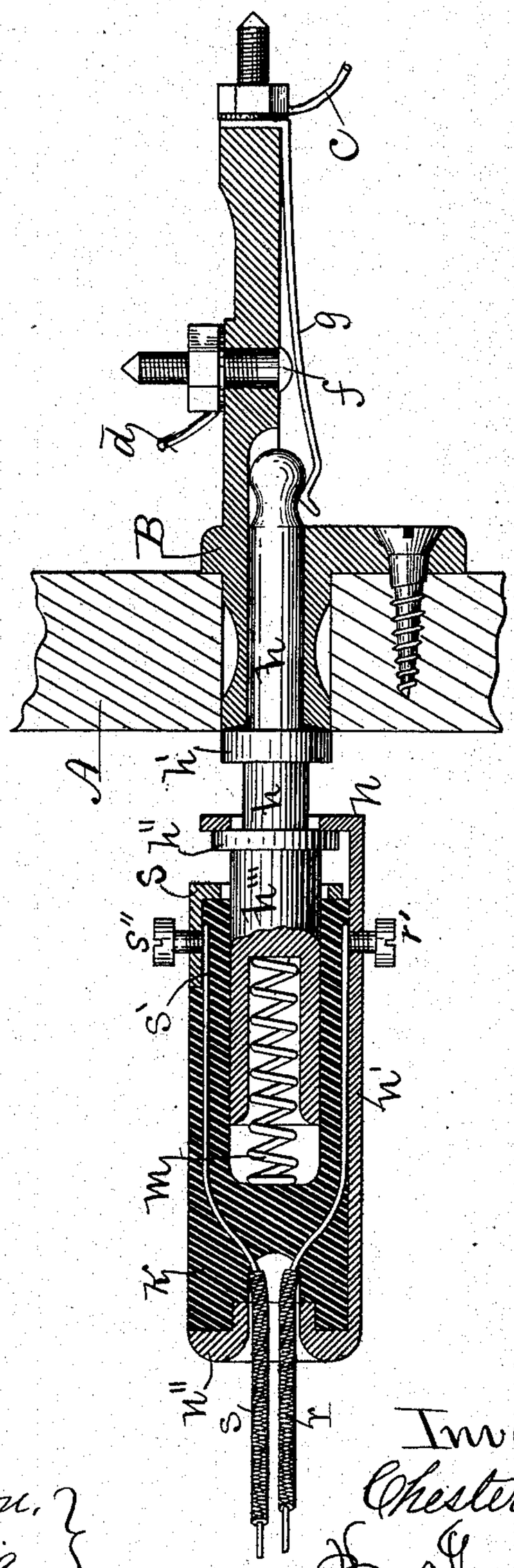
(No Model.)

C. K. MEAD.

TELEPHONE SWITCH BOARD PLUG.

No. 325,952. Patented Sept. 8, 1885.



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UNITED STATES PATENT OFFICE.

CHESTER K. MEAD, OF DES MOINES, IOWA.

TELEPHONE-SWITCH-BOARD PLUG.

SPECIFICATION forming part of Letters Patent No. 325,952, dated September 8, 1885.

Application filed December 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHESTER K. MEAD, a citizen of the United States of America, and a resident of the city of Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Improvement in Telephone-Switch-Board Plugs, of which the following is a specification.

My object is to facilitate business and to avoid the necessity of an operator at the switch-board at the exchange or central office from withdrawing his hand from the plug to form a connection with a battery, as heretofore required, to close a circuit for the purpose of ringing a subscriber's call-bell; and I accomplish the results contemplated by the device illustrated in the accompanying drawing, in which my improved plug is shown in position in a section of a switch-board as required to form a connection between a receiver at the exchange and a wire leading from the switch-board to a subscriber.

A represents a switch-board, and B a metal tube and conductor of common form fixed in the board.

c is a wire leading to a subscriber from the end of the conductor B. *d* is a wire fixed to the same conductor by means of a post, *f*, to extend to and operate a visual signal on the face of the board A in a common way.

g is an elastic conductor fixed to the end of the conductor B in such a manner that it will, in its normal condition, extend over and remain in contact with the insulated post *f*, as required, to enable a subscriber to operate the visual signal when he calls to the operator at the exchange.

h is a plug adapted to enter the tubular portion of the conductor B and to engage the free end of the spring *g* and to lift it from the contact-point of the post *f*, as required, to open the circuit established with the visual signal and enunciator by means of the wire *d* and insulated post *f*. *h'* is an annular flange or shoulder on the plug *h*, that restricts its advance into the tube B. *h''* is a second flange or shoulder. *h'''* is a tubular and open-ended extension of the plug and conductor *h*.

k is a tubular handle, made of non-conducting material, into which the tubular part *h'''* of the plug is fitted.

m is a coiled spring placed within the tubular extension *h'''* in such a manner that in its normal condition it will press the plug outward relative to the tubular insulator and handle.

n is a conductor fixed to the end of the insulator and handle *k* in such a manner that it will encircle the plug *h* between the flanges *h'* and *h''*, so that the plug can move longitudinally to alternately connect the two flanges with the conductor *n*.

n' is a branch extending from the conductor *n* through a groove in the surface of the handle to a metal ferrule and conductor, *n''*, fixed on the end of the handle, to form a connection with the transmitter-strip on the board in a common way.

r is a conducting-wire that extends from a receiver through the ferrule *n''* and a bore in the handle *k* to a screw, *r'*, by means of which it is electrically connected with the conductor *n*, the plug *h*, and the wire *c* leading to a subscriber.

S is a conductor fixed against the end of the handle *k* in such a manner that it will encircle the tubular extension *h'''* of the plug and allow the flange *h''* to come into contact therewith when the spring *m* is compressed by pressing the handle *k* toward the board A, as required, to disconnect the plug from the conductor *n* and connect it with the conductor S.

S' is a wire that extends from a battery through a bore in the handle *k* to a screw, *s''*, by means of which it is electrically connected with the conductor S, as required, to form an electrical connection with the plug *h* and the wire *c* for the purpose of ringing the subscriber's bell without withdrawing the hand from the handle *k*, and by simply pressing the handle toward the board A until the conductor S comes in contact with the flange *h''* and out of contact with the conductor *n*.

From the detailed description of the construction and function of each element the unitary actions of all the parts and the practical operation of the complete invention will be obvious to persons familiar with the prior state of the art.

I claim as my invention—

1. An improved plug for telephone switch-boards, composed of a tubular insulator and handle having a metal conductor fixed to its front end extended over the opposite end, and

a conducting-wire combined therewith to extend to a transmitting-strip on the board, a conductor fixed to the rear end, and a wire combined therewith to extend to a battery, a plug adapted to slide in the tubular handle and provided with two flanges or projections to alternately engage the two distinct conductors on the handle, and a spring to press the plug outward relative to the tubular handle, for the purposes specified.

2. The plug *h*, having flanges *h'* and *h''*, and a tubular extension, *h'''*, the tubular insulator and handle *k*, having a spring, *m*, inclosed, the fixed conductor *n n' n''*, having a wire, *r*, attached, and the fixed conductor S, having a wire attached, constructed, arranged, and combined to operate in the manner set forth, for the purposes specified.

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Witnesses:
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