

No. 712,525.

Patented Nov. 4, 1902.

J. HAMER.

FIRE ALARM SIGNALING APPARATUS.

(Application filed Nov. 11, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

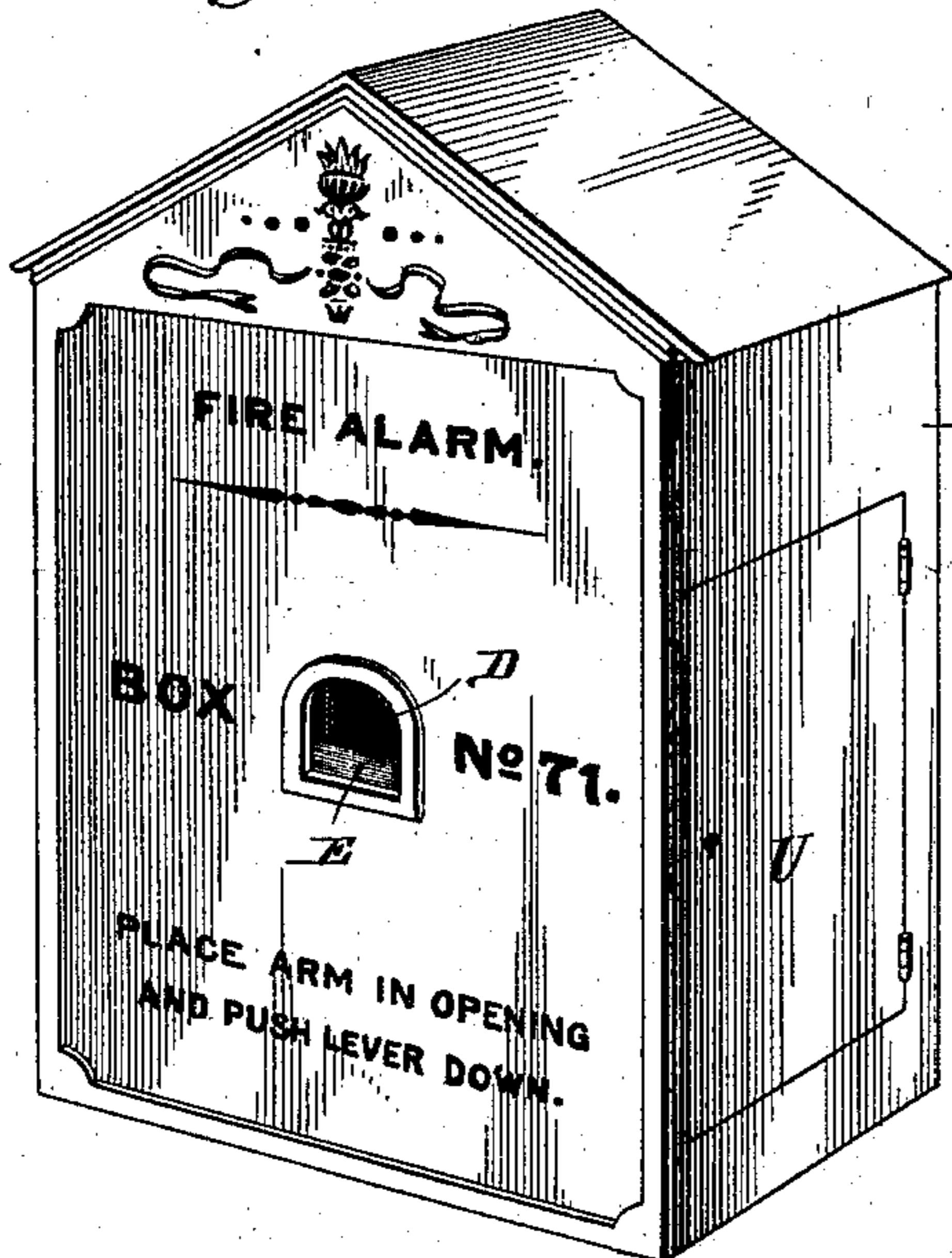


Fig. 2.

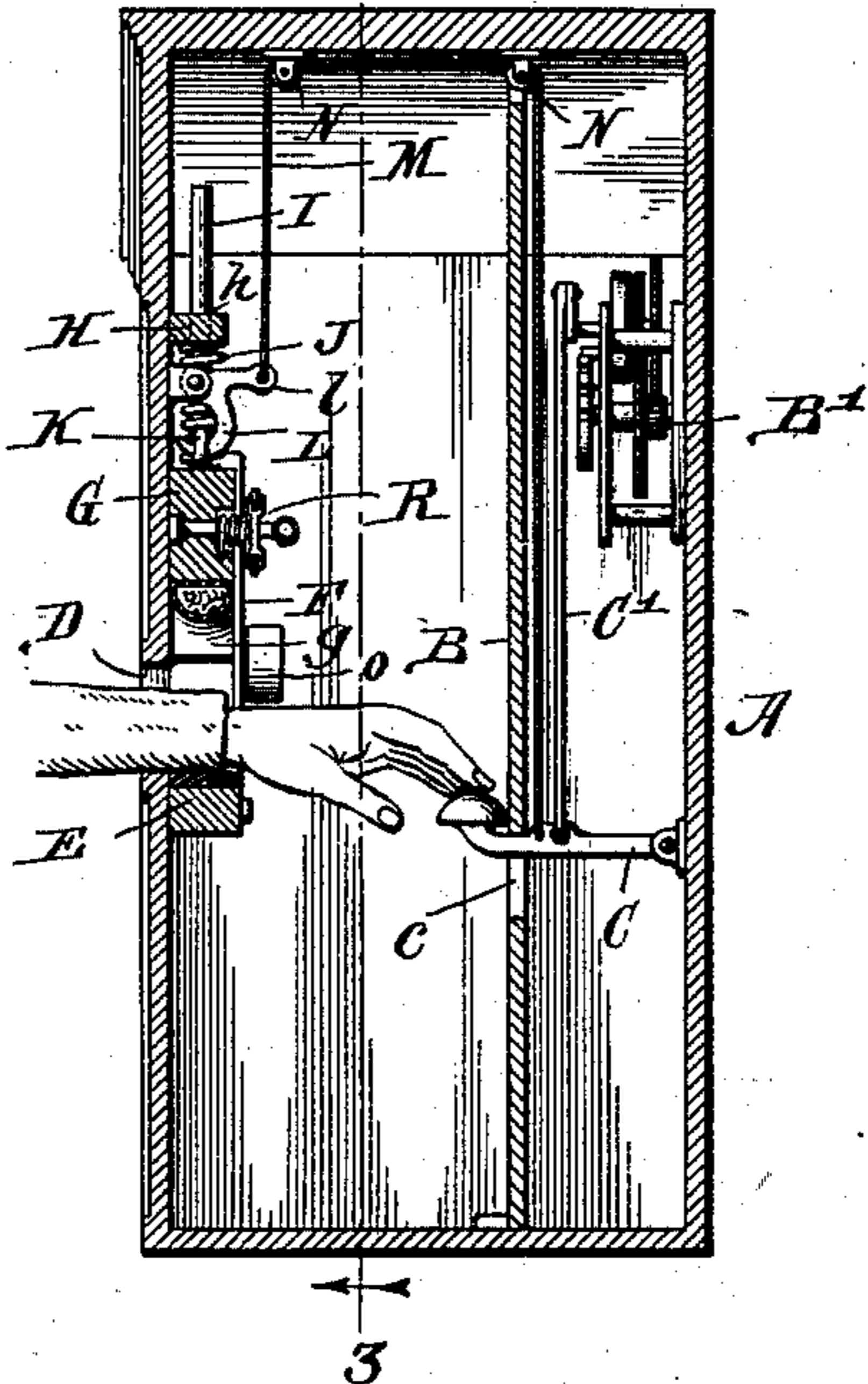


Fig. 3.

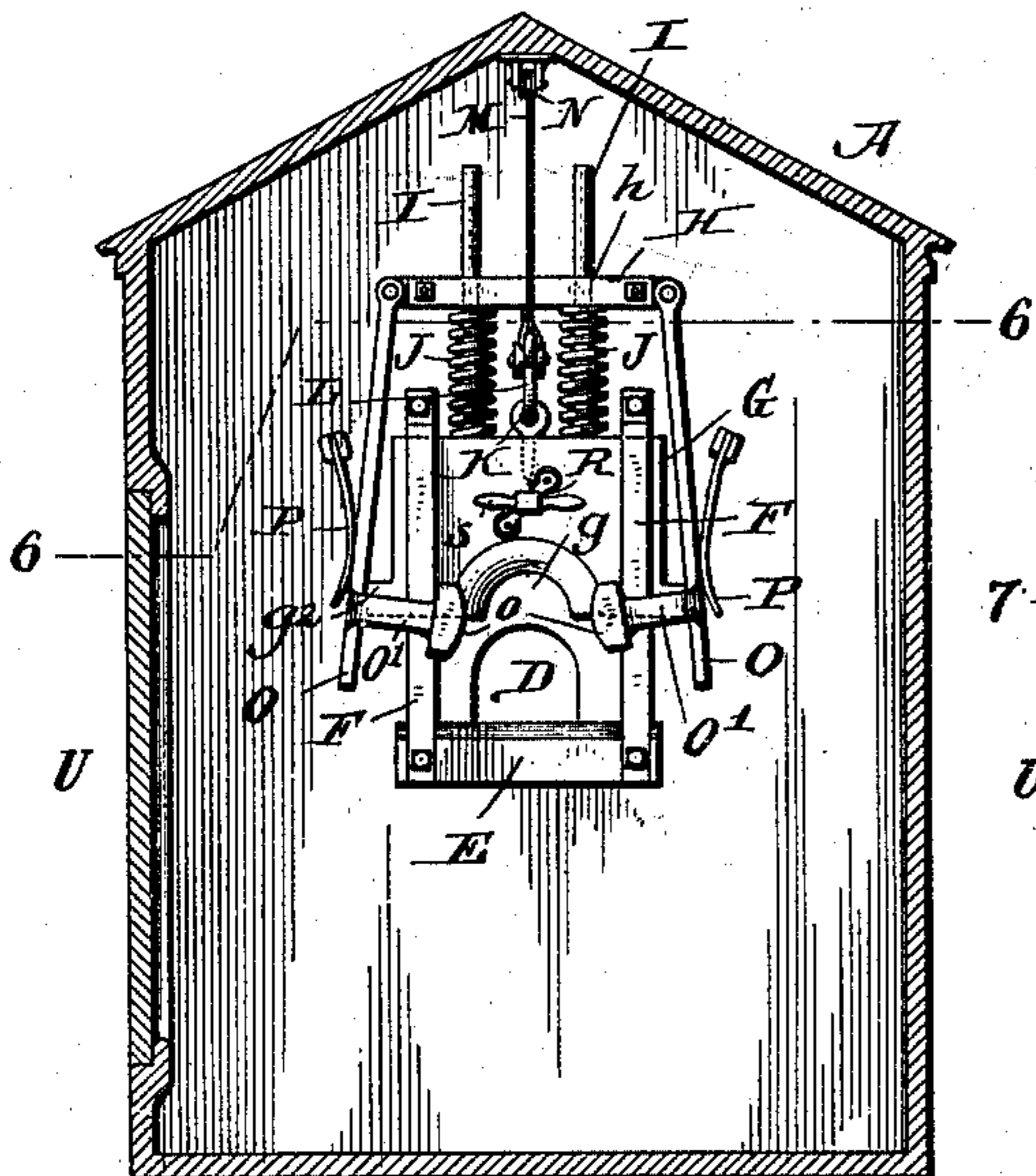
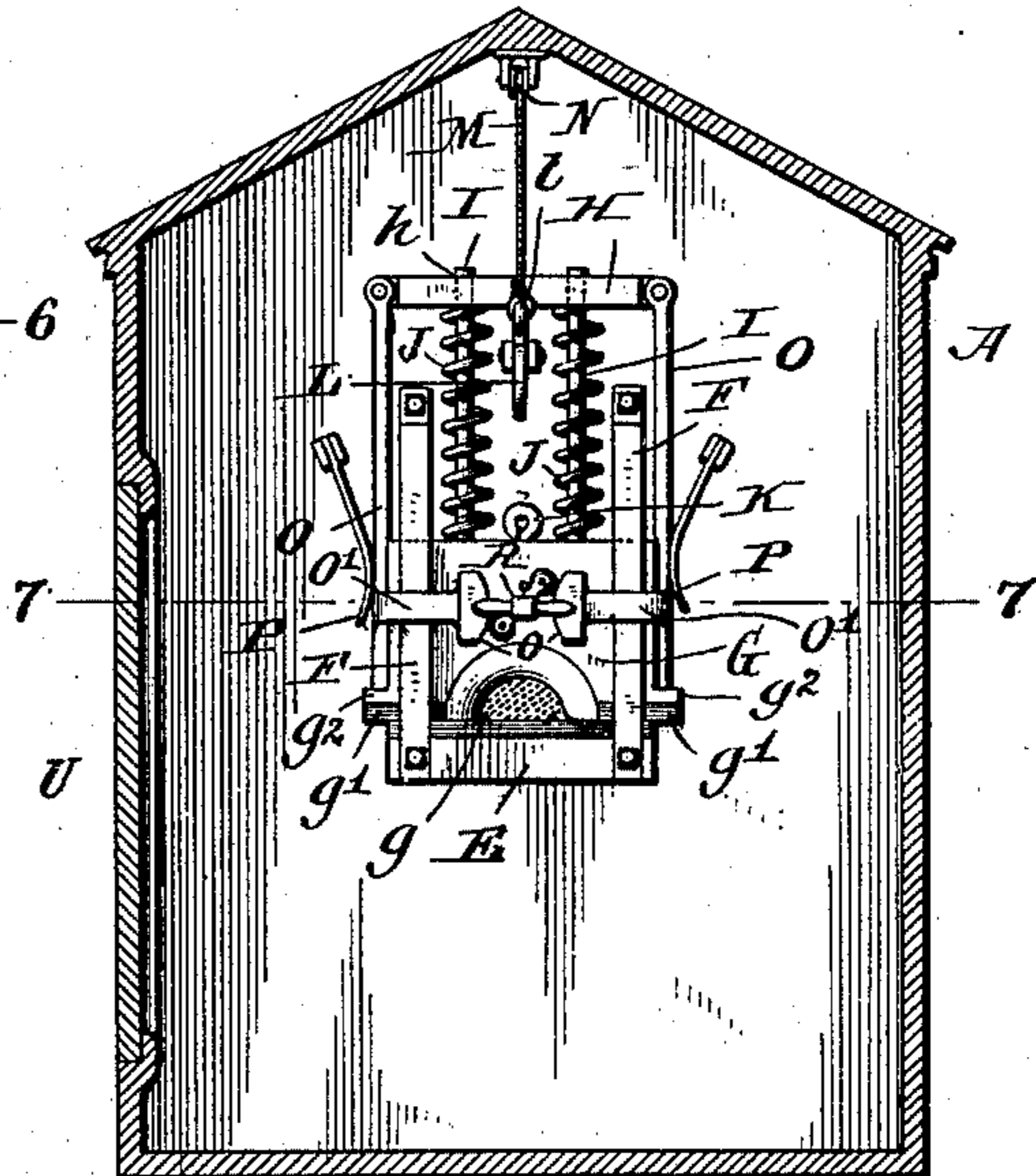


Fig. 4.



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2 Sheets—Sheet 2.

Fig. 5.

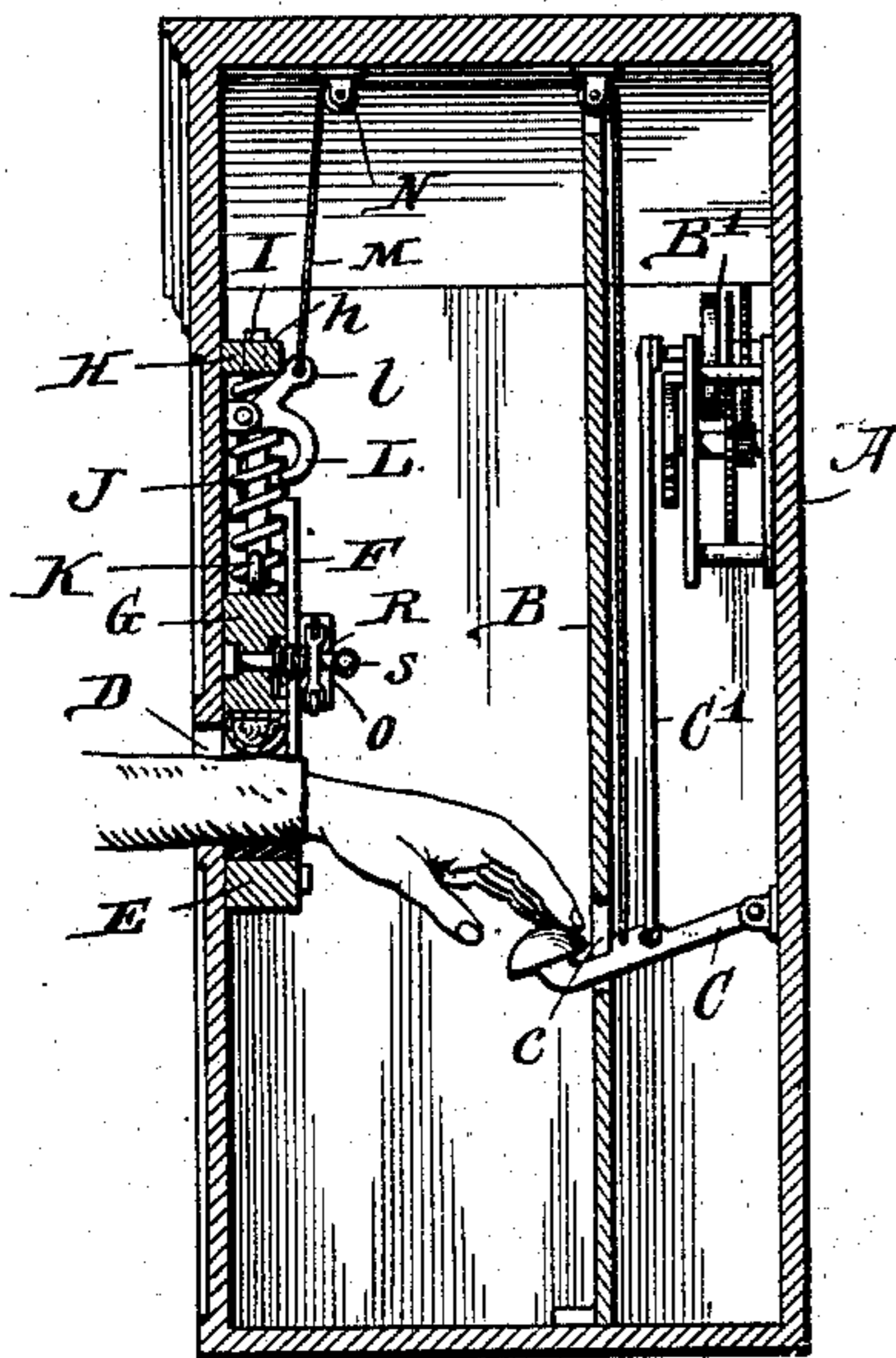


Fig. 6.

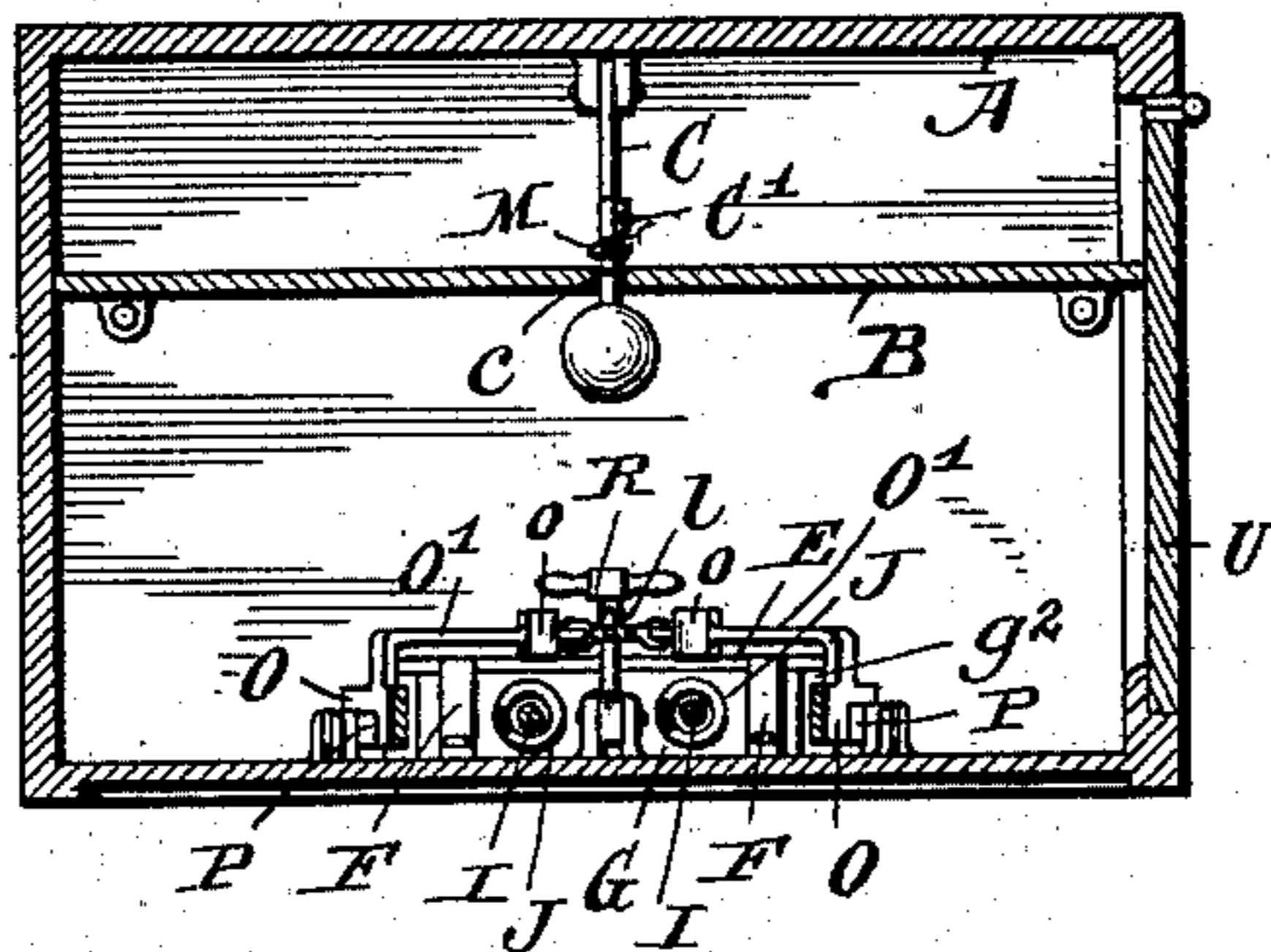


Fig. 7.

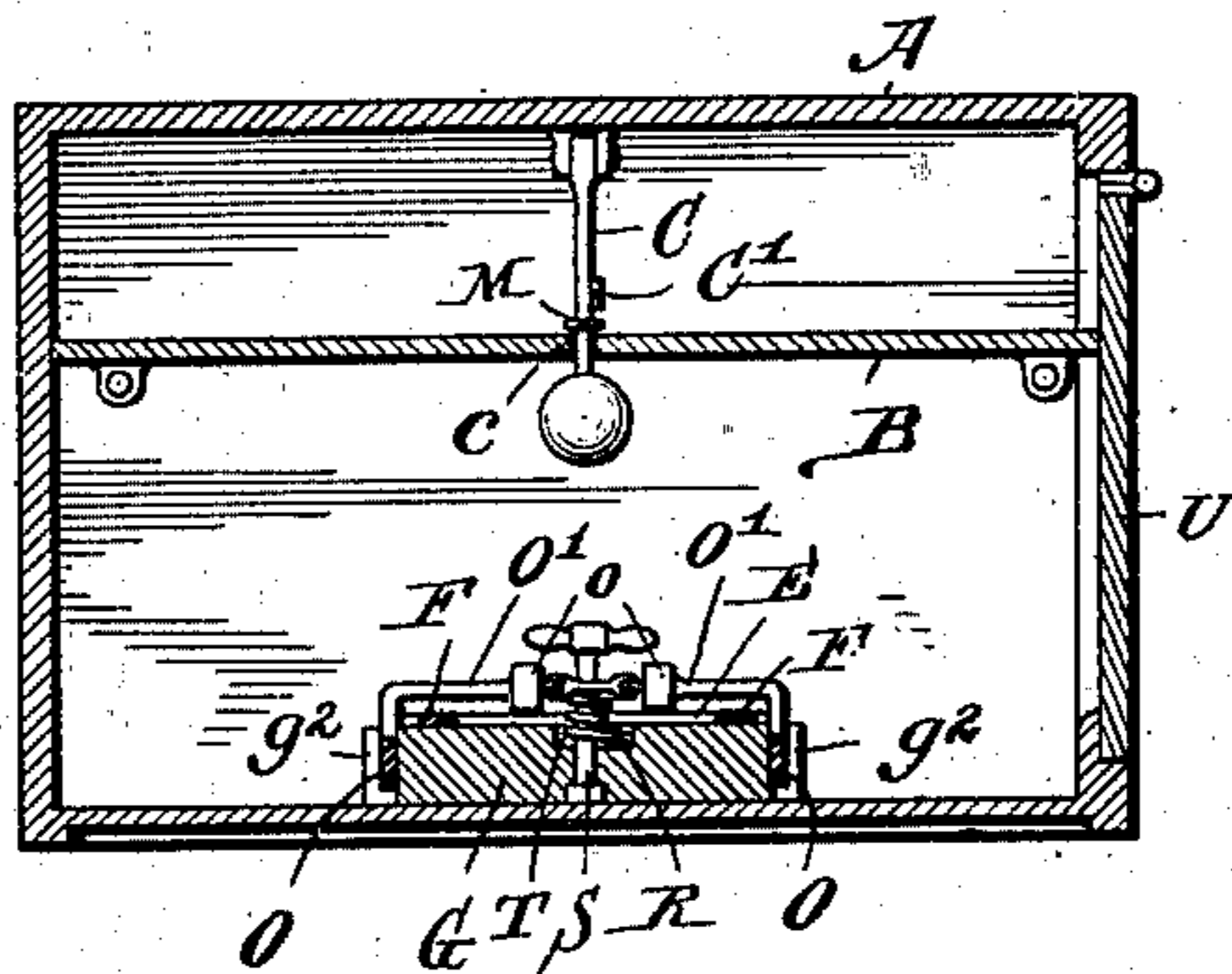


Fig. 8.

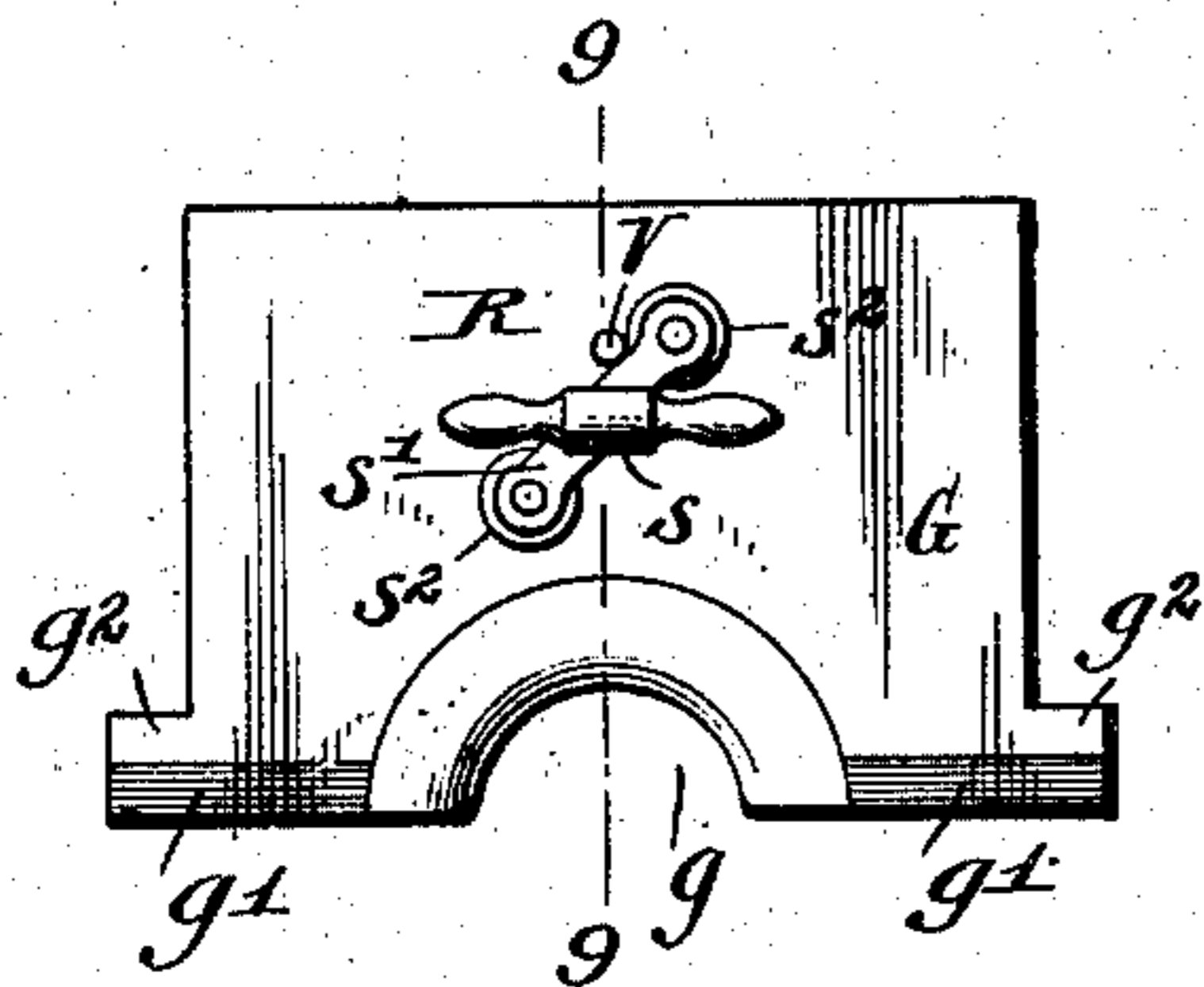


Fig. 9.

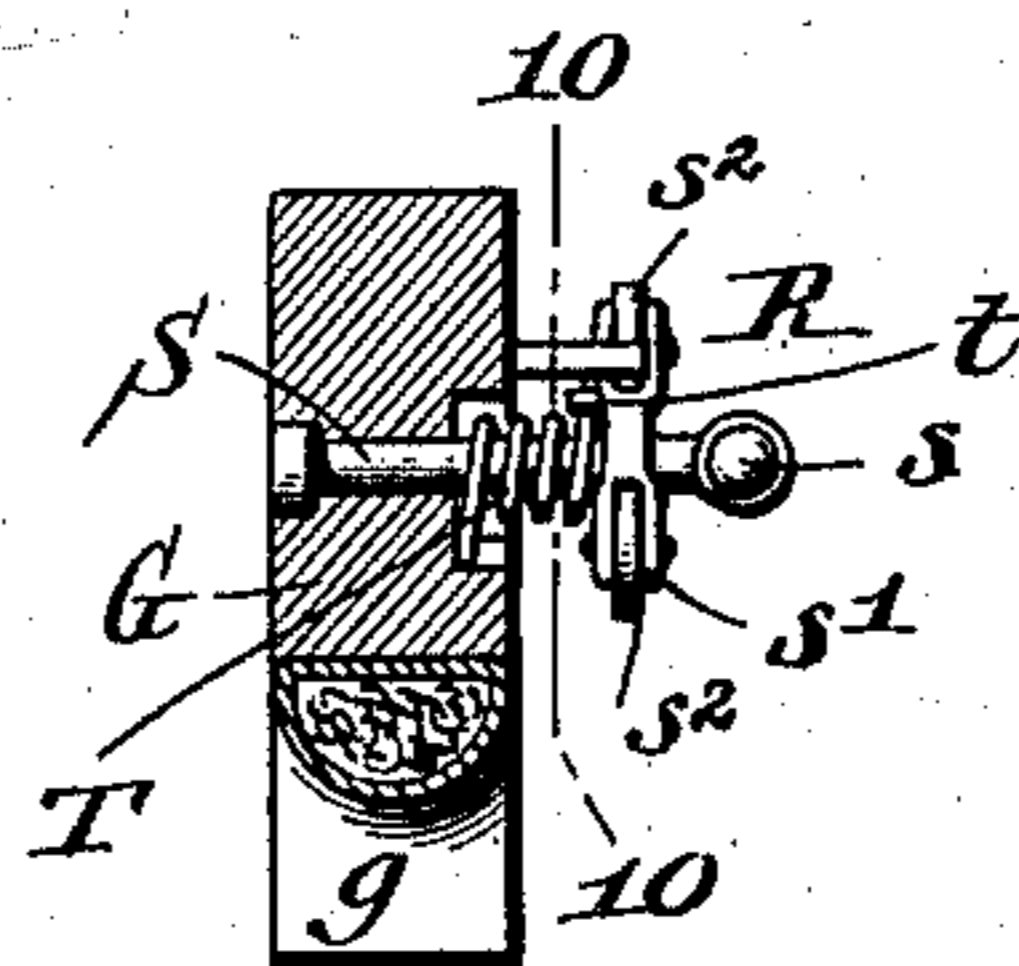
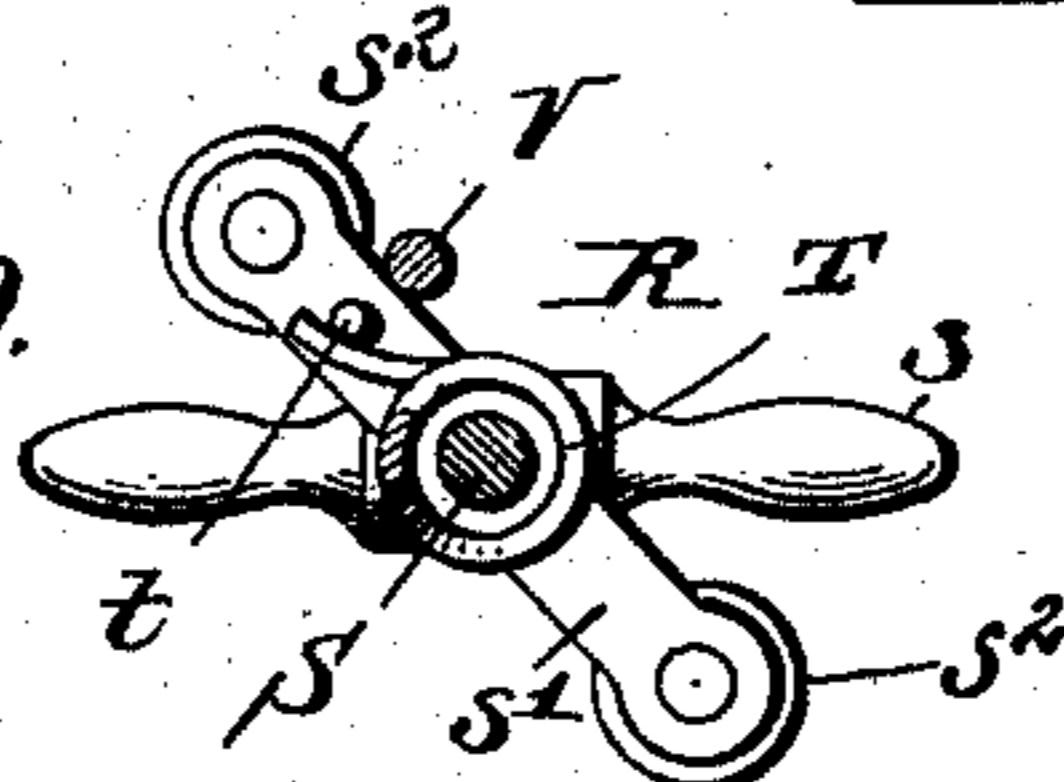


Fig. 10.



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UNITED STATES PATENT OFFICE.

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FIRE-ALARM SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 712,525, dated November 4, 1902.

Application filed November 11, 1901. Serial No. 81,921. (No model.)

To all whom it may concern:

Be it known that I, JOHN HAMER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Fire-Alarm Signaling Apparatus; and I do hereby 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.

This invention relates to that class of fire-alarm signaling apparatus which are provided with mechanism for engaging and locking the arm of the party sounding the alarm to detain such party until the arrival of the firemen or such other persons having authority and means to release the party so detained.

The object of this invention is to produce an efficient fire-alarm signaling apparatus of this character which is reliable in action, simple and durable in construction, and which will quickly and positively engage the wrist of the party operating the apparatus with but little inconvenience and without in the slightest injuring or even causing abrasion of the skin at the point where the mechanism engages the signaler.

The invention consists of the combination of elements or parts, as will be hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a fire-alarm box provided with my improvements. Fig. 2 is a central vertical section of the same. Fig. 3 is a vertical section taken on line 3 3, Fig. 2, looking toward the left. Fig. 4 is a section similar to Fig. 3, showing the parts of the detaining mechanism in a different position. Fig. 5 is a section similar to Fig. 3, showing a different position of the parts. Fig. 6 is a horizontal section taken on line 6 6, Fig. 3. Fig. 7 is a similar section taken on line 7 7, Fig. 4. Fig. 8 is a detached rear elevation of the locking-block. Fig. 9 is a vertical section taken on line 9 9, Fig. 8. Fig. 10 is an enlarged vertical section taken on line 10 10, Fig. 9, looking toward the right.

Referring to the drawings in detail, like letters of reference refer to like parts in the several figures.

The letter A represents the box or casing, having a vertical wall or partition B arranged therein, between which and the rear wall the usual signaling apparatus B' is confined. A lever C is pivotally attached to the rear wall and extends forward through an elongated opening c, against the upper end of which the said lever is normally held. The lever C is connected to the signaling mechanism B' by a rod C'; but it is manifest that any other suitable connection may be employed. It is therefore evident that on lowering the lever the signaling apparatus is operated and the alarm given to any distant point having connection therewith.

The lever B' is operated by inserting the hand through a hand-hole D, formed in the front wall of the box, the lower edge of the hand-hole, in addition to a buffing-block E, acting as a support for the arm when retained by the mechanism. This buffing-block is secured to the inner side of the front wall with its upper face preferably covered with rubber or like material and arranged even with the lower edge of the hand-hole.

F designates vertical guide-bars located on either side of the hand-hole and having their lower ends secured to the ends of the buffing-block E and their upper ends to the front wall by bolts or in any other suitable manner. Arranged to move vertically in the said guide-bars is a locking member or block G, which has a depression or cavity g arranged in its under side and which may be lined with soft rubber or padded in any desired manner to leave the cavity of proper size to grasp the wrist and lock the arm of the signaler without causing the slightest injury and with little or no inconvenience. It is also more or less yielding to accommodate itself to the size of the signaler's wrist. The under side of the locking-block on either side of the cavity g is faced with rubber, as at g', which when the locking-block is suddenly lowered strikes the rubber facing on buffing-block and deadens the noise. The locking-block is pro-

vided at its lower corners with lateral extensions g^2 for a purpose to be hereinafter disclosed.

Arranged parallel with the upper face of the locking-block G and located above the same is a guide-block H, provided with apertures h , in which guide-rods I slide, said rods extending upwardly from the locking-block in or to which they are secured. Surrounding these guide-rods are spiral springs J, which bear with one end against the under side of the guide-block H and with their other ends against the upper face of the locking-block G, serving to force the latter downward as soon as released, which is done simultaneously with the sounding of the alarm.

The locking-block is held normally in an elevated position against the pressure of the springs J, and it has an eye K, which is engaged in a hook L, pivoted to the front wall of the box, preferably between the two springs and above the locking-block. This hook has a rearward extension l , to which one end of a cord or chain M is secured, which passes over pulleys N, secured to the top of the box, and is secured with its other end to the lever B', whereby the signaling apparatus is operated. On operating the lever to sound the alarm the extension l of the hook is caused to swing upward, while the hook proper swings rearward to become disengaged from the eye K, when the locking-block is instantly and quickly lowered by the springs J and the wrist of the operator encircled by the said locking-block.

To prevent the raising of the locking-block, which would allow the operator to release his hand, I provide swinging arms O, which, by preference, I pivot to the ends of the guide-block H and which as soon as the locking-block strikes the buffer-block E swing in and engage the lateral extensions g^2 , thus preventing the locking-block from being elevated. To assure quick action of the swinging arms, springs P are made to bear against the outer faces of the same. These swinging arms are each provided with an inwardly-projecting extension O', which have the outer end enlarged and preferably concaved, as at o , and against these concaved ends the releasing mechanism is designed to operate, as will presently appear.

For convenience in disengaging the swinging arms from the lateral extensions on the locking-block I provide the releasing mechanism R, which consists of a spindle S, held in the locking-block and extending through the rear face of the same, said spindle having a handle s at its rear end and a cross-piece s' between the handle and the rear face of the locking-block. Journaled in the ends of the cross-piece s' are friction-rollers s^2 for a purpose to be presently disclosed.

Surrounding the spindle S and confined between the cross-piece thereof and the locking-block is a spiral spring T, one end thereof

being secured in the locking-block and its other end bearing against a pin t , projecting from the cross-piece. This spring serves to keep the cross-piece s' in the position shown in Fig. 8, causing the same to bear against a stop V, projecting from the rear face of the locking-block, in which position it is normally held.

A door U is provided which is to be opened by a fireman or any other authorized person, and through the door-opening such authorized person may disengage the swinging arms from the lateral extension on the locking-block by turning the spindle S, which brings the cross-piece formed thereon into a substantially horizontal position, which swings the said swinging arms outwardly, after which the locking-block may be elevated and attached to the hook L, which places the device in condition for the sounding of another alarm. Thus it is apparent that any person who illegally tampers with the fire-alarm will be detained until an authorized person releases him, and if the party so sounding said alarm proves to have illegally tampered with the same he may be punished according to law.

It is to be understood that various changes in form, proportion, and minor details of construction can be resorted to without departing from the spirit of my invention or sacrificing any of the advantages thereof.

Having thus described my invention, what I claim is—

1. The combination with an alarm signaling-box having the usual signaling apparatus and a hand-hole in an exterior wall, of a locking device having operative connection with the signaling apparatus and being caused to operate and engage the wrist of the signaler when sending a signal.

2. The combination with an alarm signaling-box having the usual signaling apparatus and an opening in an exterior wall through which the hand of the signaler is inserted to send a signal, of a locking device, and mechanism intermediate of the signaling apparatus and said locking device for causing the latter to engage the wrist of the signaler when the signaling apparatus is actuated to send the signal.

3. The combination with the fire-alarm box having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block, means for connecting said locking-block with the signaling apparatus, which latter on being operated causes said locking-block to engage the wrist of the signaler, substantially as set forth.

4. The combination with the fire-alarm box having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block, a hook having a fixed position, and being in engagement with said locking-block to keep the same elevated, means for connecting said hook with a movable part of the signaling apparatus, which

latter on being operated causes said locking-block to engage the wrist of the signaler, substantially as set forth.

5 5. The combination with the fire-alarm box having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block, means for connecting said locking-block with the signaling apparatus and springs for causing said locking-
10 block to engage the wrist of the signaler when the signaling apparatus is operated, substantially as set forth.

6. The combination with the fire-alarm box having the usual signaling apparatus and a
15 hand-hole in an exterior wall, of a buffer-block located at or near one edge of said opening, a locking-block located at or near the opposite edge of said opening, means for connecting said locking-block with the signaling
20 apparatus, which latter, on being operated causes said locking-block to move against said buffer-block and engage the wrist of the signaler, substantially as set forth.

7. The combination with the fire-alarm box
25 having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block held elevated above said hand-hole, a buffer-block below said hand-hole, and means for connecting said
30 locking-block with the signaling apparatus to cause the same to strike the buffer-block and engage the wrist of the signaler when the signaling apparatus is operated, substantially as set forth.

35 8. The combination with the fire-alarm box, having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block held normally above said hand-hole and having a recess or cavity
40 in its under face, a buffer-block below said hand-hole, means for connecting said locking-block with the signaling apparatus, which latter on being operated will permit said locking-block to lower against said buffer-block to
45 engage the wrist of the signaler, and means for locking the locking-block in its lowermost position, substantially as set forth.

9. The combination with the fire-alarm box, having the usual signaling apparatus and a
50 hand-hole in an exterior wall, of a vertically-movable locking-block held normally above said hand-hole and having lateral extensions at its lower end, a buffer-block below said hand-hole, means for connecting said locking-
55 block with the signaling apparatus, which latter on being operated will permit said lock-

ing-block to lower against the buffer-block to engage the wrist of the signaler, and pivoted arms adapted to swing against said lateral extensions of the locking-block to lock said
60 block in its lowermost position, substantially as set forth.

10. The combination with the fire-alarm box, having the usual signaling apparatus and a hand-hole in an exterior wall, of a buf-
65 fer-block secured to said wall beneath said hand-hole, guide-bars also secured to said wall, a locking-block held elevated between said wall and the guide-bars and having upwardly-extending guide-rod, a guide-block
70 secured to said wall and in which said guide-rods are held, spiral springs surrounding said guide-rods and bearing with their lower ends against said locking-block and with their upper ends against the said guide-block, a hook
75 pivotally secured to said wall and being engaged with the locking-block to keep the same elevated against the pressure of said springs, a chain or cord passing over pulleys and connecting said hook with a movable part of the
80 signaling apparatus, which on being operated will disengage the hook from the locking-block and cause the same to be lowered against said buffer-block by said springs, pivoted arms adapted to engage said locking-block
85 when lowered to hold the same in such position, and springs serving to swing said arms in engagement with said locking-block, substantially as set forth.

11. The combination with the fire-alarm
90 box, having the usual signaling apparatus and a hand-hole in an exterior wall, of a vertically-movable locking-block held normally above said hand-hole and having a recess or cavity in its under face, a buffer-block below
95 said hand-hole, means for connecting said locking-block with the signaling apparatus, which latter on being operated will permit said locking-block to lower against said buffer-block to engage the wrist of the signaler,
100 locking mechanism for holding the locking-block in its lowermost position, and means for releasing the locking mechanism to permit the locking-block to be elevated, substantially as set forth.
105

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN HAMER.

Witnesses:

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