

982,470.

Patented Jan. 24, 1911.

Fig. 1.

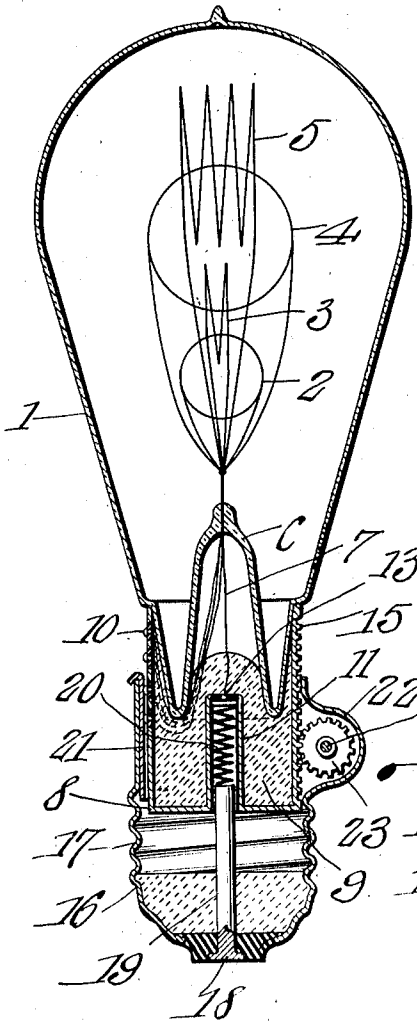


Fig. 2.

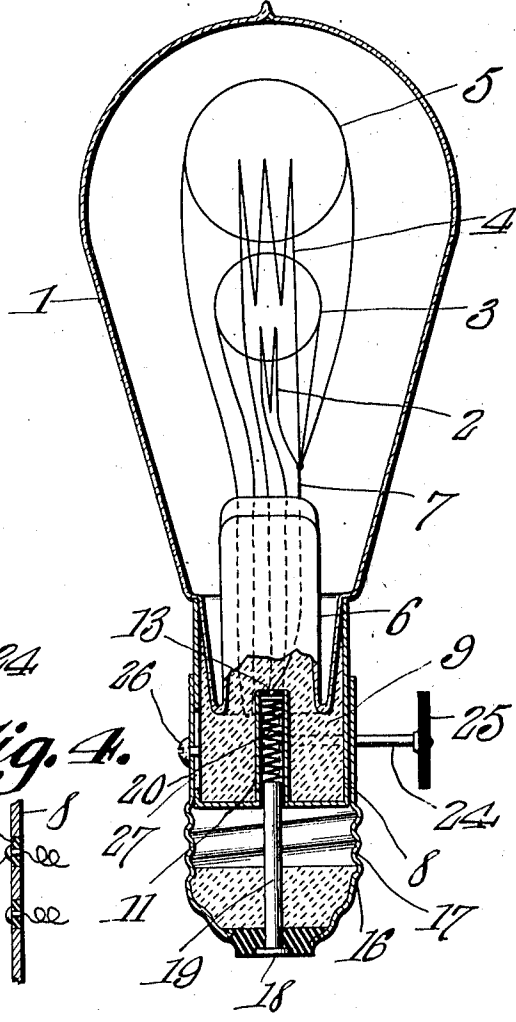


Fig. 4.

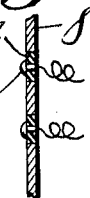
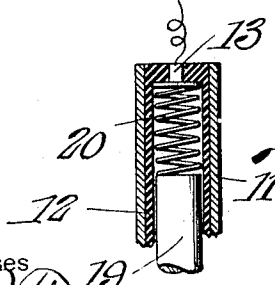


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES OSCAR CAMP, JR., OF JACKSONVILLE, ALABAMA.

ELECTRIC LAMP.

982,470.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed July 26, 1910. Serial No. 573,921.

To all whom it may concern:

Be it known that I, JAMES O. CAMP, JR., a citizen of the United States, residing at Jacksonville, in the county of Calhoun and State of Alabama, have invented a new and useful Electric Lamp, of which the following is a specification.

This invention has reference to improvements in electric lamps, more particularly to electric lamps of the incandescent type and its object is to provide a lamp which may be manipulated after the manner of an ordinary wick oil lamp to give light outputs of various intensities at the will of the operator, the bulb of the lamp containing a number of filaments of different candle power capacity, beginning with a low candle power and being capable of being coupled into the circuit progressively so that the increasing candle power of the lamp is due to the addition of filaments of individually lower candle power than the total output of the lamp.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification, in which drawings,

Figure 1 is a diametrical longitudinal section of an incandescent electric lamp constructed in accordance with the present invention. Fig. 2 is a similar section at right angles to that of Fig. 1. Fig. 3 is a detail section through the central circuit means. Fig. 4 is a detail section through a portion of the shell of the lamp base showing contact terminals.

Referring to the drawings there is shown an incandescent electric lamp bulb 1 which may be taken as indicative of any suitable type of incandescent lamp since the invention is not necessarily confined to the particular type shown.

In the example illustrated in the drawings there are four separate filaments 2, 3, 4, 5, respectively all supported in the usual pillar 6 at the base end of the bulb where these filaments are sealed in the usual manner. One side of each of the filaments has a common connection to a terminal filament or conductor 7.

The base end of the lamp is carried by a cylindrical shell 8 in which the lamp may be secured by the usual plaster-of-paris filling 9 or in any other suitable manner. This shell 8 carries at spaced intervals on one side circuit terminals 10 each of which is con-

nected to a respective filament 2, 3, 4, 5. The shell 8 has a central inset tubular portion 11 which in the particular structure shown is provided with an insulating lining 12 carrying at the inner end of the tube 11 a conducting block 13 to which is attached by soldering or otherwise the common conductor 7. The terminals of the filaments 2, 3, 4 and 5 remote from the common terminal 65 7 are carried through the member 6 and ultimately to the several contacts 10 which are carried by the cylinder 8 but insulated therefrom by suitable insulating material 14 as best shown in Fig. 4. Along one side of the cylinder 8 is a rack 15 for a purpose which will presently appear.

The lamp is provided with the usual screw base 16 shaped however to receive the cylindrical basic portion 8 of the lamp in a manner which permits the portion 8 to slide axially in the base 16, the latter being provided with exterior screw threads 17 adapting the base 16 to the usual lamp socket. The base 16 has the central terminal 18 common to ordinary Edison lamp bases and this terminal is formed on one end of a post 19 axial to the base and extending into the insulation within the tubular sleeve 11. Housed between the end of the post 19 85 where entering the tubular sleeve 11 and the contact 13 is a spring 20 serving as a conductor for coupling the terminal 18 to the terminal 13 and maintaining electric contact irrespective of the position of the lamp base 8 in the supplemental screw base 16. Along one side of the supplemental base 16 is a contact terminal 21 adapted to engage any one or all of the contacts 10, or these contacts may engage the inner wall of the supplemental base 16 directly, the purpose 95 being simply to establish contact between the supplemental base 16 and the terminals 10 in a manner to be hereinafter described. One side of the supplemental base 16 beyond the screw thread 17 is formed with an off-set 22 housing a pinion 23 on an arbor 24 terminating in the usual manipulating wheel 25 such as is commonly found in lamp burners. 105

The set screw 26 carried by an appropriate portion of the supplemental base 16 and extending into a slot 27 in a corresponding portion of the basic part 8 of the lamp permits axial relative movement of the supplemental base 16 and the basic portion 8 fast to the lamp bulb within the limits of the 110

length of the slot but prevents accidental separation of the parts.

The supplemental base 16 though shown as of the Edison type may of course be of any other of the known types of lamp bases and the base 16 is adapted to the usual socket in the usual way so that the terminals of the socket make contact with the body of the base 16 and the central insulated terminal 18.

The arbor 24 may be turned in a manner to carry the base portion 8 of the lamp outwardly with relation to the supplemental base 16 until all the terminals 10 are outside of and out of contact with the terminal member 21. Under these circumstances none of the filaments is in circuit with the power line coupled to the lamp socket and consequently none of the filaments will glow. Suppose now that it is desirable to have the lamp give forth a comparatively feeble light. Under these circumstances the arbor 24 is turned in a direction to cause the lamp base 8 to move into the supplemental base 16 until the first one of the contacts 10 is brought into engagement with the contact 21 when there is established a circuit from the supplemental base 16 to the first of the contacts 10, thence through a filament 2 and by way of the filament terminal 7 to the terminal 13 and by the spring 20 to the terminal post 19 and ultimately to the terminal 18 in contact with the like terminal in the lamp socket. Now current will flow to the filament 2 and a light such as this filament is designed to give will be produced by said filament. Ordinarily this filament will be designed to give a light of say two candle power. By further turning the arbor 24 the second one of the contacts 10 is brought into engagement with the contact 21 and the filament 3 will glow. Assuming this filament to give a candle power of six then the lamp will produce a light equal to eight candles since the filaments 2 and 3 are under these circumstances both energized. Further movement of the lamp base 8 into the supplemental base 16 brings the filaments 4 and 5 in order into circuit, the filament 4, being, say, of eight candle power so that the combined candle power of the three filaments is sixteen candles. The filament 5 may be of sixteen candle power so that the entire output of the lamp in light is thirty two candles. With the particular arrangement shown the lamp will give out light in the order of two, eight, sixteen and thirty two candles at the will of the operator. If so

great a variety of degrees of light is not desired less filaments may be used and if a greater variety is desired more filaments may be used and, if wanted, a greater candle power provided.

By means of the arbor 24 and the telescoping arrangement of the lamp base into the supplemental exterior base the manipulation of the lamp is very similar to the manipulation of an ordinary kerosene lamp whereby the light is made bright or dim by turning up or down a wick. With the present invention the light is "turned up," or "turned down" through several steps like an ordinary kerosene lamp. Should one filament or more than one filament break the lamp is still in useful condition since the filaments are in multiple when in service and all the benefits of intense or dim light are retained with consequent economy in the use of current.

What is claimed is:—

1. An incandescent electric lamp provided with a plurality of filaments of different candle powers, a base for the lamp having separate circuit terminals for one end of each filament and a common terminal for the other ends of the filaments, a supplemental base in surrounding relation to the first named base and in which the first named base is capable of telescoping, said supplemental base having its exterior corresponding to a standard base and adapted to a standard lamp socket, and means for causing a relative axial movement of one base with respect to the other.

2. An incandescent electric lamp provided with a plurality of filaments of different candle powers, a base for the lamp having separate circuit terminals for one end of each filament and common terminal for the other ends of the filaments, another base into which the first named base is capable of telescoping movement, the second base being adapted to a lamp socket, and a rack and pinion actuating mechanism for imparting relative movement between the two bases in the direction of the longitudinal axes thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES OSCAR CAMP, Jr.

Witnesses:

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