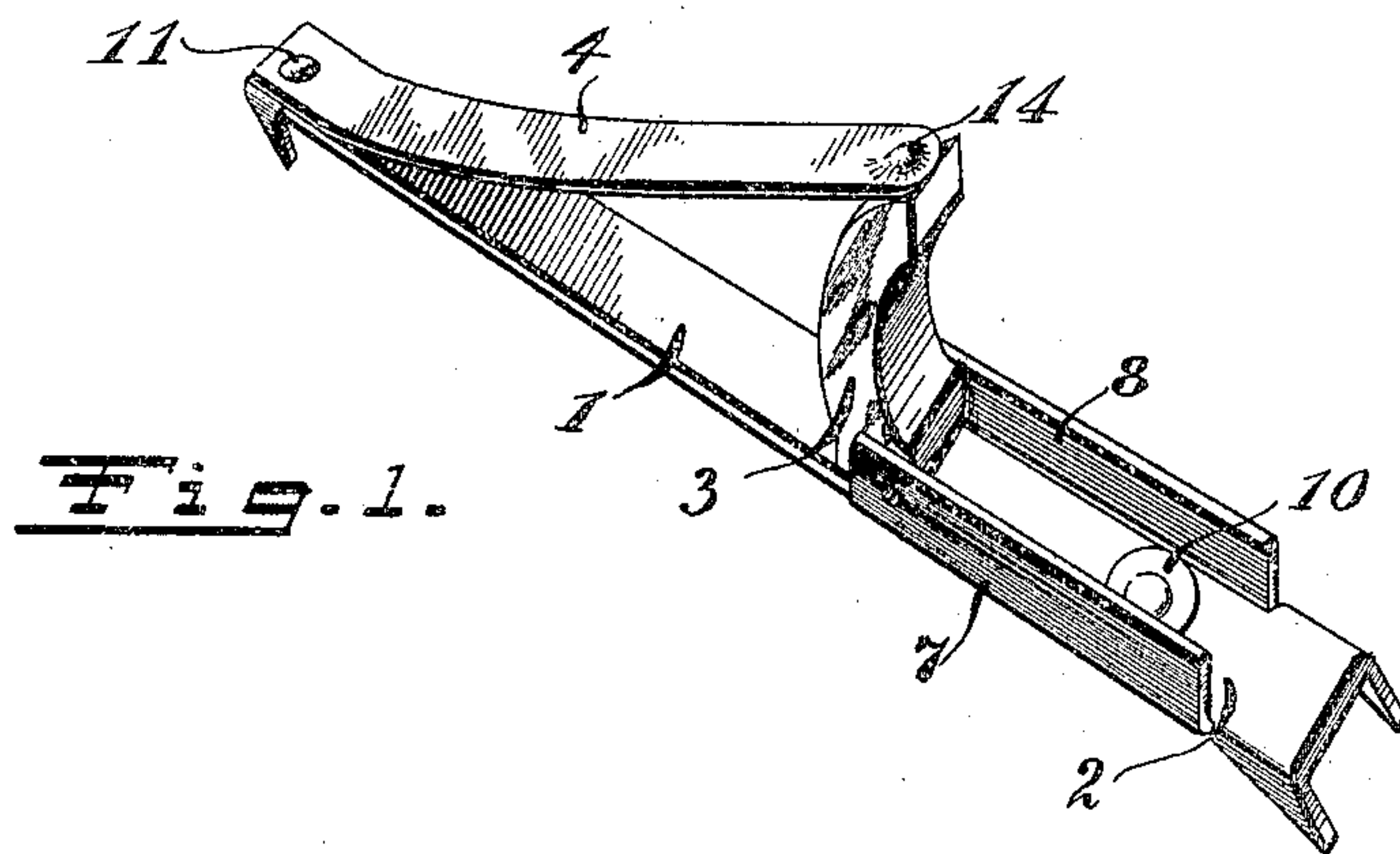
No. 812,420.

PATENTED FEB. 13, 1906.

F. C. HARRIMAN.
BURGLAR ALARM.

APPLICATION FILED SEPT. 24, 1904.

2 SHEETS—SHEET 1.



Witnesses
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Julien T. Davies Jr.

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2 SHEETS—SHEET 2.

Fig. 4.

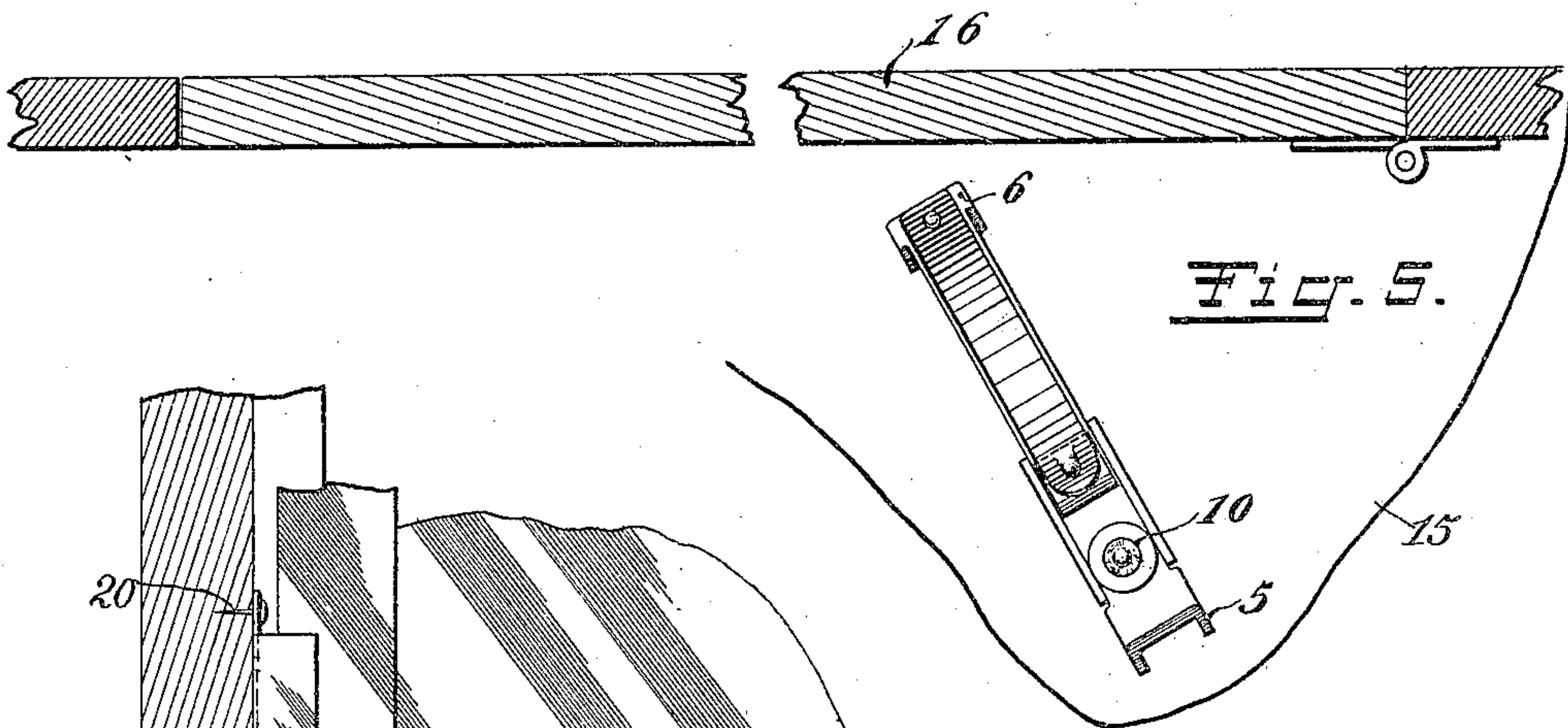
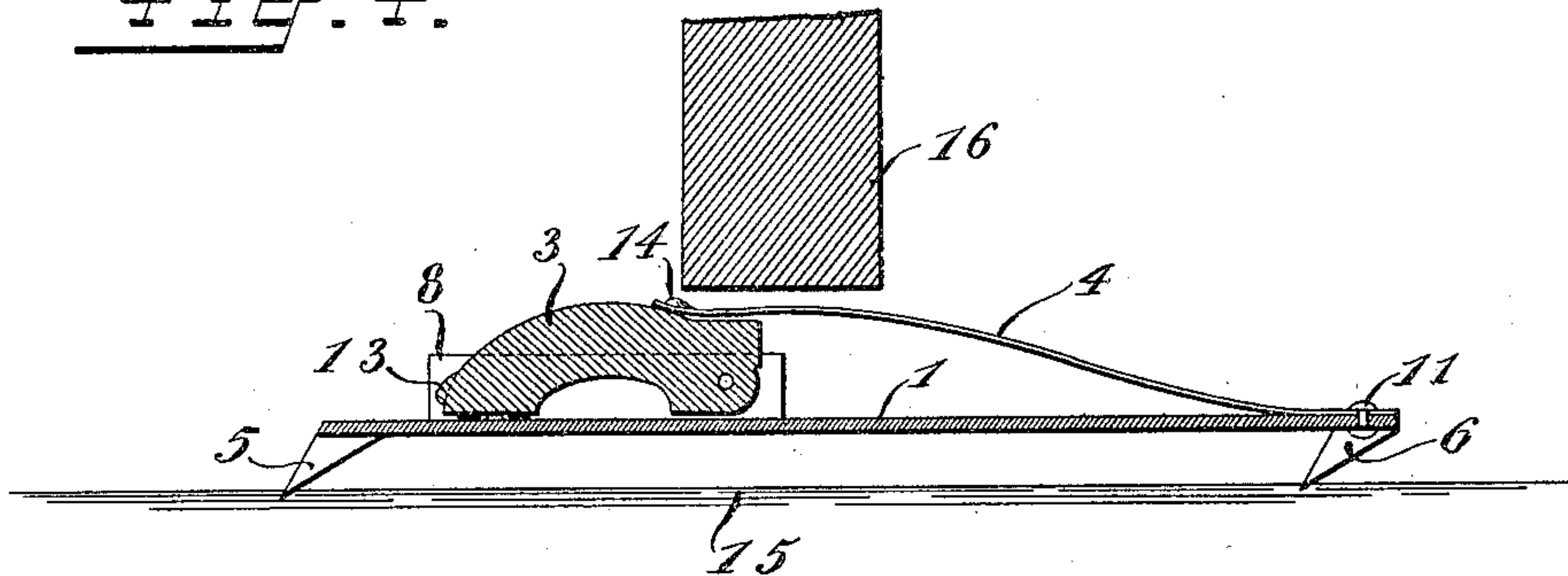
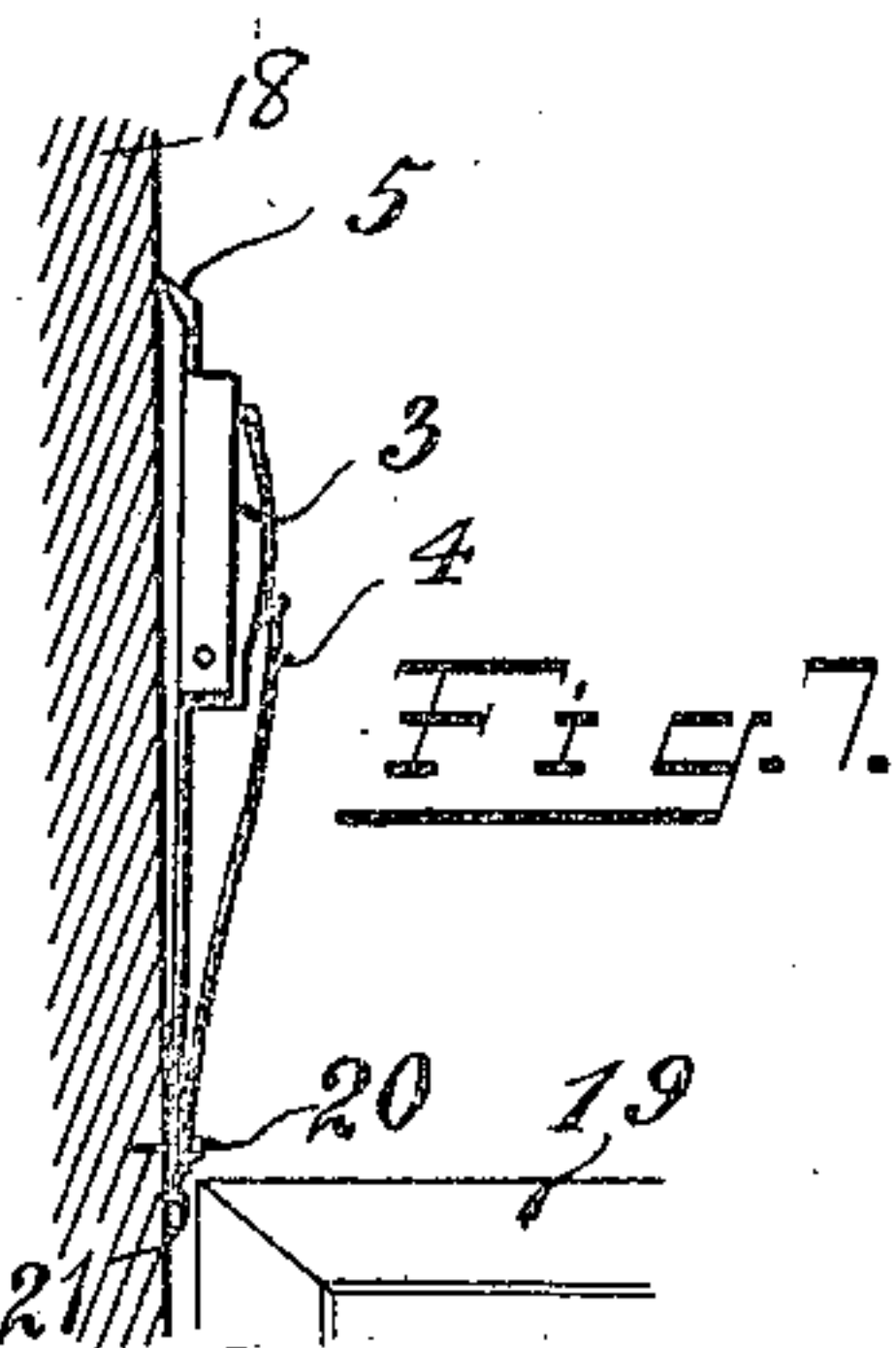
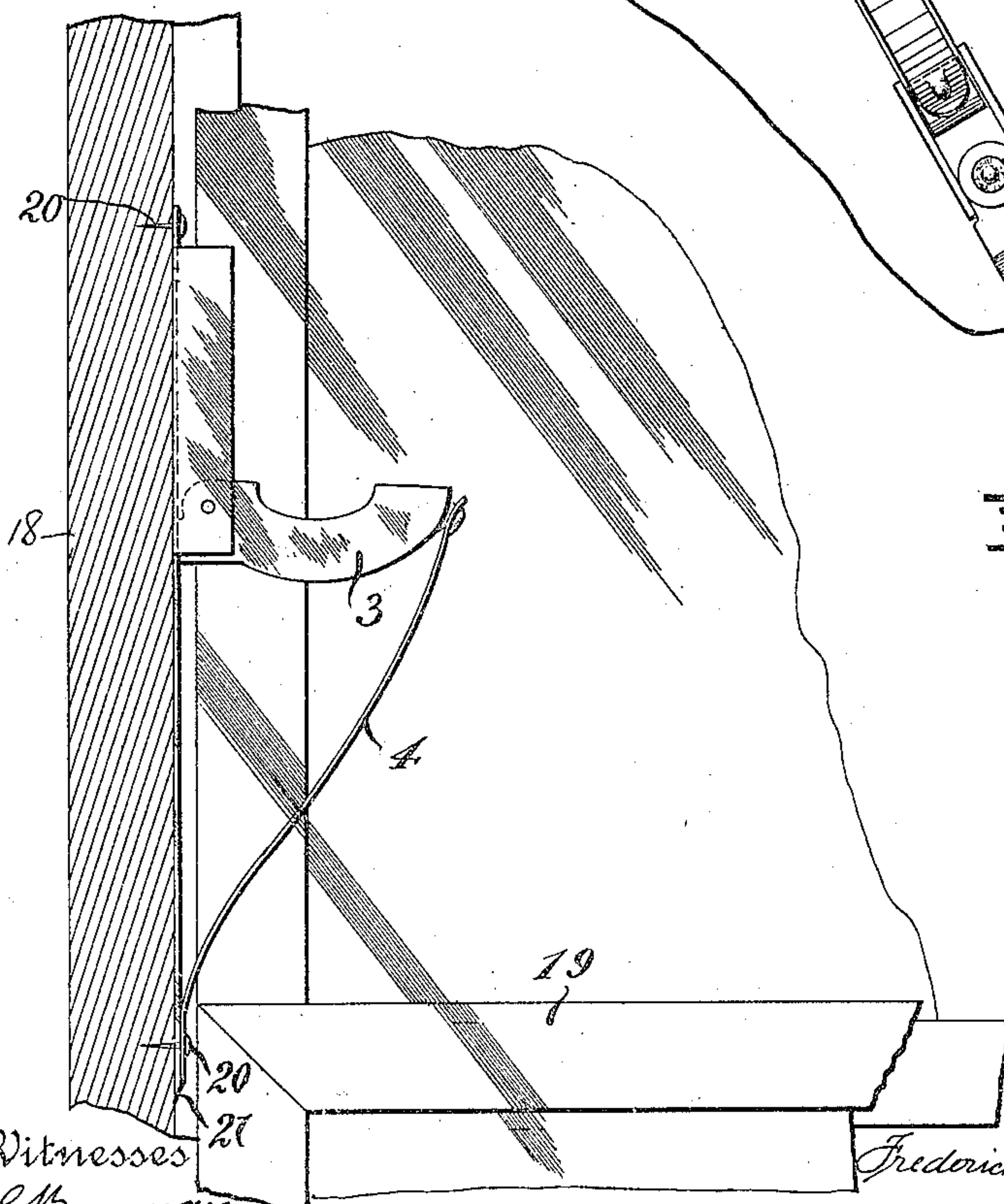


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDERICK C. HARRIMAN, OF YONKERS, NEW YORK.

BURGLAR-ALARM.

No. 812,420.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed September 24, 1904. Serial No. 225,739.

To all whom it may concern:

Be it known that I, FREDERICK C. HARRIMAN, a citizen of the United States, residing in the city of Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to the class of burglar-alarms designed to be placed directly upon a floor or window-stile adjacent to a door or sash or upon the door or sash itself and to emit an alarm when the door or sash is opened.

The object of the invention is to produce a simple, compact, economical, and reliable device of this sort which may be readily placed in position to protect a door or window and which will be effective to alarm not only the occupants of the building, but the burglar as well. To these ends the invention comprises a base designed for ready attachment to a floor or the stile of a window-frame, a hammer pivoted upon the base, an anvil or means for holding a detonator, and means for cocking the hammer and for enabling the opening movement of the door or window to cause the hammer to strike. Any suitable detonator may be used, preferably one giving a loud report, so as not only to arouse the occupants of the house, but also to lead the burglar to suppose that he is discovered and that a firearm has been shot at him, thereby frightening him away. In its preferred form the base is constructed so that it is only necessary to set it upon the floor near the door, its construction being such that it cannot be moved out of position by the opening of the door, whereby it may be readily removed and replaced whenever desired.

In the accompanying drawings, Figure 1 is a perspective view of my improved burglar-alarm, showing the form adapted to rest upon a floor, the hammer being cocked. Fig. 2 shows the alarm placed upon the floor in position to be operated when the door opens, as indicated by the arrow. Fig. 3 shows the alarm being operated by the movement of the door. Fig. 4 is a longitudinal section showing the hammer in striking position. Fig. 5 is a plan showing the alarm placed upon a floor near a door, the hammer being cocked. Fig. 6 shows how the device may be attached to the stile of a window-frame in position to be operated by the opening move-

ment of a sash. Fig. 7 is a modification of the Fig. 6 construction.

The alarm is illustrated as comprising a base 1, provided with an anvil portion 2, a hammer 3, and a hammer-driving spring 4. The base may be conveniently formed from a strip of sheet metal, from each end of which may be bent downwardly and forwardly projecting prongs 5 6. Between the ends of the base the metal may be turned up to form opposite ears 7 8, between which the hammer 3 is pivoted by means of a pin 9 in such a manner that it may strike forwardly and downwardly upon a percussion-cap or other detonator 10, resting upon the anvil 2 and confined in the pocket formed by the ears 7 8. The member 4, which drives the hammer, may be in the form of a leaf-spring or spring-finger and by means of a rivet 11 may be fixed at its rear end to the rear end of the base and may extend forwardly and upwardly to rest upon the hammer. The tip of the latter may be provided with a small boss 13, and the tip of the spring may be cupped at 14 to fit yieldingly upon the boss and hold the hammer cocked. When the parts are in this position and the alarm is resting upon the floor, the rear end of the spring is lower and the forward end higher than the lower edge of a door, as at Fig. 2. When it is desired to set the alarm, the hammer may be lifted, flexing slightly the spring 4, until the cup 14 catches upon the boss 13. Then a paper or other detonator 10 is set upon the anvil 2 between ears 7 8, and the device is then set upon the floor near a door 16, in such a position that when the door is opened the bottom edge thereof will engage the spring, as at Fig. 3, and by a wedging action flex the same downwardly, causing the cup 14 to slip off and release the boss 13, and also causing the spring to drive the hammer down with great force, insuring the explosion of the detonator 10. The back of the hammer is preferably arched, as at 17, in such a manner that the tip of the spring rides down over the same to accelerate its velocity during its downward movement. When the door strikes the spring, it tends to push the alarm along the floor; but this tendency is resisted by the prongs 5 6, which point forwardly and downwardly, so that the pressure caused by the door may cause the prongs to dig into the floor or carpet, for which purpose they may be sharpened, as illustrated. Thus it will be seen that the alarm may be inex-

5 pensively manufactured, is of few parts and reliable, may be readily set, is adapted to use common detonators, and requires no skill in its use, while capable of frightening a burglar away as well as of giving notice of his presence, and when it is unnecessary to protect the door the alarm may simply be picked up from the floor and set down by another door or put away until again needed.

10 At Fig. 6 the invention is shown as adapted to use upon a window, being attached to the stile 18 just above the sash 19, with the spring end lowermost, this end of the base being unprovided with the spurs 6 and being
15 made sufficiently thin to enable the sash to operate the spring without likelihood of binding in the window-frame. Usually there is sufficient space between the sash and the stile to accommodate the alarm, especially when
20 the lower end thereof is made thin, as illustrated. The upper prongs 5 may be retained so that the sash may not force the alarm up along the stile, and a tack 20 may be used for securing the lower end of the base, the tack
25 being preferably secured to the base during its manufacture. The upper end of the base may be similarly secured, as at Fig. 6, or the prongs 5 may be retained at said upper end, as at Fig. 7. The lower end of the base may
30 be beveled or thinned, as at 21, to insure that the top corner of the sash while rising shall not catch and hold thereon. The action of the sash upon the spring 4 is substantially the same as that already described with reference to the door, the hammer being released
35 and caused to strike by the flexure of the spring due to the engagement of the sash therewith.

Other variations may be resorted to within
40 the scope of my invention.

Having thus described my invention, I claim—

1. A detonating burglar-alarm comprising a base, a hammer pivoted upon said base and
45 having an arched back, and a spring fixed at one end upon said base in rear of said hammer and inclining upwardly thereto and resting upon said arched back; means being provided for retaining the hammer in its raised
50 position, the hammer being releasable by downward pressure upon the spring, and the tension of the spring caused by such pressure being effective to cause the hammer to strike.

2. A detonating burglar-alarm comprising
55 a sheet-metal base having downwardly-turned prongs and upwardly-turned ears which form a pocket for holding a detonator,

a hammer pivoted between said ears, and a spring secured at its rear end to said base and inclining upwardly and forwardly and bearing upon said hammer; means being provided for enabling said spring to hold said hammer cocked, and the construction being such that downward flexure of the spring releases the hammer and causes it to strike.

3. A detonating burglar-alarm comprising a strip of sheet metal having at each end a pair of downwardly and forwardly turned prongs and near its forward end a pair of upwardly-turned ears which form a pocket for
70 the reception of a detonator, an arched hammer pivoted between said ears and provided upon its tip with a boss, and a spring attached at its rear end to the rear of said strip and inclining upwardly and forwardly and having a
75 cupped portion to fit over said boss for holding the hammer when cocked, the spring being of such a length that its tip rides down along the arched back of the hammer while the latter is striking.

4. A burglar-alarm comprising the combination of a base; a hammer pivotally mounted therein; and a spring secured at its lower end to said base and having its upper free end overlapping the upper free end of said hammer in the latter's cocked position, the upper
85 free end of said spring being formed with a retaining-recess for holding said hammer in cocked position.

5. A burglar-alarm comprising the combination of a base provided with retaining
90 means; a hammer pivotally mounted in said base and actuated by a flat spring; and said flat spring one end of which is secured to the base and the other end of which overlaps and
95 retains said hammer in cocked position; said hammer being released by pressure upon said spring and driven by said spring after such release.

6. In combination, a door; a base; a hammer
100 mounted in said base; and an inclined spring-arm the lower end of which is secured to said base and the upper end of which is formed to engage and retain in cocked position said hammer; said door and base being
105 movable relatively to each other, and said spring-arm being in the path of travel of said door and actuated directly by the pressure of said door to release and drive said hammer against said base.

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