(No Model.)

S. E. BEEDY.

TELEPHONE.

No. 245,120. Patented Aug. 2, 1881.

Fig. 1.

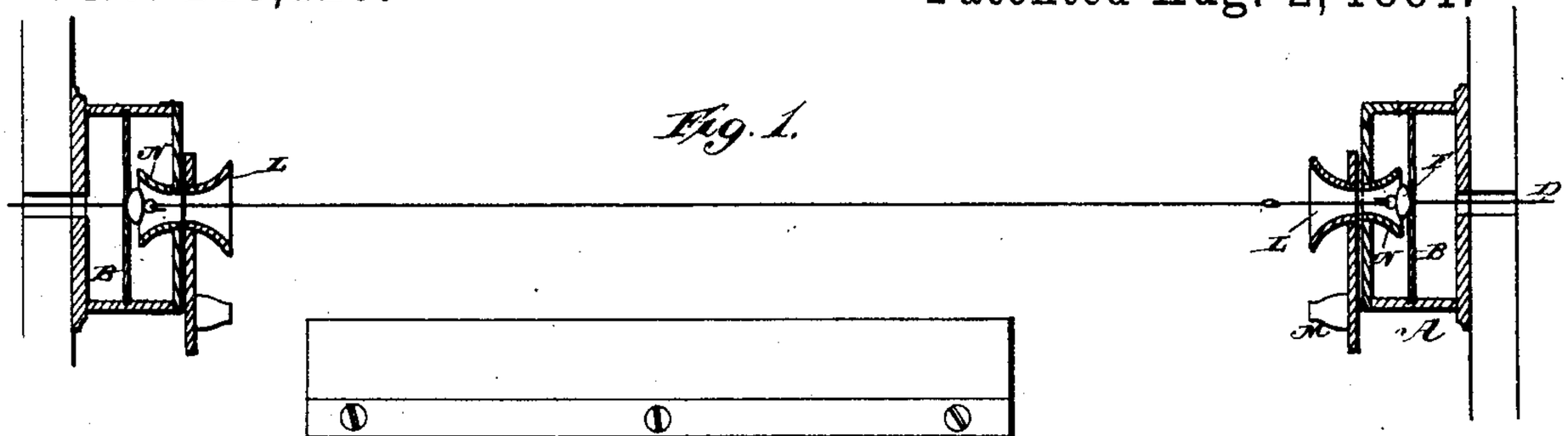


Fig. 2

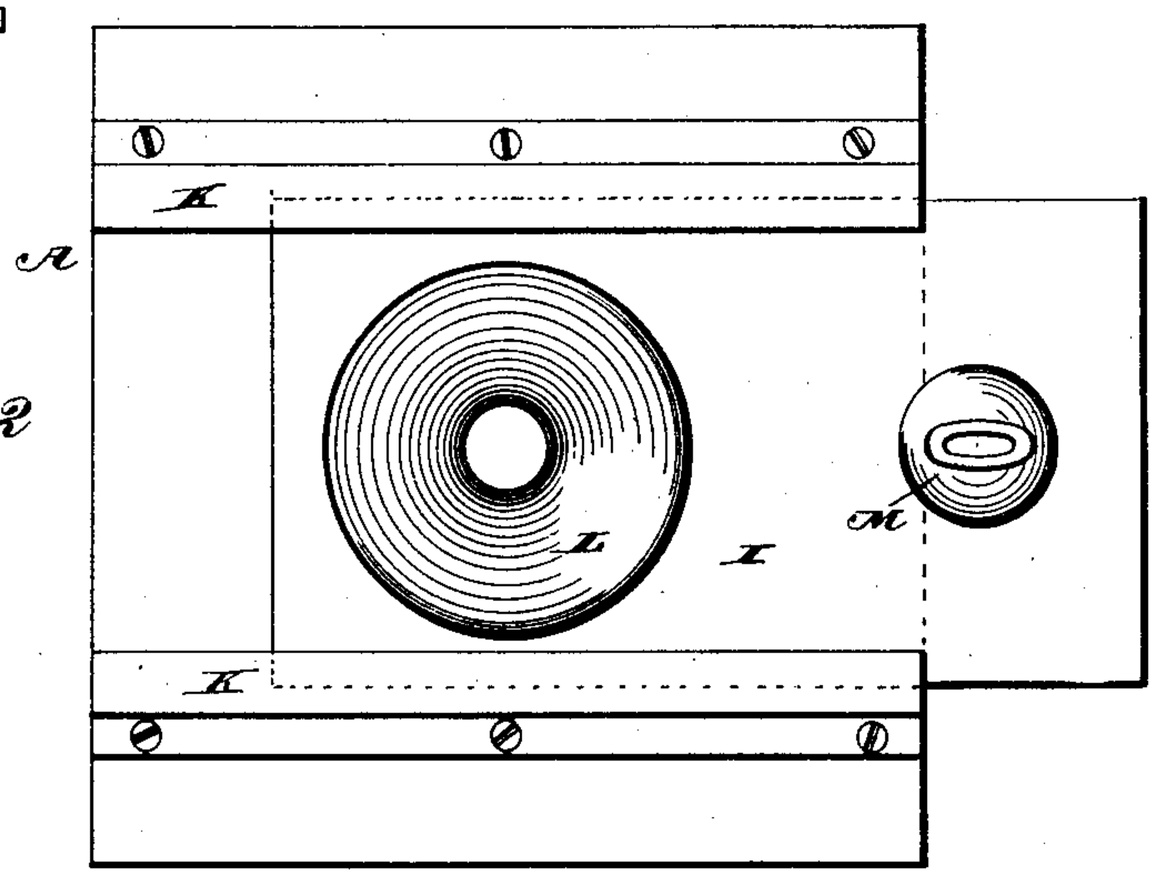


Fig. 6.

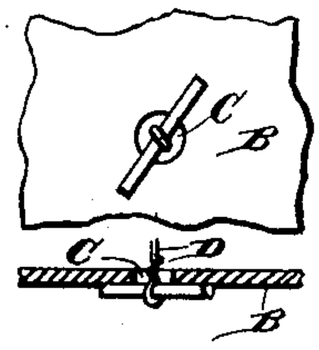


Fig. 3.

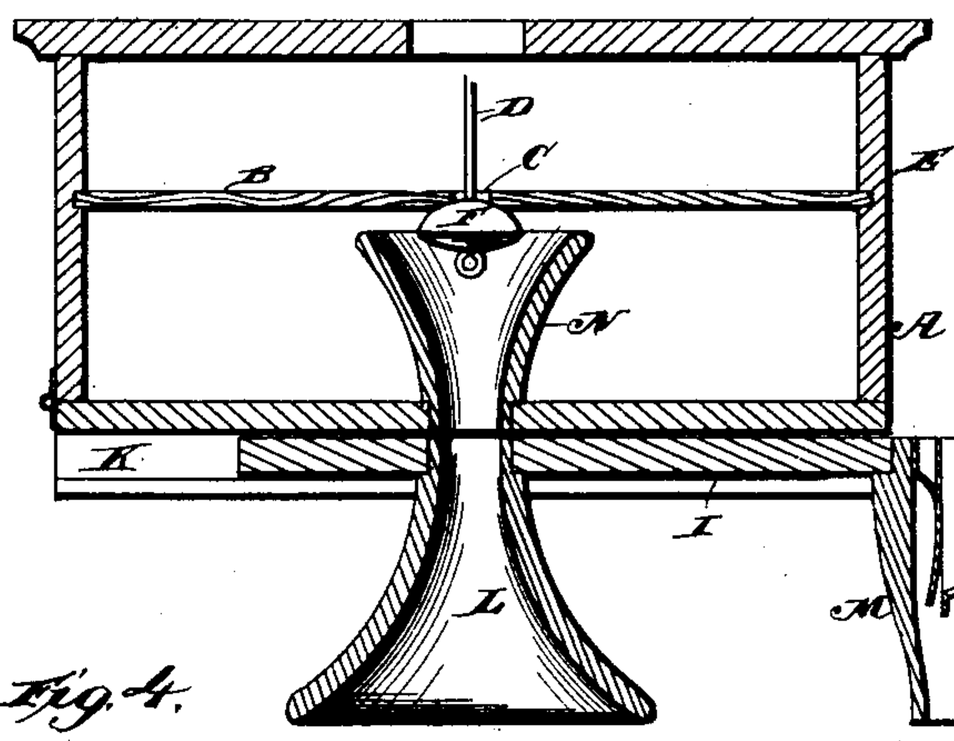


Fig. 5.

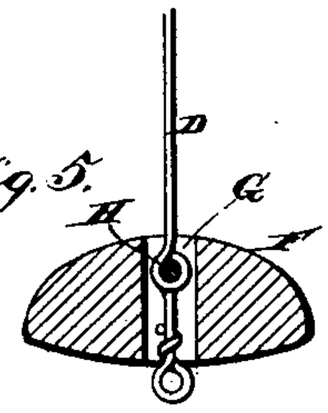
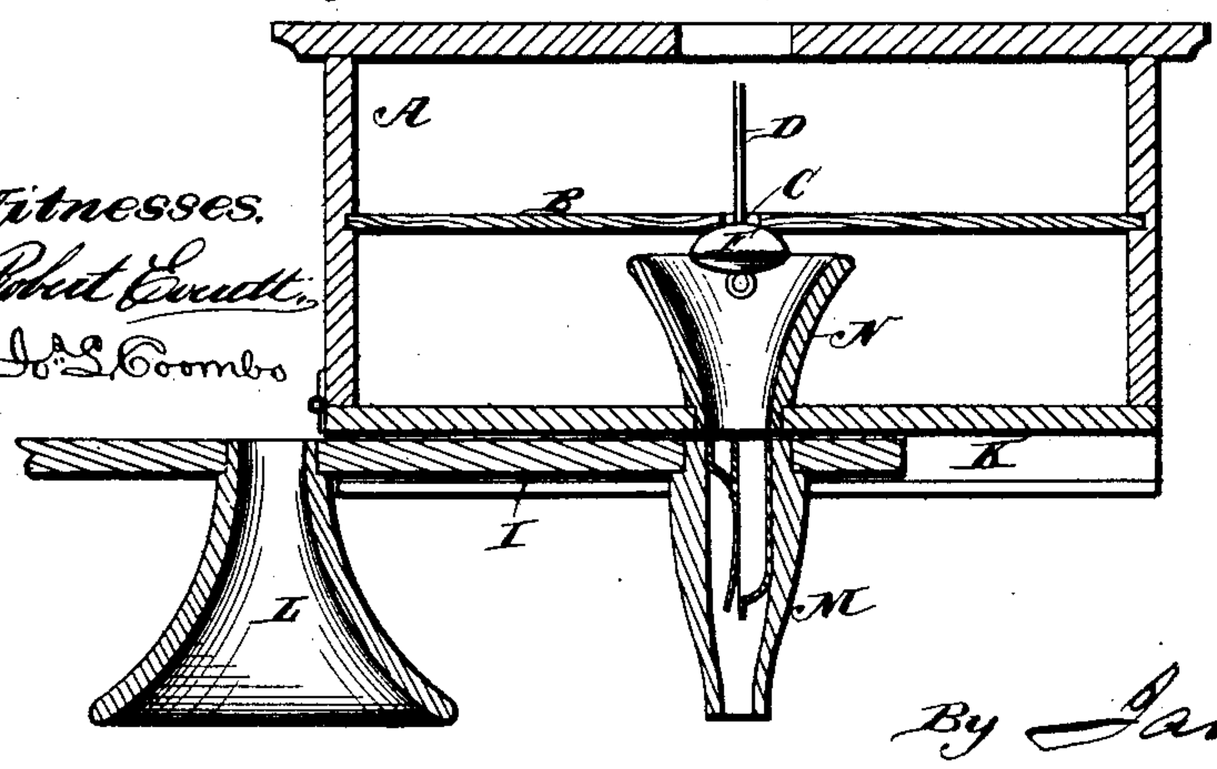
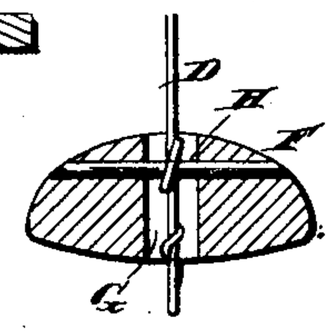
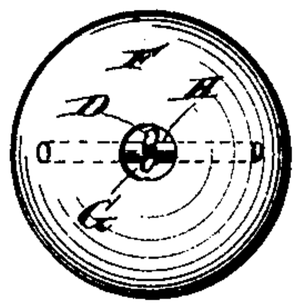


Fig. 4.







Witnesses.
Robert Everett.
Jo. S. Coombs

Inventor.
S. E. Beedy.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

SETH E. BEEDY, OF FARMINGTON, MAINE, ASSIGNOR OF ONE-HALF TO JOHN J. LINSCOTT, OF SAME PLACE.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 245,120, dated August 2, 1881.

Application filed June 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, SETH E. BEEDY, a citizen of the United States, residing at Farmington, in the county of Franklin and State of Maine, have invented new and useful Improvements in Telephones, of which the following is a specification.

This invention relates to certain improvements in acoustic telephones, or that class of telephones in which the sound-producing vibrations are transmitted mechanically through a suitable connecting-wire from the instrument at the transmitting-station to the instrument at the receiving-station; and the invention has for its objects to provide a means whereby the vibrations of the connecting-wire may be transmitted directly to the receiving-station, which, acting in addition to the vibrations communicated to the diaphragm at each station, will give more volume and more distinct articulation at such receiving-station, and will render the telephone practicable on longer lines than heretofore, and increase its utility on shorter lines where difficulty is experienced in receiving on account of noises in the vicinity.

My invention also has for its object to provide an improved means whereby the call or signal and articulate sounds may be transmitted through the same instrument, thus dispensing with a separate call or signal instrument, materially reducing expense.

My invention further has for its object to provide means whereby the instruments may be employed in a telephonic exchange, and two subscribers be put in direct communication at a central station, as more fully hereinafter specified.

These objects I attain by the devices and mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a view showing the instruments connected together at the central station to directly connect the subscribers. Fig. 2 is a front elevation of the transmitting or receiving instrument. Fig. 3 represents a sectional view of the transmitting-instrument with the parts in position for transmitting articulate sounds. Fig. 4 represents a similar view of the instrument with the parts in position for transmitting the call or signal; and Fig. 5 represents detached views of the button by means of which the wires are secured to the diaphragms of the instruments at the respective stations. Fig. 6 represents a modification of the perforated button.

The letter A indicates the casing of the instrument, which is constructed of wood or other suitable material, in rectangular or other form.

B indicates the diaphragm, which is preferably constructed of wood. The said diaphragm is provided with a central aperture, C, through which the connecting-wire D passes.

The diaphragm may be secured in any convenient manner, but it is preferably let into the sides of the casing, as shown by the letter E.

The connecting-wire D at its extremities has secured to it the wooden buttons F, set against the front of the diaphragms of the respective instruments and serving to secure the wires to the same. The said buttons are convex or hemispherical on the sides bearing against the diaphragms, so as to accurately transmit the vibrations from one instrument to another.

A most important feature of my invention consists in the peculiar construction of these buttons. This consists in forming the buttons with a central aperture, indicated by the letter G, and confining the extremities of the wire to a cross-bar, H, leaving a passage directly through the button, through which the direct sound-vibrations of the wire itself may be transmitted to the receiver, which greatly augments the volume of the transmitted sound.

The letter I indicates the front of the instrument. This is arranged to slide in grooves K in the side walls, and is provided with a flaring mouth-piece, L, and a trumpet or whistle, M, either of which may be brought opposite the center of the diaphragm by sliding the front in the grooves in which it is adapted to move.

The letter N indicates a flaring tube, arranged on the inside of the front I directly opposite the mouth-piece and extending nearly to the diaphragm. The said tube serves to condense the sounds and transmit the same in greater volume to the receiver.

In some instances the call or signal trumpet or whistle may be omitted, in which case

the front may be hinged to the casing after the manner of a door, so that it may be thrown back and the signal or call transmitted by tapping directly upon the button.

When the instruments are to be used in a telephonic-exchange system the buttons of those at the central station connecting with the respective subscribers have the connecting-wires extending through the opening in the button and looped at the extremities in such manner that two instruments connecting with separate subscribers may be connected by means of a wire temporarily, so as to bring any two subscribers into direct communication with each other.

The perforated button will be found most practicable in use, but the same effects may be obtained to a certain extent by dispensing with the button and securing the extremities of the connecting-wire to suitable bars placed diametrically across the opening in the diaphragm, and of such size as to not wholly obstruct such opening; hence I do not wish to limit myself strictly to the perforated button in connection with the diaphragms and connecting-wires. Fig. 6 illustrates such modification, in which the wire is shown secured to a single bar which crosses the opening in the diaphragm.

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

1. In an acoustic telephone, the combination of the perforated diaphragm and connecting-wire, the latter being secured at the extremity by a device, substantially as shown and described, adapted to hold the wire and leave an opening around the same, substantially as and for the purposes set forth.

2. In an acoustic telephone, the combination with the diaphragms and their connecting-wire, of the perforated buttons, having the wire secured thereto so as to have an opening around the same, substantially as and for the purpose specified.

3. In an acoustic telephone, the combination, with the diaphragms and their connecting-wire, of the perforated buttons and the cross-bars, to which the wire is attached in such manner as to leave an opening around them, substantially as specified.

4. In an acoustic telephone, the combination of the diaphragms and the perforated buttons, and the connecting-wire extending through the buttons and looped, whereby two subscribers may be put in direct connection at the central station of a telephonic exchange, substantially as specified.

5. In combination with the casing, the sliding front provided with a mouth and ear piece and a signal or call, and located in grooves in such manner that either the mouth-piece or call may be brought in front of the diaphragm at will, substantially as specified.

6. In combination with the front of the casing, the diaphragm, its button and connecting-wire, and the flaring tube N, for condensing the sounds, substantially as set forth.

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

SETH E. BEEDY.

Witnesses:
ALBERT H. NORRIS,
J. A. RUTHERFORD.