No. 702,028. Patented June 10, 1902.

J. M. OVERSHINER.

TELEPHONE SWITCHBOARD.

(Application filed Dec. 15, 1900.)

(No Model.)

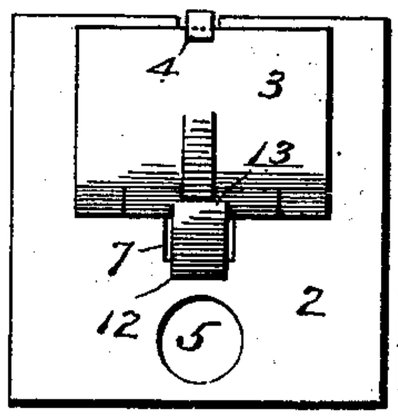

FIG. 6.

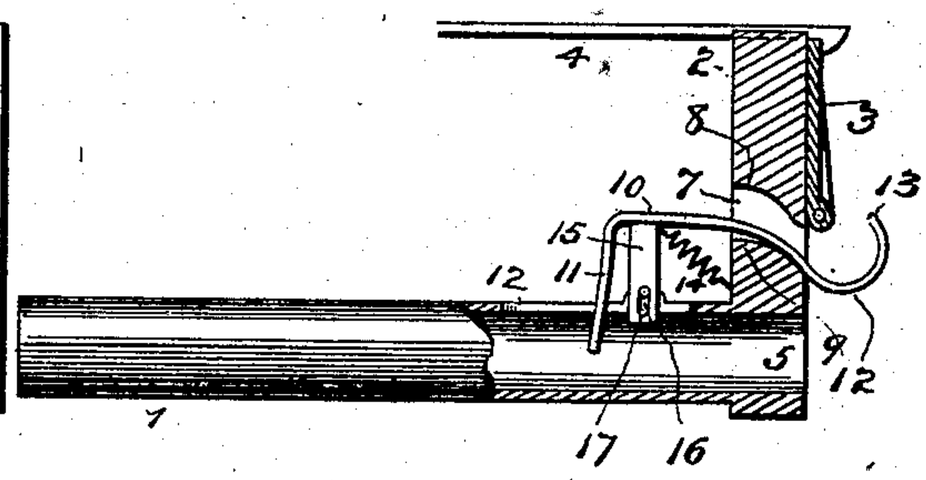

FIG. 1.

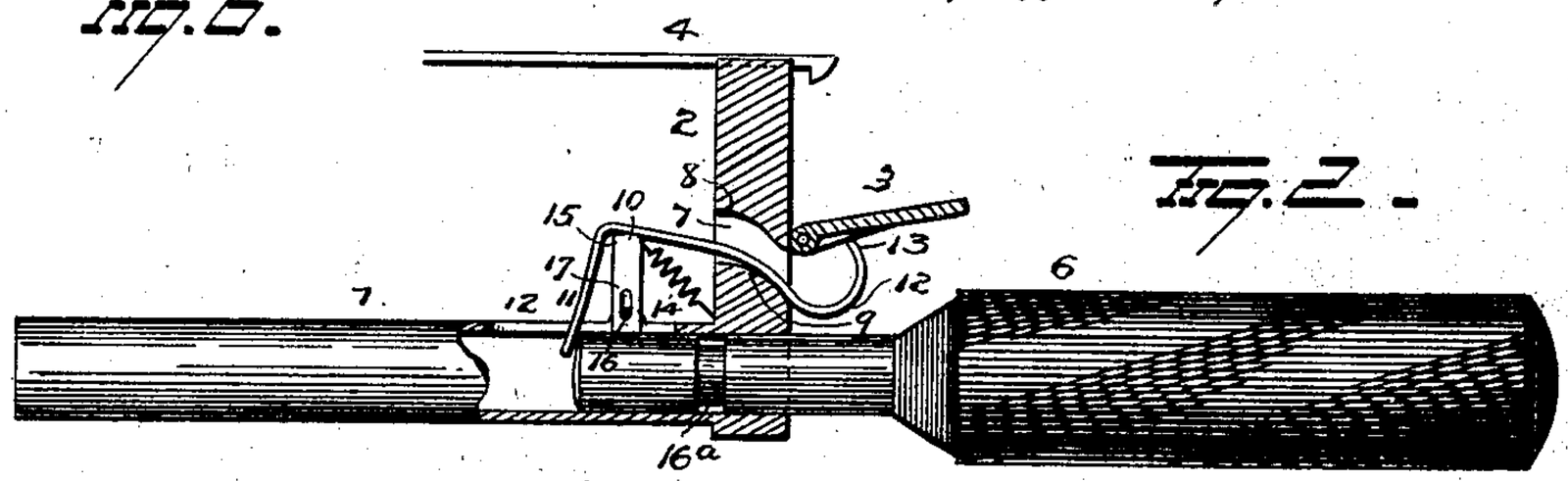

FIG. 2.

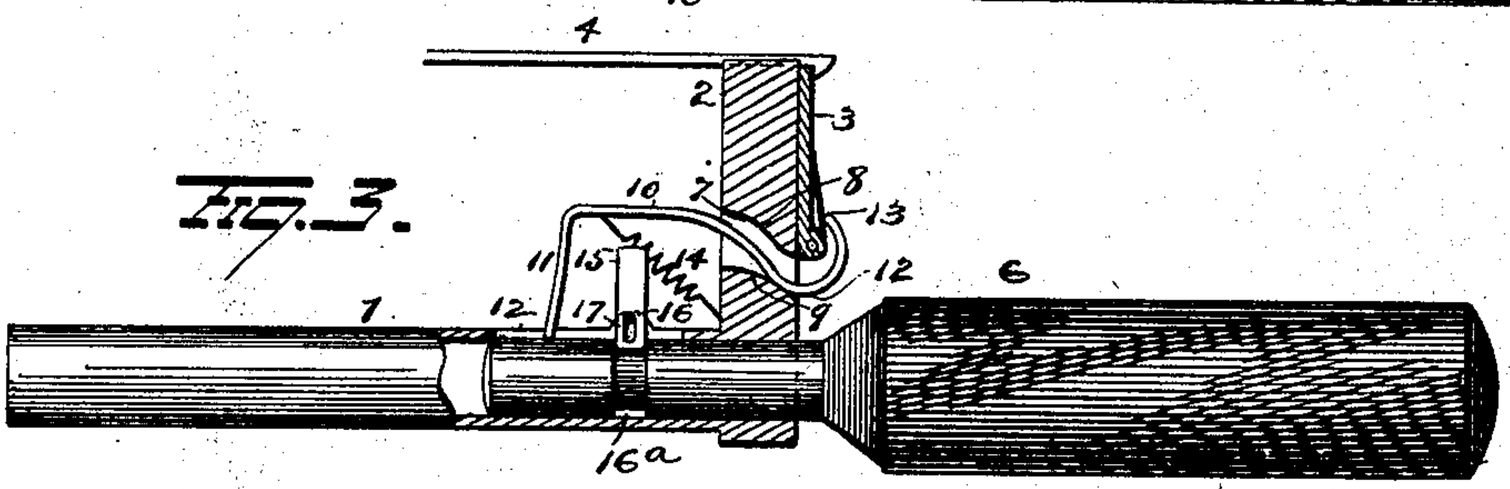

FIG. 3.

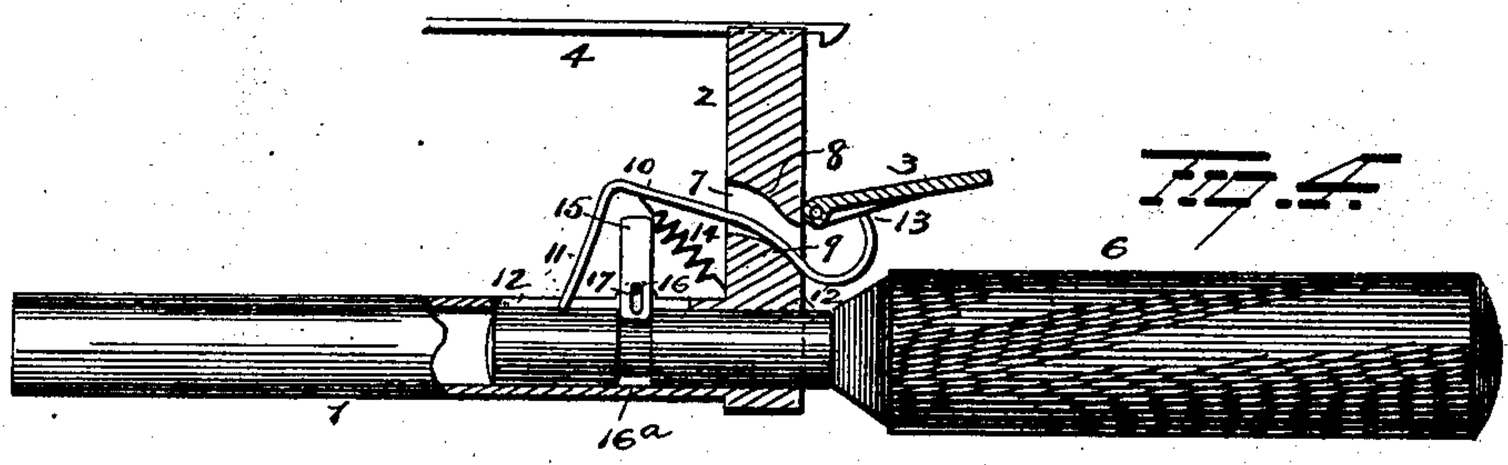

FIG. 4.

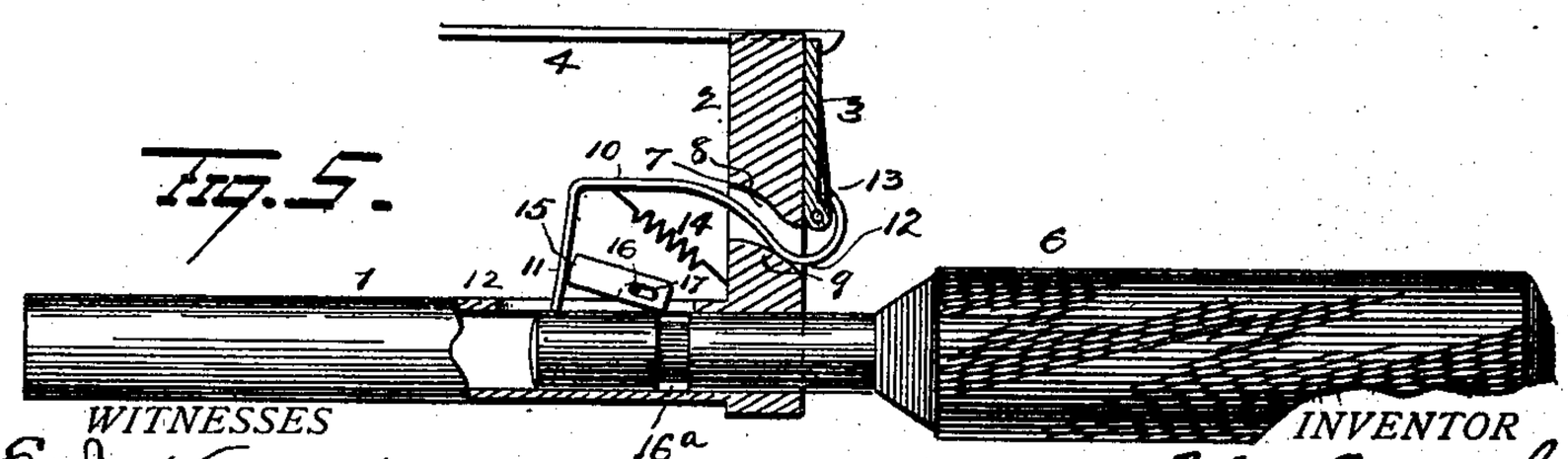

FIG. 5.

WITNESSES

E. J. Nottingham

G. F. Downing.

INVENTOR

J. M. Overshiner

By H. A. Seymour

Attorney

UNITED STATES PATENT OFFICE.

JAMES M. OVERSHINER, OF ELWOOD, INDIANA.

TELEPHONE-SWITCHBOARD.

SPECIFICATION forming part of Letters Patent No. 702,028, dated June 10, 1902.

Application filed December 15, 1900. Serial No. 39,988. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. OVERSHINER, of Elwood, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Telephone-Switchboards; 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.

My invention relates to an improvement in telephone-switchboards, and more particularly to means for restoring the drop or annunciator, the object of the invention being to provide simple and efficient means for restoring the drop when the plug is being inserted into the jack-socket and also for restoring the drop when the plug is being withdrawn from the socket.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional view showing my improved drop-restoring devices in their normal positions. Fig. 2 is a view showing the positions of the parts after the drop has fallen and with the plug partially inserted into the jack-socket. Fig. 3 is a view showing the positions of the parts when the drop-plug has been fully inserted and the drop restored. Fig. 4 is a view showing the positions of the parts after the drop has fallen while the plug is in the jack-socket. Fig. 5 is a view showing the manner of restoring the drop when the plug is being withdrawn. Fig. 6 is a view showing the front of the jack.

1 represents a jack-socket tube, 2 the front plate of a jack, and 3 a drop or annunciator hinged at its lower edge to the face of the front plate 2 and retained in its normally raised or closed position by means of a latch 4, adapted to be actuated in the usual manner to release the drop. The front plate 2 is provided with a hole 5 in alinement with the socket-tube 1 for the reception of a plug 6. Above the hole 5 and between said hole and the hinged lower edge of the drop the front plate 2 is made with a slot 7, extending diagonally through the same and having a curved upper face 8 and a curved lower face 9, the latter forming, in effect, a cam-surface for a purpose hereinafter explained. A slide or lifter 10 projects through the slot 7 and is provided at its rear end with a curved arm 11, which depends through an elongated slot 12 in the socket-tube 1 and terminates within said tube in the path of the plug, so as to be engaged by the latter when it is inserted into the tube. The front end of the slide or lifter 10 is made hook-shaped to form a curved shoulder 12 to engage the lower cam face or wall 9 of the slot 7 and an end 13 to receive the drop when it falls. The slide or lifter 10 is retained normally at the outer end of its movement in position to receive the drop when it falls by means of a spring 14, secured at one end thereto and at the other end to the rear face of the front plate 7, and said slide or lifter is maintained normally raised or propped by means of a small lever 15. This lever is pivotally connected with the tube 1 by means of a pin 16, passing through an elongated slot 17 in the lever, and the lower or short arm of the latter normally depends a short distance into the tube.

When a subscriber calls central office, the drop will fall and will be caught by the end 13 of the slide or lifter 7, as shown in Fig. 2. When the operator inserts a plug into the tube, said plug will first engage the lower end of the lever 15, raise the latter, and pass it. The insertion of the plug will not cause the lever 15 to be moved toward the front of the annunciator, because the spring 14, which is in front of it, would prevent such movement. The lever would be raised by the insertion of the plug to the position shown in Fig. 2, said lever being slotted at 17 for this purpose. When the end of the plug has passed the lever 15, it will abut against the depending arm 11 of the slide or lifter, and as the operator continues to force the plug into the tube the slide or lifter will be moved upward and inward, and the shoulder 12 riding on the lower cam-face 9 of the slot 7 the end 13 of the slide or lifter will rise and force the drop to its restored position. When this shall have been accomplished, the lower end of the lever 15 will have entered a groove 16[a] in the plug

and be thus retained in an upright position, as shown in Fig. 3. When the parts shall have assumed the positions shown in Fig. 3, the spring 14 will immediately act to again force the slide or lifter outwardly to the position shown in Fig. 4, with the curved shoulder 12 beyond the lower cam-face 9 of the slot 7 and the end 13 in position to receive the drop when the subscriber "rings off." When the drop is down, with the plug in the jack, it indicates to the operator that the subscriber has finished with the line and has "rung off," thus avoiding the necessity for any other ring-off drop. When the parts assume the positions shown in Fig. 4, therefore the use of the line has been concluded and the operator will withdraw the plug. As the plug is being removed one wall of the groove in the plug into which the lever 15 enters will engage the lower end of said lever and turn it on its fulcrum, causing the longer upwardly-projecting arm to engage the depending arm 11 of the slide or lifter and move the latter back, and resulting in restoring the drop in the manner before explained. When the end of the plug shall have passed the arm 11, the slide or lifter will fall to its normal position, with the arm 11 depending into the tube 1, and when the plug shall have been fully withdrawn the spring 14 will have moved the slide or lifter outwardly to its normal position, ready to again receive and restore the drop when it falls, as hereinbefore fully explained.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein described.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a jack-socket and a drop, of a longitudinally-movable slide or drop-lifter, a spring for normally holding the slide or drop-lifter in position to receive the drop when it falls and means for raising the end of the slide which receives the drop to restore the latter when a plug is moved in the jack-socket.

2. The combination with a jack-socket, a drop, and a plug having a groove or recess therein, of a sliding drop-restorer having a portion entering the jack-socket, a lever having a part projecting into said socket and adapted to enter the notch or recess in the plug and means for causing the restorer to rise and restore the drop when said restorer is slid by the insertion into or the withdrawal of the plug from the jack-socket.

3. The combination with a jack-socket and a drop, of a slide having an arm depending into the socket and having a portion to receive the drop, a plug having a groove or recess, a pivoted lever having a part projecting into the socket and to enter the groove or recess in the plug, whereby when the plug is withdrawn the lever will be made to engage the arm of the slide to move the latter and means for causing the slide to rise when thus moved, and restore the drop.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES M. OVERSHINER.

Witnesses:
HERMAN J. HALL,
HORACE L. WING.