

No. 710,065.

Patented Sept. 30, 1902.

L. J. LOEFFLER.
SELF RESTORING TELEPHONE.

(Application filed Oct. 23, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

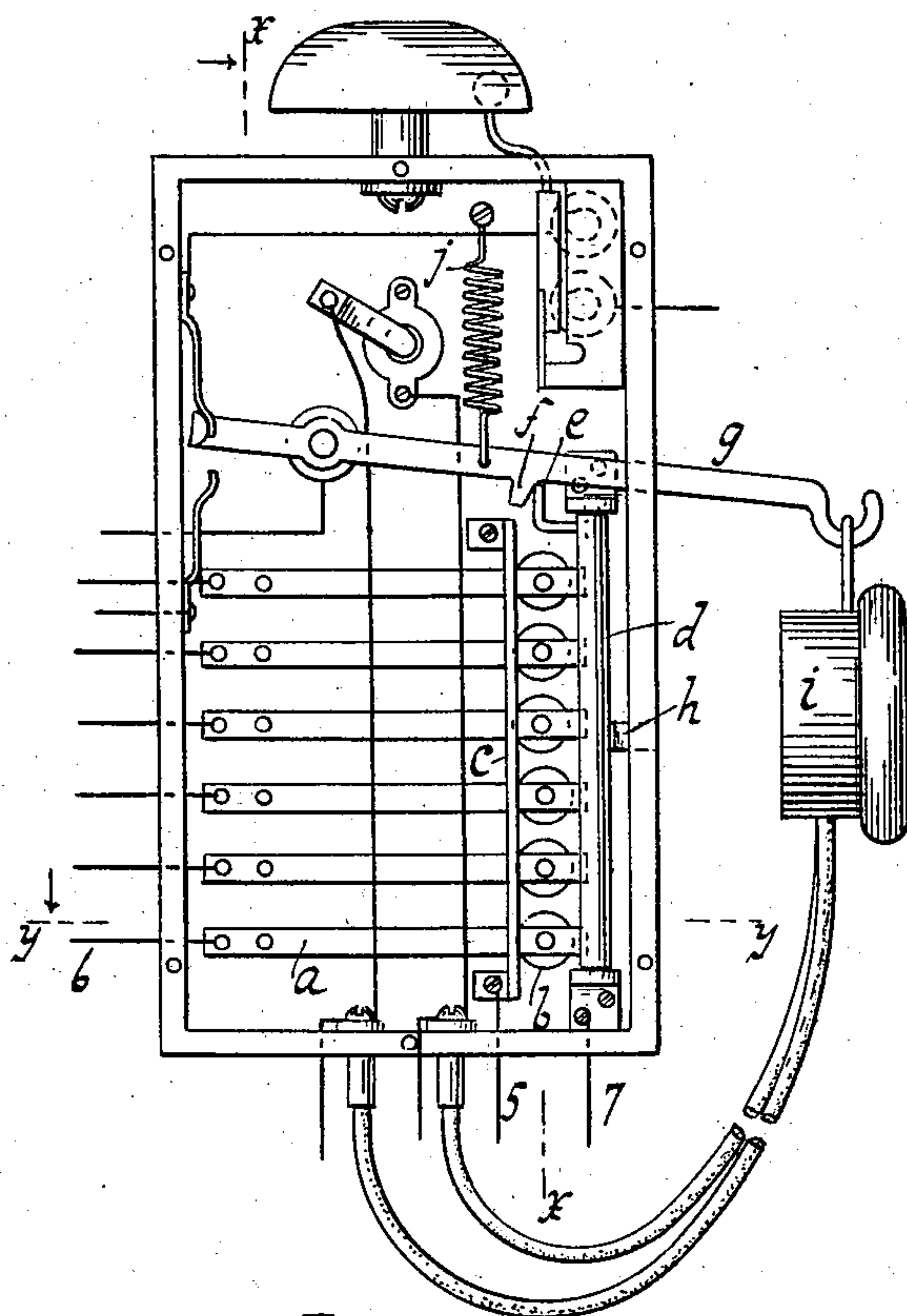


Fig. 2.

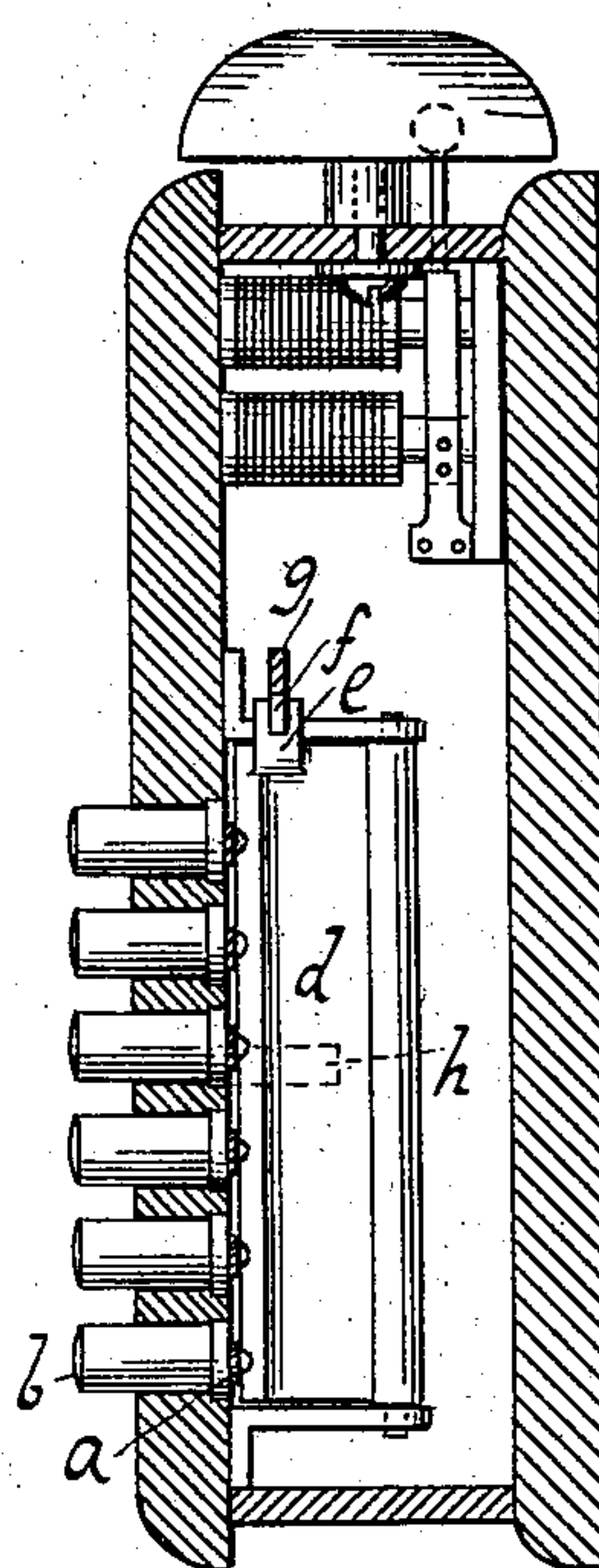


Fig. 3.

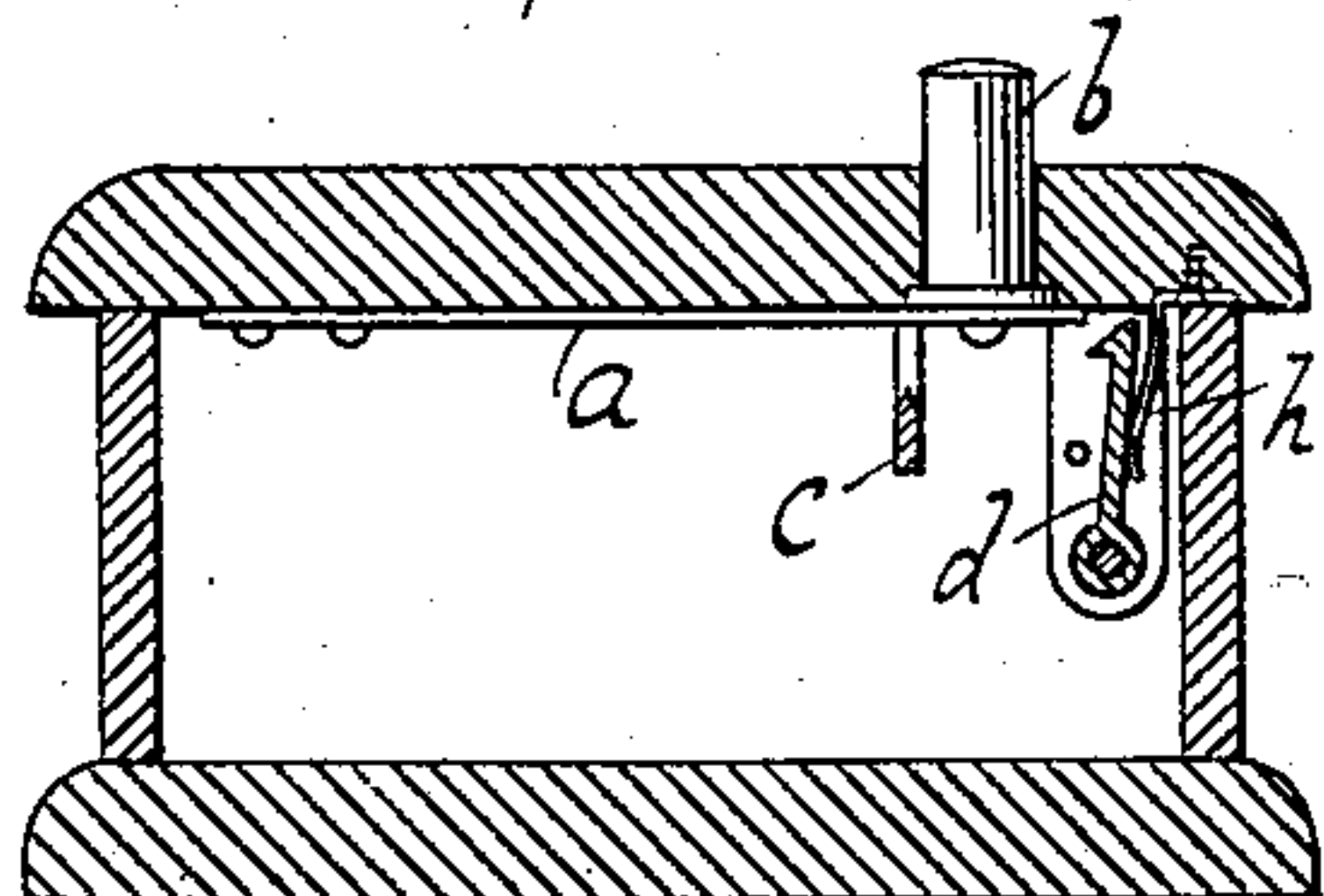


Fig. 4.

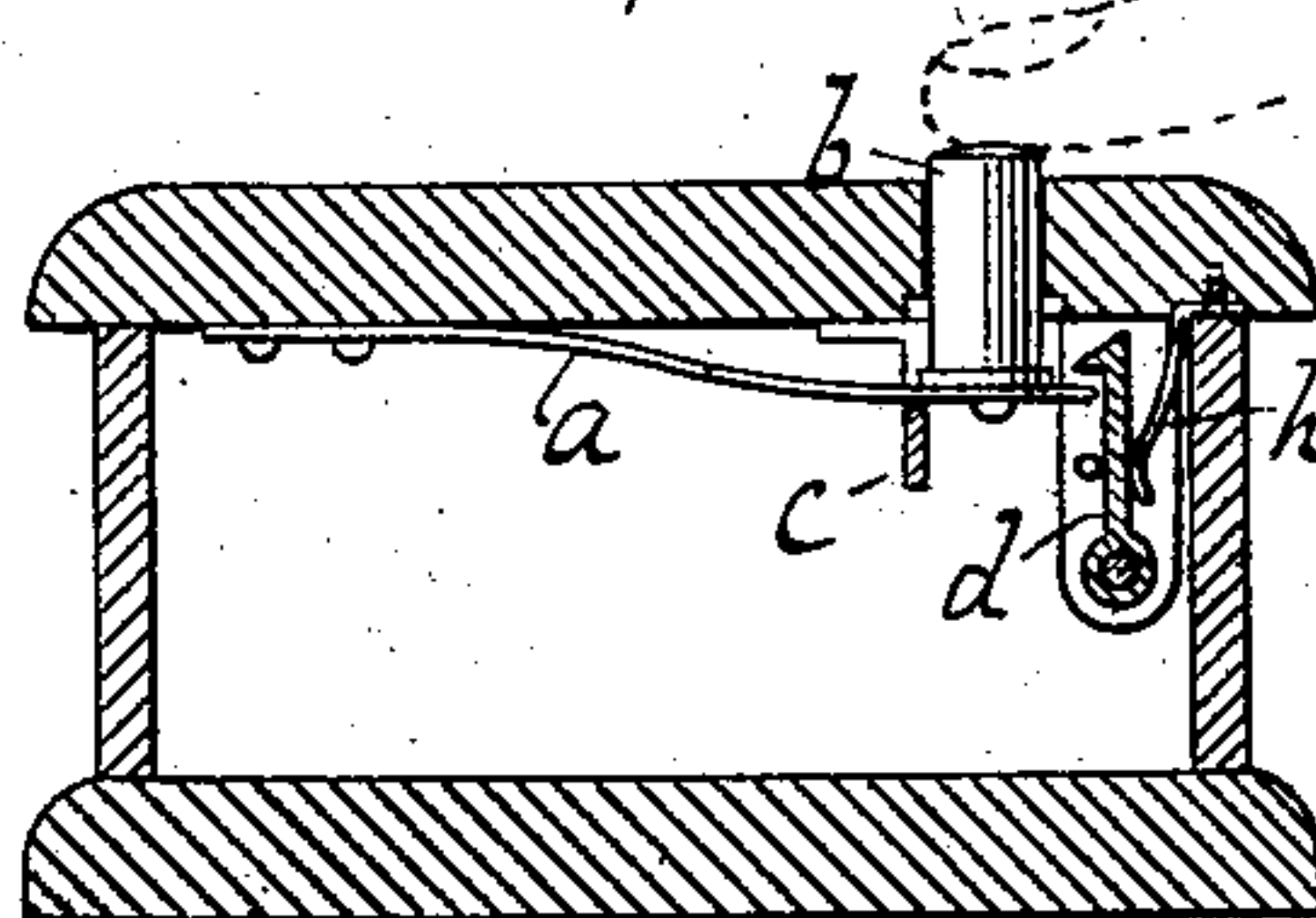
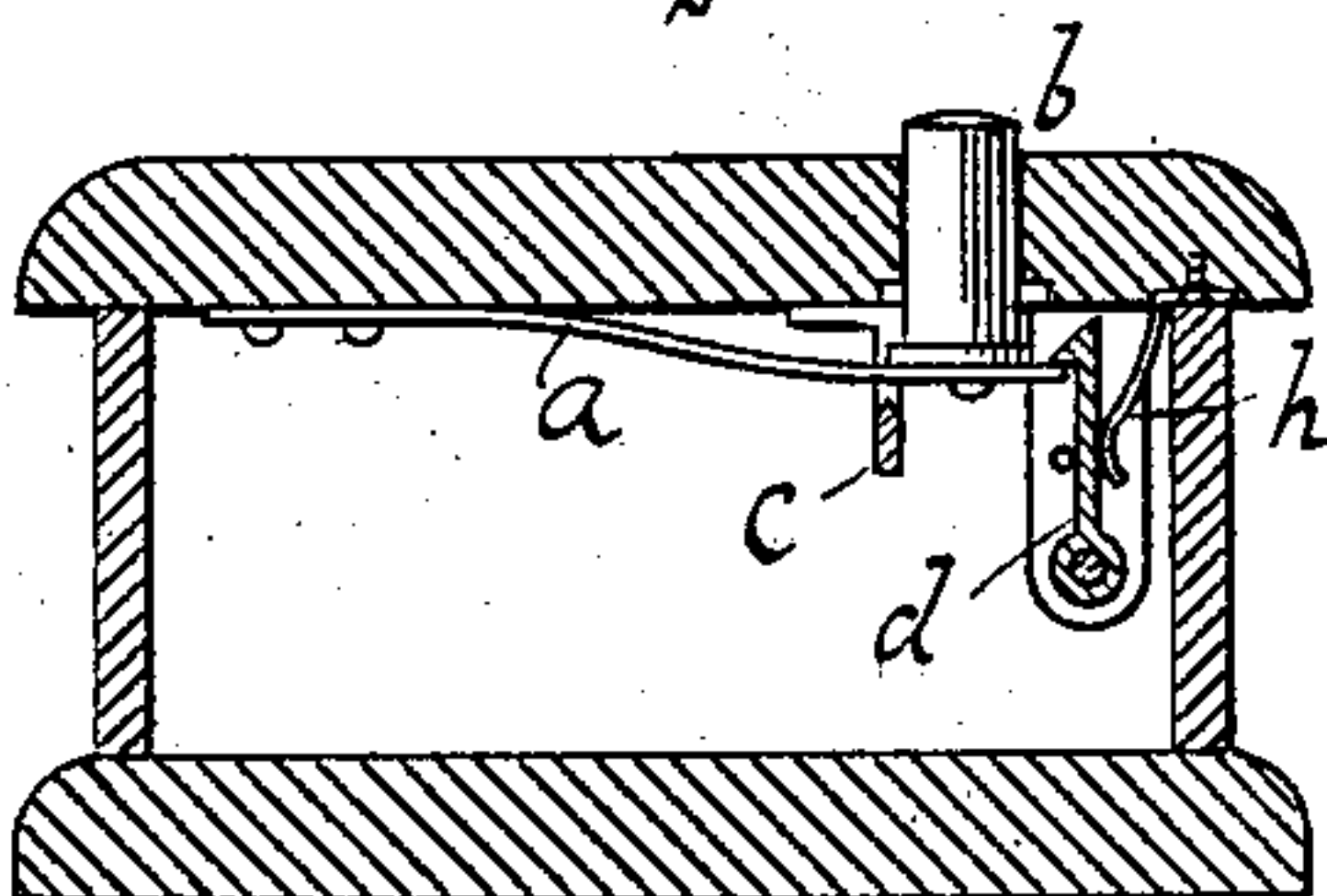


Fig. 5.



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Fig. 6.

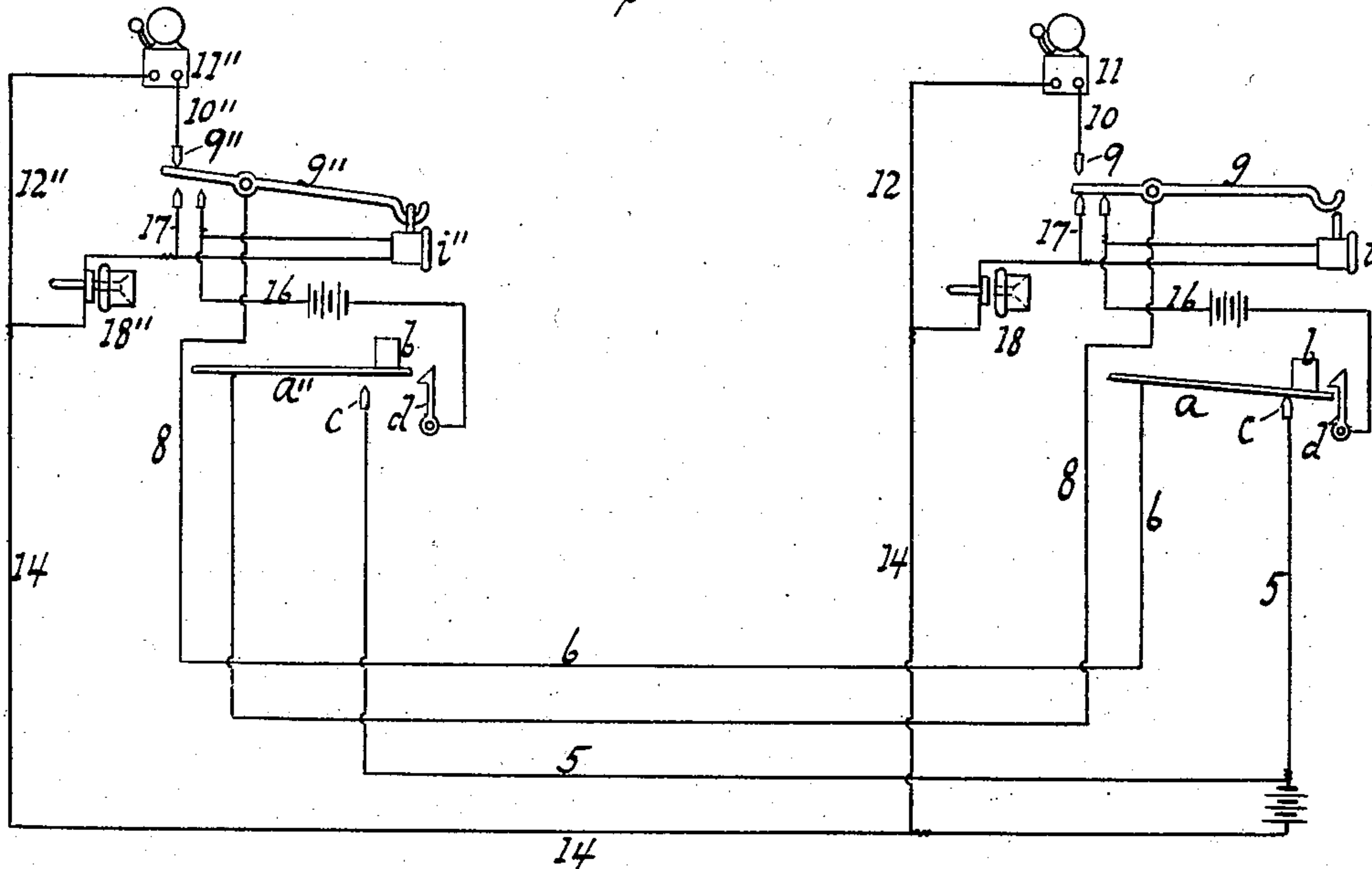
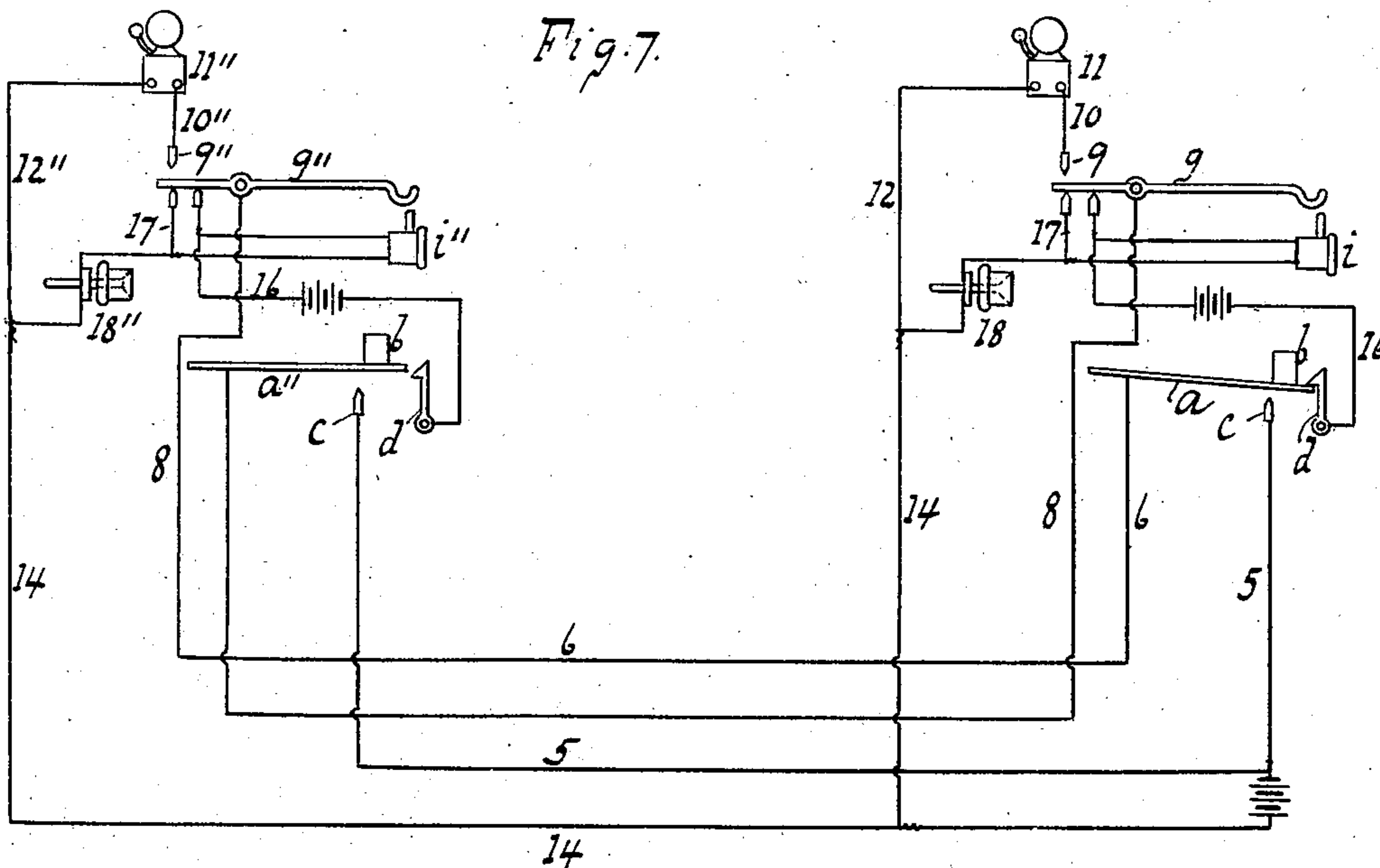


Fig. 7.



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LOUIS J. LOEFFLER, OF NEW YORK, N. Y.

SELF-RESTORING TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 710,065, dated September 30, 1902.

Application filed October 23, 1901. Serial No. 79,740. (No model.)

To all whom it may concern:

Be it known that I, LOUIS J. LOEFFLER, a citizen of the United States, residing in Manhattan borough, New York city, in the county and State of New York, have invented new and useful Improvements in Self-Restoring Telephones, of which the following is a specification.

This invention relates to a telephone by which call and talking circuits are readily established and broken as required; and the invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 shows a receiver hanging on its hook and the contacts open. Fig. 2 is a section along *xx*, Fig. 1. Fig. 3 is a section along *yy*, Fig. 1, the contacts being open. Fig. 4 is a view like Fig. 3, showing the signaling-circuit closed. Fig. 5 is a view like Figs. 3 and 4, showing the talking-circuit closed. Figs. 6 and 7 are diagrams for illustrating the nature and relations of the circuits which are operated by the apparatus disclosed.

This telephone is provided with a call-bell, a transmitter, and a receiver, which are well known. By means of this invention a circuit is closed by pressing a push-button, which rings a call-bell, and when the pressure is removed from the push-button another circuit is closed, which is connected to the receiver of a telephone situated at another end or part of the circuit.

To a cover of the telephone are fastened a series of spring-strips *a*. For each one of these spring-strips is provided a push-button or handle *b*. When any one of the push-buttons is pressed, a contact is closed between one of the spring-strips *a* and the signal-circuit bar *c*, Fig. 4, which closes the circuit through circuit or signal wire 5 to a call-bell or signal in the telephone situated in a different locality and back through the circuit-wire 6 to the spring-strips.

When the pressure is removed from the push-button, the free end of the respective spring-strip is engaged by an oscillating pawl or catch *d*, Fig. 5, which closes the talking-circuit through wire 7 to the receiver of a telephone in a different locality and back through the circuit-wire 6 to the spring-strip. The

oscillating pawl is provided with the arm *e*, which is engaged by a nose *f* on the lever *g*. A spring *h* tends to push the arm against the nose of the lever.

When not in use, the receiver *i* is hung on the hook of the lever *g*, Fig. 1, and depresses the lever, bringing the nose in contact with the arm of the pawl, pushing it back against the spring *h*, which releases the spring-strip *a*, thereby opening the circuit through wire 7 and wire 6, Fig. 3. When the receiver *i* is removed from the hook, the lever freed from such weight is pulled up by the action of spring *j*, thus bringing the nose of the lever out of engagement with the arm of the pawl, which is pushed forward by the spring *h* to be in line with the spring-strip *a* when pushed in by depressing one of the buttons. Each of the spring-strips is provided with a circuit-wire, so that communication can be held with a series of telephones in different localities.

It is noticed that the line contact-spring *a* is normally out of contact with both the signal-wire terminal *c* and the talking-wire terminal *d*. These terminals are so spaced that when the contact touches or closes at either terminal *c* or *d* it is out of contact with the other terminal *d* or *c*.

The button or actuator *b* moves or holds the contact *a* in touch with terminal *c*, and the contact is then clear of terminal *d*, while said terminal or catch *d* holds the contact in touch with the other circuit when released by the button or handle *b*.

In Fig. 6 are shown two instruments, the one at the right calling the one at the left, or, in other words, the button *b* at the right having been moved to contact *a* to *c*, so that the current or circuit is closed along 5 and 14 to 12", actuating the call or buzzer 11" at the left and continuing on through 10" and 9" to lever *g*" and wires 8 and 6 back to spring *a* and point or bar *c*.

After the call is made the button *b* at the right is released, and spring *a* now cuts off or opens the call-circuit at *c*, Fig. 7, and closes the talking-circuit at *d*, and the two receivers *i* and *i*" being taken off the hooks *g* and *g*" at the right and left hand instruments the talking-circuit is closed at *d a* along wires 6 and 8 to lever *g*" and wire 17 to receiver *i*" and transmitter 18" along wire 14 to trans-

mitter 18 and receiver *i* to wire 16 and contact *d a*.

Of course the required signaling and talking batteries are included in or provided for the respective circuits.

What I claim as new, and desire to secure by Letters Patent, is—

1. A signal-wire terminal, a swinging catch forming a talking-wire terminal, a spring for moving the catch to engaging position, an arm carried by the catch, a releasing nose or incline for the catch made to engage the arm, a weight-actuated lever on which said incline is mounted, a contact-spring made to normally move clear of the terminals, and a button or handle for moving the contact to the signal-terminal, said contact-spring being adapted for engagement by the catch when released to clear the signal-terminal substantially as described.

2. A swinging spring-pressed catch forming a talking-circuit terminal and having an inclined and shoulder portion, a push-button and line contact-spring made to contact with the incline to retract or pass the catch and to be held by or make talking contact with the shoulder when the push-button is freed, a ringing-circuit bar with which the contact-spring closes when pressed by the button past or clear of the shoulder, said spring being made to return to and be held by the shoulder

clear of the ringing-circuit on the release of the button, a receiver-carrying hook or lever having a nose, and an arm on the swinging catch engaged by the nose for forcing the catch to release the line contact-spring, the latter being made to normally spring away from or clear both the ringing and talking circuits substantially as described.

3. A signal-wire terminal and a talking-wire terminal combined with a contact-spring normally out of contact with both terminals and made to contact with either terminal while clear of the other terminal, means for causing the engagement of said contact-spring with one of said terminals, a pawl engaging the contact-spring for retaining the same in engagement with the other of said terminals, a spring engaging said pawl for retaining it in engagement with the said contact-spring, an arm connected with said pawl, a lever, and a nose carried by the lever and engaging the said arm for releasing the pawl from its engagement with the said contact-spring.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LOUIS J. LOEFFLER.

Witnesses:

CHAS. E. POENSGEN,
E. F. KASTENHUBER.