March 22, 1932. J. G. STROCK 1,850,642

ILLUMINATING MEANS FOR TELEPHONE CALLING DEVICES

Filed April 22, 1930

Fig. 1.

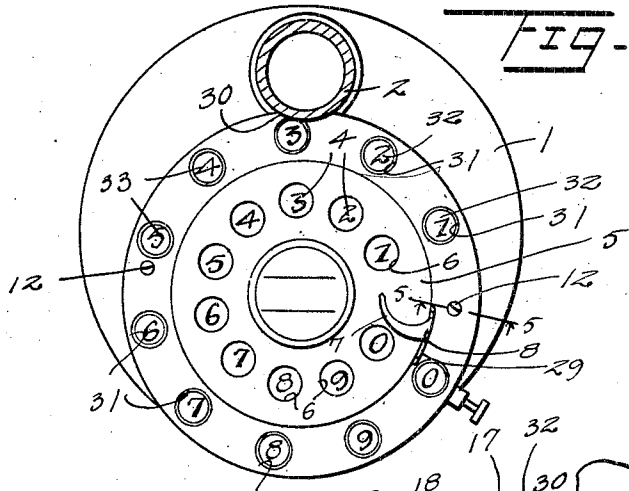


Fig. 2.

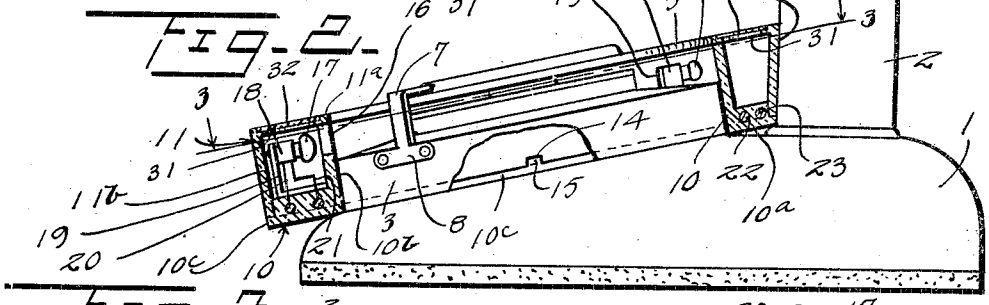


Fig. 3.

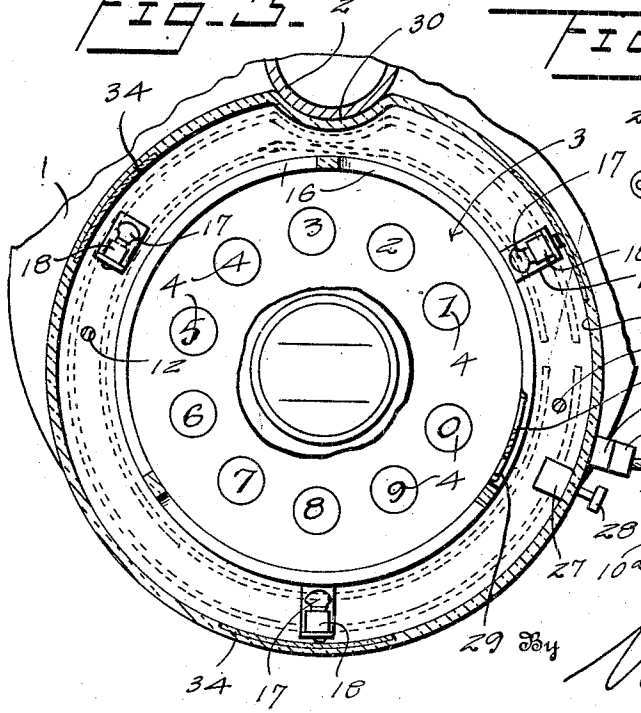


Fig. 4.

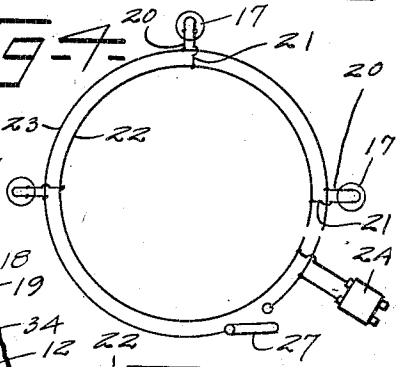
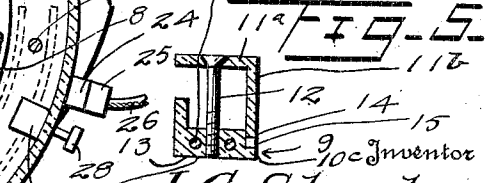


Fig. 5.



Inventor
J. G. Strock

By Watson E. Coleman
Attorney

Patented Mar. 22, 1932 1,850,642

UNITED STATES PATENT OFFICE

JOSEPH G. STROCK, OF PITTSBURGH, PENNSYLVANIA

ILLUMINATING MEANS FOR TELEPHONE CALLING DEVICES

Application filed April 22, 1930. Serial No. 446,340.

This invention relates to illuminating means for telephone calling devices, and more particularly to improvements in the illuminating means forming the subject matter of my co-pending application filed March 15, 1930 and serially numbered 436,224. That illuminating means comprises a one piece annular casing adapted to be arranged upon and in surrounding relation to the cylindrical base of a telephone calling device and provided in its inner wall with openings alined with the space between the base and the dial of the calling device, and electric lamps arranged in the casing opposite the openings to illuminate the numbers of the calling device which are arranged upon the base and are visible through openings in the dial.

The present invention has for one of its objects to improve the casing of the illuminating means to the end that its cost of manufacture may be reduced to the minimum, and to attain this object, the invention comprehends the formation of the casing from two similar sections of annular formation in plan and elevation and of angular formation in cross section.

The present invention has for a further object to provide novel and simple means through the medium of which the casing sections may be easily, quickly and firmly secured in assembled relation.

The present invention has for a further object to provide a casing of the character stated which shall have the top wall thereof provided with digits corresponding in value and arrangement to those of the calling device and adapted to be illuminated by the lamps in the casing, to the end that the dialing of the number will be greatly facilitated.

The present invention has for a further object to provide a casing of the character stated wherein the lamps shall be arranged in an annular series therein or radially therein and in alinement with the digits of the casing and calling device.

The present invention has for a still further object to provide novel and simple means for supporting the lamps in the casing.

With the foregoing and other objects in view, the nature of which will appear as the description proceeds, the invention consists in the construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, wherein:—

Figure 1 is a view partly in horizontal section and partly in top plan of a telephone instrument provided with a dial calling device and equipped with a dial illuminating means constructed in accordance with my invention;

Figure 2 is a view with the telephone instrument in side elevation and the illuminating means in vertical section;

Figure 3 is a sectional view taken on the plane indicated by the line 3—3 of Figure 2;

Figure 4 is a diagrammatic view illustrating the connection in relation to the input socket, switch, lamps and conductors of the illuminating means, and

Figure 5 is a sectional view illustrating the manner in which the sections of the casing are secured together.

Referring in detail to the drawings, 1 designates the base, and 2 the standard of a telephone instrument of the disc type and equipped with a calling device of the dial type. The calling device comprises a cylindrical base 3 which is mounted upon the base 1 in front of the standard 2, digits 4 arranged in an annular series upon the upper side of the base 3, a dial 5 rotatably mounted upon the base 3 and provided with openings 6 through which the digits are visible, and a finger stop 7 overlying the dial and carried by a bracket 8 secured to the lateral side of the base. The means for illuminating the digits 4 comprises an annular casing 9 which rests upon the base 1 of the telephone instrument in surrounding relation to the base 3 and dial 5 of the calling device. The casing 9 extends from a plane coincident with the upper side of the dial 5 to a plane coincident with the lower side of the base 3. The casing 9, which may be made of metal, bakelite or any other desired material or materials, consists of two similar sections 10 and 11. The casing sections 10 and 11 are of annular formation in plan and elevation and are of angular formation in cross section, the casing section 10 presenting an annular bottom wall 10*a*

and an annular inner wall 10*b*, and the casing section 11 presenting an anular top wall 11*a* and an annular outer wall 11*b*.

The walls 10*a* and 10*b* may be formed integrally or made separately and secured together in any suitable manner, and the wall 10*a* is provided at its outer or free edge with an annular flange or shoulder 10*c* located below the upper surface of the wall 10*a*. The walls 11*a* and 11*b* may also be formed integrally or made separately and secured together in any suitable manner, the wall 11*a* resting at its inner or free edge upon the upper or free edge of the wall 10*b*, and the wall 11*b* resting at its lower or free edge upon the flange or shoulder 10*c* and against the outer edge of the wall 10*a*. The casing sections 10 and 11 are secured in assembled relation by cap screws 12 which pass through the wall 11*a* and engage in recesses 13 formed in the wall 10*a*. The wall 11 is provided in its lower edge with notches 14 which receive dowels or lugs 15 formed upon and extending upwardly from the shoulder 10*c*, the dowels cooperating with the screws 12 to firmly secure the sections 10 and 11 in assembled relation.

The inner wall 10*b* of the casing 9 has a snug fit with the lateral wall of the base 3 of the calling device, and is provided with a series of circumferentially extending slots 16 which register with the space between the upper side of the base and the dial 5 and through which the rays of lamps 17 pass to illuminate the digits 4 on the base. The lamps 17 are of the incandescent electric type, and may be arranged in an annular series in the casing 9, as shown in Figure 3 or radially of the casing, as shown in this figure. When radially arranged in the casing 9, the lamps 17 will be alined with the radial centers of the digits 4. The lamps 17 are arranged directly opposite the slots 16 and are carried by sockets 18.

The sockets 18 are carried by brackets 19 which are secured to and extend upwardly from the casing wall 10. The sockets 18 are each connected by leads 20 and 21 to annular conductors 22 and 23 which are arranged in the casing 9 and which may be embedded or recessed in or otherwise secured to and also insulated from the casing wall 10*a*. An input socket 24 is secured to the casing wall 11*b* and is connected to the conductors 22 and 23. The socket 24 is adapted to receive a plug 25 connected to a lead cord 26 which may be connected to any suitable source of current, as for instance, a house current stepped down to the required voltage by a transformer, not shown. A switch 27, which may be of any well known or appropriate type and provided with a control knob 28, is carried by a casing wall 11*a*, and is interposed in the conductor 22.

The casing wall 10*b* is provided with a recess 29 for the reception of the base of the finger stop carrying bracket 8, and the casing wall 11*b* is provided with a recess 30 for the reception of the standard 2. The casing wall is provided with an annular series of openings 31 which correspond in number to the dial opening 6 and are arranged radially with respect to the dial openings. Transparent or translucent panels 32 are secured in the casing opening 31, and bear digits 33 which may be etched, grooved, carved or inlaid therein so as to render them clearly visible when illuminated. The digits 33 correspond in value and arrangement to the dial digits 4. In order to insure the most effective illumination of the digits 4 and 33, reflectors 34 are arranged in the casing 9 immediately below the lamp 17 and if desired, these reflectors may be secured to the casing section 10 or to the brackets 20.

As the casing sections 10 and 11 are similar, and due to the construction of the means by which they are secured together, they may be easily and cheaply manufactured and assembled. Due to the snug engagement of the casing section 10 with the base 3 of the calling device, the casing section 11 may be removed without displacing said first casing section, and after this has been done, burned-out lamps may be easily and quickly replaced. The manner in which the casing sections 10 and 11 are connected together, the engagement of the casing section 10 with the calling device and the engagement of the casing section 11 with the standard of the telephone instrument, permits the calling device to be manipulated and the telephone instrument to be handled without danger of displacing the illuminating means or effecting any relative movement of the casing sections. When the device is in use, its digits 32 and the calling device digits 4 will be brilliantly illuminated, with the result that the number may be dialed with accuracy and speed. To effect the illumination of the digits, it is only necessary to close the switch 27, and if desired, the switch may be of the automatic type so as to permit it to break the lamp circuits when released.

While I have described the principle of the invention, together with the structure which I now consider the preferred embodiment thereof, it is to be understood that the structure shown is merely illustrative and that such changes may be made, when desired, as fall within the scope of the invention as claimed.

I claim:—

In combination, a telephone calling device having a base provided with digits and a dial rotatably supported above the base and provided with openings through which the digits are visible, a casing surrounding the base and consisting of two sections, one of the casing sections presenting annular bottom and inner walls and the other casing presenting annular top and outer walls, the bottom wall being provided at its outer edge with an annular flange located below the upper surface of such

wall, lugs extending upwardly from the flange, the top wall resting at its inner edge upon the upper edge of the inner wall, the outer wall resting at its lower edge upon said flange and against the outer edge of the bottom wall and the outer wall being provided in said edge thereof with recesses receiving the lugs, retaining elements passing through the top and bottom walls, the inner wall being provided with openings alined with the space between the base and dial, and a source of light within the casing.

In testimony whereof I hereunto affix my signature.

JOSEPH G. STROCK.