Oct. 16, 1934. A. W. GENRICH 1,977,124

ELECTRIC INCANDESCENT LAMP

Original Filed Oct. 20, 1930

Fig. 1.

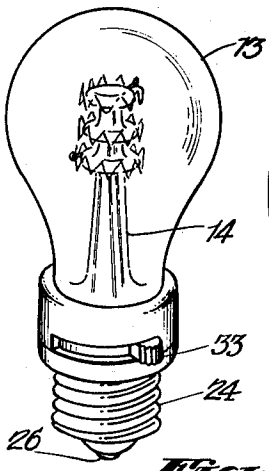


Fig. 2.

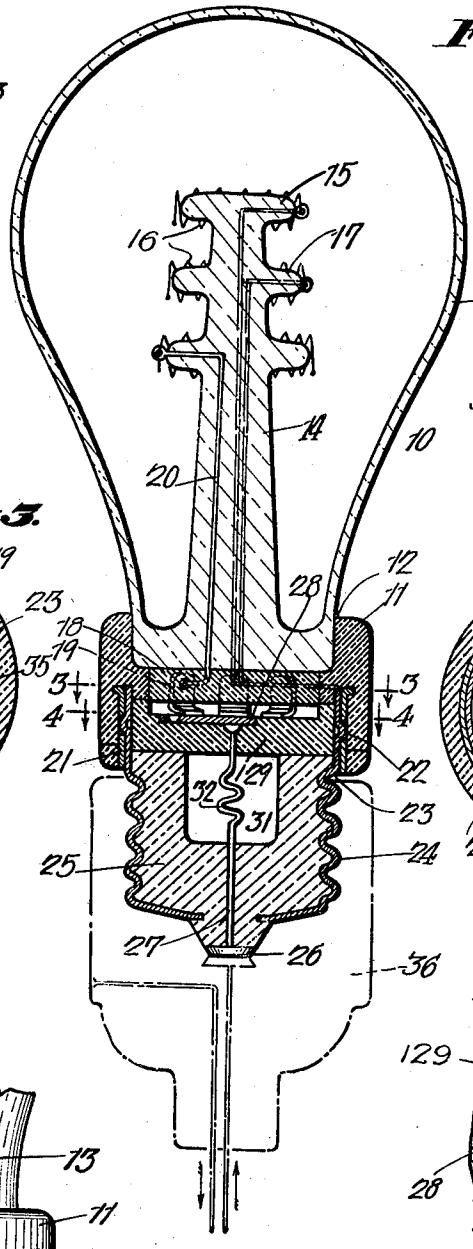


Fig. 7.

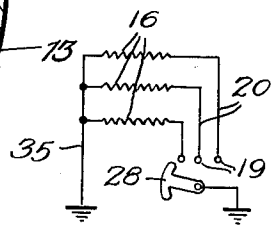


Fig. 3.

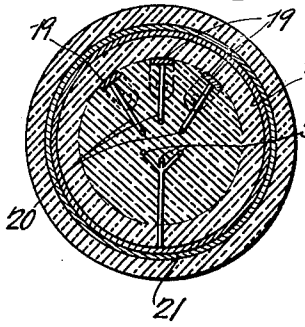


Fig. 4.

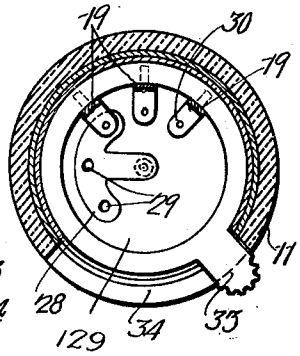


Fig. 5.

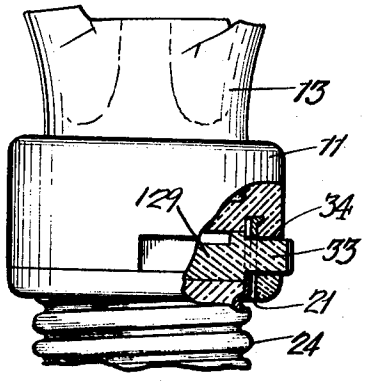
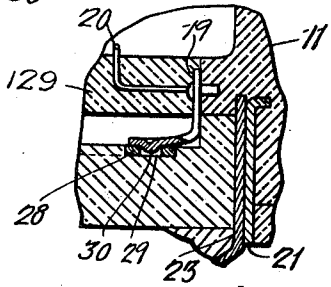


Fig. 6.



Inventor

ARNOLD W. GENRICH.

By Clarence A. O'Brien

Attorney

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1,977,124

UNITED STATES PATENT OFFICE

1,977,124

ELECTRIC INCANDESCENT LAMP

Arnold W. Genrich, New York, N. Y., assignor of three-tenths to Alexander Grewe, two-tenths to Wilhelm Frohbose, one-tenth to Laura Grewe, and one-tenth to Walter A. Vollmeke, all of New York, N. Y.

Substitute for abandoned application Serial No. 489,994, October 20, 1930. This application February 27, 1934, Serial No. 713,214

2 Claims. (Cl. 176—27)

This invention relates to improvements in electric incandescent lamps.

The primary object of the invention resides in an electric lamp in which the volume or brilliancy of the light produced thereby may be varied to meet the requirements. The advantages of such a lamp are apparent as at times it may only be desired to produce a dull light and another time a brighter light which serves to effect a saving in the consumption of electricity.

Another object of the invention is to provide an electric lamp embodying a plurality of separate filaments, and electric means for rendering them operative so that in the event that one or more of the filaments should be broken or burned out, a new or unbroken filament may be made operative.

This application is a substitute for abandoned application No. 489,994, filed Oct. 20, 1930.

A further object of the invention is the provision of an electric lamp of the above kind which may be screwed into a standard electric lamp socket, and in which the several filaments may be selectively operated without turning the lamp when in the socket.

With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view of my improved incandescent electric lamp.

Figure 2 is an enlarged vertical longitudinal sectional view therethrough and showing an electric lamp socket in dotted lines.

Figure 3 is a horizontal sectional view on the line 3—3 of Figure 2.

Figure 4 is a similar view on the line 4—4 of Figure 2.

Figure 5 is a detail sectional elevational view.

Figure 6 is an enlarged detail sectional view to illustrate the manner in which the co-acting contact elements are held in connected position.

Figure 7 is a diagrammatic view, of the filament circuit and actuating switch.

Referring to the drawing, the numeral 10 designates my improved incandescent electric lamp in its entirety which includes a base 11 of insulating material, the same being provided with a recess 12 in its top to receive a neck portion of a bulb or globe 13, the air from within the same having been exhausted. Extending inwardly from the neck of the bulb is a filament post or support 14, the same being provided adjacent its outer end with a plurality of spaced heads or flanges 15, the same increasing in diameter from the outermost head inwardly of the stem 14. Separate filament wires 16 are supported by and extend around the heads 15 for a purpose to be presently explained.

The under side of the base 11 is also recessed and due to the upper recess 12, a horizontal partition 18 is provided within the base and secured to the partition and extending beneath the same are L-shaped contact elements 19, the same being disposed in spaced relation and there being one element for each of the filament wires 16. Conductor wires 20 extend through the stem 14 and have one of their ends connected to the respective contact elements 19 and their opposite ends to the respective filament wires 16. Countersunk in the inner side walls of the lower recess provided in the base 11 is a metal ring or band 21, the same being provided with spaced openings 22 for receiving teats or projections extending from a side wall of a metal shell 23. The lower end of the shell is screw threaded, as at 24, and contains a body of porcelain or other insulating material 25. The body 25 extends below the bottom of the metal shell and is provided with a terminal contact 26, the same being connected to one end of a conductor wire 27 which leads and is connected to a contact plate 28 embedded in the top of a turnable disk 129 of insulating material and which disk is held in position between the body 25 and the partition provided in the base 11. The top face of the disk 129 in which the contact plate 28 is countersunk is also recessed to enable the lower ends of the L-shaped contact members 19 to be disposed in the path of the contact plate 28. This plate 28 is substantially T-shaped in plan, the cross portion being of arcuate configuration and provided with recesses or holes 29 for the reception of the respective projections or teats 30 provided on the free ends of the contact elements 19.

It will be seen that the screw threaded plug section is connected to the base 11 by the interlocking teats and recesses provided in the shell and band 21 so that in assembling the parts, the disk 129 may be placed in position and the shell snaps into engagement with the band countersunk in the base 11.

The top center of the porcelain body 25 is provided with a recess 31 through which the conductor wire 27 passes and which wire is coiled or looped as at 32 to enable turning of the disk 129 without causing any breaks or disconnection between the wire 27 and the contact plate 28.

A manipulating arm 33 extends from the disk 129 through a horizontal slot 34 provided in the base and provides a means by which the disk may be turned a predetermined distance for a purpose to be presently explained. The upper portion of the shell and the band 21 are also provided with slots which aline with the slot 34 in order to allow the manipulating portion to extend exteriorly of the base.

The return wires 35 from the respective filaments 16 are grounded upon the shell 24 so as to complete a circuit through the respective filaments when the respective contact elements 19 are engaged by the contact plate 28.

From the foregoing description, assume that my improved electric lamp is in screwed engagement with an electric socket shown in dotted lines at 36 and the switch arm or contact plate 28 is in the position shown in Figure 4 of the drawing, wherein only one of the contact elements 19 is engaged thereby. When the current is turned on through the socket, a circuit will be completed through one of the filaments, thus producing an incandescent glow of light. It follows that by imparting turning movement to the disk 29 by the manipulation of the portion 33, the contact plate 28 may be engaged with the next adjacent contact 19 whereupon two of the filaments will become light, thus increasing the brilliancy of the light produced. Should it be desired to further increase the brilliancy of the light, the disk 29 may be further turned so that all three of the contact elements shown are engaged by the contact plate 28. The end walls of the slot 34 serve to limit the turning movement of the disk in opposite directions as the manipulating portion 33 engages the same.

Although I have explained the manner in which the brilliancy of the light produced by the lamp may be varied, it will be understood that one of the main objects is to selectively throw the various filaments into operation in the event that one or more of the filaments may become broken or burned out. Therefore, the feature is not limited to the variants of the light produced, but embodies a means whereby the light of an electric lamp may be increased by reason of the fact that the filaments may be brought into operation as needed.

While I have shown and described what I deem to be the most desirable embodiment of my invention, I wish it to be understood that various changes in construction may be resorted to if desired and I do not limit myself to the structural details herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

Having described the invention, what is claimed as new is:—

1. In an electric lamp, a body having a recess, relatively fixed contacts carried by the body and projecting into said recess, a rotatable disk in said recess and having a radial contact element provided with a circumferential outer portion for engaging said fixed contacts, said disk being formed with a depression receiving said contacts, a plug having an attaching portion closely embracing said disk and extending into said recess, and means securing the extended portion of said shell in said recess, said disk being engaged at one side by said plug.

2. In an electric lamp, a body having a recess, relatively fixed contacts carried by the body and projecting into said recess, a rotatable disk in said recess and having a radial contact element provided with a circumferential outer portion for engaging fixed contacts, a plug having an attaching shell closely embracing said disk and extending beyond the plug into said recess, means securing the extended portion of said shell in said recess, said disk being engaged at one side by said plug, a conductor wire extending through said plug and engaging said radial contact element and having a serpentine portion, said plug being provided with a socket freely receiving the serpentine portion of said conductor wire.

ARNOLD W. GENRICH.