

No. 840,159.

PATENTED JAN. 1, 1907.

J. D. PEACHEY.  
ELECTRICAL SIGNALING APPARATUS.

APPLICATION FILED JAN. 10, 1903.

2 SHEETS—SHEET 1.

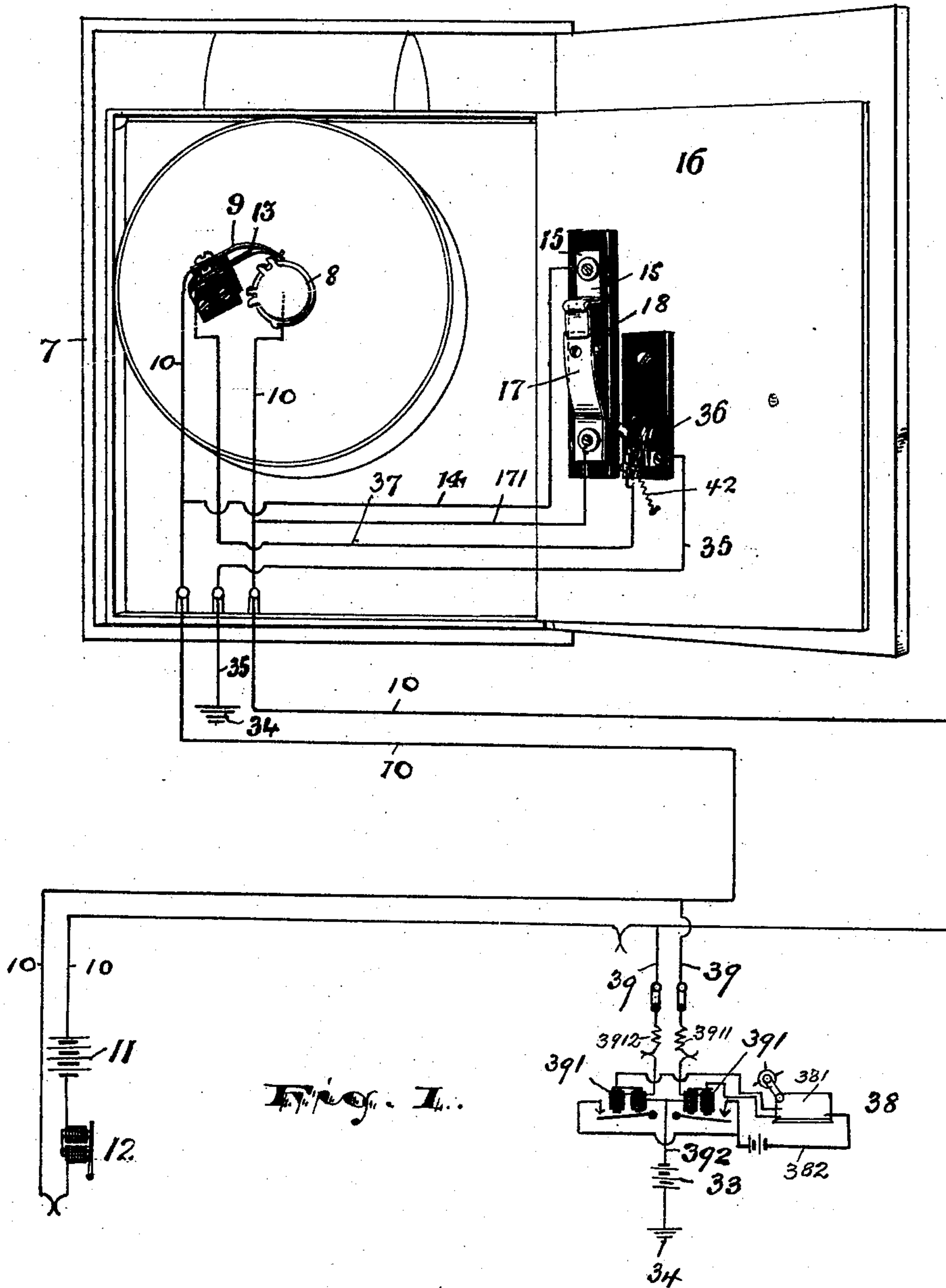


Fig. 1.

WITNESSES:

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*Russell M. Everett.*

INVENTOR:

**John D. Peachey,**

BY

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ATTORNEYS

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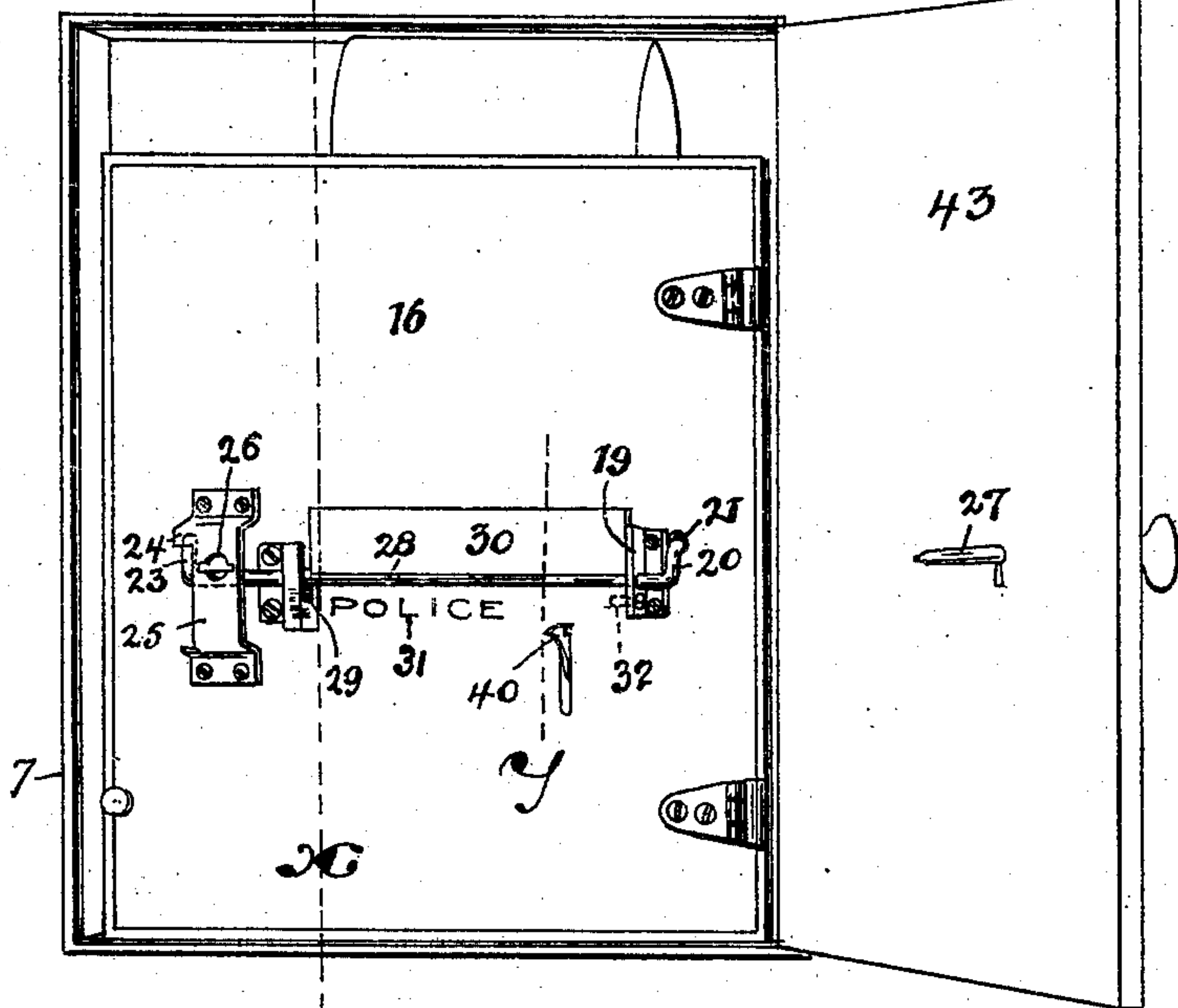


Fig. 2.

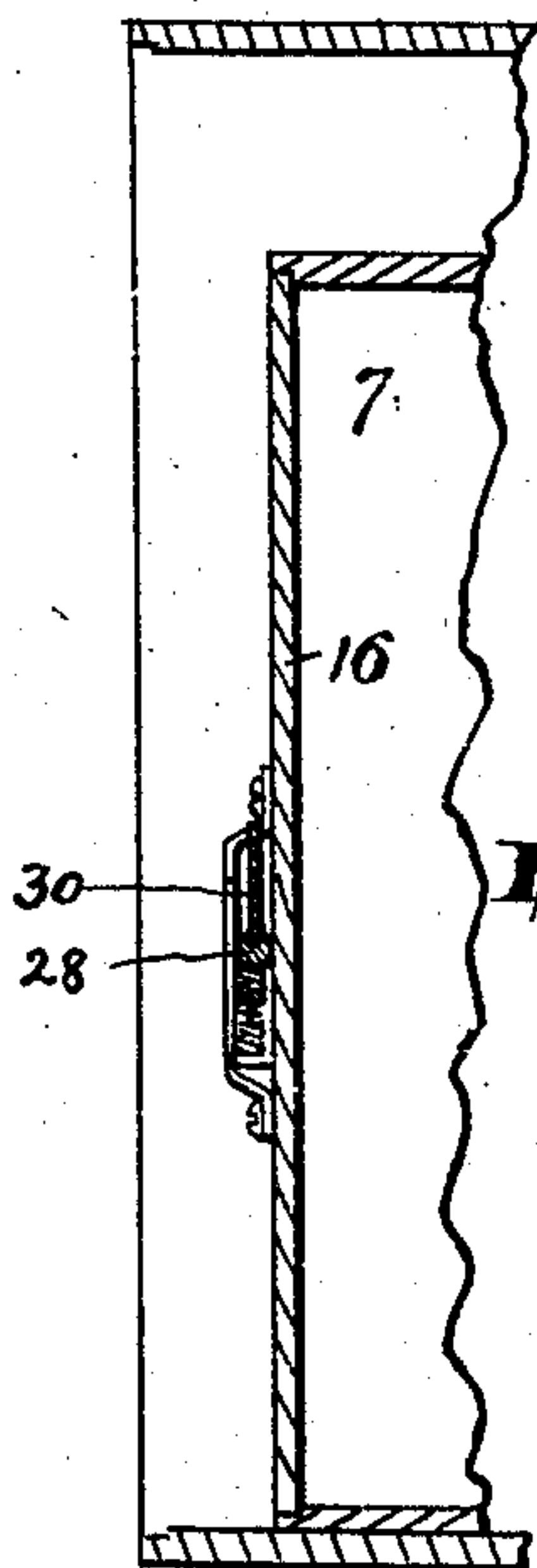


Fig. 3.

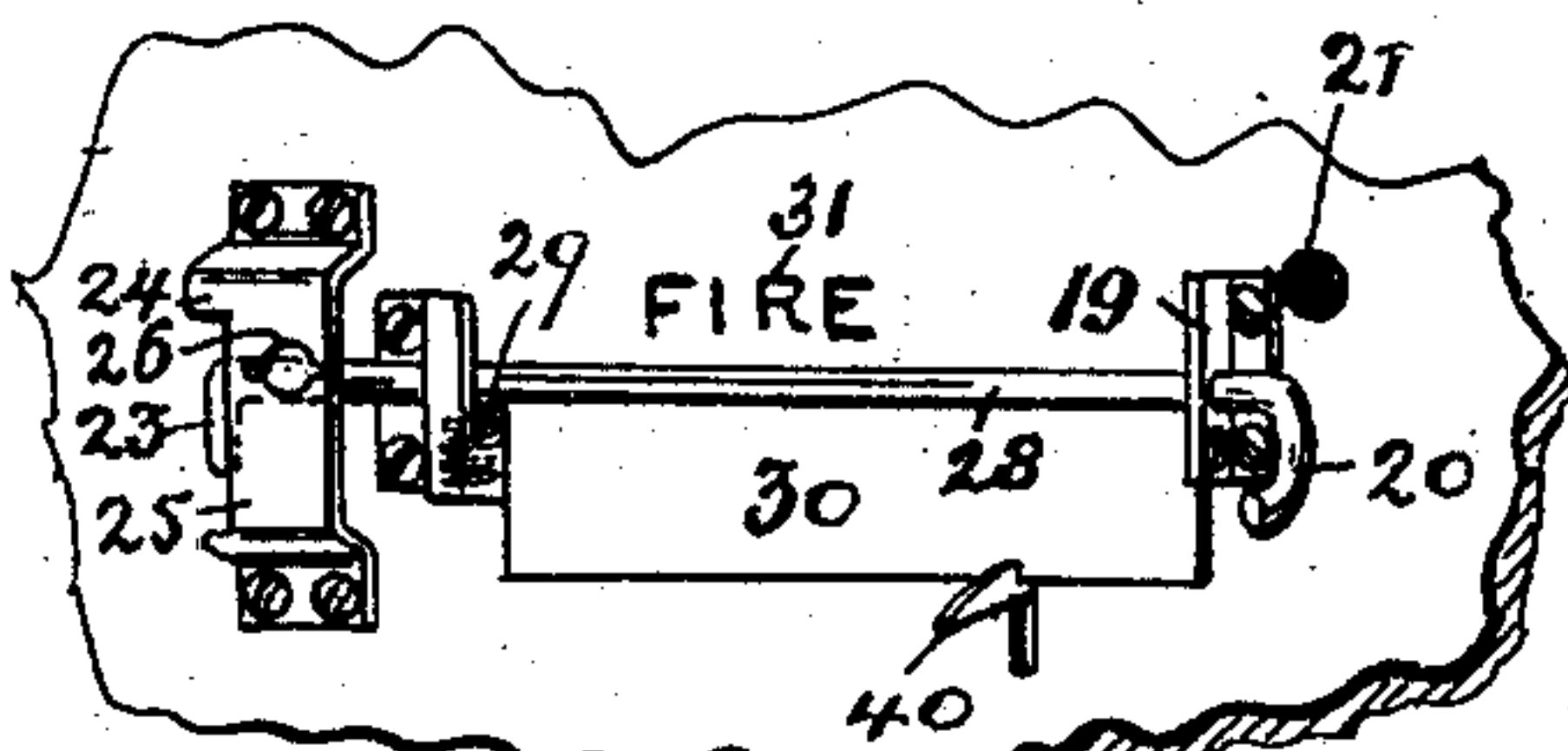


Fig. 4.

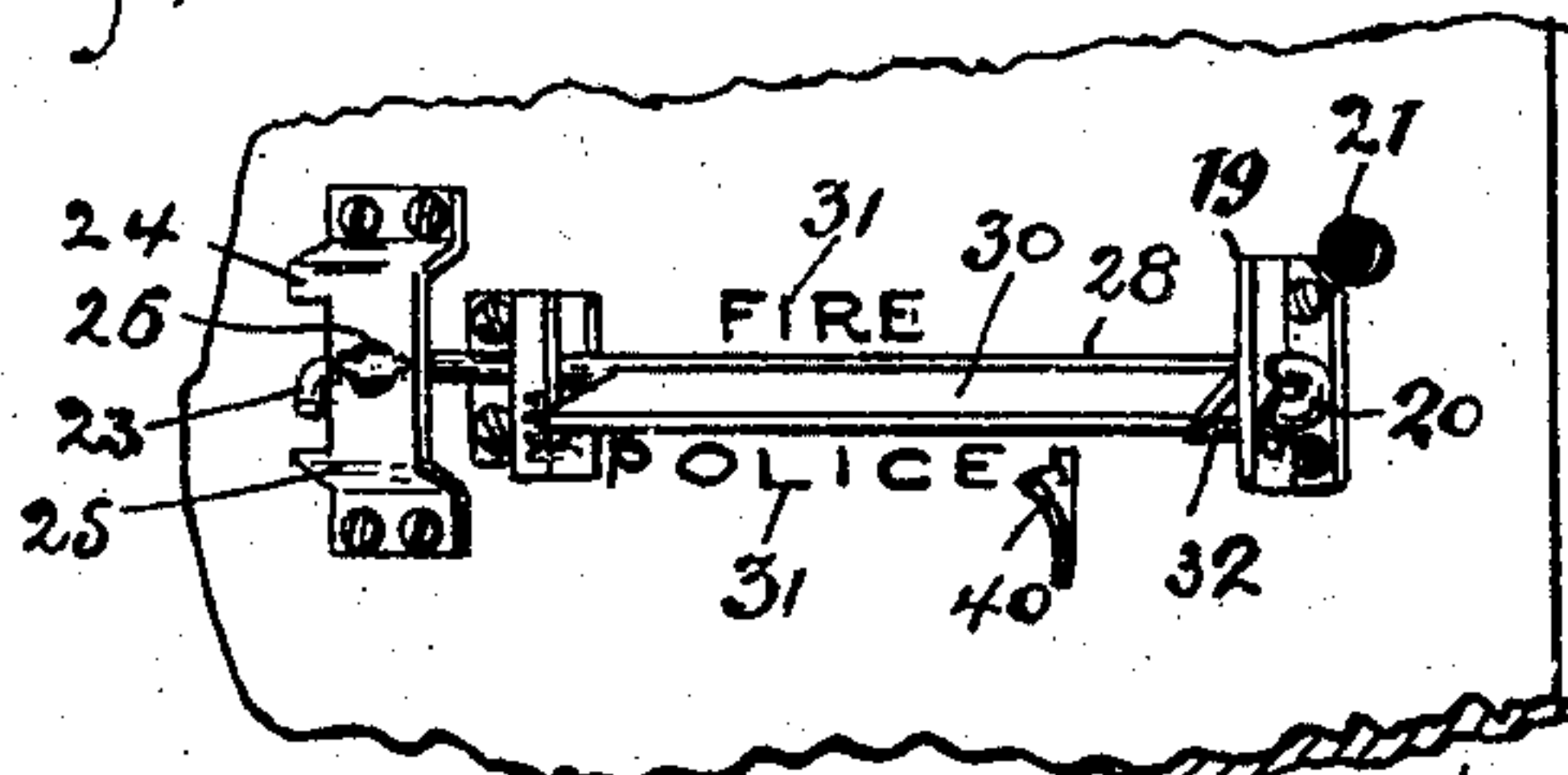


Fig. 5.

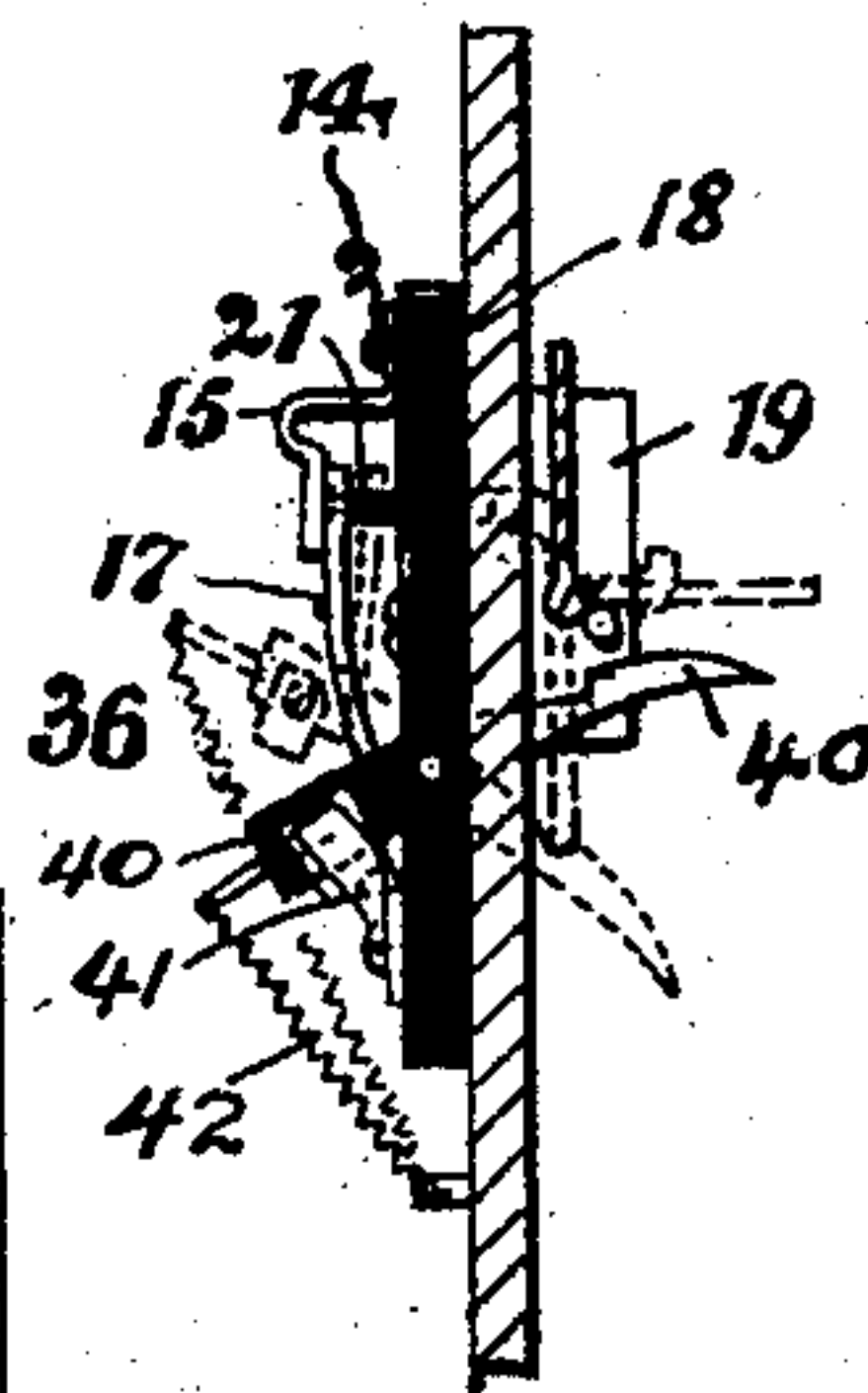


Fig. 6.

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# UNITED STATES PATENT OFFICE.

JOHN D. PEACHEY, OF EAST ORANGE, NEW JERSEY.

## ELECTRICAL SIGNALING APPARATUS.

No. 840,159.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed January 10, 1903. Serial No. 138,472.

*To all whom it may concern:*

Be it known that I, JOHN D. PEACHEY, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented and produced new and original Improvements in Electrical 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The objects of this invention are to economize in the construction of municipal signaling apparatus, to enable both fire-alarm-signaling and police-signaling apparatuses to be employed in connection with one set of wires, boxes, and connections, and to obtain other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved electrical signaling apparatus and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like characters of reference indicate corresponding parts in each of the several figures, Figure 1 is a diagrammatic view illustrating the novel features of my improved apparatus. Fig. 2 is a front elevation showing a street or other box to which certain of my novel appliances have been attached. Fig. 3 is a section of the same, taken on line *x*. Figs. 4 and 5 are perspective details showing different positions of the appliances shown in Fig. 2; and Fig. 6 is a section taken at line *y*, Fig. 2.

In said drawings, 7 indicates an ordinary municipal street-box containing a fire-alarm apparatus for making and breaking a fire-alarm electric circuit in any ordinary manner. Of said box 8 indicates the break-wheel, 9 the ordinary contact-spring adapted to close with the break-wheel 8, and 10 10 are the fire-alarm-circuit wires, on which a battery 11 is stationed at the fire-alarm central office or station 12 in connection with any of the usual fire-alarm telegraphic apparatuses (not fully shown) commonly found at fire-alarm central stations for signaling and recording an alarm. In connection with

said street-box 7 and its ordinary fire-alarm appliances, and more particularly in connection with the break-wheel 8 thereof, I have arranged a second contact-spring 13, adapted to engage with the break-wheel 8 to close a police-alarm circuit supplementing the fire-alarm circuit, as hereinafter described. The spring 13 is normally out of contact with the break-wheel 8.

To one of the wires 10, preferably within the box 7, is tapped a wire 14, extending to a terminal 15, attached, preferably, to the door 16 of said box. This door 16 may be the inner door commonly found in municipal boxes. The terminal contact 15, which is preferably in the form of a spring, coöperates with a second terminal spring 17, also seated upon a block 18, of insulating material. The springs 15 17 are normally in contact, and the spring 17 is connected by wire 171 with the other circuit-wire 10. The tendency of said springs is to separate when released, as hereinafter described. The said springs 15 17, or one of them, when released, as described hereinafter, are adapted to act automatically to throw or operate a switching device hereinafter described, the power of said springs being exerted to operate said switching device so as to automatically act on the fire-alarm apparatus to change the normal relation of circuits, as hereinafter described.

The switching device preferred is of peculiar construction and is shown more clearly in Figs. 4, 5, and 6 and comprises a lever 28, fulcrumed upon a bracket 19 on the door 16 and having a bent arm 20, which normally extends partially through a hole in the door 16 and engages a block of insulation 21, attached to the contact-spring 17, as shown in Fig. 6. The said lever is provided with a second arm 23, adapted to engage a catch projection 24 on a retaining-piece 25, the said arm 23 being so shaped or disposed in relation to the body of the lever and the coöperating catch 24 as to hold the arm 20 pressed against the block of insulation 21 and to force the springs 15 17 into contact and to thus hold them, as shown in Fig. 2.

The retaining-piece 25 is preferably provided with a keyhole 26, through which latter a key 27 may be thrust from the outside of the box, and when said key is thus thrust through said keyhole the lever-arm 23 is detached from its coöperating detent or coöperating catch 24, so that the springs 15 17 are permitted to disengage and act as herein-



after described. When thus released, the power of the spring 17 causes the lever 28 to turn on its fulcrum to the position shown either as in Figs. 4 or 5.

5 A spring 29 tends to hold the lever in caught relation to the detent or catch 24. The body of said lever 28 is preferably of considerable horizontal length to receive the edge of a drop plate or shutter 30, adapted to  
10 cover and conceal indicating-marks 31, such as "Fire" or "Police," applied to the door 16. Said words, "Fire" and "Police," are preferably painted or marked upon the outside of the door of the box, respectively above and be-  
15 low the horizontal line of the said lever-body. Thus when the said lever is in its position of Fig. 2, in which the arm 20 of the lever presses the contact-springs 15 and 17 into closed relation, the said shutter 30 covers  
20 and conceals the word "Fire;" but when said lever is released the shutter 30 drops with the turning-lever 28 and covers and conceals the word "Police" and the word "Fire" is then exposed to view, as in Fig. 4.

25 Under some circumstances or conditions I prefer to maintain both the police and fire signal circuits and connections in operative relation, and in this event I prefer to employ a stop 32, Fig. 5, which may be seated on the  
30 fulcrum 19. Thus it is adapted to be engaged by the drop plate or shutter when it arrives at or approximately at a horizontal plane, in which case the police-circuit is not cut out, as hereinafter described, while at the  
35 same time the fire-circuit is still in its ordinary operative condition.

When the key 27 releases the lever 28, as hereinbefore described, and the power stored in the spring 17 has effected a breaking of the  
40 contacts 15 17 and has thrown the lever and drop-shutter 28 and 30, the latter to its lower vertical or approximately vertical position, the police-circuit is broken, so that the electrical energy is directed over the wires 10 to  
45 effect the usual fire-signaling operations at the central fire-station 12, as hereinafter described. When the springs 15 17 are in closed contact, however, the fire-signaling apparatus is cut out and the battery 33 is  
50 brought into effective relation.

The circuit of the battery 33, Fig. 1, may be traced as follows: From the said battery the current passes to the ground 34, thence over the wire 35 and through the ground-  
55 switch 36 and through wire 37 to the contact 13, where it may divide when resistance is equal. Part of the battery-current passes over contact-spring 9, wire 10, to the left in Fig. 1, passing branch wire 14 to the tap-  
60 wire 39, to the right in Fig. 1, through resistance coil or wire 3911, having a sufficiently high resistance to prevent interference with the operations of the fire-alarm apparatus, thence through relay 391 to the right, thence  
65 to wire 392, to the battery 33, and to the

ground 34, above referred to. In connection with the relay 391 at the police-station I employ a local registering device 381 for registering the number and signals from box 7, normally a police-box, the registering device 70 and its arrangement being such as is commonly employed in police-alarm-registering devices. Said device is on the local battery-circuit 382. The other path of the divided current is through break-wheel 8, wire 10 to 75 the right, passing branch wire 171, thence to wire 39, and through resistance coil or wire 3912, to relay 391 to the left, and thence to wire 392 and the battery 33.

The function of the relay 391 to the left is 80 to duplicate the signal to secure greater certainty, and should a break occur in the circuit 10 the calls on one side of the break will come in on one relay, while the calls from the other side will come in on the opposite relay. In 85 this way the location of the break will be more easily discovered.

When it is desired to cut out the "police-circuit" when using the fire-circuit, I omit or render inoperative the stop 32, preferably by 90 turning back the screw of which it preferably consists, so that the shutter 30 when released will drop with some little force upon the ground-switch lever 40 of the switch 36. Said ground-switch lever 40 acts as a termi- 95 nal of one of the wires 35 and engages a coöperating switch-terminal 41, Fig. 6, and when the drop or shutter 30 falls said switch-lever 40 disengages the second terminal 41 of the switch 36, so as to break the ground connection, as will be understood. Thus the police- 100 circuit is cut out and cannot interfere with the operativeness or efficiency of the fire-circuit.

When the drop or shutter 30 is released 105 from the switch-lever 40, a spring 42 acts to close the terminals 40 41 automatically. Suitable insulation is employed in connection with the terminals of the switch 36 to render the same effective. 110

In connection with the apparatus as above described I prefer to employ two keys 27, one of which is a long one for fire-service and of sufficient length to extend through the outer door 43 of the fire-alarm box and 115 through the hole 26 to engage and release the lever 28, after which the circuit or break-wheel 8 may be operated by turning the usual hand-lever (not shown) or by any of the other means commonly employed in effecting 120 a rotation of said break-wheel. When the circuit is to be employed in connection with police alarms or signaling, the policeman uses a shorter key 27, which will not extend to the hole 26 or otherwise operate the lever 28, the 125 said shorter key, however, permitting the said policeman to open the door 43 and manipulate the report-indicator and the police-signaling apparatus, such as the hand-lever (not shown) above referred to, but without 130



changing the circuit-lever 28, thus enabling him (the policeman) to effect a turning of the wheel 8 and a transmission of signals to the police-station alone.

5 I am aware that various detailed variations or modifications may be made in the apparatus thus described without departing from the spirit or scope of the invention, and I do not wish to be understood as limiting myself by any of the positive expressions employed excepting as the state of the art may require.

Having thus described the invention, what I claim as new is—

15 1. In a combined fire and police signaling system, the combination with a box having indicating words or marks applied thereto and a switching device, of a word or mark concealing and exposing drop plate or shutter arranged adjacent to said words or marks and adapted to automatically cooperate with the switching device and indicate the central office at which the signal will be recorded when the box is operated, said box having electric connection with central offices, and electrical appliances, substantially as set forth.

2. The combination with a fire central station and its normally closed electrical circuit having street-boxes thereon, circuit-breaking means in said boxes adapted to open said normally closed circuit, and police-circuit wires and connections connecting with the said normally closed fire-circuit, and with a police central station distant from and independent of the fire central station, and means stationed at said boxes adapted to prevent the opening of the fire-circuit during the operation of the police-circuit wires and connections, substantially as set forth.

3. The combination with a municipal fire central station and its normally closed metallic circuit having street-boxes thereon with circuit closing and breaking apparatus there-

in, the said circuit closing and breaking apparatus being normally open to ground, of two tap-wires connected to the normally closed metallic circuit, one tap-wire connected on each side of the said circuit between the fire-station apparatus and the first box out from the fire-station on that side of the line of said circuit, both tap-wires extending to a police central station distant from the fire central station and both being normally grounded through resistance, relays and battery as shown and set forth.

4. In combination with a police central office and a fire central office separate and distant from one another, a box having a circuit-changing wheel and its metallic fire-circuit connections and terminals, a police-circuit wire in said box, of a switch arranged in said box adapted to hold fire-circuit closed while said box is being used for the transmission of police-signals and a key for operating the switch to mechanically release the fire-circuit terminals when opening the box, substantially as set forth.

5. In combination with a municipal or street box having therein fire-signaling closed-circuit connections and appliances, a ground-wire tapped on a terminal of the fire-circuit and attached to the closed terminals of the police-circuit, a lever holding the fire-terminals in contact, a catch holding said lever against said fire-terminals, and a key adapted to open the box, detach the lever and its catch and open both the fire and police terminals to render the police-circuit inoperative and the fire-circuit and its signal appliances operative, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of December, 1902.

JOHN D. PEACHEY.

Witnesses:

CHARLES H. PELL,  
C. B. PITNEY