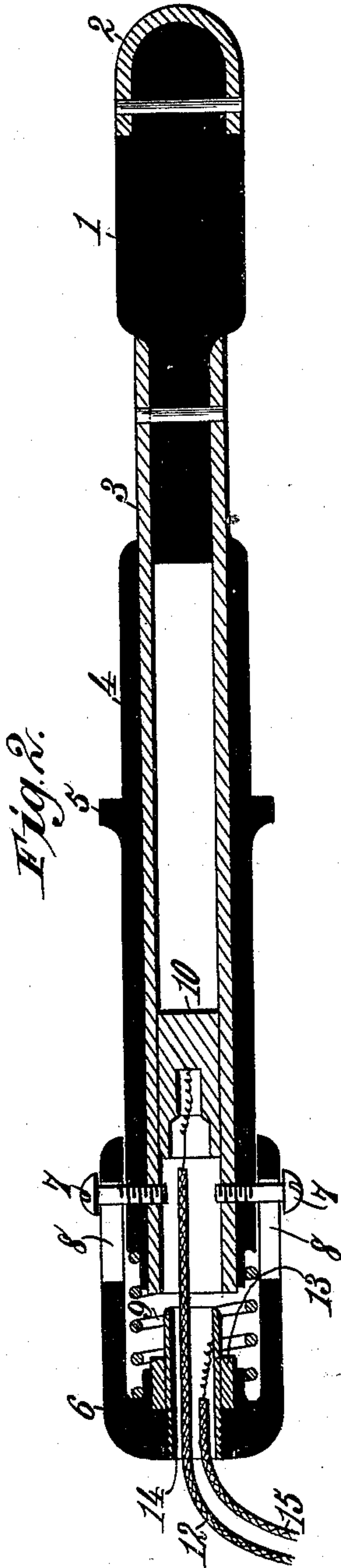
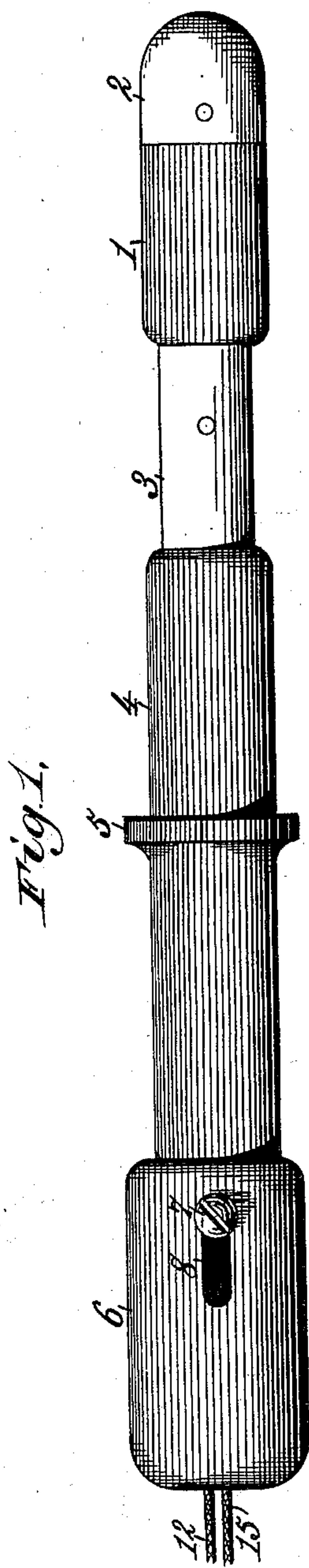


(No Model.)

P. MINNIS.
TELEPHONE SWITCH PLUG.

No. 561,424.

Patented June 2, 1896.



Witnesses:
Robert G. Pratt.
Geo. W. Rea.

Inventor:
Paul Minnis.
By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

PAUL MINNIS, OF MOBILE, ALABAMA, ASSIGNOR OF ONE-HALF TO THE HOME TELEPHONE COMPANY, OF SAME PLACE.

TELEPHONE SWITCH-PLUG.

SPECIFICATION forming part of Letters Patent No. 561,424, dated June 2, 1896.

Application filed February 17, 1896. Serial No. 579,652. (No model.)

To all whom it may concern:

Be it known that I, PAUL MINNIS, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented new and useful Improvements in Plugs for the Line-Jacks of Telephone-Switchboards, of which the following is a specification.

My invention relates to plugs for the line-jacks of telephone-switchboards, my purpose being to provide a simple and improved construction whereby the wires of the flexible cord to which said plug is connected may be coupled, in an electrical sense, to cut a circuit temporarily—as, for example, to switch the operator's head-phone into circuit—to place the central station in direct communication with a line-station, or for other purposes.

My invention consists in the novel features and in the parts and combinations of parts hereinafter fully explained, and then particularly pointed out in the claims which complete this specification.

To enable those skilled in the art to which my invention pertains to clearly understand and practice the same, I will proceed to describe the same in detail, reference being had for this purpose to the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 is a central longitudinal section, of a plug embodying my invention.

The plug shown in the drawings is constructed with a point 1, of non-conducting material, its tip being covered by a cap 2, of conducting metal. The reduced portion of the point enters a tubular body 3, between the end of which and the cap 2 the enlarged non-conducting portion of the point is exposed. A non-conducting sleeve 4 incloses most of the tubular body, and between the end of said sleeve and the exposed part of the non-conducting point a portion of the conducting-body 4 is exposed. A collar 5 is formed on the exterior of the sleeve 4 to limit the insertion in the line-jack.

Upon the open end of the sleeve is placed a cap 6, formed of insulating material and connected by screws 7, which pass through slots 8 in the cap and are tapped into the sleeve 4 and tubular body 3. A spring 9,

coiled between the end of the sleeve and the closed end of the cap, holds the latter normally in the position shown in Fig. 2, permitting the cap, however, to be moved toward the open end of the sleeve by pressure.

In the tubular conducting-body 3 is a core 10, of conducting material, which is connected to a wire 12. In the center of the cap is inserted a ring 13, of conducting metal, having a diameter equal to that of the tubular body 3, with which it is substantially concentric. Within this ring lies a cylindrical bushing 14, which projects a little inside the cap and enters the tubular body 3 when the cap 6 is pushed up. The wire 12 enters through this bushing, and a second wire 15 is connected to the bushing 14. These two wires are contained in one part of the flexible cord. One of these wires connects the two line-stations and the other may go to a separate point, such as the head-phone of the operator at the central station.

The exposed metallic portion of the body 3 and the metal tip 2 are used in connection with contacts in the line-jack, and the insulating part of the head 1 is for the purpose of cutting out the call-circuit. It will be noted that the provision of a spring-projected cap electrically connected to one wire in the cord and a tubular body electrically separated from the cap and having a second wire provides a construction rendering it a matter of extreme simplicity to temporarily couple the two wires, their separation afterward being wholly automatic.

What I claim is—

1. A plug for a telephone-switchboard, consisting of an insulating-point having a metallic tip, or extremity, a conducting-body portion exposed between the insulating-point and an insulating-sleeve covering the remainder of the body portion, a spring-projected cap longitudinally movable on the end of the insulating-sleeve, a contact-ring and bushing in said cap, and wire terminals of the flexible cord one connected to the conducting-body and the other to the contact-ring, whereby the two wires may be coupled electrically by pushing the cap inward, substantially as described.

2. A plug for a telephone-switchboard, com-

prising an insulating-point having a metallic tip, a conducting-body partly exposed, the remainder covered by a sleeve of non-conducting material, a spring-projected cap on
5 the outer end of the plug having slots to receive screws which connect it movably to the plug, a contact-ring and bushing in said cap, a wire of the flexible cord connected to the conducting-body of the plug, and a second

wire connected to the ring and bushing in the cap, substantially as described.

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

PAUL MINNIS.

Witnesses:

CLAYTON B. CLARK,
WILLIAM H. SULLIVAN.