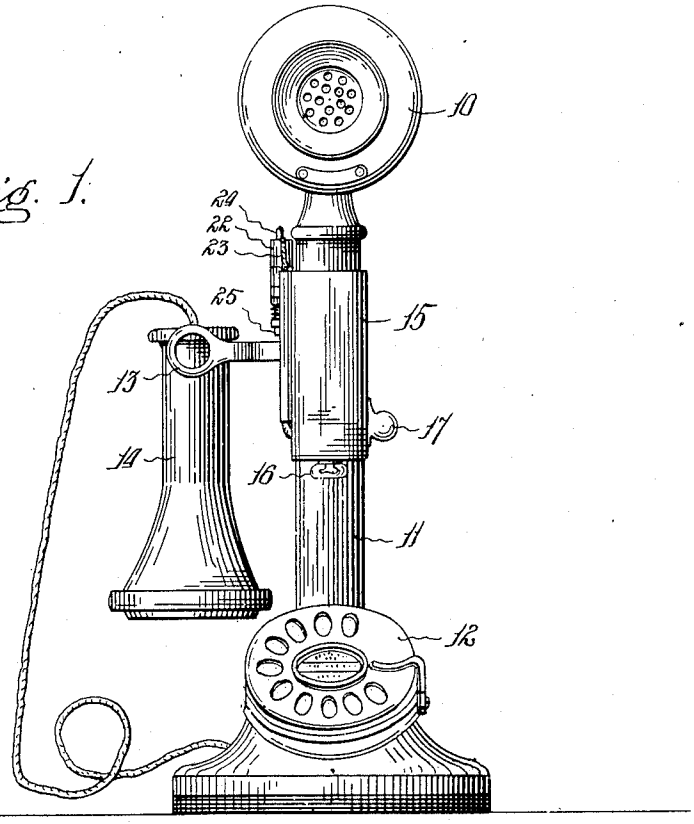
Sept. 17, 1929. E. C. BUCHANAN 1,728,852

DIAL LIGHT FOR TELEPHONES

Filed Sept. 4, 1928

Fig. 1.



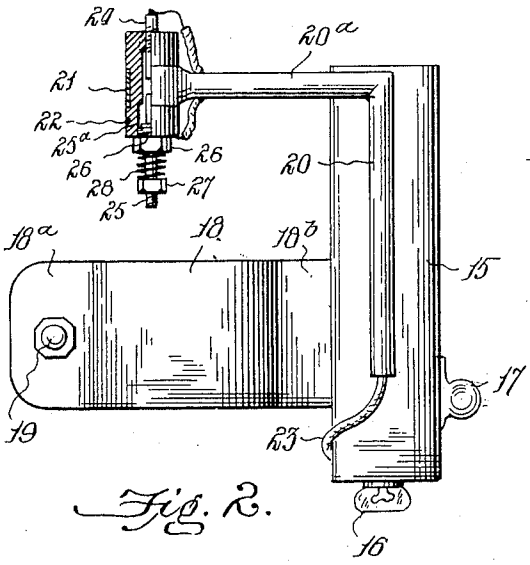
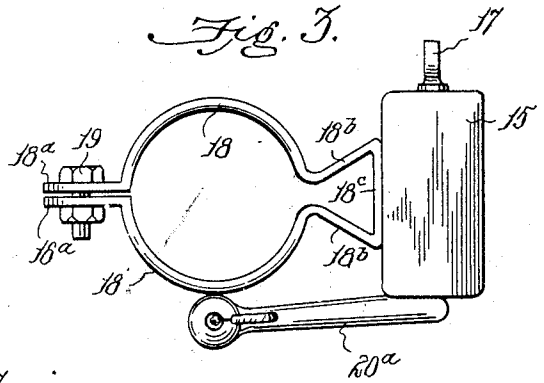


Fig. 2.

Fig. 3.



Inventor:

E. C. Buchanan.

By Connee & Peace

Attorney.

Patented Sept. 17, 1929 1,728,852

UNITED STATES PATENT OFFICE

EDWIN C. BUCHANAN, OF NASHVILLE, TENNESSEE

DIAL LIGHT FOR TELEPHONES

Application filed September 4, 1928. Serial No. 303,936.

My invention is an improvement in telephone apparatus of that particular type or system commonly known as automatic, in which a dial is used and operated by a subscriber to make the desired telephone connection with another subscriber.

In the operation of this system the transmitter and receiver are oftentimes located where there is insufficient light to enable the operator to conveniently read the indicia on the dial, and it is therefore the main object of my invention to provide an electric lamp attachment for the standard of the transmitter which will throw its light directly on to the dial, in association with a switch in circuit with the lamp and operated automatically when the receiver is removed from the hook and replaced thereon.

A further object of my invention is to provide a small and economical attachment of this kind which may be readily applied to the conventional type of standard forming part of the transmitter and will not detract from the appearance of the telephone apparatus or interfere with its usual operation.

With these principal objects in view my invention consists of an attachment comprising a small lamp of the type commonly known as flash-lights, in combination with means for attaching the same to the standard of the transmitter and for controlling the circuit to the lamp automatically on operation of the arm which carries the receiver; all as hereinafter fully described and more specifically set forth in the appended claims.

In the drawings:

Figure 1 is a view in front elevation showing the application of my improved dial light,

Fig. 2 is a side elevation of the attachment, and

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

My invention is applied to that particular class of telephone apparatus comprising a transmitter 10 at the upper end of a standard 11 having a base on which the dial 12 is fastened, the standard carrying the vertically movable arm 13 supporting the receiver 14, my improved automatic dial light being adapted to be fastened to the aforesaid standard to direct the light therefrom on to the dial and to provide for turning the light on and off by movement of the arm 13 when the receiver is removed from and replaced on said arm, as hereinafter described whereby the lamp will be lighted for the period of time it is actually required in the operation of the telephone in making a call.

In carrying out my invention I employ a small electric lamp device of the type commonly known as a flash-light comprising a casing 15 having an electric light bulb 16 at one end and enclosing the battery which furnishes the electric current, said casing, as usual, having a slide-switch 17 at one side for making and breaking the circuit from one pole of the battery. To the back of the casing of this lamp I attach a metal clip having oppositely curved members 18 18 to embrace the standard 11 and be clamped thereon by a bolt and nut 19 passed through extensions 18^a 18^a of said clamping members, and to provide for a slight resiliency of the inner ends of said clamping member they are provided with diverging extensions 18^b 18^b integrally connected to the attaching plate 18^c of the clip by which the latter is welded or otherwise rigidly secured to the electric-lamp casing. In addition to the switch 17 and also in circuit with the electric light bulb 16 I provide an auxiliary switch operated by the movable arm of the telephone apparatus. For this purpose the vertical member 20 of a bent tube is attached, as by welding, to one side of the lamp-casing 15, with the outer end of the horizontal member 20^a thereof formed into a band 21 in which is supported the cylin-

drical body portion 22 of the auxiliary switch, the bent tube forming a conduit for the electric cord 23 from the lamp as well as a support for said switch. This switch comprises the aforesaid body portion 22, of insulating material having a bore extending vertically therethrough in the upper end of which is threaded a post 24 forming one of the terminals or contact points of the switch and in the lower end of which slides a rod 25 forming the other terminal or contact point of the switch, the bore in said body portion being enlarged at its lower end, to receive the reduced inner end 26[a] of a nut 26 threaded therein to retain the slide rod or terminal 25, the latter having a collar 25[a] for limiting its outward movement. To normally and yieldingly hold the slidable contact-rod out of contact with the terminal 24 a nut 27 is threaded on the lower end of said rod and a spring 28 is interposed between the fixed nut 26 at the lower end of the body portion 22 and said nut 27, whereby to provide for closing the circuit on upward movement of the slidable terminal 25 against the action of the spring, it being noted that one of the wires from the cord 23 extends out of the member 20[a] of the tubular switch support and is connected to the projecting end of terminal 24, while the other wire is connected to the nut 26 through which the other terminal works, the body portion 22 and end of the slidable rod 25 being of insulating material to prevent short circuiting of the electric current through the lamp in one instance and in the other instance prevent possible interference with the telephone circuit through the metal arm which engages said slidable rod.

The application and operation of my improved automatic dial light for telephone apparatus will be readily understood by reference to Fig. 1 of the drawings for the electric lamp having the light bulb at its lower end is attached to standard 11 of the transmitter, by means of the members 18, 18 which embrace said standard and are clamped thereon by the bolt 19, said casing being adjusted on the standard to locate the lower end of the spring-actuated termianl 25 immediately below the shank of the arm 13 in the lowered position of said arm, or when it is depressed by the receiver suspended from the outer end thereof. When so arranged, and with switch 17 closed the lighting of the lamp or light bulb 16 is controlled by said auxiliary switch, that is the said switch is held normally open by the spring, with the light extinguished, and when the receiver 14 is removed from the hook 13 the latter in its upward movement for telephoning will automatically push rod or terminal 25 in contact with rod or terminal 24 thus closing this auxiliary circuit so that the electric lamp will be lighted and throw its light on to the dial so that it can be clearly read in making the required telephonic connection. The automatic dial light will be found very convenient in those cases where the telephone apparatus is located in places where there is insufficient light either in daytime or night, but where the apparatus is located so that the dial is properly lighted during the daytime but not at night the main switch 17 may be opened during the daytime so as to save the batteries by not having the lamp lighted unnecessarily every time the receiver is removed from its supporting arm.

It will be understood, of course, that inasmuch as I employ an electric lamp of the flash-light type the battery or batteries (not shown) which supply the current can be renewed in the usual manner by opening the upper end of the casing, and it will be also understood that with respect to the main features of my invention changes or modifications can be made without departing from the spirit or scope of the claims.

I claim:

1. A dial lighting attachment for telephones comprising an electric lamp and circuit, a clip secured to the lamp-casing for attaching the same to the standard of the transmitter, a supporting arm secured to and projecting from the lamp-casing, and a switch in circuit with the lamp and carried by the supporting arm, said switch consisting of a body portion of insulating material, a terminal secured in the upper end thereof, a movable terminal slidable in the lower end of said body portion and having a collar thereon, and a spring interposed between said collar and lower end of the aforesaid body portion of the switch to hold the switch normally open, the terminals being in circuit with the lamp.

2. A dial lighting attachment for telephones comprising an electric lamp and circuit, means for securing the lamp-casing to the standard of the transmitter, a tubular supporting arm secured to the lamp-casing and having a member projecting at right angles therefrom, a body portion of insulating material carried at the outer end of the projecting member of the supporting arm, an electric terminal threaded in the upper end of said body portion, an electric terminal slidable in the lower end thereof for movement in and out of contact with the aforesaid terminal, a collar on the projecting end of the slidable terminal, and a spring interposed between said collar and the lower end of the aforesaid body portion for moving the slidable terminal out of contact with its companion terminal.

3. A dial lighting attachment for telephones comprising an electric lamp of the flash-light type having a casing, a light-bulb and a switch in circuit with the light-bulb, a clip secured to the lamp casing for attach-

ing the same to the standard of the transmitter, a tubular supporting arm attached to one side of the lamp-casing and having a member projecting at right angles therefrom, and a switch secured at the outer end of the supporting arm and consisting of a body portion having a terminal threaded in the upper end thereof, a terminal sildable in the lower end of said body portion, and a spring for projecting the last mentioned terminal out of contact with the other terminal of the switch, the said terminal being connected to the lamp circuit by a cord passing through the switch supporting member.

EDWIN C. BUCHANAN.