

No. 685,715.

Patented Oct. 29, 1901.

F. A. CUMINGS.
SECURITY TELEPHONE SYSTEM.

(Application filed Apr. 19, 1901.)

(No Model.)

Fig. 1

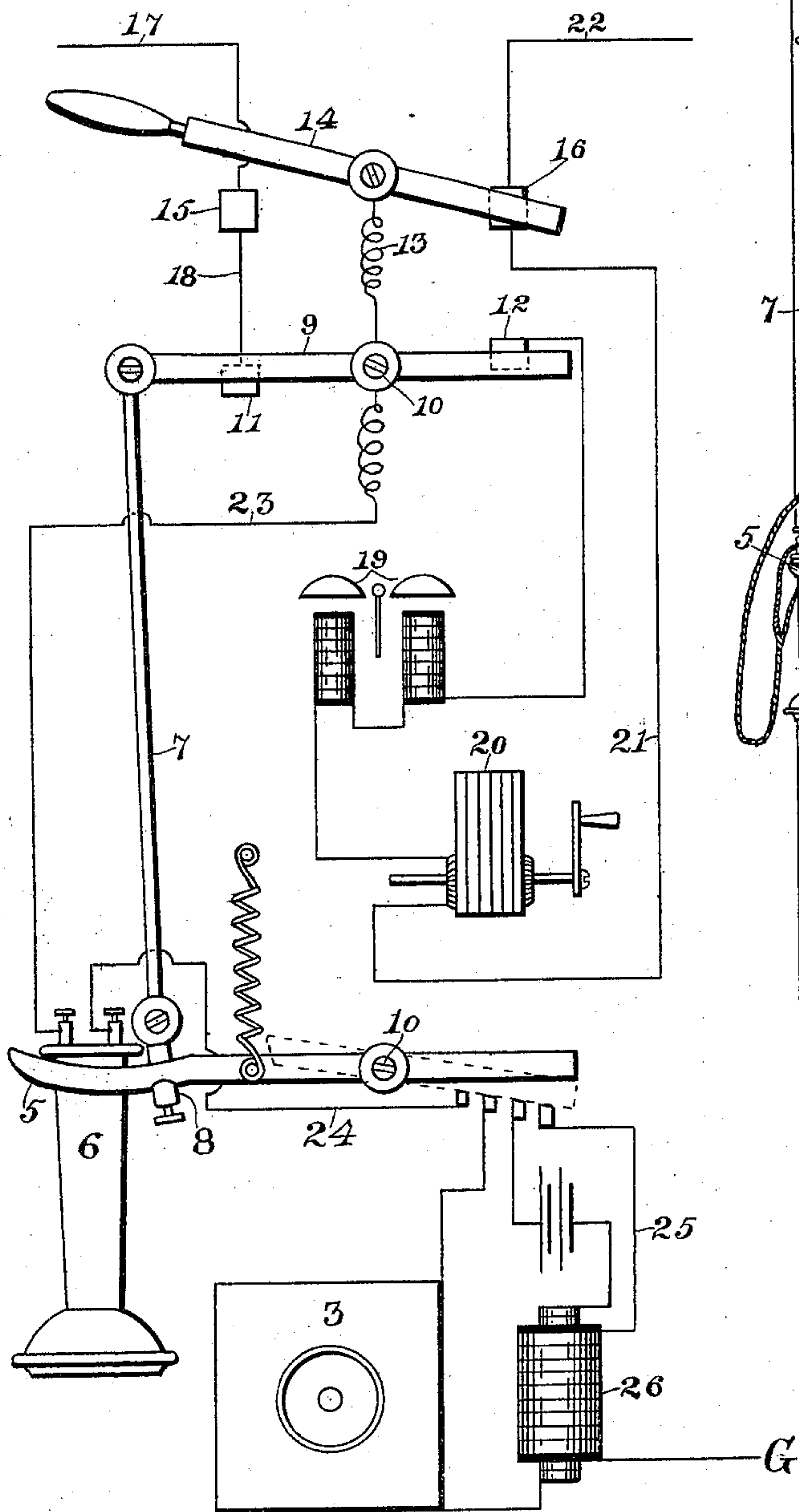


Fig. 2

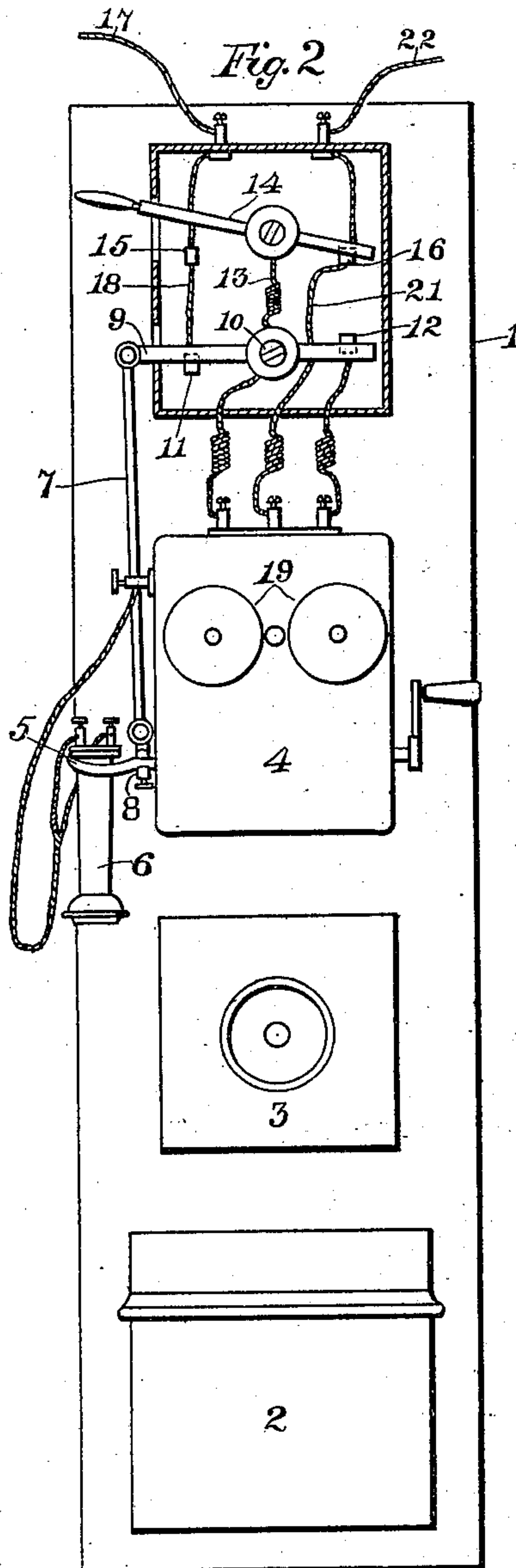
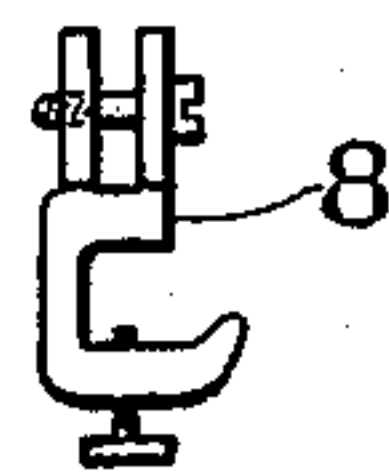


Fig. 3



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UNITED STATES PATENT OFFICE.

FRANK A. CUMINGS, OF GREERSVILLE, OHIO, ASSIGNOR OF ONE-HALF TO
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SECRECY TELEPHONE SYSTEM.

SPECIFICATION forming part of Letters Patent No. 685,715, dated October 29, 1901.

Application filed April 19, 1901; Serial No. 56,551. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. CUMINGS, a citizen of the United States, residing at Greersville, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Secrecy Telephone Systems; and I do 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 the characters of reference marked thereon, which form a part of this specification.

My invention relates to secrecy telephone systems, and has for its object the production of two mutually-connected switches independent of the usual set of instruments now furnished the users and operated partly by the movement of the hook-lever of the magneto, which may be applied, if necessary, without changing the original instruments materially and by means of which the line-wires extending either to right or left may be grounded through the telephone-receiver at the will of the operator, the normal positions of the parts permitting the call-bell to be rung from either direction.

Each constituent element of my invention is described in detail and its individual office, together with the mode of operation of the whole, fully explained hereinbelow.

Of the accompanying drawings, throughout which like characters refer to like parts, Figure 1 is a diagram of the connections; Fig. 2, a front view of a telephone with my invention attached, and Fig. 3 a side view of the coupling device.

In the views shown numeral 1 marks the wall-board, 2 the battery-box, 3 the transmitter, 4 the magneto-case, and 5 the hook-lever by means of which the receiver 6 is suspended, all of the customary construction and arrangement.

From the hook-lever 5 there extends upwardly a connecting-rod 7, provided at its lower end with a coupling device 8, which enables the rod to be pivotally shackled to the hook-lever. At the upper end the rod is pivotally joined to the arm 9 of the lower of the two connected switches constituting my

invention. Switch-arm 9 is a conductor and is pivoted upon the pin 10. Contacts 11 and 12 are met and joined by arm 9 when in its lower and normal position, as delineated. A wire 13 joins switch-arms 9 and 14, the last number relating to the top or grounding switch, of which plates 15 and 16 are the contacts. I do not confine myself to the precise form shown for the rod and arms, but may vary the same for suitable reasons.

Considering the diagram, Fig. 1, the connections may be followed. Line-wire 17 enters on the left to contact 15. Thence the circuit is by wire 18 to contact 11, along arm 9 to contact 12 and through the bell 19 and magneto 20, by way of the connecting-wire 21 and contact 16, to the right-hand line-wire 22. From the right call-currents would pass through the same conductors in reverse order.

To explain the operation of my invention, let it be assumed that it is desired to speak with a person on the right without permitting parties on the left or intermediate parties to hear the conversation. By bringing the arm 14 against contact 16, as shown, and removing the receiver 6 from hook 5 a circuit is established from the right line-wire 22 by contact 16, arm 14, wire 13, connecting the two arms, across arm 9, by wire 23 to receiver 6, thence by wire 24 to hook-arm 5, and thence by wire 25 through secondary coil 26 to ground G. Under these conditions no one on the left can hear the message. If any intermediate operator removes his receiver from its hook, he breaks the circuit; but the uppermost switch-arm 14 being in the interrupter's instrument in contact with either the right or the left line-wire from his location he is thus brought into communication with one or the other of the original parties and may be asked to hang up his receiver and withdraw. The speaker to the right must bring his switch-arm 14 into contact with plate 15 on the left. On a line having a number of instruments equipped with my invention any two persons may converse with comparative secrecy.

I am aware that switches have been constructed enabling a telephone user to ground either the left or right hand line-wire at will, and I do not claim that feature broadly.

What I claim, and seek to secure by Letters Patent of the United States, is—

In a secrecy telephone system, the combination of the hook or receiver-supporting lever
5 constituting a switch arranged to make and break the receiver and transmitter circuits, a second or intermediate switch having the arm
9 arranged to make and break the magneto and line circuit, a connecting-rod 7 provided
10 at one end with a coupling whereby it may be detachably secured to the said hook-lever, the remaining end of rod 7 being pivotally joined to switch-arm 9, and a third switch

having the arm 14 adapted to be operated by hand and arranged to connect alternately 15 with the right and left branches of the line, the switch-arm 14 being in electrical connection with the telephone-receiver, substantially as shown and described.

In testimony whereof I affix my signature 20 in presence of two witnesses.

FRANK A. CUMINGS.

Witnesses:

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