

No. 635,950.

Patented Oct. 31, 1899.

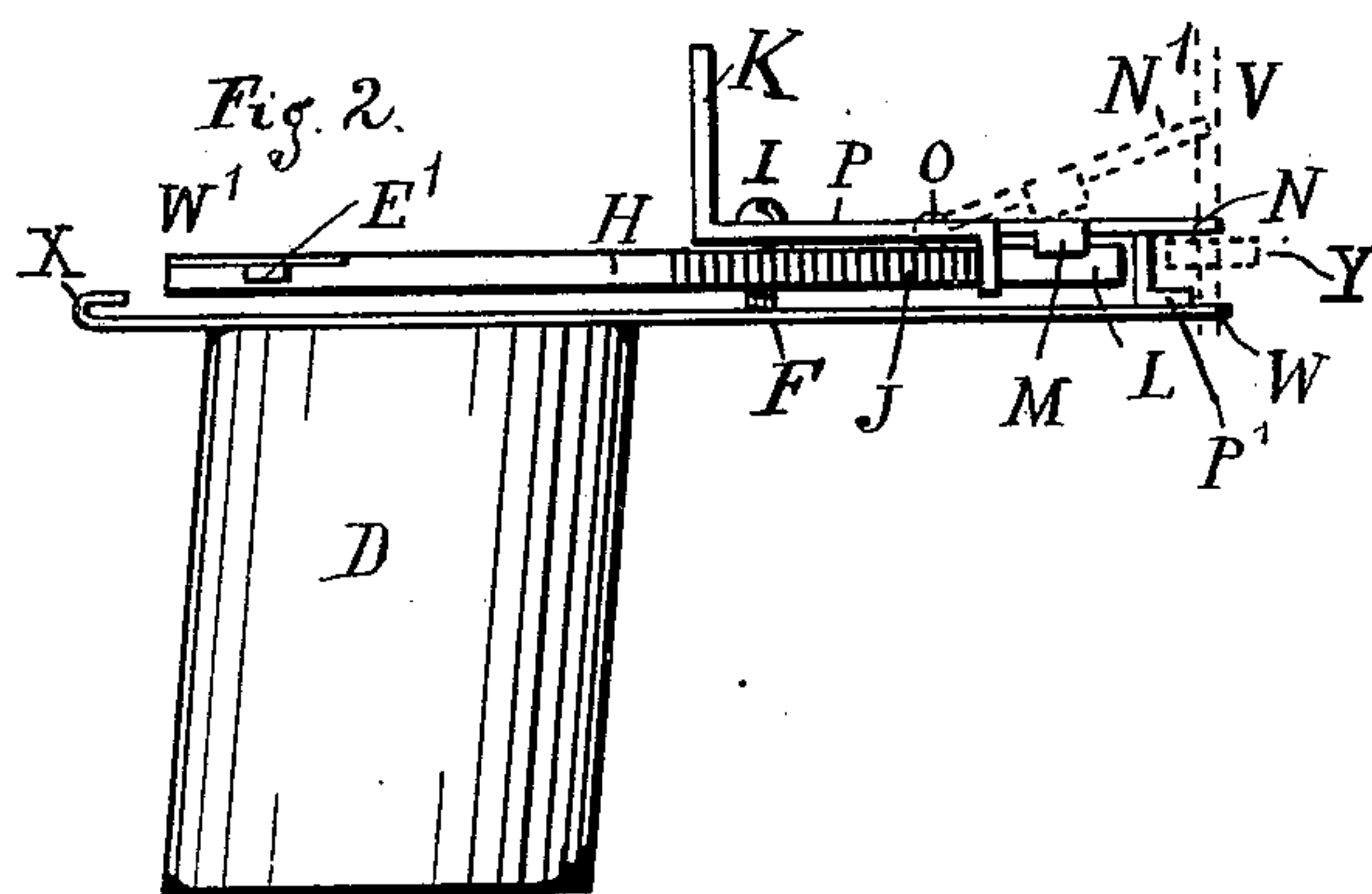
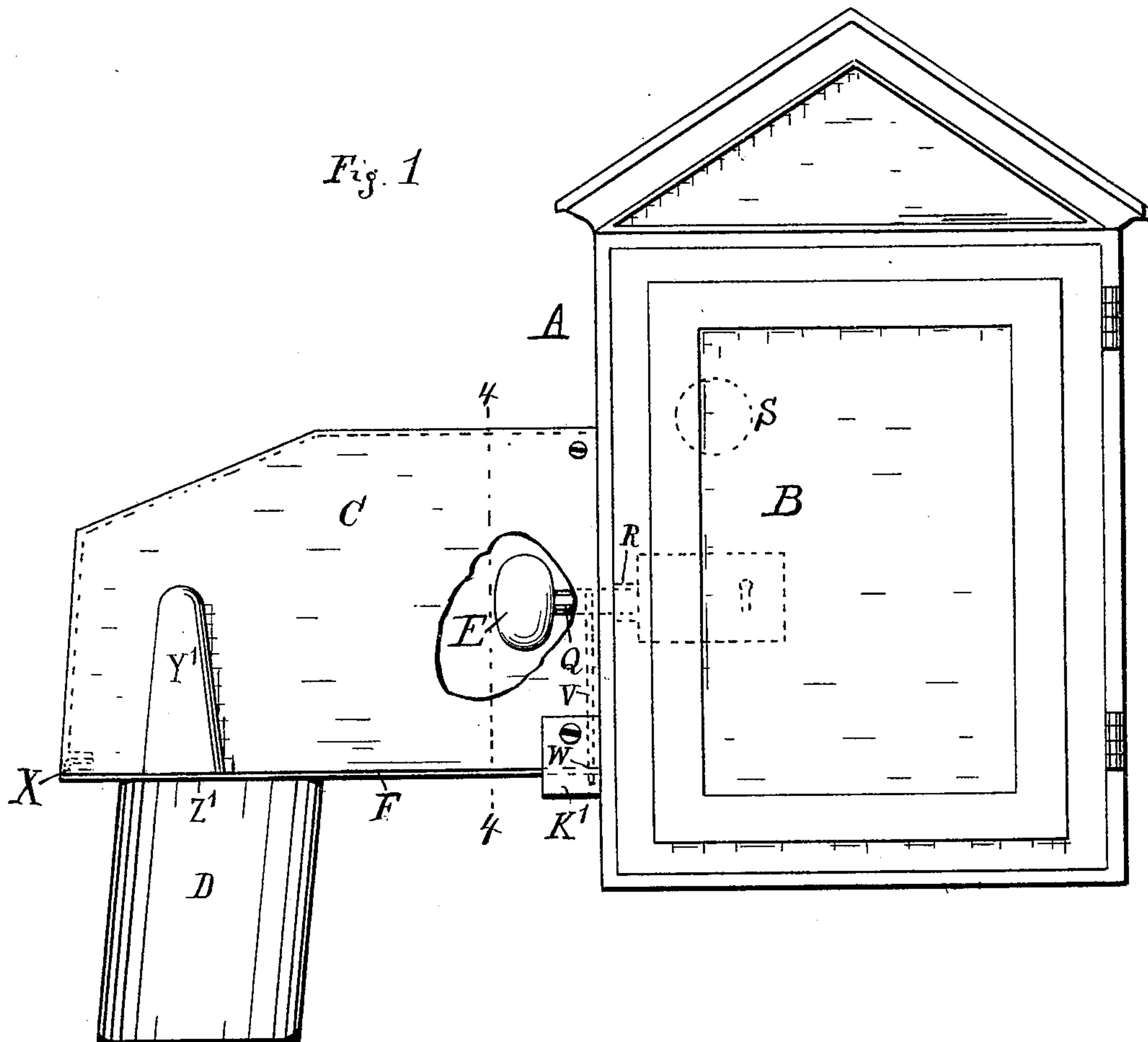
T. W. YALE.

DEVICE FOR PREVENTING FALSE ALARMS.

(Application filed Mar. 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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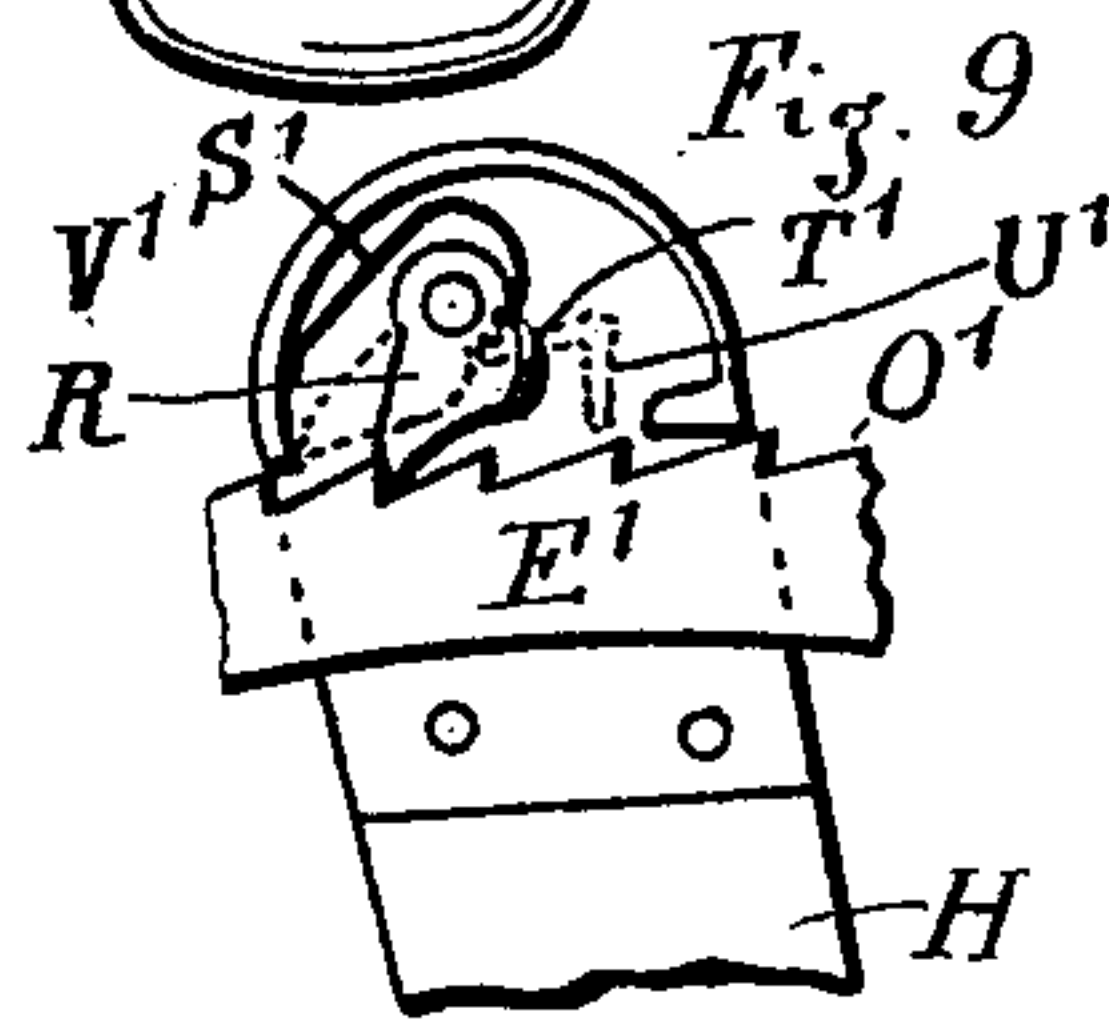
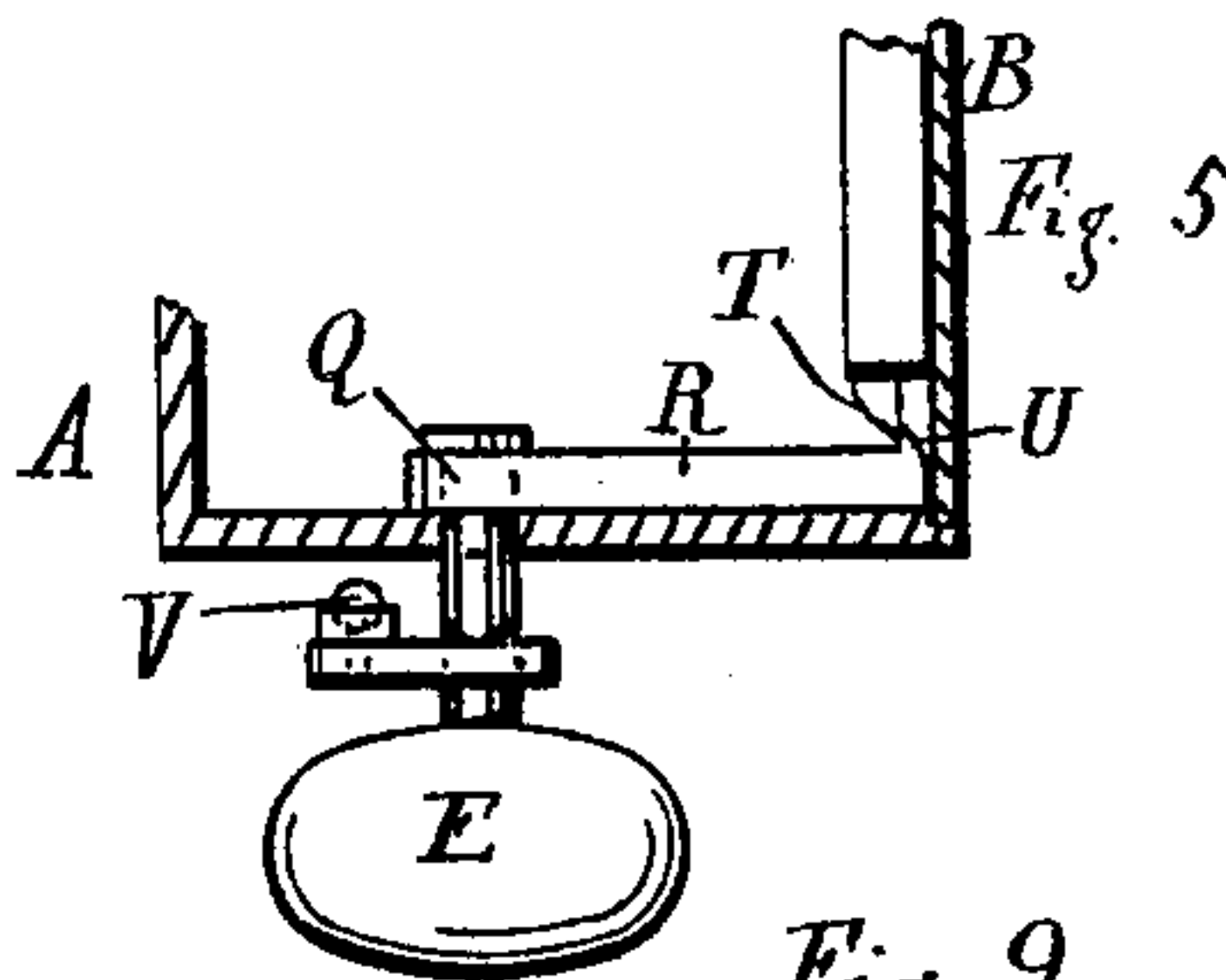
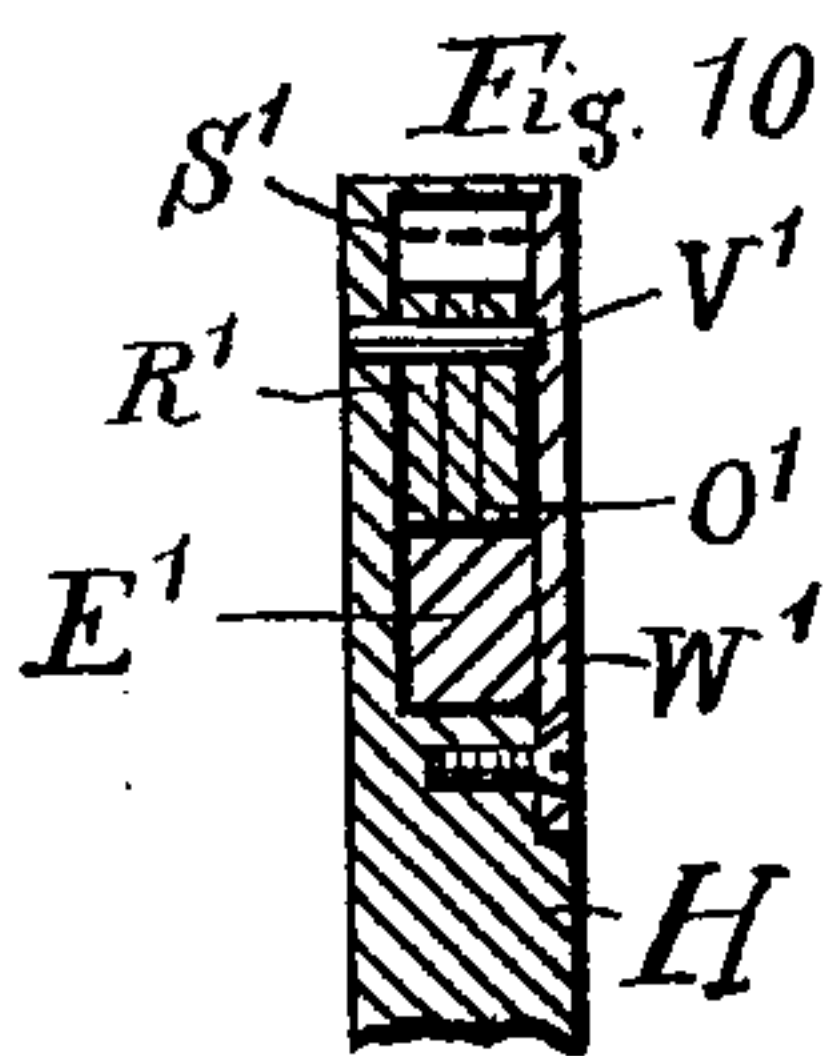
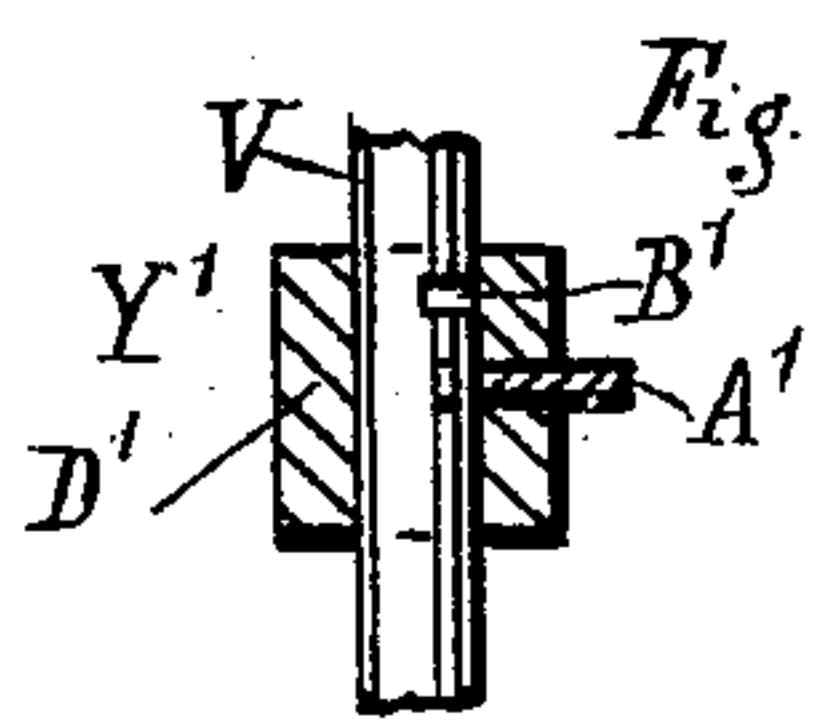
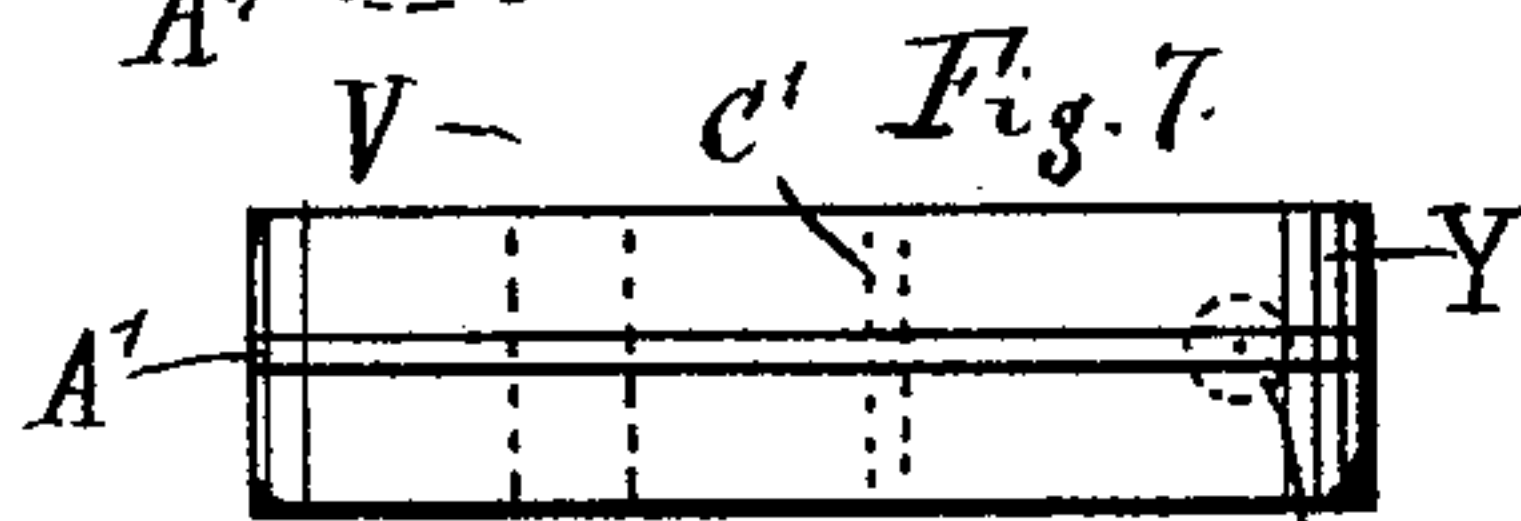
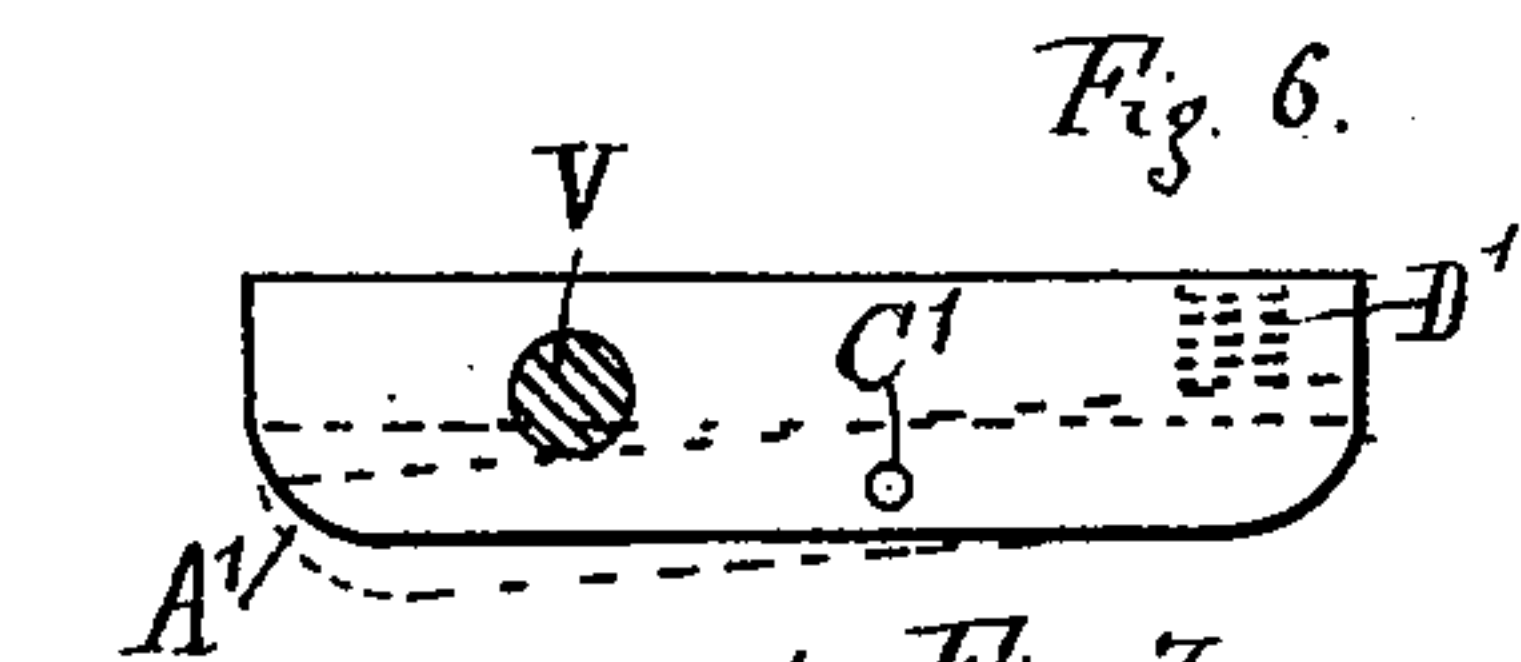
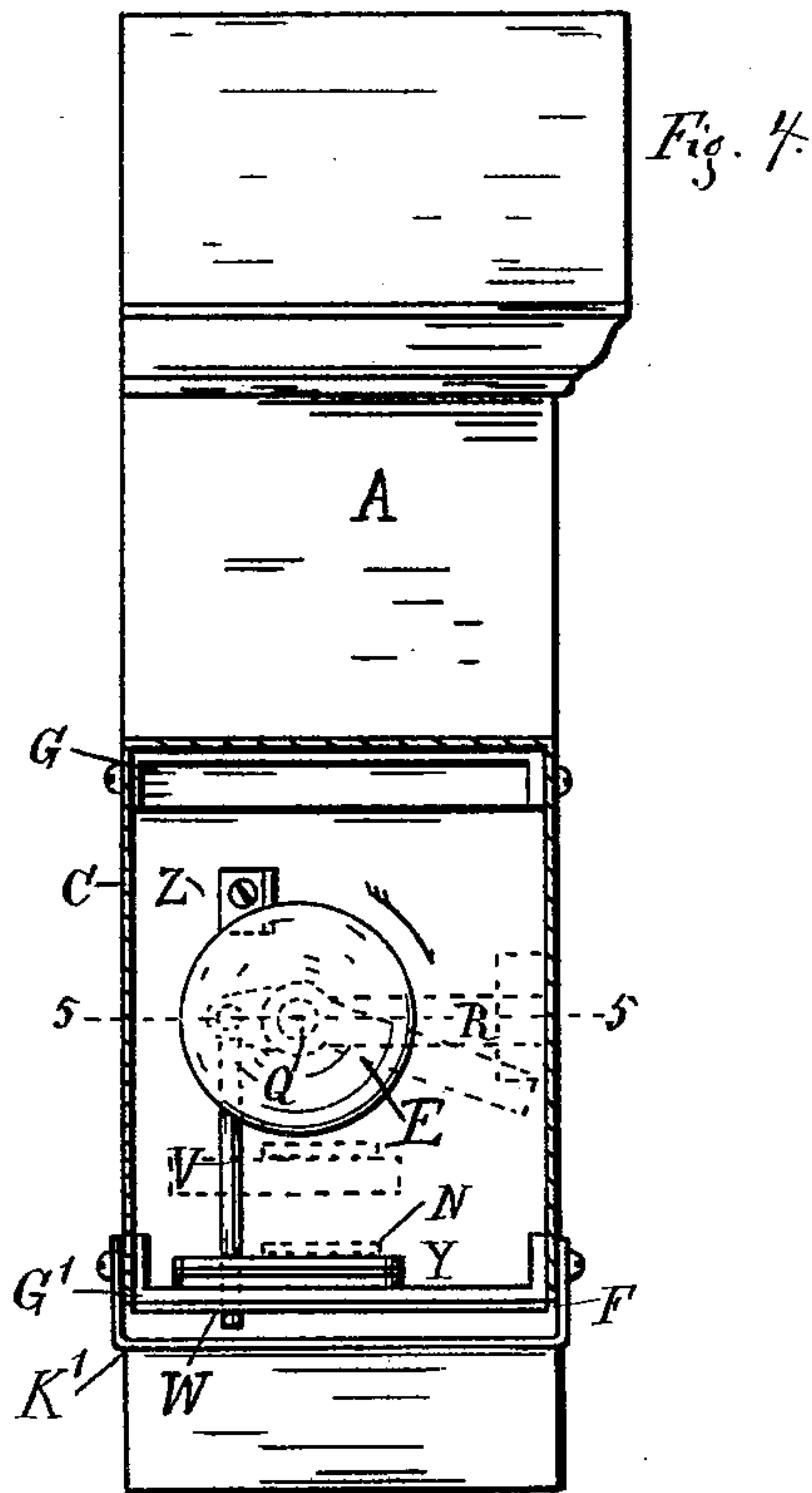
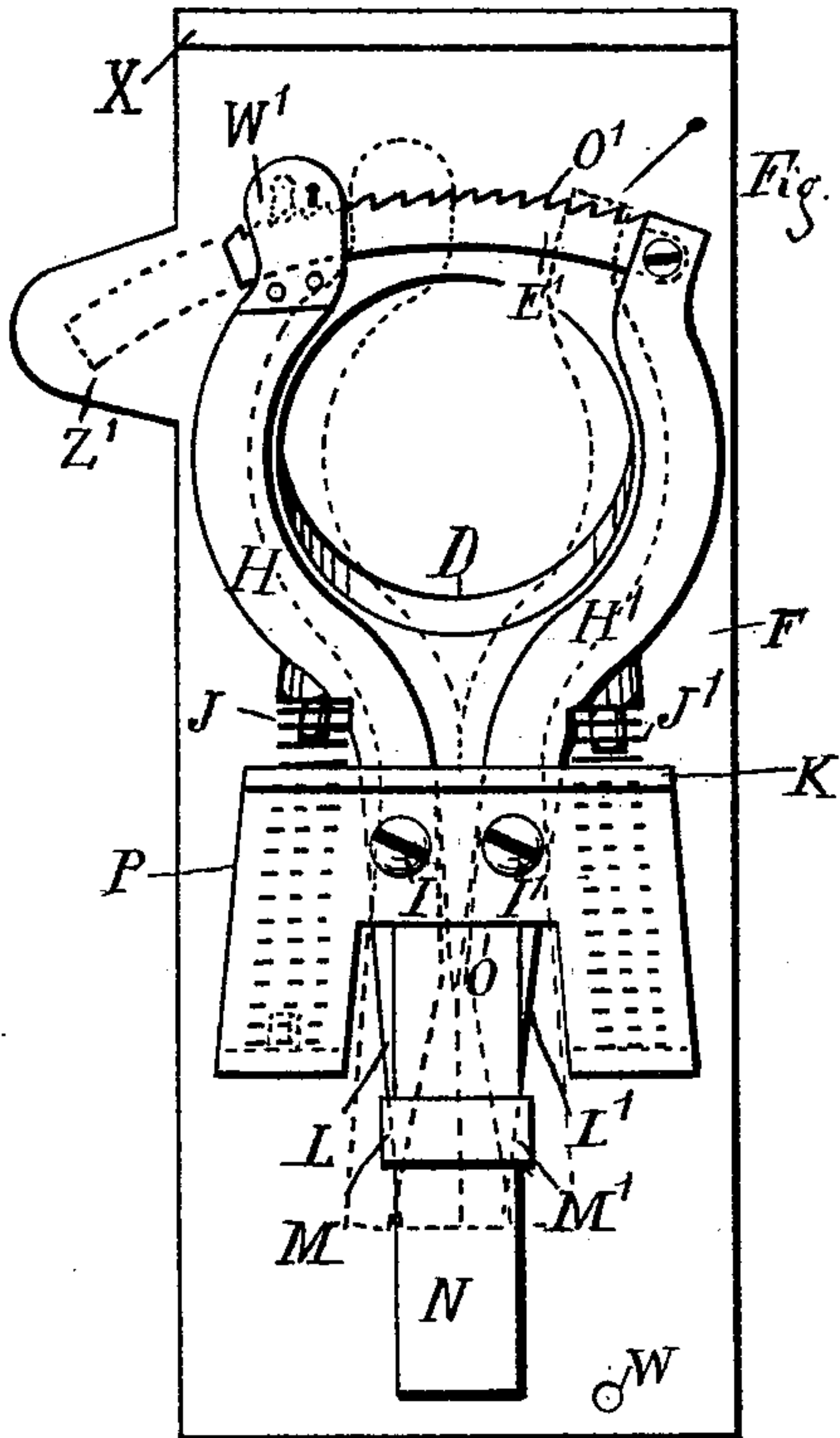
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DEVICE FOR PREVENTING FALSE ALARMS.

SPECIFICATION forming part of Letters Patent No. 635,950, dated October 31, 1899.

Application filed March 24, 1899. Serial No. 710,397. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. YALE, a citizen of the United States, residing at Rochester, in the county of Monroe, in the State of New York, have invented an Improved Device for Preventing False Alarms, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved detachable device applied to fire-alarm or other signal-boxes whereby the person who sends in an alarm may be subsequently positively identified, since in the act of signaling a handcuff or identifier attaches itself to the arm of the signaler, from which it can only be released by an official who is provided with the proper key. The handcuff is made removable from the box, and the signaler experiences little or no inconvenience from having it on his arm until it can be unlocked and detached.

My invention is fully described and illustrated in the following specification and the accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, Figure 1 represents a fire-alarm signal-box provided with my improvement. Fig. 2 represents the handcuff or identifier detached. Fig. 3 is an elevation of the same. Fig. 4 is a sectional side view of the signal-box on the line 4 4, Fig. 2. Fig. 5 is a section on the line 5 5, Fig. 4. Fig. 6 is a plan view of the catch. Fig. 7 is a side view of the same. Fig. 8 is a section of the same. Figs. 9 and 10 represent the lock.

In the accompanying drawings, A represents a fire-alarm or other signal box of any ordinary or preferred type of construction. Such box is provided with any suitable or usual door B, by which access is had to the pull or trip by which the signal is sent, located in the interior of the box. Keys for the door in fire-alarm systems are ordinarily left with one or more trusty persons who occupy buildings in the neighborhood of the location of any particular box. An alarm cannot be sent in then from any particular box unless a key can be secured, which, especially at night, uses up valuable time and delays the sounding of the alarm, while the fire

or other requirement for a signal is actively proceeding in its course. In order to overcome the delay in finding the key and at the same time to prevent the sending in of false or unnecessary alarms, especially by parties actuated by a spirit of malice or mischief, I provide the signal-boxes with an attachment which permits any person without a key to send in an alarm, but in such fashion that a handcuff or identifying device becomes attached to and locked on the hand of the signaler, so that it can only be removed by an official who has the proper key. This handcuff or identifier is light and in no material way interferes or prevents any work the identified signaler may desire or be required to perform pending the arrival of the official with the key which will release the identifier. If a false or unnecessary alarm has been sent in, the handcuff on the arm of the party who sent it remains there for the identification of the signaler, and consequently, if proper, for his subsequent punishment. Under such a system it will be obvious that, identification and consequent punishment being certain, no false alarms will be sent in. Certainty of detection and exposure inhibits all criminal or quasicriminal acts. In order to secure these results, I attach to the box A a casing C and a tube D, and I provide inside the casing a knob or hand-wheel E, which when turned will send in the signal or unlock the door of the box, so that the signal can be sent, and I also provide a detachable part of the casing or tube so constructed that it will automatically grasp the hand or wrist of the signaler, and although it may be detached from the box it will remain on the arm of the signaler until unlocked by the proper official with the key which he carries. The signaler is thus able to disconnect himself from the box, but he cannot divest himself of the handcuff or identifier until it is unlocked.

It will be obvious from the preceding description that very many different methods and mechanisms may be employed to secure the results indicated; but in practice I have adopted the kind of mechanism hereinafter described, which is applicable to the ordinary signal-boxes now in general use and has proved satisfactory on trial. The apparatus is also represented as worked by the left-hand;

but it will be understood that that is a mere matter of convenience and adaptation.

The person desiring to send a signal inserts his hand in the tube D and reaches the knob 5 E, which he turns a part of a rotation, and this movement of the knob sends the signal or unlocks the door B, so that the signal can be sent by the usual pull or trip. If the left hand is inserted in the tube D, the right hand 10 is at liberty to operate the pull or trip to send the signal to the central office. When the signaler has inserted his or her hand in the tube D and has turned the knob E, so as to send in the signal or unlock the door, the handcuff or identifier (shown best in Figs 2 and 3) 15 is released and allowed to come into operation to grasp the wrist of the party who has made the signal in such manner that it cannot be released except by the proper key. At 20 the same time the signaler is not prevented from going away from the box, because, although his wrist is caught, he can disconnect the handcuff or identifier from the box by a simple lateral movement, after which he must 25 carry the handcuff on his wrist until released by the proper official. Various different mechanisms may be used to accomplish these results; but that which I have adopted for practical use is as follows: The case C is attached 30 to the side of the signal-box, and the depending tube D and the handcuff are detachably secured to the case. There is a plate F at the bottom of the case C, which carries the handcuff or identifier and which is removable by 35 the signaler after the signal is sent, but attached to his arm. For this purpose the plate F, carrying the identifier, is arranged so it can be disconnected from the casing after the signal has been sent, but so it will still main- 40 tain its grip on the arm of the signaler.

The handcuff or identifier is provided with the movable jaw or jaws H H', Figs 2 and 3, which are pivoted or otherwise attached to the plate F, as indicated at I I'. Springs J J' 45 are applied to the jaw or jaws in any suitable way, acting to force the jaws toward the wrist of the signaler. The jaws are placed just inside the case and move across the inner end of the tube D, so that the signaler in thrusting his hand in to reach the knob E must place 50 his wrist between the jaws.

K is a guard projecting inward from the plate F, which compels the signaler to pass his hand above it before he can reach the knob. 55 The jaws are held apart by the lugs or ears M M' on the lever N, which is pivoted at O to a suitable frame P, supported by the pivots I I', or otherwise suitably connected with the plate F. The frame P also supports the spring or springs. The ends L L' of the jaws are 60 held together by the lugs M M'; but when the lever N is swung outward, as indicated by the dotted lines N' in Fig 2, the jaws are released and the springs force them together.

65 The partial rotation of the knob sends in the signal or unlocks the box, lifts the lever

N, so as to allow the jaws to grasp the wrist of the signaler, and also releases the plate F and its connected parts, so that they may be detached from the box. In the construction 70 shown the door is unlocked by the movement of the knob, so that it swings open itself, a spring being applied to it in any suitable manner, or the signaler can open it, a suitable handle S being provided. The stem Q of the 75 knob E passes through the side of the box and has attached to its inner end the arm R, which engages with a suitable spring-latch T on the inside of the door. The movement of the knob E swings the arm R out of engage- 80 ment with the latch T, as indicated by the dotted lines in Fig. 4, and thus unlocks the door. The arm R is provided with a lip or projection U, which engages with the spring-latch T.

A rod V is pivoted to the knob E or to an 85 arm on its stem and engages in an opening W, Fig. 3, in the plate carrying the handcuff. When the knob is turned, the end of the rod V is drawn out of the hole W, so as to permit the plate and handcuff to be detached from 90 the box. The signaler, having the identifier now clasped on his wrist, draws the plate outward from the box, withdrawing a hook or bent flange X from a slot in the outer end of the casing, and thus disengages himself from 95 the box, but with the handcuff still attached to his arm. The movement of the rod V also raises the lever N and disengages the lugs M M' from the arms L L', thus permitting the springs to close up the jaws. 100

Y is a block which is moved by the rod V and swings the lever N outward, so as to disengage the lugs M M'. The block Y carries the spring-catch A', Figs. 6, 7, and 8, which 105 engages with the notch B', so the block is compelled to travel with the rod. The catch A' is pivoted at C', and a suitable spring D' is arranged to press the catch into the notch B'. In setting the apparatus after the plate F has been inserted in place the knob is turned 110 backward, and this forces the lower end of the rod down into the hole W and at the same time brings the notch B' into the position where the catch A' engages in it, so that the block must travel with the rod when operated 115 to release the handcuff from the box.

Z, Fig. 4, is a stop which limits the movement of the knob.

G G' are ribs or lugs attached to the box and to which the case is secured. 120

K' is a bar or plate which protects the lower end of the rod V.

It will be understood that the parts may be so connected and adjusted that the bars H H' are allowed to seize the wrist just before the 125 signal is sent or the door unlocked.

P', Fig. 2, is a stop to limit the movement of the lever N. When the jaws H H' are pressed together by the spring or springs, they automatically lock themselves together, so 130 that they cannot be again separated until unlocked. Various mechanical devices may be

employed for this purpose; but in practice I have adopted the construction shown in the accompanying drawings.

E', Fig. 3, is a curved bar provided with 5 ratchet-teeth O', pivoted to one of the jaws and engaging with the other by a concealed spring-catch, which is disengaged from the teeth by a lock operated by a key. In practice I prefer to use a number of these catches, 10 as indicated at R', Figs. 9 and 10, these catches serving also as tumblers to the lock. The catches are pivoted at V', Figs. 9 and 10, on a stud in the end of one of the jaws, and they are forced toward the rack by the springs S'. 15 The catches are of different widths, as indicated at T', Fig. 9, so as to act as tumblers to engage with the different notches in the key U'. This key is of any ordinary construction. The lock is not released until all the catches are 20 swung free from the rack by the turning of the proper key. The rack E' passes through an opening in the jaw H.

W' is a removable plate covering the recess in the jaw in which the lock is located. Any 25 othersuitable kind of a lock may be employed. The jaws may be made of any suitable or preferred shape, and they may be offset, so as to pass by each other in closing up. The jaws may also be covered with cloth, rubber, or 30 other suitable material.

Y', Fig. 1, is a projecting part of the casing which protects the toothed rack. The plate F has a corresponding extension Z', 35 Figs. 1 and 3. The door may be provided with any ordinary style of lock, so that the alarm may be sent in by any person having the proper key or so that the box can be opened for inspection or repairs.

It will be understood that many alterations 40 may be made in my invention without departure from the leading principles thereof. Thus the handcuff or identifier may be constructed in many different ways so long as the essential features of a grip on the wrist 45 and detachability from the box are preserved. The jaws may be single or double, one or both may slide, the mechanism for disconnecting the handcuff from the box may be variously modified, and so also with the device for un- 50 locking the door. The pipe or spout D may be made of any suitable length or diameter, and it may be pointed in any desired direction. The casing C may be detached from the box along with the handcuff. The rack- 55 bar may be omitted and a suitable lock arranged near the pivots of the jaws. The mechanism for releasing the jaws may be

variously modified. The casing may be applied to the door of the box. The mechanism in the box may be of any ordinary or pre- 60 ferred construction. The arm R may be the moving part of any suitable electric switch. In various other ways the apparatus may be altered, as will readily occur to the skilled constructor, and still be within the principles 65 hereinbefore set forth.

I claim—

1. As an attachment to a signal-box, the removable handcuff or identifier, provided with means for detaching it from the box and 70 with means adapted to release the mechanism of the handcuff to allow it to grasp the hand inserted within it in sending a signal.

2. The combination with a signal-box, of a casing applied thereto, a knob or handle in- 75 side the casing, a detachable handcuff or identifier attached to the casing, and means for releasing the handcuff and for detaching it from the box by the operation of the knob.

3. The combination with a signal-box, hav- 80 ing a knob attached thereto, adapted to produce or permit the signal, of a casing inclosing the knob, the detachable part of the casing provided with the handcuff or identifier; the tube attached to the detachable part, the 85 handcuff at the inner end of the tube, and means for releasing the handcuff and detaching the removable part of the casing and the tube upon the operation of the knob, as and for the purposes set forth. 90

4. The combination with a signal-box, provided with a door having a spring-latch, a knob on the box and a lever engaging with the latch, and a casing or passage provided with a detachable handcuff or identifier, 95 through which only can access be had to the knob, and means for releasing and detaching the handcuff operated by the knob, as and for the purposes set forth.

5. The combination with a signal-box, of 100 means for permitting its operation comprising a detachable handcuff and mechanism for releasing and detaching the handcuff, as and for the purposes described.

6. The combination with a signal-box, of 105 means for permitting its operation, comprising a detachable handcuff and a tube leading thereto, and mechanism for releasing and detaching the handcuff and the tube, as and for the purposes set forth.

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