

(Model.)

T. J. GLENN.  
BURGLAR ALARM.

No. 251,109.

Patented Dec. 20, 1881.

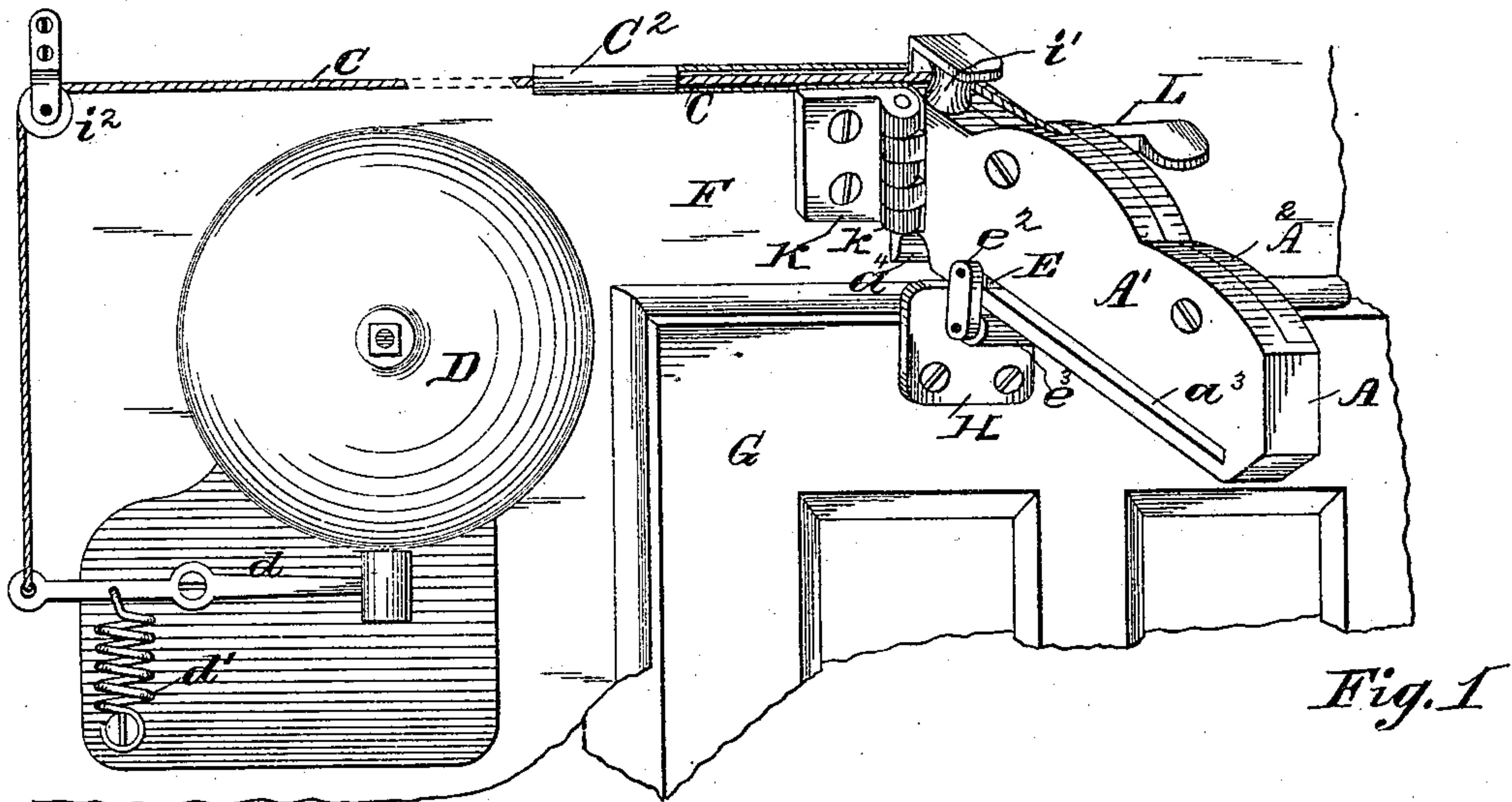


Fig. 1

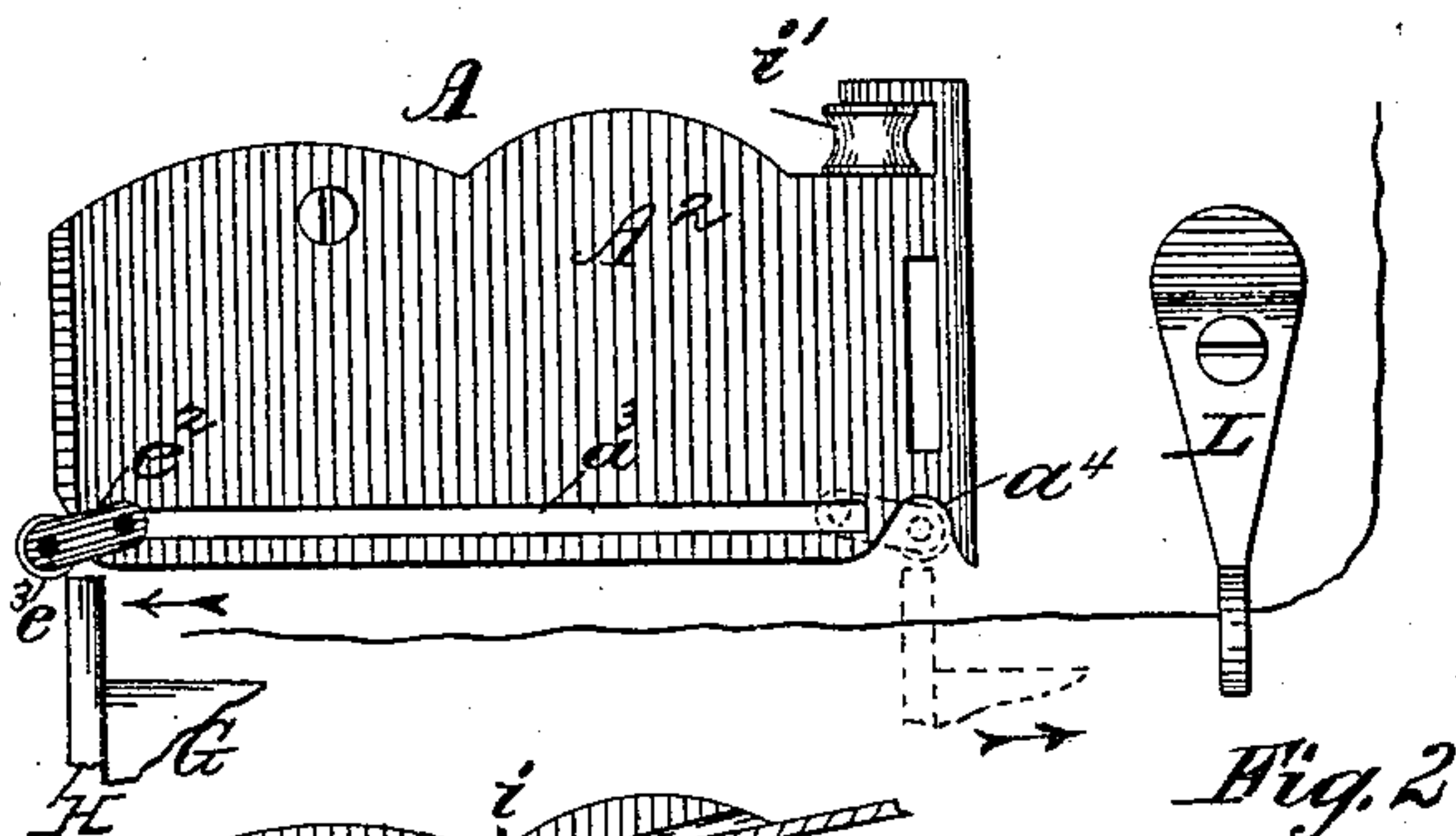


Fig. 2

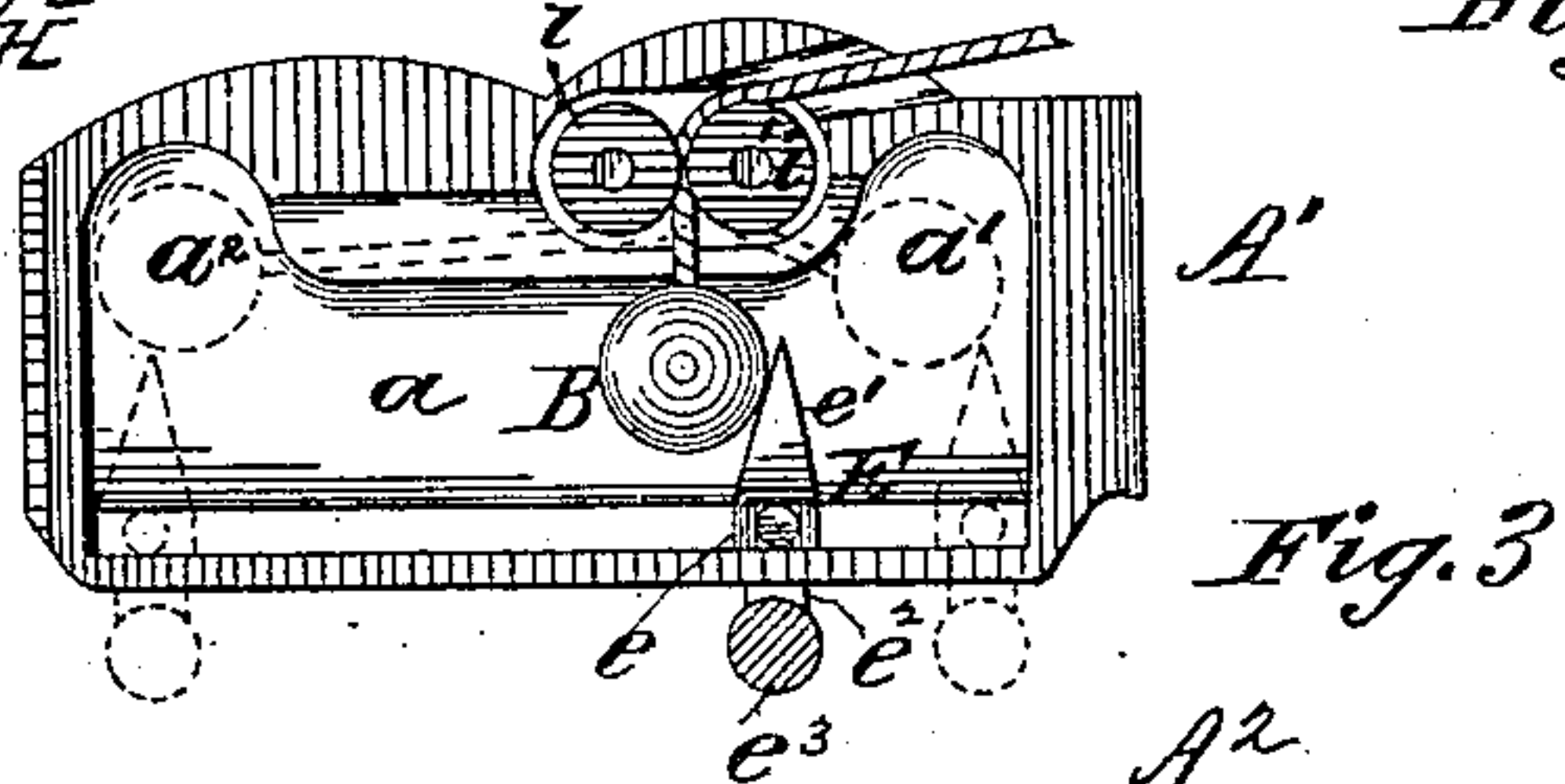


Fig. 3

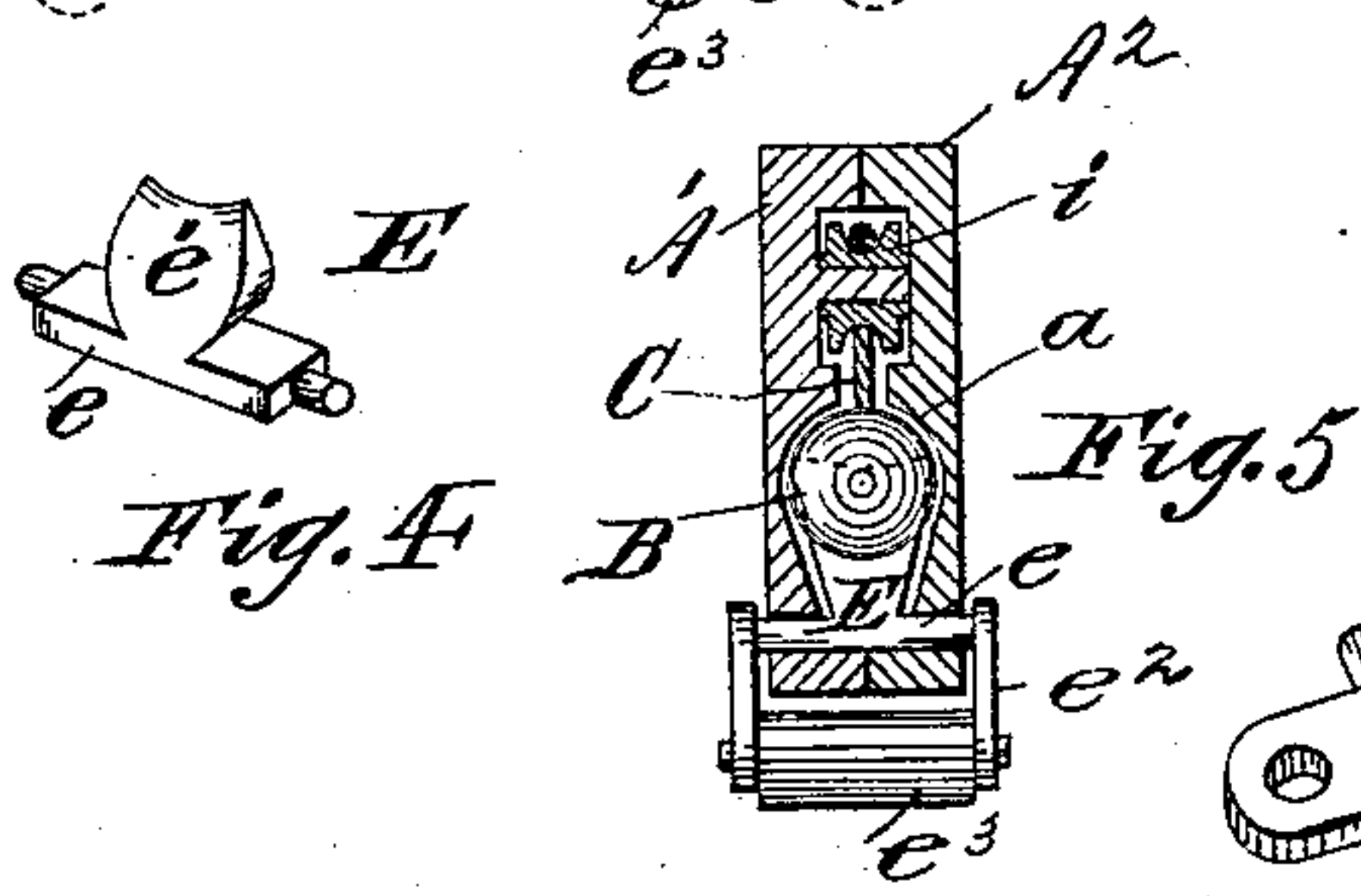


Fig. 4

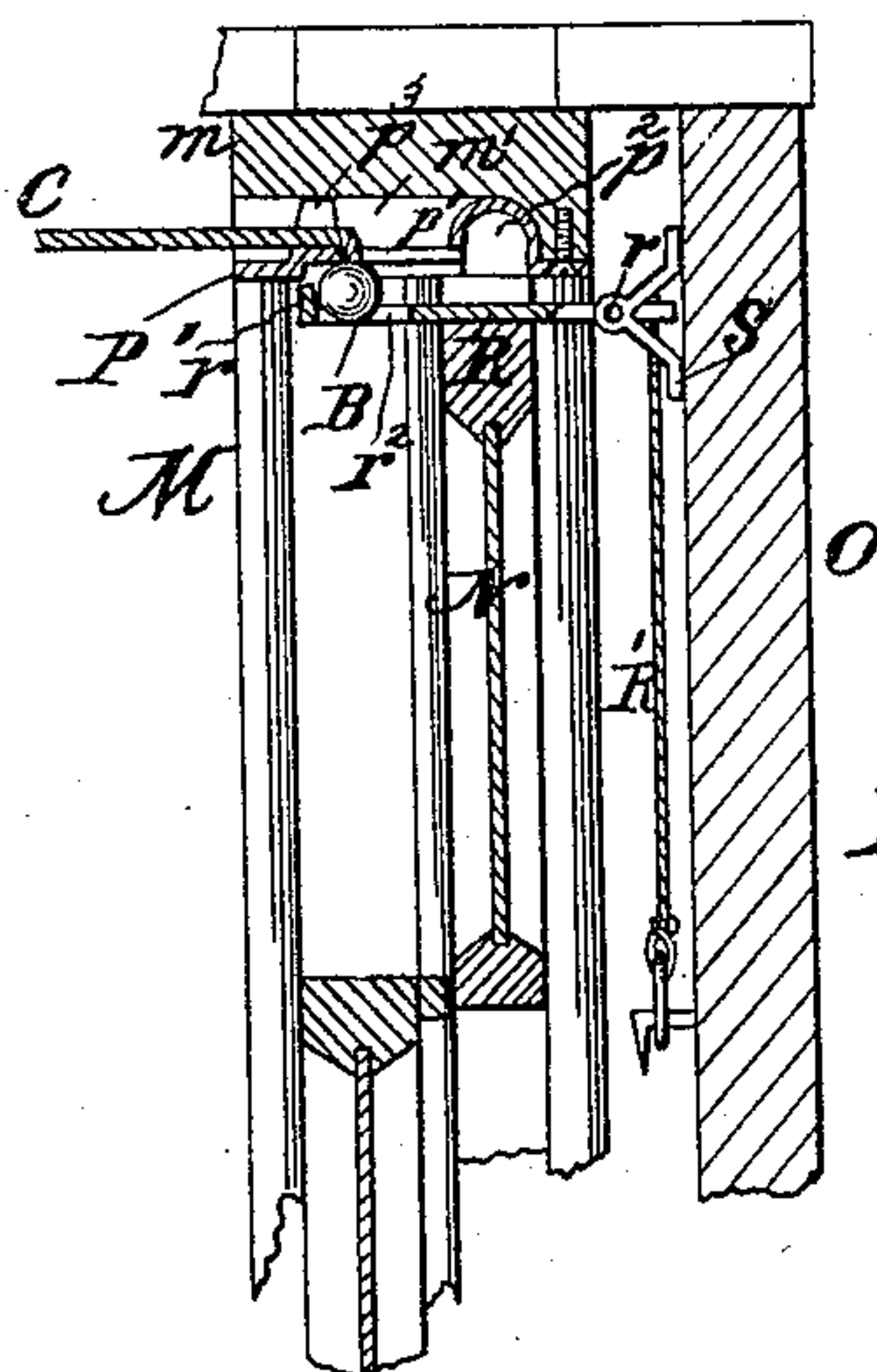


Fig. 6

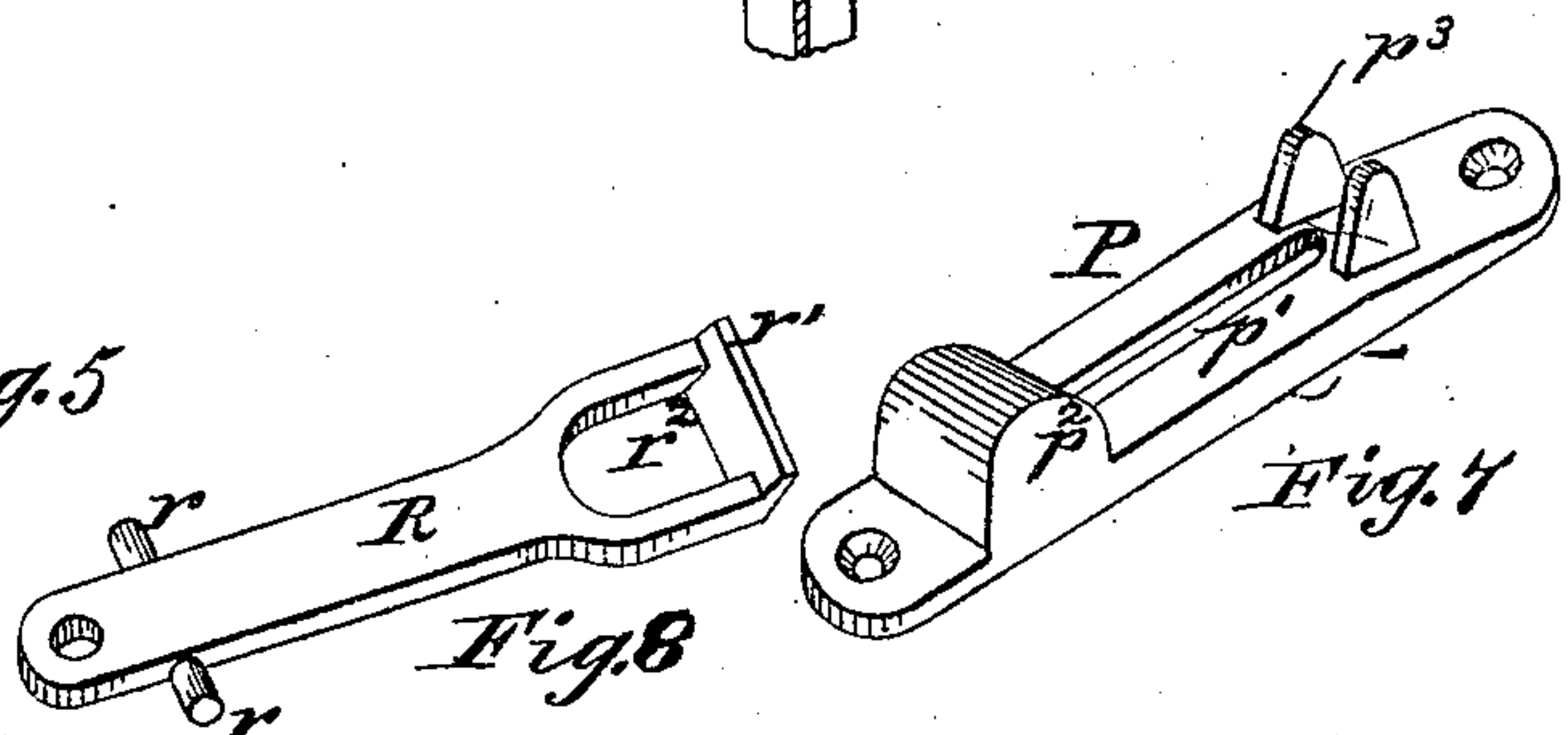


Fig. 8

Fig. 7

WITNESSES:

*E. van Stavern,*  
*Joe B. Connolly*

INVENTOR,

*Thomas J. Glenn*

*By Connolly Bros.*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

THOMAS J. GLENN, OF PHILADELPHIA, PENNSYLVANIA.

## BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 251,109, dated December 20, 1881.

Application filed June 7, 1881. (Model)

*To all whom it may concern:*

Be it known that I, THOMAS J. GLENN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Door and Burglar Alarms; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my invention, illustrated as applied to a door-frame. Fig. 2 is a side elevation. Fig. 3 is a longitudinal vertical section. Fig. 4 is a detail perspective. Fig. 5 is a transverse vertical section. Fig. 6 is a vertical section of a window and shutter, showing the adaptation of a modification of my invention thereto, and Figs. 7 and 8 are perspective details of said modification.

My invention has relation to mechanical (as distinguished from electric) burglar-alarms, and has for its object to provide a device which will unfailingly actuate or start an alarm whenever a door or window to which it is attached is opened.

My invention consists in the peculiar construction and combination of parts hereinafter more fully set forth, having reference principally to the formation of a case or box which receives a ball designed and adapted to be attached to the end of a draft-cord, said case having a groove, in which said ball is caused to travel when a door or window is opened, and a chamber or offset, into which said ball slips or is pushed, so as to relieve the tension on its draft-cord, and thereby cause a distant alarm attached to or connected with the other end of said draft-cord to be actuated or permitted to start.

Referring to the accompanying drawings, A designates a case or box, made in two pieces or sections, A' and A<sup>2</sup>, and having an internal groove or channel, *a*, which is enlarged at either end, forming offsets or chambers *a'* *a*<sup>2</sup>, respectively.

B is a ball adapted and designed to fit and move in said groove, and is secured to one end of a draft-cord, C, whose other end is connected to a distant alarm of any suitable character, so that said alarm will be actuated or started when draft is exerted on said cord. In the

drawings I have illustrated such alarm as consisting of a gong, D, with a striker, *d*, to which the cord is attached. Now, if the ball B be moved along the groove *a*, draft will be exerted on the cord C, and if the tension be suddenly relaxed the striker will be quickly moved by its retracting-spring *d'* and caused to sound an alarm on the gong. To move the ball and to permit its sudden release, I provide a carriage or traveler, E, consisting of a bar, *e*, with head *e'* and depending links *e*<sup>2</sup> *e*<sup>3</sup> and roller *e*<sup>3</sup>. The bar *e* fits and moves in a longitudinal slot, *a*<sup>3</sup>, in the case A, the head *e'* extending up into the groove *a*, while the links *e*<sup>2</sup> and roller *e*<sup>3</sup> hang pendent outside of said case, as shown.

The case A is attached to a door-frame, F, and to the door G below is secured a bracket, H, in such position that when closed it rests in contact with or behind the traveler E, as shown in Fig. 1. As the door opens the bracket H pushes the traveler before it, the latter moving the ball B until it reaches the offset *a*<sup>2</sup>, when it moves up into such offset, allowing the traveler to pass it, as shown in dotted lines on the left of Fig. 3. The ball B is now free to return, and is drawn back by the retracting-spring *d'* acting on cord C through channel *a*, its clearance of traveler E having relaxed the tension on said cord and permitted the striker to act. The device resets itself automatically after being operated, the closing of the door pushing back the traveler to its normal position and causing the latter to clear itself and get its head back of the ball by pushing the latter up into the offset *a'*, as shown in dotted lines on the right of Fig. 3.

To provide for easy movement of the cord, it passes over anti-friction rollers *i* *i'* *i*<sup>2</sup>, and to allow the device to be moved out of the way during the day-time, or when not required to be set, the case A is hinged, as shown at *k*, on a bracket or base-plate, K. A pivoted button, L, is also provided to hold the case in the projected position it occupies when set, as shown in Fig. 1.

Owing to the peculiar slip movement of the ball, the device will unfailingly actuate or start an alarm whenever the door to which it is attached and on which it is set for operation is opened sufficiently to move the ball far enough to clear the traveler or rise up into the offset *a'*, the opening of the door for a very short dis-



tance—say an inch and a half—effecting such movement and release.

To adapt it to windows and shutters, which latter open outwardly, the device is somewhat modified from the construction just described, which is intended for adaptation to doors opening inwardly. Such modification is shown in Figs. 6, 7, and 8. In the former figure, M represents a window-frame, N the upper sash, and O the outside shutter. In a mortise,  $m'$ , on the under side of the upper cross piece,  $m$ , of the frame is fitted a plate, P, having a longitudinal slot,  $p'$ , which terminates in a recess or offset,  $p^2$ . Said plate has also on its upper side two lugs,  $p^3$ , which form guides for the draft-cord C, which passes through said slot  $p'$ , and is there secured to the ball B.

R represents a stirrup-shaped bar, pivoted or sustained on trunnions  $r$  in a bracket, S, fastened on the inside of the shutter O. This bar fits in a notch cut in the upper part of the sash N, its end flange,  $r'$ , impinging against the side of the ball B, the latter resting in the opening  $r^2$ . As the shutter is opened the bar R moves the ball B along the under side of the plate P until said ball rises in the offset  $p^2$ , clearing the flange  $r'$ . The ball now slides back under the influence of the draft on the cord C, and the tension of said cord being thus suddenly released, the alarm is caused to be sounded.

I have shown the alarm as consisting of a gong; but my invention may be used with a clock-work or other alarm, the draft on the cord C serving to release a detent, and thus set such alarm going. In every case, however, a retracting-spring should be so connected with the draft-cord that when the ball moves up into the offset provided for its clearance it will be drawn back by such spring to its normal position.

To protect the draft-cord from being cut by burglars or intruders, who might open the door far enough to permit the introduction of shears or other cutting device for severing said cord, I propose arranging a metallic pipe,  $C^2$ , in position above the door and leading up to the case A. The cord will pass through this pipe until it emerges at the pulley  $i^2$ , and is thus protected against cutting.

To facilitate moving the stirrup R without

requiring one to get upon the window-frame for that purpose, a cord,  $R'$ , may be attached, as shown, to the tail-piece of said stirrup. To adjust the stirrup the cord  $R'$  is pulled after drawing down the upper sash. Then on pushing up said sash the stirrup is held in position.

In lieu of the button L, for holding the case in its projected position, a lock operated by a key, or some equivalent means for securing the case A fixedly in position when set and preventing its being turned on its hinge by burglars or intruders, may be employed, and such I intend using.

What I claim as my invention is as follows:

1. In a device for actuating or starting an alarm by exerting draft on a cord or equivalent connection, the combination, with a plate or case, of a ball to be moved therein or thereon and an offset or chamber for receiving and releasing said ball at the limit of its movement, substantially as specified.

2. In combination with case A and ball B, connected to the actuating-cord of a burglar-alarm, the traveler E and bracket H, said parts being constructed and designed for operation substantially as described.

3. The combination, in a device for actuating or starting an alarm, of the following parts, namely: a case or plate for guiding the movement of a ball, and formed with an offset for the latter, a draft-cord passing into said case or plate, and attached to such ball at one end and connected with a retracting-spring at its other, and a traveler or pusher for moving said ball along said case or plate until it is caused to enter the offset therein, whereby draft is exerted on said cord and suddenly released, allowing the latter to be jerked by its retracting-spring, substantially as shown and described.

4. In a burglar or door alarm, the combination, with a hinged case, A, of a button or locking device for holding said case in its projected position, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

THOS. J. GLENN.

Witnesses:

JAMES W. GLENN,  
E. D. McLOUGHLIN.