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ELECTRIC LIGHT BULB

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Fig. 1.

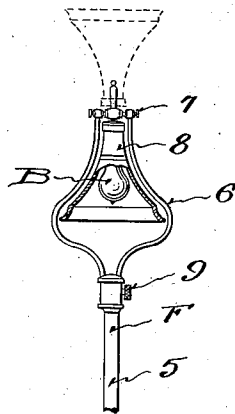
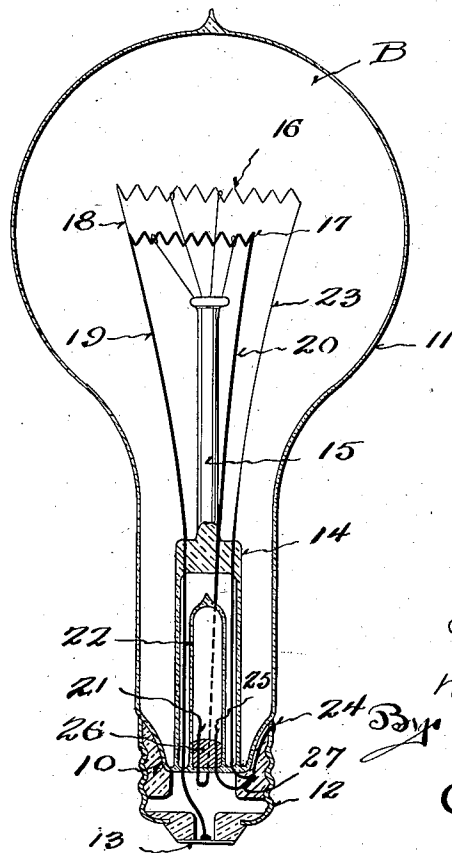


Fig. 2.



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ELECTRIC LIGHT BULB

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5 Claims. (Cl. 176-27)

This invention appertains to electric lighting, and more particularly to an improved electric light bulb and fixture therefor.

In floor and other type lamps embodying direct and indirect lighting, it is generally customary to provide bulbs of small power for direct lighting, and bulbs of high power for the indirect lighting. This is a costly construction and the type of fixture is limited in design.

It is now proposed to provide a single bulb having filaments of different power therein, and a manually actuated switch for placing the desired filament in the circuit. However, this construction requires a special structure for the bulb socket and a complicated switch structure for controlling the filaments.

Therefore, one of the primary objects of my invention is to provide novel means for automatically placing the desired filament or filaments of a lamp bulb in the circuit according to the position of the bulb, whereby the desired power for the desired purpose can be had without a complicated switch structure, or a special construction of bulb socket.

Another salient object of my invention is the provision of a lamp fixture embodying a support or base and a swinging reflector on the support for the lamp bulb for movement into either a direct lighting position or in an indirect lighting position, the bulb having a standard base and filaments of different power therein, with a globule of mercury for closing a circuit through the desired filaments of the bulb according to the position of the bulb and the reflector.

A further important object of my invention is the provision of a lamp bulb for direct and indirect lighting having filaments of different power therein, with spaced terminals for the filaments arranged within an envelop or receptacle preferably located in the base of the bulb, the envelop or receptacle receiving a globule of mercury for controlling the bridging of the terminals according to the position of the bulb.

With these and other objects in view, the invention consists in the novel construction, arrangement, and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawing, in which drawing:

Figure 1 is a fragmentary side elevation of a floor lamp constructed in accordance with my invention for use with direct or indirect lighting, the reflector of the lamp being shown broken away and in section.

Figure 2 is an enlarged longitudinal section through a lamp bulb constructed in accordance with my invention.

Referring to the drawing in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter F generally indicates a floor lamp, and B my improved electric light bulb therefor.

While I have illustrated an electric light fixture of the floor type, it is to be understood that the fixture can be modified without departing from the spirit or the scope of the invention.

As shown, the fixture includes a standard 5 supporting the spaced arms 6, the upper ends of which rotatably support a shaft 7 carrying the lamp socket and reflector 8 for the bulb B. Obviously, by disposing the reflector 8 in a lowered position, as shown in full lines in Figure 1, the lamp can be used for direct lighting, and when the reflector is swung to its raised position, as shown in dotted lines, the lamp can be used for indirect lighting.

A switch 9 of any desired type can be utilized for controlling the flow of current through the lamp socket and to the bulb B. It is to be understood that the lamp socket can be of the usual construction now found in the open market.

My improved electric lighting bulb B comprises a base 10 for supporting the glass container or envelop 11. The base 10 also includes the metallic electric conducting shell 12 and a central contact 13. The shell 12 is threaded for connection with a lamp socket, and any other means of connecting a lamp bulb to various types of lamp sockets may be employed without departing from my invention.

Disposed within the glass envelop 11, and preferably formed integral therewith, is a hollow standard 14, which carries the centrally disposed post 15 for supporting the filaments. In the present instance, I have shown filaments 16 and 17 of different characters, and the filament 16 is of the 50 watt type, and the filament 17 is of the 100 watt type. It is obvious, however, that the above specification is by example only, and that the power of the filaments can be changed without departing from the spirit or the scope of the invention.

As stated above, the post 15 supports the filaments in spaced relation in any desired manner, and the filament 16 has one terminal connected, as at 18, to one terminal of the filament 17, which terminal is provided with a lead-in wire 19. This wire 19 extends through the hollow

member 14 and is electrically connected with the central contact 13. Attached to the other end of filament 16 is a conducting wire 23 which extends through the hollow member 14 and through the base 10, and is electrically connected, as at 24, to the metal shell 12, thus completing the electrical circuit through filament 16.

Attached to the other end of the filament 17 is a conducting wire 20, which also extends through the hollow member 14 and terminates as an electrical terminal point 21 in a closed sleeve, tube or receptacle 22 formed of insulating material. This closed sleeve or tube can be formed integral with the base portion of the envelop 11, if desired.

Electrically connected to the metal shell 12 is a conducting wire 27, which extends through base 10 and enters the closed sleeve, tube or receptacle 22, terminating as an electrical terminal point 25, which is in spaced relation to the terminal point 21.

A globule of mercury 26, or any movable substance that will conduct electricity, is placed in the tube or receptacle 22, and when the bulb B is in upright position, as shown in Figure 2, the electric conducting substance bridges the gap between the terminal points 21 and 25, thus completing the electrical circuit through the filament 17. When the bulb B is inverted from the position shown in Figure 2, the conducting substance moves away from the terminal points 21 and 25, which breaks the electrical connection between said terminals, thus opening the circuit through the filament 17.

Thus, it can be seen that when the bulb B is in the position shown in Figure 2, both filaments are electrically connected, and that when the bulb is inverted from the position shown in Figure 2, the electric circuit through the filament 17 is broken. However, the filament 16 remains electrically connected in any position.

Consequently, when the bulb B is associated with the reflector 8, and the reflector is in its lowered position, as shown in Figure 1, only the low wattage filament is in use producing a modified light, whereas a filament of high wattage, as required for indirect illumination, would prove too intense for this direct lighting; but when the reflector 8 is swung to its raised position, as shown by dotted outline in Figure 1, both the low wattage and the high wattage filaments are brought into use producing the more intense light required for indirect illumination.

From the foregoing description, it can be seen that I have developed a lamp bulb with an exceptionally simple and durable means for providing a low power filament producing a modified light which is desired for direct lighting, and a high power filament producing the intensified light required for indirect illumination, with an internal automatic control for making this change in the intensity of light, without requiring the use of a manually operated switch for this purpose. No extra wiring or special construction of lamp socket is required.

Obviously, I can provide a lamp bulb having a single filament or a plurality of filaments, with means for automatically opening and closing the circuit through the single filament, or any one or any number of the plurality of filaments without departing from my invention.

Changes in details may be made without departing from the spirit or the scope of the invention, but what I claim as new is:

1. An electric light bulb comprising an outer envelop, filaments of different characters in said envelop, two contacts for the envelop, means electrically connecting the filaments together at one end and to one of said contacts, means electrically connecting the opposite end of one filament to the other contact, the other end of the other filament being provided with a terminal, a second terminal arranged in spaced relation to the first terminal and electrically connected with the last mentioned contact, and a mercury switch in said bulb for bridging said terminals when the bulb is in a predetermined position.

2. An electric light bulb comprising an outer envelop having two contacts, filaments of different characters in said envelop, means electrically connecting the filaments together at one end and to one contact, means electrically connecting the other end of one filament to the other contact, the other end of the other filament being provided with a terminal, a second terminal electrically connected with the last mentioned contact and spaced from the first terminal, a closed tube receiving said terminals, and a globule of mercury in said tube bridging said terminals when the bulb is in a predetermined position, and movable away from the terminals when the bulb is in another position.

3. An electric light bulb comprising, an envelope, filaments in said envelope in parallel circuit arrangement, and an automatic switch inside said envelope electrically connecting the filaments together when the bulb is moved to a raised elevated position and for disconnecting said filaments from one another when the bulb is swung to a lowered position, whereby said bulb will give one intensity of light for indirect lighting and another and lesser intensity of light for direct lighting.

4. An electric light bulb comprising, an outer envelope, filaments of different characters in said envelope in parallel circuit arrangement, and a mercury switch inside said envelope automatically electrically connecting said filaments when the bulb is swung to a raised position with the base of the bulb lowermost, and automatically disconnecting said filaments when the bulb is swung to a lowered position with the base of the bulb uppermost, whereby said bulb will give one intensity of light for indirect lighting and another and lesser intensity of light for direct lighting.

5. An electric light bulb comprising, an outer envelope having two contacts, filaments of different characters in said envelope in parallel circuit arrangement, means electrically connecting the filaments together at one end and to one contact, means electrically connecting the other end of one filament to the other contact, the other end of the other filament being provided with a terminal, a second terminal electrically connected with the last mentioned contact and spaced from the first terminal, a receptacle disposed inside said envelope receiving said terminals, and an electrical conducting substance in said receptacle bridging said terminals when the bulb is in a raised elevated position with the base of the bulb lowermost and movable away from the terminals when the bulb is swung to a lowered position with the base of the bulb uppermost, whereby said bulb will give one intensity of light for indirect lighting, and another and lesser intensity of light for direct lighting.

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