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TELEPHONE SWITCHBOARD ATTACHMENT

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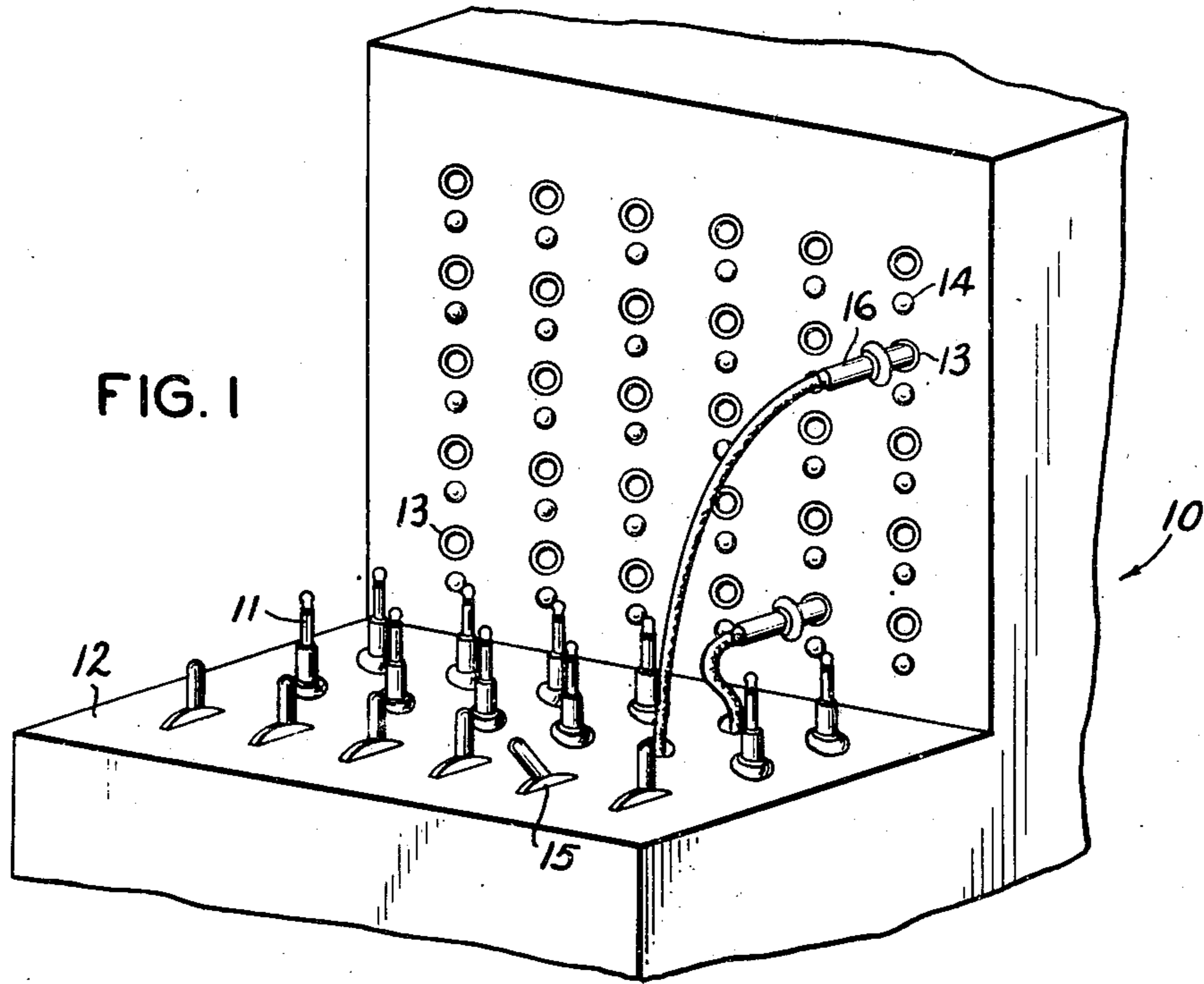


FIG. 1

FIG. 2

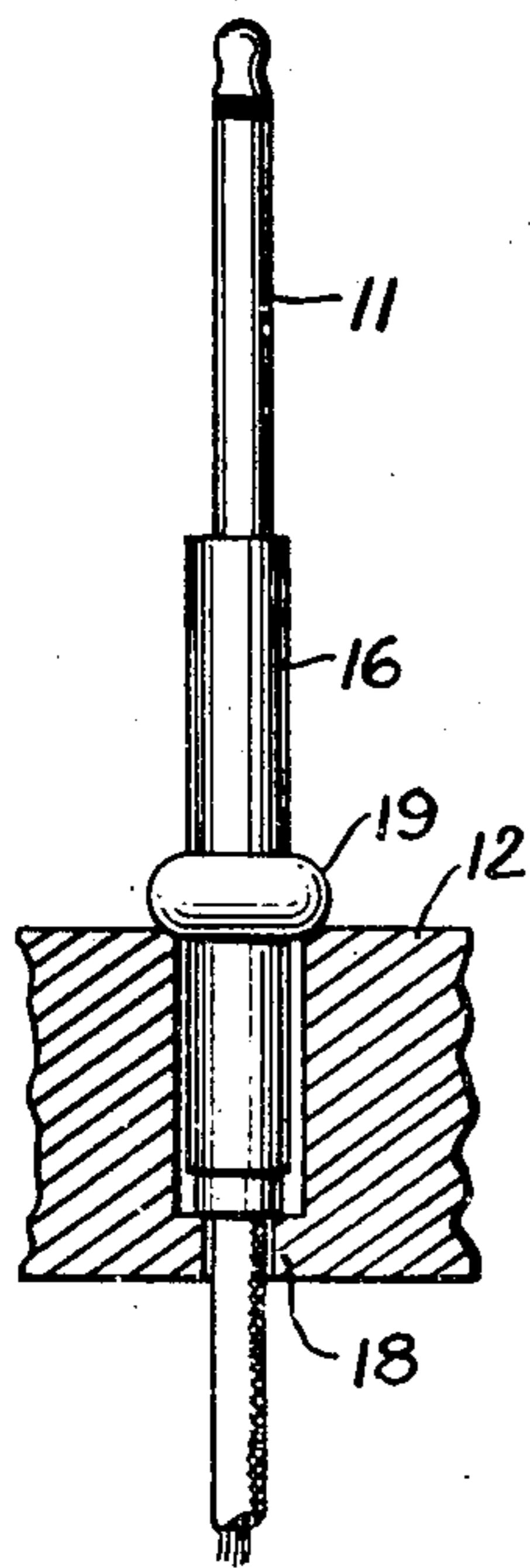


FIG. 3

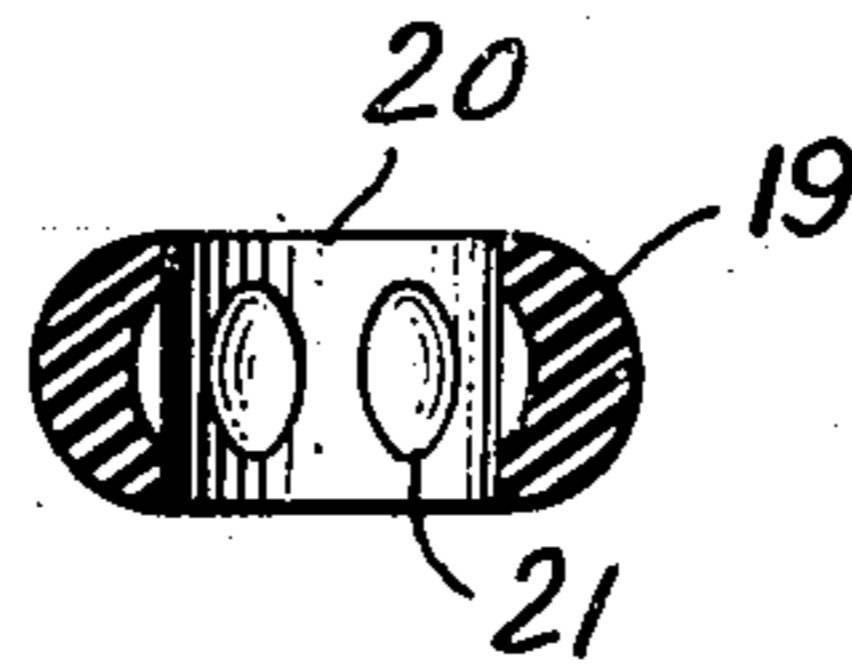
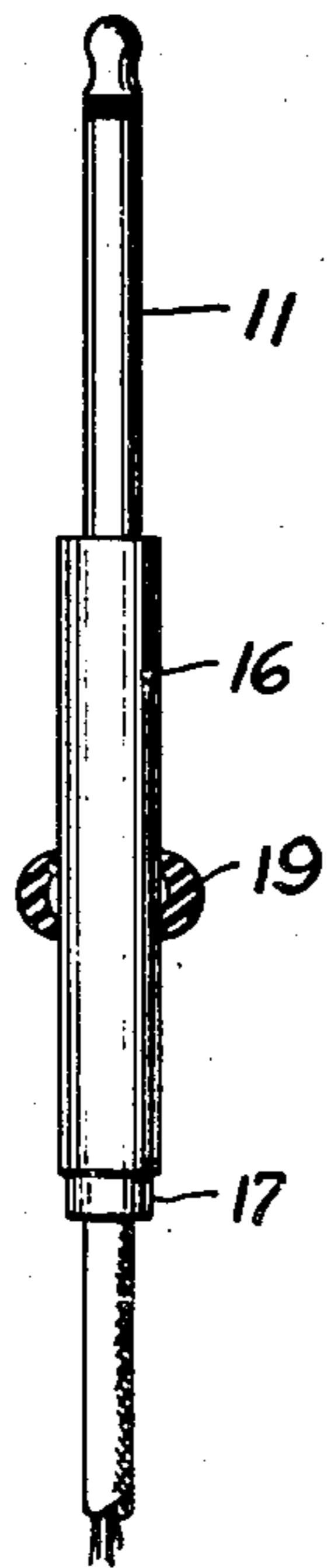


FIG. 4



FIG. 5

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# UNITED STATES PATENT OFFICE

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## TELEPHONE SWITCHBOARD ATTACHMENT

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3 Claims. (Cl. 173-361)

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The present invention relates to an attachment for the plug of a telephone switchboard.

One object of the present invention is to provide an attachment for the plug of a telephone switchboard which will permit easier handling of the plug in normal use.

Another object of the present invention is to provide such an attachment which will serve as a dirt seal for the plug socket in the switchboard panel.

A further object of my invention is to provide an attachment which can be readily installed, yet secure against disengagement.

A still further object of my invention is to provide such an attachment which can be economically and easily manufactured.

Other objects and advantages will become apparent upon reference to the following specification and the annexed drawings, in which:

Fig. 1 is a perspective view of a telephone switchboard having plugs provided with my attachment,

Fig. 2 is a vertical cross-section of a portion of the switchboard panel showing one of the plugs with the attachment in its rest position,

Fig. 3 is a vertical plane view of a telephone plug showing the attachment in cross-section,

Fig. 4 is a vertical cross-section of the attachment, and,

Fig. 5 is a horizontal cross-section of the attachment.

Referring to the drawings in which like numerals indicate like parts throughout the various views, the reference numeral 10 indicates generally a standard P. B. X telephone switchboard provided with plugs 11 mounted in a horizontal panel 12. The plugs 11 are used in the conventional manner to connect any two telephone lines terminating in sockets 13. Each of the sockets 13 are provided with a standard signal light 14 and after the connection is made by use of the plug 11, a ringing key 15 is used to ring the called telephone.

In the normal use and operation of a telephone switchboard, the portion 16 of the plug 11 is used as a gripping element to handle the jack 11 into connected position and to disconnect the plug 11 to return it to rest position. Telephone operators are cautioned in being trained for their job never to use the wire to pull the plugs 11 from connected position, but due to a tendency of damp hands and/or imperfect gripping of the portion 16 to intensify the slipping of the hand from the portion 16 without removing the plug 11 from its connected position, most operators,

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despite being cautioned against it, will grip the cord instead of the portion 16 to remove the plugs 11 from connected position. This, of course, gives rise to the cords being worn out and/or broken long before failure would otherwise occur if the plug 11 were properly used.

In addition to the problem noted above, it can be seen in Fig. 2 of the drawings that the only seal between the plug 11 in its rest position and the panel 12 is a rubber skirt 17 which engages a shoulder 18 at the lower side of board. This structure, of course, prevents dirt from falling past the plug 11 to the under side of the panel 12 so long as the plug 11 is in a position of rest but as soon as the plug 11 is removed from its rest position to make a connection on the board 10, any dirt which may have fallen beside the plug 11 and collected in that position will be permitted to fall below the panel 12 into the mechanism lying therebelow.

Applicant has invented an attachment to simultaneously solve both the aforementioned problems in telephone switchboard operation.

In referring to Figs. 4 and 5 of the drawings, applicant's invention comprises a rubber ring 19 formed in a generally doughnut shape, having a central bore 20 with substantially vertical walls. A series of suction cups 21 are integrally formed in the center of the bore 20 of the ring 19. The central bore 20 of the ring 19 is molded so as to have a finished size of a smaller diameter than the outer diameter of the portion 16 of the plug 11.

In the use and operation of my invention, the ring 19 is mounted on the portion 16 of the plug 11 in a position approximately midway of the ends of the portion 16. The suction cups 21 are forced into tight engagement with the surface of the portion 16 to form a secure grip between the ring 19 and the plug 11.

When the operator desires to disconnect the plug 11 from its connected position, she will use the ring 19 as a handle to grasp the plug 11 and pull it from its connected position. Even though her grasp be weak and her hands damp, a perfect grip can be made by use of the ring 19 and the tendency to use the cord as a handle will be eliminated.

In the rest position of the plug 11, as indicated in Fig. 2, the ring 19 will form a seal with the top surface of the panel 12 to prevent any dirt from falling into the panel 12 beside the plug 11 at any time. When all of the plugs 11, having the rings 19 positioned thereon are in rest position, the panel 12 may be dusted by use of a cloth or

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brush with no possibility of the dirt being dropped through the panel 12 into the mechanism below.

The above described attachment is the preferred embodiment of my invention, but it should be understood that minor changes may be resorted to without departing from the scope of the appended claims.

I claim:

1. A telephone switchboard plug comprising a contact portion, an insulating portion supporting said contact portion, and an annular rubber ring having a cylindrical inner surface, mounted on said insulating portion, said rubber ring having suction cups formed on said internal surface thereof to enhance the grip between the ring and the insulating portion.

2. A device as claimed in claim 1 in which the ring is positioned on the plug so as to serve as a gripping handle for use in removing the plug from connected position, and also to serve as a dirt sealer between the plug and the switchboard in the rest position of the plug.

3. A telephone switchboard plug attachment comprising an annular ring constructed of rubber and having a cylindrical inner surface, and pro-

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vided with suction cups on said inner surface to engage and grip the plug, said ring being adapted to serve as a hand grip for handling the plug and as a seal for the switchboard panel.

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