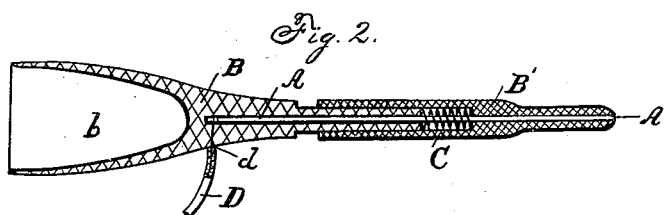
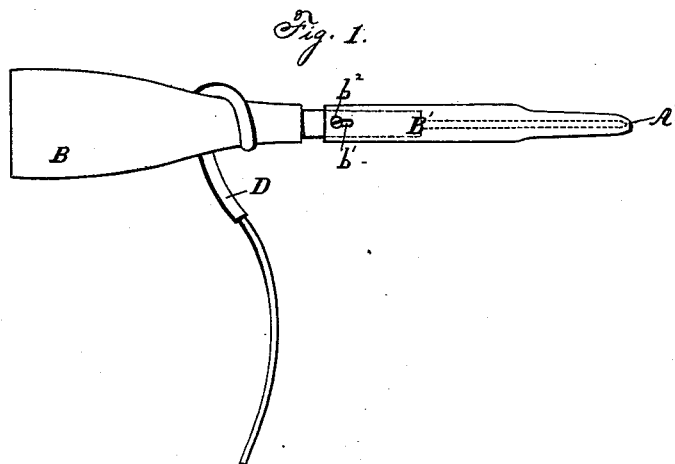


(No Model.)

L. MANN.
TRANSFERRING AND CALLING IMPLEMENT FOR TELEPHONE EXCHANGES.

No. 262,301.

Patented Aug. 8, 1882.



WITNESSES
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LEWIS MANN, OF DETROIT, MICHIGAN.

TRANSFERRING AND CALLING IMPLEMENT FOR TELEPHONE-EXCHANGES.

SPECIFICATION forming part of Letters Patent No. 262,301, dated August 8, 1882.

Application filed June 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEWIS MANN, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Transferring and Calling Implements for Telephone-Exchanges; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a longitudinal central section.

The object of my invention is to provide a calling and transferring implement to be used in telephone-exchange systems in central offices for holding the terminal of a battery-wire and for sending an electric impulse through any other wire when it is desired. I accomplish this purpose by means of a metallic needle, the point of which is surrounded by a movable insulator, said needle being attached to a flexible electric cord.

To this end, as shown in the drawings, A is a metallic needle.

B is a shell or case made of insulating material, one end firmly inclosing the head of the needle, the opposite end preferably constructed so as to be worn upon the finger, as shown at b, allowing the free use of the rest of the fingers for other purposes.

B' is a movable section of the insulating-case inclosing the point of the needle, said case provided with an elongated slot, b', through which it is secured by a screw, b², upon the end of the case B in such a manner that it may have a limited movement back and forth in the direction of the needle.

C is a suitable spring in the case B'. The object of this insulating shell or case is to prevent the needle from touching exposed points and sending an electric impulse where

not desired, should it come in contact with such points.

D is an ordinary flexible electric cord or cable connected with the battery-wire. Passing through the shell, as shown at d, this flexible electric cord is secured in the shell B to the inner end of the needle A.

The operation of this device will now be understood. With the instrument adjusted upon the finger, the operator presses the point A' upon the desired terminal or line, when the needle is pressed forward through the movable insulating-case B' until the metallic needle A comes into contact with the terminal, and an electric impulse is sent from the battery-wire thereby. When the implement is removed the spring C retracts the movable portion of the case B', so that the point of the needle is again protected and insulated.

What I claim is—

1. A transferring and calling implement for telephone-exchanges, consisting of a single metallic needle connected with one terminal of a battery-wire, and adapted to transmit an electric impulse along any other wire by contact therewith, in combination with a movable insulating-case for inclosing the point of the said needle, substantially as described.

2. A transferring and calling implement for telephone-exchanges, consisting of a single metallic needle connected with one terminal of a battery, and adapted to transmit an electric impulse along any other wire by contact therewith, in combination with an insulating-case covering the head of the needle and a movable insulating-case protecting the point of the needle, substantially as described.

3. A transferring and calling implement for telephone-exchanges, consisting of a metallic needle connected with an electrical conductor, an insulating-case inclosing the head of the needle, adapted to be worn upon the finger, and a movable insulating-case inclosing the point of the needle, said movable case provided with suitable means whereby it may be movably secured upon the end of the stationary case, substantially as described.

4. A transferring and calling implement for

telephone-exchanges, consisting of a metallic needle, an insulating-case inclosing the head of the needle, adapted to be worn on the finger, a movable insulating-case inclosing
5 the point of the needle, said movable case provided with a suitable interior spring, and in combination therewith a flexible electric cord, which passes through the side of the case

and is connected with the needle, substantially as and for the purpose described. 10

In testimony whereof I sign this specification in the presence of two witnesses.

LEWIS MANN.

Witnesses:

J. EDWARD WARREN,
N. S. WRIGHT.