

(No Model.)

2 Sheets—Sheet 1.

W. D. BENSON & T. B. LUMPKIN.
BURGLAR ALARM.

No. 307,260.

Patented Oct. 28, 1884.

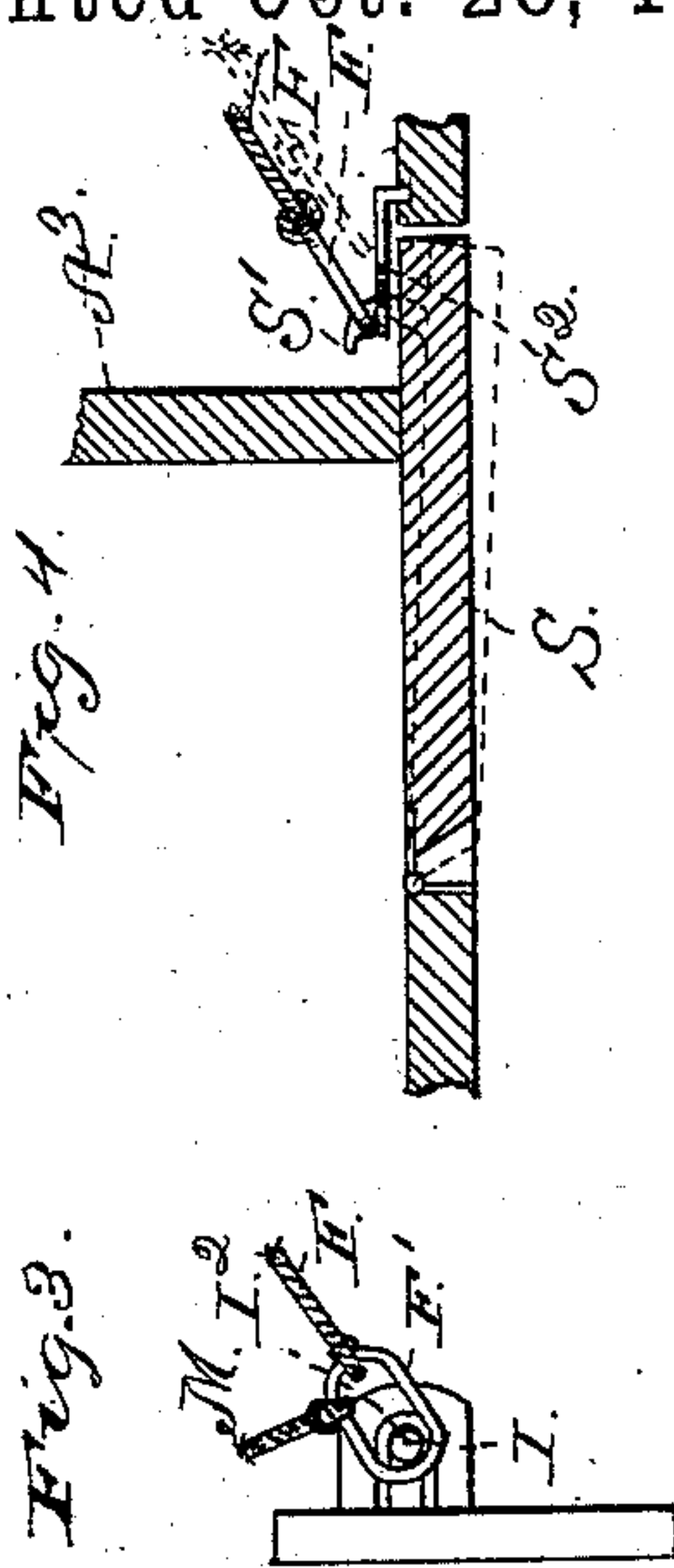
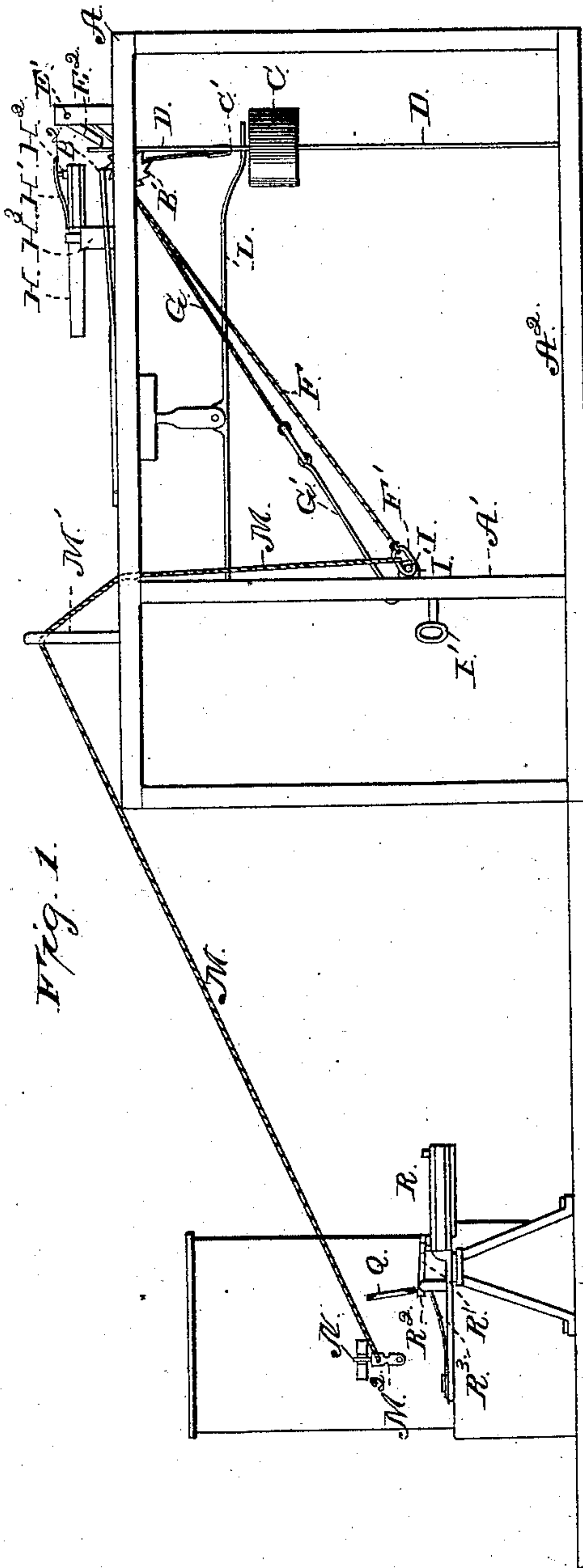


Fig. 3.

Fig. 4.

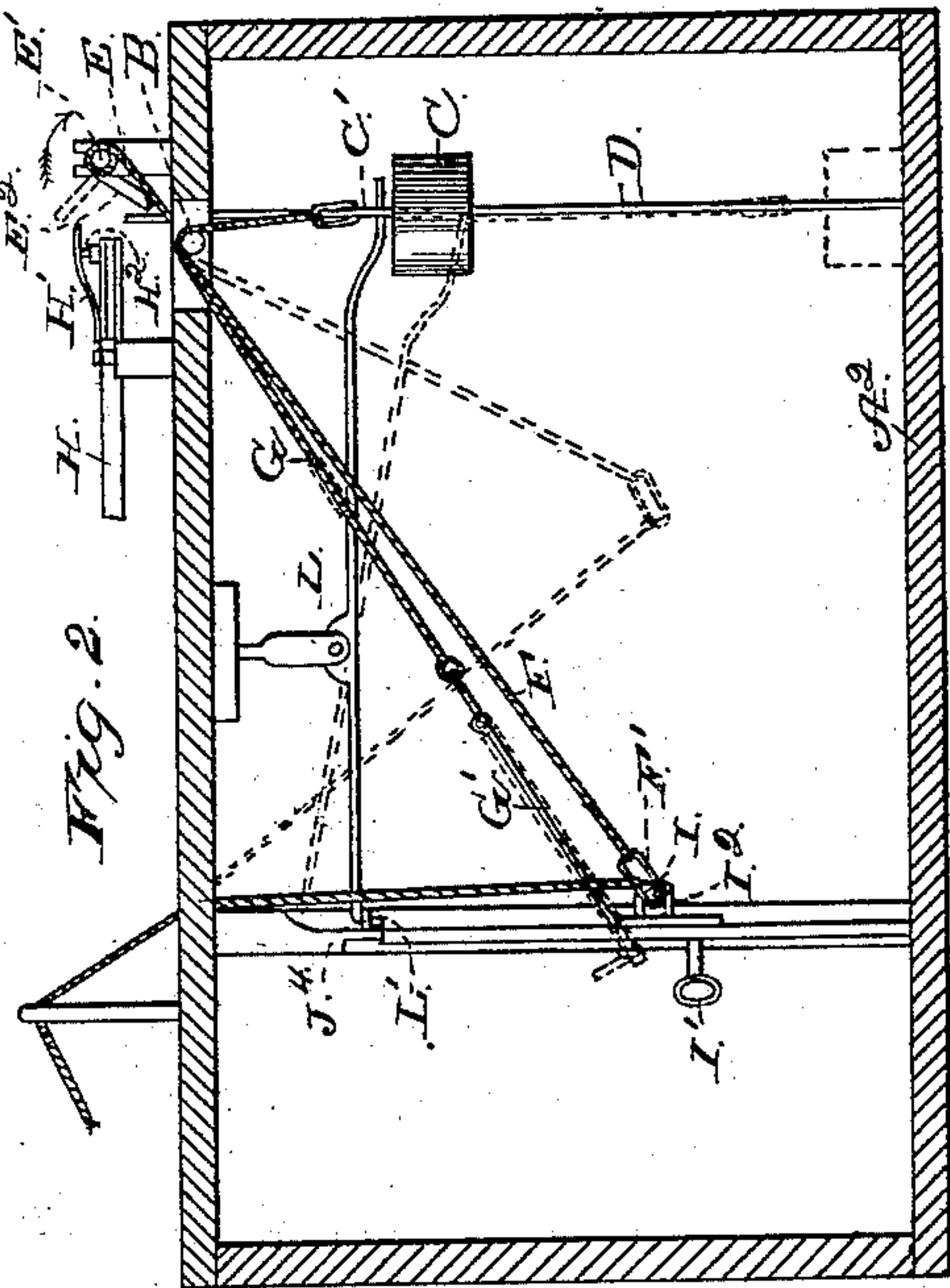


Fig. 2.

Fig. 5.

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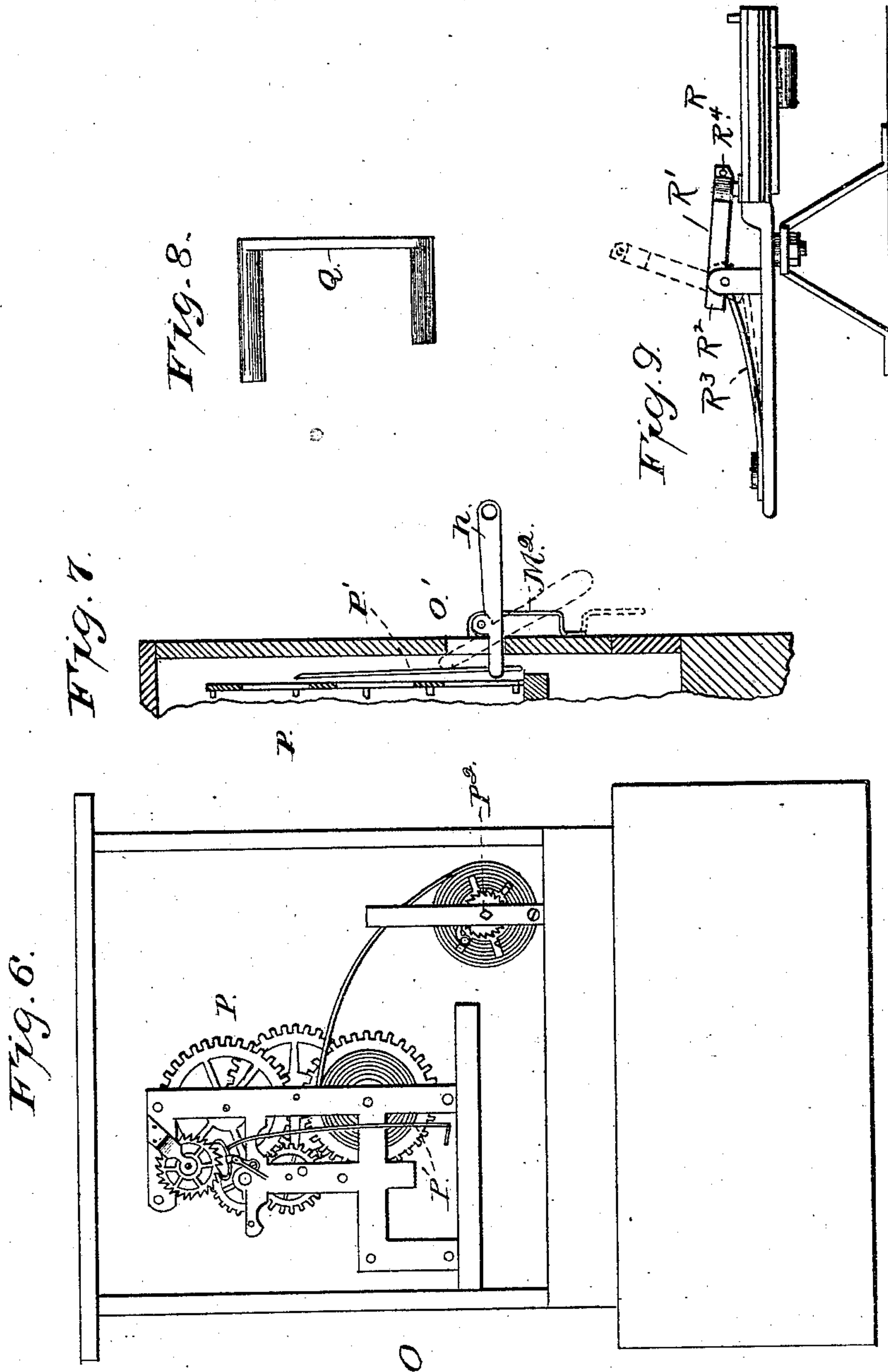
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UNITED STATES PATENT OFFICE.

WILLIAM D. BENSON AND THOMAS B. LUMPKIN, OF ROCKY MOUNT, SOUTH CAROLINA; SAID BENSON ASSIGNOR TO SAID LUMPKIN.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 307,260, dated October 28, 1884.

Application filed March 11, 1884. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM D. BENSON and THOMAS B. LUMPKIN, citizens of the United States, residing at Rocky Mount, in the county of Chester and State of South Carolina, have invented certain new and useful Improvements in Burglar-Alarms; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in burglar-alarms, and comprises means for grasping and holding the burglar, an alarm for rousing the inmates of the house sought to be entered, and an automatic device whereby a fire-arm is discharged in the direction of and wounds or frightens the burglar, as will hereinafter more fully appear.

In the drawings, Figure 1 is a side elevation of our improved machine, the side of the house being removed in order to better illustrate the operating parts. Fig. 2 is a vertical longitudinal section of the portion of the house adjacent the door and showing the tripping mechanism. Fig. 3 is a detail view of the slip-bolt, with link comprising the tripping mechanism. Fig. 4 is a detail view of a modification of the tripping mechanism. Fig. 5 is a detail perspective view of the door and grappling-bail. Fig. 6 is a detail view of the clock-work for discharging the gun that shoots the burglar, the front part of its casing being removed. Fig. 7 is a vertical section of the front of the clock-work. Fig. 8 is a detail view of the firing-crank, all of which will be described. Fig. 9 is a detail enlarged view of the gun presently described.

The top plate, A, front beams, A', floor A², and door A³ are intended to represent the ceiling, door frame or front, floor, and door of a dwelling or other house. Obviously the construction thereof and the disposition of the mechanism presently described may be varied to suit any architectural style or taste without involving a departure from the principles of our invention. A shaft or pulley, B, is

journaled at a suitable elevation, preferably in the ceiling and at a point in rear of the door. This roller is provided with a ratchet-wheel, B'. A spring-pawl, B², is arranged to engage said ratchet and hold the shaft from revolving and preventing the operation of the grappling devices when so desired. When it is desired to set the trap so it will operate in the manner presently described, the pawl is held clear of the ratchet by means of a block or similar device inserted under the movable end of said pawl, as will be readily understood. The operating-weight C is arranged under the shaft B, and is guided preferably by vertical rods or rails D, which pass through the weight, and are secured rigidly in position and guide said weight in its ascent and descent. Chains or ropes E F G have one end secured to the weight C and are wrapped around the shaft B, and are connected at their other ends to the devices presently set forth. The rope E is carried up and secured to the windlass E'. This windlass has a crank, E², which revolves as indicated in Fig. 2. A gun, H, is secured on the ceiling, and is provided with a spring-hammer, H', which has an extension in rear of the nipple H², which extension is arranged so it will be engaged and raised by the crank-handle E² of the windlass. As the weight C descends, the handle E² is revolved in the direction indicated in Fig. 2, and the hammer H' is raised, and as it is released by the continued motion of the crank E² the gun H is fired and the inmates of the house aroused. The windlass E' is used to elevate the weight, and to permit such operation the gun H is swiveled at H³, so it can be turned out of the way of handle E² when the weight is being raised. The rope F is provided on one end with a link or eye, F'. This link catches over the end of a slip-bolt, I, as most clearly shown in Fig. 3. This bolt passes back when operating by the key I' through a staple, I², so that the link F' is pushed by said staple off the bolt when the latter is drawn back. This link, connected with the bolt, holds the weight up, and when the link is released from the bolt in the manner described the weight descends. The rope G is connected at its forward end to one end of bars G', the other ends of which pass through

openings G^2 , formed through the door-jambs A' , and are connected to the ends of the side bars or arms of the grappling-bail. This grappling-bail J is composed of the cross-bar J' and the side bars or arms, J^2 . The bar J' is serrated or provided with teeth J^3 , so as to securely hold the burglar. A lug, J^4 , is extended from the cross-bar J' , and is perforated, as shown in Fig. 5. This perforated lug extends through an opening, J^5 , formed through the door-framing immediately above the door, and is held by the point of the pivoted arm L . It will be noticed that the door-frame is slotted at K , so that the grappling-bail will rest down therein flush with the outer face of the door-frame. The arm L is pivoted on a suitable support, and its forward end is bent to form a point, L' , adapted to engage the perforated lug J^4 . The rear end of this arm is passed through an eye, C' , on the weight C , so that when said weight is elevated the point L' is held in the lug J^4 , and any accidental falling of the bail prevented. A cord, M , is made fast at one end to link F' , and its other end extends up through the ceiling, thence over a guide-bracket, M' , and is carried to the clock-work casing and secured to the upper end of the trip M^2 . This trip is pivoted at its lower end and turns up under the bar N . This bar N is pivoted in and extends through the front of the casing. The outer end of this arm is the heavier, so that when the trip M^2 is pulled from under it it will fall. A slot, O' , is formed in the casing to permit this dropping, which is indicated in dotted lines, Fig. 7. The inner end of the arm N , when held horizontally, as shown in Fig. 7, engages the pallet-rod P' of the clock-work P , and holds the clock-work from running. This clock-work is constructed so that when it has been running a given time after it is set in motion its shaft P^2 , which is properly clutched, will be released and revolve rapidly by the force of the spring. This shaft is provided with the crank Q , one arm, Q' , of which is socketed to fit the shaft P^2 , and its other arm, Q^2 , is extended horizontally, preferably upward in position to engage the extended rear end of the hammer R' of the gun R . This gun R is accurately aimed at the door A^3 . Its hammer R' is extended at R^2 in rear of its pivot, and is operated by a spring, R^3 , bearing upward against said rear extension. In its revolution the arm Q^2 of the crank Q strikes the rear extension, R^2 , of the hammer R' , and the gun R is fired, wounding the burglar and arousing the neighborhood, the gun being loaded with wads or in other desired manner, so as to give a loud report.

The operation of our invention is simple. When the parts are in the position shown in full lines in Fig. 2, the trap is set for the burglar. He comes to the door and inserts and turns the key I' . This slips the bolt I from within the staple I^2 and out of the link F' , releasing the rope F , and the weight C falls.

The arm L is then raised at L' from eye J^4 . The rope G draws the grappling-bail into the position shown in dotted lines, Fig. 2, catching the burglar and holding him firmly. At the same time the rope E revolves crank E^2 . This crank strikes hammer H' , and the alarm-gun H is fired, waking the inmates of the house. At the same time the rope M pulls trip M^2 from under arm N . This sets the clock-work in motion, and in a given time—fifteen or twenty minutes—if the burglar is not meantime captured and the clock-work stopped, the shaft P^2 is released, the crank Q strikes hammer R' , and the gun R is fired, wounding the burglar.

The form of the clock-work may be varied in innumerable ways, and its construction and operation will be obvious to those skilled in the art.

Many modifications may be made in our improvement without departing from the principles of the invention.

Instead of the link F' , a loop might be formed in the end of the rope F . The staple I^2 is used to render the releasing action more certain, and could be dispensed with when desired.

The construction of latch and releasing devices is the one preferred for dwellings, &c.

Where our invention is applied to safes, we prefer to use a platform, S , hinged at its forward edge in front of the door and extended in rear thereof, and is provided with a stud or pin, S' . The link fits over this pin, and as the platform is depressed by the burglar stepping on it the link F' is detached, the operation being facilitated by the staple S^2 , corresponding in operation to the staple I^2 , as does also the pin S' to the pin or bolt I .

We do not desire to be limited to the particular form of tripping devices described, as they may be varied without departing from the principles of our invention. It will be seen the gun R has its hammer R' provided in its forward end with an opening or eye, R^4 . It will be seen the hammer may be elevated to the position indicated in dotted lines, at which point it will stand against the tension of the spring. Now, if the clock-work be arranged to revolve crank Q against the back of the hammer, it will be forced down and the gun discharged.

It is manifest that the clock-work might be dispensed with and the cord M be secured directly to the outer end of the hammer, though we prefer the clock-work, as thereby sufficient time may be allowed, under ordinary circumstances, between the tripping of the bail and the firing of gun R , for the inmates of the house to capture the burglar. It will also be seen the gun R might be used in connection with any door by connecting it by a cord with the door, so that the opening of the latter would draw the hammer down. The gun, being swiveled as shown and described, will be turned by the tension of the cord until it points in direction of the strain thereon, when

the hammer will be drawn down and the gun discharged.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination of the shaft or pulley, the grappling-bail, a weight, the rope connecting said bail and weight, tripping mechanism, the elevating-windlass having a suitable crank, and the alarm-gun having its hammer arranged in the path of and adapted to be operated by the crank of the elevating-windlass, substantially as set forth.

2. The combination, with the grappling-bail, the weight, the connecting-rope, and the trip devices, of the arm L, pivoted midway its ends, and having one end engage the bail, and its other end the weight, substantially as and for the purpose set forth.

3. The combination, with the grappling-bail, the weight, the rope connecting the weight and bail, and the tripping mechanism, of the gun R, the clock-work train, having one of its shafts provided with a crank arranged to engage and operate the hammer of said gun, and provided with a depending pallet-rod, the pivoted arm N, having its inner end arranged to engage the pallet-rod P, the trip-bar M², and the cord M, having one end connected with trip M², and its other end connected with the weight, all arranged and operating substantially as set forth.

4. In a burglar-alarm and trap, the combination of the shaft or pulley, the grappling-bail, the rope or chain having one end connected with the weight, and its other end connected with the grappling-bail, and mechanism for holding and automatically releasing said weight, substantially in the manner and for the purposes specified.

5. The combination, with the grappling-bail, the weight, and the cord connecting same, of the rope F, having one end connected to the weight, and its other end carried up over the shaft or pulley and provided with a link or loop, and the releasing bolt or pin secured on a movable support, and adapted to operate substantially as set forth.

6. The combination of the bail, the weight, the rope connecting the bail and weight, the tripping mechanism, the gun, the clock-work adapted to fire the gun, and the rope connecting the bail and clock-work, whereby the operation of the bail will start the clock-work, substantially as and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM D. BENSON.
THOMAS B. LUMPKIN.

Witnesses:

W. S. SIBLY,
J. A. SCOTT.