April 23, 1935. W. O. FULLERTON 1,998,836

INDICATING DEVICE

Filed Dec. 1, 1933

FIG. 1

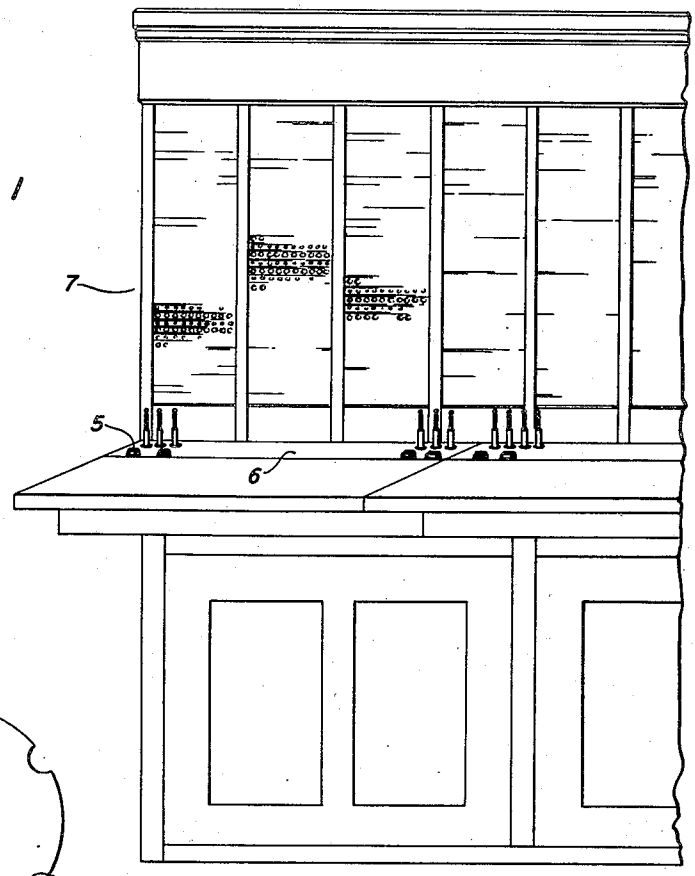


FIG. 3

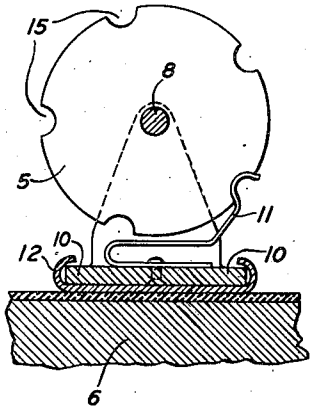
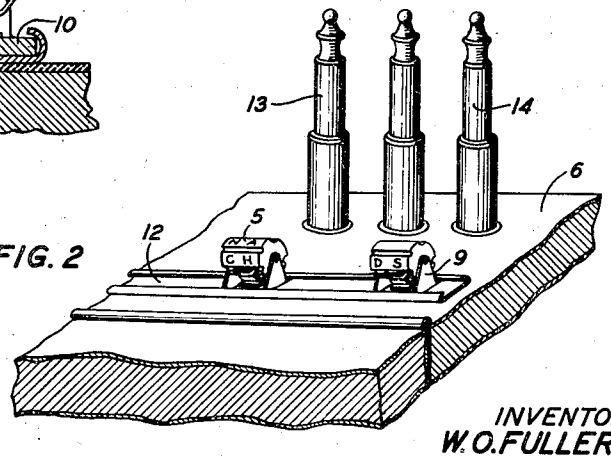


FIG. 2



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INDICATING DEVICE

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Application December 1, 1933, Serial No. 700,381

1 Claim. (Cl. 40—68)

This invention relates to recording devices and more particularly to a manually operated device for recording the progress of toll telephone calls.

In central offices and particularly at straightforward toll positions a telephone operator is called upon to handle various types of calls; for example, calls to be extended by way of a ringdown toll line, terminating calls which are to be completed to the subscriber's line and calls to be extended by way of a straightforward toll line to another exchange at which the called subscriber's line is located. In order that an operator properly handle these various types of connections it is necessary that the type of line with which a cord is associated be apparent and what act is necessary for her to perform upon the receipt of certain lamp signals which function to indicate the completion of certain phases of the connection.

Accordingly, an object of the invention is to provide an indicating instrument, which, under control of the operator, will indicate to her the progress of a telephone connection which she is serving either to complete or extend.

This object is attained in accordance with a feature of the invention by the provision of an indicating device, suitably located on the switchboard with respect to a cord circuit involved in a call, which has a plurality of distinct markings each denoting a stage in the progress of the call and so arranged that said markings can be displayed, one at a time, by a manual act of the operator.

Another feature of the invention resides in a ratchet type spring arrangement which automatically locks the indicator in the position to which it has been set by the operator.

These and other features of the invention will readily appear from the following detailed description made with reference to the accompanying drawing in which,

Fig. 1 is a perspective view of a portion of a telephone switchboard showing the location of the indicators thereon;

Fig. 2 is an enlarged view of a section of the switchboard shown in Fig. 1; and

Fig. 3 is an enlarged sectional view of the indicator which constitutes the subject matter of this invention.

Referring to the three figures generally and to Fig. 3 specifically, the indicator is essentially a small hard rubber pentagonal cylinder 5 which is set horizontally in a mounting on the shelf 6 of the switchboard 7. The cylinder 5 is rotatably mounted on a pin 8 which is supported near the extremities of the two vertical extensions of a U-shaped bracket 9. The base of the bracket 9 extends outwardly on each side beyond the upright or vertical portions of the bracket to form shoulders 10. A ratchet type spring 11 is secured to the base of the bracket 9 by means of rivets and is located substantially at the center thereof.

On the switchboard shelf 6 there is secured in any suitable manner a trough-shaped strip 12, the overturned edges of which forming, with the base of the strip, guides or slots into which the shoulders 10 of the bracket 9 fit. The bracket 9, by virtue of its shoulders 10 and the overturned edges of the strip 12, is slidably mounted on the switchboard and effectively maintained in an upright position. If desirable, the edges of the strip 12 may be crimped after the indicator is set in position, thereby rendering the indicator support or bracket 9 stationary.

In practice, every other plug, such as plugs 13 and 14 is furnished with an indicator, the latter being located immediately before the plug with which it serves.

The periphery of the cylinder 5 is divided into five sections or segments each section separated from a succeeding section by a groove 15, which grooves serve as recesses for the free end of ratchet spring 11 for the purpose of locking the cylinder in any of its set positions. Each section except one of the cylinder periphery is provided with letters or characters which when displayed, indicate to an attending operator certain phases of a call which she has initiated or is completing. The particular indicator herein described is provided with the following characters, "RD", "DS", "NA" and "CH", the section intermediate the sections bearing characters "RD" and "DS" being left blank to indicate the normal position of the device.

The indicator is used in the following manner:

Under a condition where a plug such as plug 13 is not in use the indicator rests in its normal position, that is, with its blank segment or section uppermost and clearly within view of the operator. In this position however and with plug 13 inserted into a jack on the switchboard, the operator will understand that she is completing a call to a subscriber and that the subscriber has not yet answered the call. When the subscriber answers, the switchboard cord lamp is extinguished in accordance with well known practice whereupon the operator rotates the indicator to the second position or segment which is engraved or otherwise printed with the char-

acters "DS". The indicator in this position notifies the operator that when the cord lamp relights she should pull down the plug or disconnect.

The third and fourth segments are employed on connections made to what are commonly known as straightforward toll lines. When the operator plugs into this type of line she rotates the indicator to the third position so as to display the marking "NA" which indicates to her that a connection has been completed to a straightforward toll line but has not yet been answered. When the call is answered, the cord lamp is extinguished and the operator thereupon rotates the indicator to the fourth position, displaying the marking "CH" which indicates to her that she must challenge when the cord lamp again is lighted. After challenging and then removing the plug from its jack the operator returns the indicator to its normal position.

The fifth segment which is engraved "RD" is used when a connection is made to a ring-down toll line. On connections of this type, the operator does not challenge upon disconnect signals and therefore does not require any disconnect indication for this purpose.

From the foregoing description, it is apparent that applicant has devised a telephone switchboard accessory which serves to minimize the possibility of improperly handling telephone calls by an operator and which relieves the operator of the task of remembering what type of line a certain cord is associated with and enables her to readily interpret the significance of lamp signals.

What is claimed is:

An indicating device for use on telephone switchboards to indicate to an operator the several stages of a connection handled by her, comprising a cylinder, a bracket rotatably supporting said cylinder, the periphery of said cylinder being divided into a plurality of sections each section bearing a distinctive marking and separated from adjacent sections by a groove, and means cooperating with said grooves and effective upon the rotation of said cylinder to a position to display a certain one of said markings corresponding to a certain stage reached in the completion of a telephone connection, for automatically locking said cylinder in its set position.

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