Oct. 8, 1935. W. S. BAUM 2,016,310

TELEPHONE DIAL ILLUMINATOR

Filed Aug. 2, 1934

Fig. 1

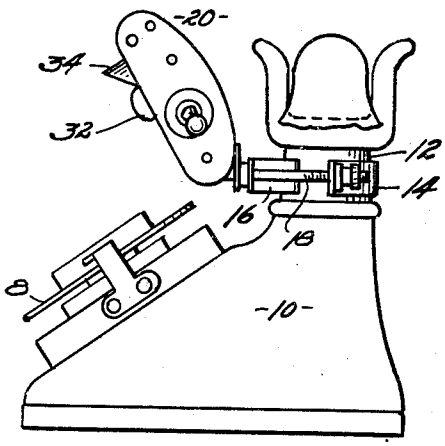


Fig. 2

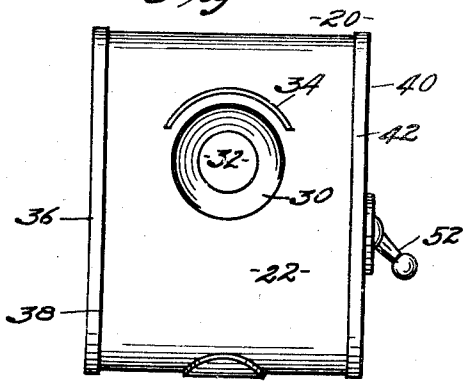


Fig. 3

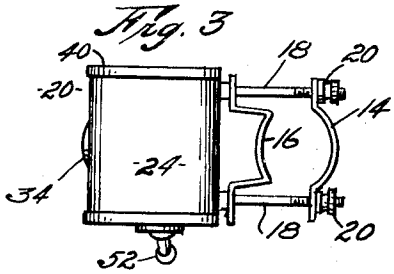
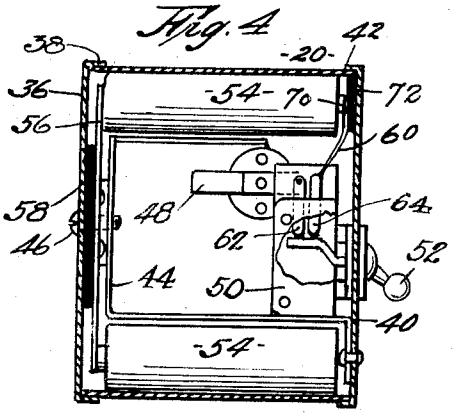


Fig. 4



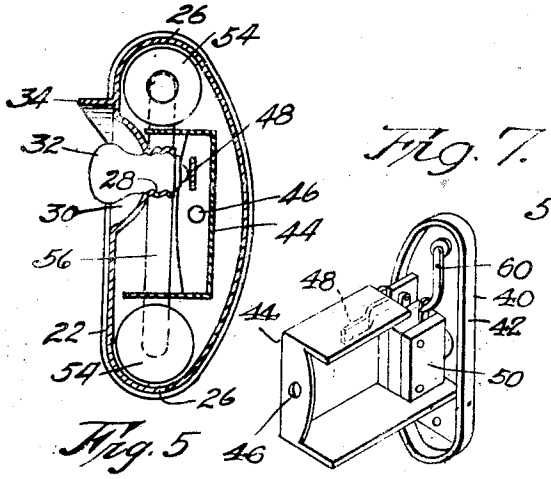


Fig. 5

Fig. 7.

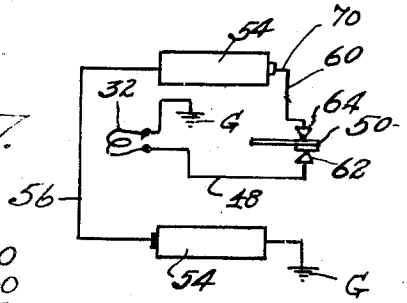


Fig. 6.

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Patented Oct. 8, 1935

2,016,310

UNITED STATES PATENT OFFICE

2,016,310

TELEPHONE DIAL ILLUMINATOR

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Application August 2, 1934, Serial No. 738,061

10 Claims. (Cl. 240—2.17)

This invention relates to illuminating devices of the character particularly adapted for use as an attachment for telephones having the manually operable dial, and the primary object of the invention is to provide such an illuminator which is exceptionally simple in construction, inexpensive to manufacture, strong, and durable.

One of the important aims of the invention is to provide a telephone dial illuminator of the character described in my United States Letters Patent No. 1,961,474, issued June 5, 1934, but with marked improvements with respect to specific form and structural details, to the end that manufacture, assembly and attachment is made easy and simple.

Advantages with respect to specific form and combination of the parts of the illuminator will be made clear during the following specification, referring to the accompanying drawing, wherein:

Figure 1 is a side elevation of a telephone dial illuminator embodying this invention and in place on a dial-type telephone of the stand style.

Fig. 2 is an enlarged face view of the device.

Fig. 3 is a top plan view of the same.

Fig. 4 is a longitudinal, central section through the illuminator.

Fig. 5 is a longitudinal cross section through the same.

Fig. 6 is a diagrammatical illustration of the circuit employed in the illuminator, and

Fig. 7 is a perspective view of the frame removed from the case.

In constructing a dial illuminator, it is necessary that the same be made light and formed so that it will direct light rays upon the dial 8 of telephone 10. The telephone 10 may be of any type so long as it constitutes a vertical standard 12 to which the illuminator may be attached through the medium of mating clamp plates 14 and 16 that are carried by stems 18 mounted directly upon the lower portion of the arched back of the case. Tightening nuts 20 are in screw-threaded engagement with stems 18 so that plates 14 and 16 might be drawn into tight engagement with standard 12. It has been found in practice that altering the specific form of plates 14 and 16 to a slight degree will allow for attachment to any of the various forms of telephone standards 12.

The illuminator per se comprises a case 20 that is formed in an unique manner to present a flat face or side 22, opposed by a convex side 24, which are joined together by arcuate edges 26 which should be concentric with the hereinafter described batteries. An internally screw-threaded aperture 28 is formed in the flat side wall 22 and a recess 30 is formed around this aperture 28 by pressing the portion of wall 22 inwardly as shown in Fig. 5. An electric lamp 32 is in screw-threaded engagement with the internally threaded aperture 28 and the outwardly projected portion of lamp 32 is confined within recess 30. To direct the rays of light from lamp 32 downwardly toward dial 8, case 20 is provided with a small arcuate canopy 34, which is mounted on flat side 22 above recess 30.

The circumscribing strip of material which forms walls 22, 24 and connecting sides 26, is closed at one end by a fixed end plate 36, having a continuous flange 38 at its edge to grip the continuous outer face of the formed circumscribing member. A similar end plate 40 is removably affixed to the open end of this hollow casing 20 and its flanges 42 likewise grip the outer face of the aforesaid circumscribing member so that flanges 38 and 42 are inwardly directed toward each other in the manner illustrated.

A frame 44 carried by end 40 projects inwardly to a point adjacent end plate 36 and there receives screw 46 which draws plate 40 to position. This single screw 46 is the only member which the user of this illuminator need manipulate in placing batteries. A contact finger 48 is carried by frame 44 and is in connection with switch 50 that is supported by both frame 44 and end plate 40. An operating lever 52 forming a part of switch 50 projects through plate 40 so that the circuit may be made or broken by its manipulation to and from a position connecting contact points 62 and 64. Two batteries 54 are housed within case 20 and joined together by connector bar 56 carried by plate 36, but insulated therefrom by fiber 58. The opposite ends of batteries 54 are in contact with points on plate 40, one of which is a connection 60 to switch 50.

When frame 44, end plate 40, switch 50, and batteries 54 are moved to place as a unit, contact finger 48 engages lamp 32 and screw 46 is moved to position, all of which constitutes the only manipulation necessary to assemble the telephone dial illuminator.

The lamp 32 may be replaced without disassembling the structure and manipulation of switch through lever 52 will make and break the circuit so that the connections between lamp 32 and batteries 54 may be caused to carry electrical energy from batteries 54 to lamp 32 or broken to preclude such action, as desired.

When switch points 62 and 64 are closed, the

circuit is from one end of lower battery 54 through connector bar 56 to upper battery 54, thence through point 70, that is insulated from plate 40 by block 72, connection 60, contact point 64, switch member 50, contact point 62, finger 48, through lamp 32 to ground G. The other end of lower battery is grounded also to complete the circuit.

The specific structural features hereinabove set down are important and since they permit inexpensive manufacture and the fulfillment of the other important aims of this invention, it is desired to be limited in the practice of the invention only by the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a telephone dial illuminator, a hollow case having an open end; batteries within the case; an electric lamp carried by the case having connection with the batteries; a cover plate to close said open end; a frame integral with the cover plate extending into the case to a point adjacent the opposite end of the case; and means for securing together the frame and said opposite end of the case.

2. In a telephone dial illuminator, a hollow case having an open end; batteries within the case; an electric lamp carried by the case having connection with the batteries; a cover plate to close said open end; a frame carried by the cover plate extending into the case to a point adjacent the opposite end of the case; means for releasably securing together the frame and said other end of the case; and a switch mounted on the inner side of the cover plate having an operating lever extending outwardly from the case when the cover is in place.

3. A telephone dial illuminator of the character described comprising a hollow case having a planar side, an open end and a recess formed in said planar side; an electric lamp in the recess; a cover plate closing the open end; a frame carried by the cover plate extending into said case for securement thereto; a contact finger carried by the frame for engagement with the said lamp; and batteries within the casing in connection with said lamp.

4. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the said open end; a frame carried by the cover plate extending into said case; removable means for securing together the case and frame; batteries within the case and held in operative position by the said frame; and electrical conductors joining said batteries and lamp including a contact finger on the frame and a switch on the said cover plate whereby to open and close the circuit between the batteries and lamp.

5. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the said open end; a frame carried by the cover plate extending into said case for attachment to the opposite end of the case; means for interconnecting the frame and said opposite end of the case to draw the cover plate into position; a battery on each side respectively of said frame, each having one end in contact with a point on the cover plate; a connector bar in contact with the opposite ends of said batteries; and electrical conductors joining said batteries and lamp.

6. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the said open end; a frame carried by the cover plate extending into said case for attachment to the opposite end of the case; means for interconnecting the frame and said opposite end of the case to draw the cover plate into position; a battery on each side respectively of said frame, each having one end in contact with a point on the cover plate; a connector bar in contact with the opposite ends of said batteries; and electrical conductors joining said batteries and lamp, said interconnecting means serving to hold the batteries in tight contact with the said points on the cover plate and the said connector bar.

7. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the said open end; a frame carried by the cover plate extending into said case for attachment to the opposite end of the case; means for interconnecting the frame and said opposite end of the case to draw the cover plate into position; a battery on each side respectively of said frame, each having one end in contact with a point on the cover plate; a connector bar in contact with the opposite ends of said batteries; and electrical conductors joining said batteries and lamp, said interconnecting means serving to hold the batteries in tight contact with the said points on the cover plate and the said connector bar, said batteries being held in place between the said frame and the said casing and said casing being formed to hold the batteries against lateral displacement, transversely of the case when the frame is in place.

8. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the said open end; a frame carried by the cover plate extending into said case for attachment to the opposite end of the case; means for interconnecting the frame and said opposite end of the case to draw the cover plate into position; a battery on each side respectively of said frame, each having one end in contact with a point on the cover plate; a connector bar in contact with the opposite ends of said batteries; and electrical conductors joining said batteries and lamp, said interconnecting means serving to hold the batteries in tight contact with the said points on the cover plate and the said connector bar, said frame serving to hold the batteries in spaced-apart relation within the case and to permit the electric lamp to project into the case between the batteries.

9. A telephone dial illuminator of the character described comprising a hollow case having an open end and a lamp-receiving recess formed in one side; an electric lamp in the recess; a cover plate closing the open end; a frame carried by the cover plate extending into said case; a battery on each side respectively of said frame; and electrical conductors joining said batteries and lamp, said lamp projecting between said batteries and into said frame.

10. A telephone dial illuminator comprising an apertured case; an electric lamp projecting from the aperture of the case; batteries housed within the case; electric conductors, including a switch,

connecting the batteries and the electric lamp, said case comprising a circumscribing, hollow member forming a flat side and a convex side, arcuate, convex, opposite edge portions connecting the said flat side and convex side, flanged end plates closing the ends of said circumscribing hollow member with the flanges thereof extending inwardly toward each other and against the outer side of said circumscribing member; a clamp on the case for attaching the illuminator to the vertical standard of a telephone in juxtaposition to the telephone dial above the same; a recess formed in the flat side of the case to receive the projected portion of the electric lamp; and an arched canopy on the flat side of the case above the said lamp to direct rays of light therefrom downwardly toward the said dial.

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