March 14, 1933. J. F. CURRIVAN 1,900,916

DIAL OPERATOR

Filed Dec. 31, 1929

Fig. 5.

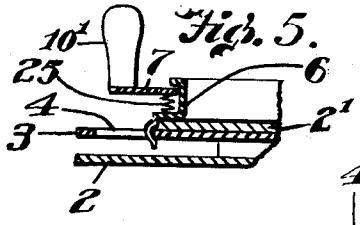


Fig. 1

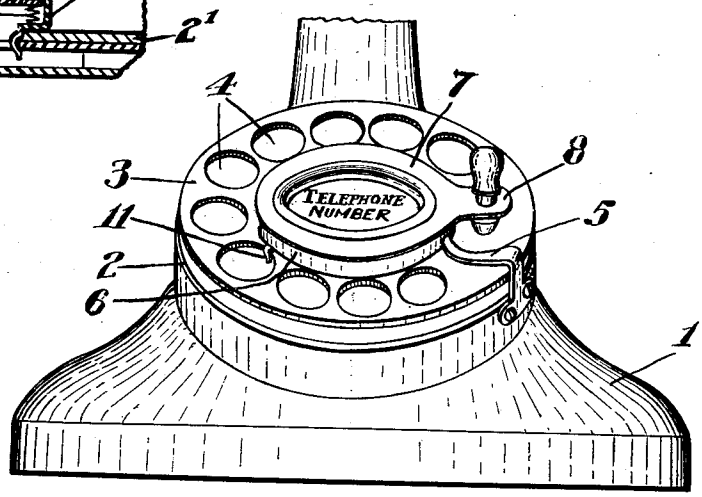


Fig. 3

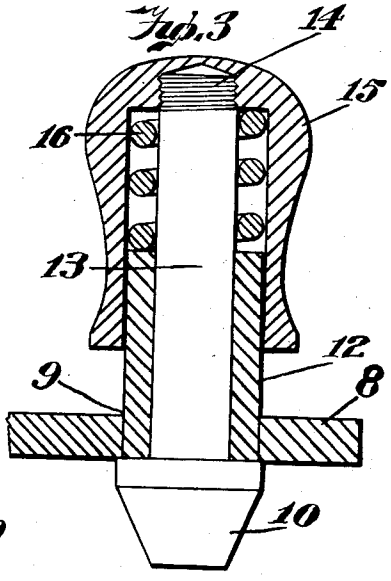


Fig. 2

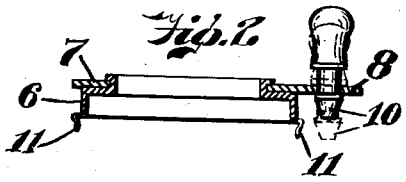
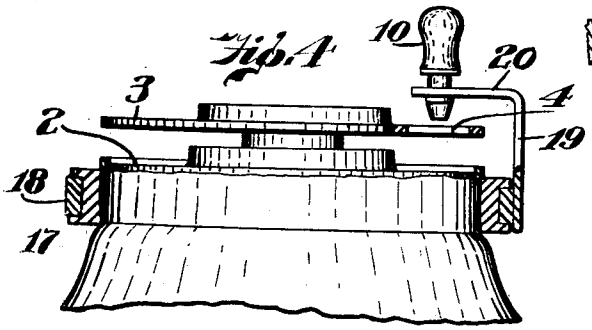


Fig. 4



Inventor
John F. Currivan
Ellis Spear Jr.
By Attorney

Patented Mar. 14, 1933 1,900,916

UNITED STATES PATENT OFFICE

JOHN FRANCIS CURRIVAN, OF FOREST HILLS, NEW YORK, ASSIGNOR TO GOOD-AD, INC., A CORPORATION OF PENNSYLVANIA

DIAL OPERATOR

Application filed December 31, 1929. Serial No. 417,606.

This invention relates to dial operating attachments for telephones equipped for automatic dialing.

As supplied to the subscriber, such telephones are equipped with a dialing disc which is adapted to be rotated manually over a fixed dial mounted on the telephone base. The dialing disc has an annular series of finger holes therein and the fixed dial bears beneath each hole letters and numbers for the various exchanges served so that the telephone numbers can be dialed.

In operating such a telephone, the user successively inserts his finger or a pencil, pen or other pointed implement in the selected holes of the rotatable dialing disc and rotates said disc over the fixed dial until the abbreviation for the wanted exchange and the number of the party wanted is dialed.

This is objectionable for several reasons, and accordingly my present invention has for its general purpose to provide means in the nature of an attachment capable of instant installation upon any dial telephone to enable the instrument to be dialed without the necessity of inserting the finger or the point of some foreign implement in the holes of the dialing disc in order to rotate the same successively over the fixed dial.

Such attachment provides a conveniently assembled and readily manipulatable operator for accomplishing telephone dialing. Its structure is such as not to obscure the visibility of the numbers or printed matter on the dial and physically my dial operator is of such size as not to detract from the appearance of the instrument.

In the accompanying drawing, I show a preferred embodiment and several modifications of my attachment.

Figs. 1 to 3 are views of the preferred form. Fig. 1 showing the same in applied position. Fig. 2 being a section, and Fig. 3 an enlarged detail through the projectable plunger, and

Fig. 4 is a fragmentary elevation, partly in section, showing a modification, and

Fig. 5 shows a further modification.

Referring to Figs. 1 to 3 inclusive, first, I have indicated at 1 the base of a telephone instrument of standard type equipped for automatic dialing. The fixed dial is indicated at 2, and the rotatable dialing disc at 3, said disc having an annular series of holes 4 through which the numerals and letters of the fixed dial 2 are visible, and being limited in its rotation by a fixed stop 5. Centrally of the fixed dial 2 is a surface N on which the number of the telephone may appear.

Over the dialing disc 3 in any suitable manner is a collar 6 through which is visible the telephone number N and on which is rotatably mounted a ring 7 having a lateral extension 8 perforated as at 9 and carrying a projectable plunger 10 alined with the series of holes 4 in the dialing disc 3 and adapted to be entered selectively into any desired hole 4 for the purpose of rotating said disc.

As here shown, the collar 6 is mounted on the usual metal ring 2′ which holds the number card of the dial, being provided with a plurality of depending tongues 11 adapted to be lodged in certain of the holes 4 of the dialing disc 3, so that the collar is affixed thereto and rotates therewith. So mounted, the collar 6 and ring 7 lie within the series of holes 4 in disc 3 so as not to obscure the visibility of the letters and numbers of the dial 2 underlying said holes, and the offset extension 8 of the ring 7 positions the plunger 10 above and in line with the hole series. The telephone number or other matter inside of the collar 6 is not hidden at any time by either collar, ring, or plunger.

The plunger 10 may be mounted in the ring 7 in any desired manner. For purposes of illustration such mounting is shown in Fig. 3 as including a vertically extending bushing 12 which is sweated or otherwise permanently assembled in the hole 9 of the ring extension 8.

The plunger stem 13 is slidable vertically through the bore of said bushing, said stem being pointed at its lower end as shown, and at its upper end being threaded or otherwise securely assembled as at 14 with a depending head or skirt 15 which slides over the bushing 12 externally thereof.

Coiled about the stem between the upper end of the bushing and the cap or skirt 15

is a coil spring 16, the function of which is to return the plunger to the full line position of Fig. 2 after each actuation thereof.

Normally, the exposed end of the plunger clears the dialing disc 3 but when it is desired to dial a number, the cap 15 is grasped and the plunger and ring 7 rotated over the disc until the plunger is alined with the selected hole 4 of the disc. The plunged is then forced downwardly as shown in dotted lines in Fig. 2 to enter its pointed end well within the selected hole 4, thus coupling the dialing disc 3 to ring 7, whereupon both are rotated to the full limit to their travel towards the stop 5 and released. The usual spring (not shown) with which the disc 3 is equipped retracts the disc and the spring 16 returns the plunger 10 to original position to repeat the operation in dialing the next letter or number. This form of my dial operating device is readily positioned simply by slipping the spring tongues 11 into the holes of the dialing disc 3.

In the modification of Fig. 4 the plunger 10 is mounted in proper cooperative relation to the dialing disc by means of a collar 17 fixed to the telephone base and shaped to retain a rotatable ring 18 from which extends upwardly an arm 19 bent upon itself as at 20 to position the plunger above and over the series of holes 4 in the dialing disc.

In the modification of Fig. 5 the plunger 10 is mounted on the outer end of a spring arm 21. The inner end of said arm is swiveled as at 22 to an attaching plate 23 which is formed at its ends with spring portions 24 by means of which the plate 23 may be detachably mounted on the metal ring which holds the usual number card of the dial.

In using this form of dial operator, the plunger 10 is swung about the swivel 22 as an axis until the plunger is registered with the desired hole 4 of the dialing disc, whereupon the plunger is depressed to enter its lower end in said hole and the plunger and with it the dialing disc is then rotated to dial the desired number. When the plunger is released, the spring action of the arm 21 lifts the plunger out of the hole within which it was entered thereby clearing the dialing disc to permit the plunger again to be swung over the disc and registered with some other hole thereof.

In the modification of Fig. 6, the ring 7 is provided with a knob 10′ rather than a plunger, as the plunger 10 in Figs. 1 to 5, and this ring is itself mounted sufficiently loose around the collar 6 to permit the knob carrying portion thereof to be depressed and cause the dialing disc 3 to turn with the ring 7 when said ring is rotated. The ring 7 is normally maintained clear of the disc 3 by the interposed coil spring 25.

In using this form of device, the ring 7 is rotated by means of knob 10′ over the disc 3 until the knob is alined with the proper hole 4 of the dial, whereupon the ring is depressed against the action of the spring 25 sufficiently to cause the disc 3 to rotate with the ring when the ring is rotated to effect dialing.

Various other modifications in the construction and operation of my device may obviously be resorted to without departing from the spirit and scope of my invention and if within the limits of the appended claims.

What I therefore claim and desire to secure by Letters Patent is:

1. For use with a dial telephone having a rotatable dialing disc provided with an annular series of holes, and having centrally thereof an area adapted to disclose printed matter, a dial operator comprising a rotatable and reciprocal plunger and means for maintaining said plunger in alignment with said hole series for selected projection into desired hole, said aligning means lying wholly outwardly of said area so as not to obscure the same.

2. For use with a dial telephone having a rotatable dialing disc provided with an annular series of holes, and having centrally thereof an area adapted to disclose printed matter, a dial operator comprising a rotatable and reciprocal plunger and means for maintaining said plunger in alignment with said hole series for selected projection into desired hole, said aligning means lying wholly outwardly of said area so as not to obscure the same, said means comprising a member fixed to said dialing disc and rotatable therewith.

3. For use with a dial telephone having a rotatable dialing disc provided with an annular series of holes, and having centrally thereof an area adapted to disclose printed matter, a dial operator comprising a member lying wholly outwardly of said area for printed matter so as not to obscure the same, said member fixed to said dialing disc and rotatable therewith, and a second member mounted on said first member and rotatable independently thereof, and a reciprocal plunger mounted on said second member and extending therefrom so as to be disposed in alignment with said hole series for selected projection into any desired hole.

4. For use with a dial telephone having a rotatable dialing disc provided with an annular series of holes, and having centrally thereof an area adapted to disclose printed matter, a dial operator comprising a member lying wholly outwardly of said area for printed matter so as not to obscure the same, said member having a plurality of depending tongues adapted to be lodged in said holes, and a reciprocal plunger carried by said member and extending therefrom so as to be disposed in alignment with said hole series for selected projection into any desired hole.

5. For use with a dial telephone having a rotatable dialing disc provided with an an-

nular series of holes, and having centrally thereof an area adapted to disclose printed matter, a dial operator comprising a member lying wholly outwardly of said area for printed matter so as not to obscure the same, said member having a plurality of depending tongues adapted to be lodged in said holes, a second member mounted on said first member and rotatable independently thereof, and a reciprocal plunger mounted on said second member and extending therefrom so as to be disposed in alignment with said hole series for selected projection into any desired hole.

6. For use with a dial telephone having a fixed dial bearing printed matter and a relatively rotatable dialing disc provided with an annular series of dialing holes, a collar mounted on dialing disc and lying wholly to one side of said annular series of holes so as not physically to obscure the legibility of the printed matter of the fixed dial normally observable through said holes, said collar having a plurality of depending offset positioning tongues adapted for frictional engagement in certain of said holes for detachably mounting said collar in the relation indicated, a relatively rotatable ring mounted on said collar and having a lateral extension disposed in the general plane of said ring and overlying said annular hole series, and a plunger reciprocably mounted in said extention in alinement with said hole series for selective projection into any desired hole.

7. For use with a dial telephone having a fixed dial bearing printed matter and a relatively rotatable dialing disc provded with an annular series of dialing holes, a vertically disposed collar mounted on dialing disc and lying wholly to one side of said annular series of holes so as not physically to obscure the legibility of the printed matter of the fixed dial normally observable through said holes, said collar having a plurality of depending offset positioning tongues adapted for frictional engagement in certain of said holes for detachably mounting said collar in the relation indicated, a relatively rotatable horizontally disposed ring mounted on said collar and provided with a relatively flat upper face adapted to serve as a display surface for advertising or descriptive matter and having a lateral extension disposed in the general plane of said ring and overlying said annular hole series, and a vertically disposed plunger reciprocably mounted in said extension in alinement with said hole series for selective projection into any desired hole.

8. For use with a dial telephone having a fixed dial bearing printed matter and a relatively rotatable dialing disc provided with an annular series of dialing holes, a relatively fixed collar sleeved about the telephone base beneath said dial and disposed beneath and outside of said series of holes, a rotatable ring carried by said collar, an arm carried by said ring and extending vertically to a point above and outside of the edge of said rotatable dialing disc and there being bent inwardly to overlie the series of holes in said disc, and a vertically disposed plunger reciprocably mounted in said inwardly bent extension in alinement with said hole series for selective projection into any desired hole.

In testimony whereof I affix my signature.

JOHN FRANCIS CURRIVAN.