

A. C. STANBROUGH & E. JOHNSON.
ELECTRIC LAMP CONTROLLER.
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1,043,268.

Patented Nov. 5, 1912.

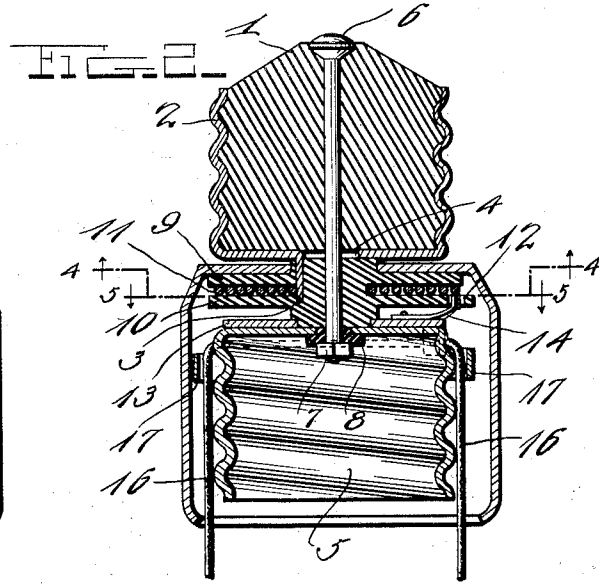
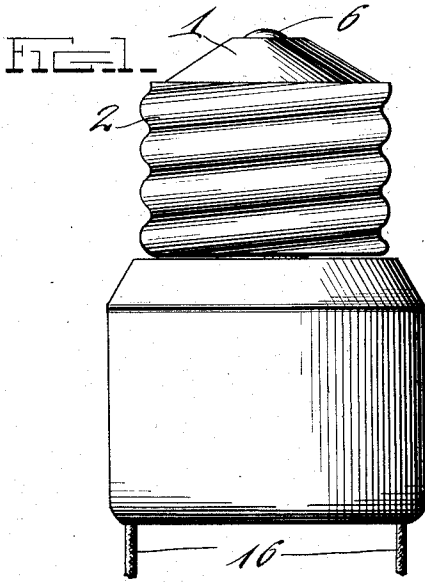


FIG. 3.

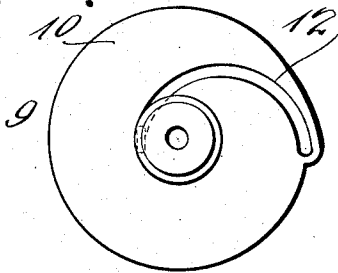


FIG. 5.

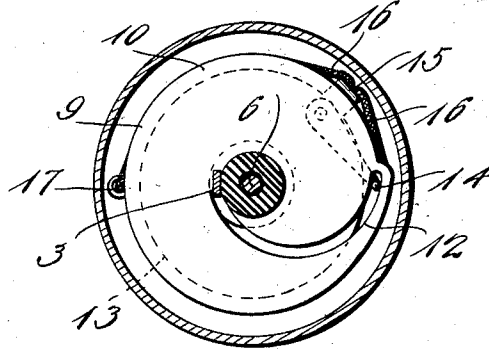
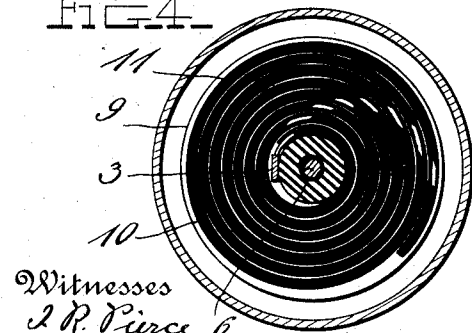
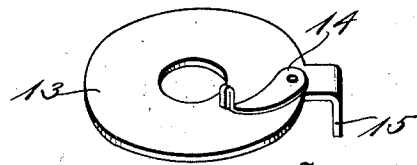


FIG. 4.



Witnesses
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FIG. 6.



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UNITED STATES PATENT OFFICE.

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ELECTRIC-LAMP CONTROLLER.

1,043,268.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, AMOS C. STANBROUGH and EMERY JOHNSON, citizens of the United States, residing at Newberg, in the county of Yamhill and State of Oregon, have invented certain new and useful Improvements in Electric-Lamp Controllers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in controlling or regulating devices for electric lamps.

One object of the invention is to provide a controlling device of this character by means of which the power of an incandescent electric lamp may be regulated to increase or decrease the light, thus saving the current as well as producing the desired amount of light.

Another object is to provide a controlling device for electric lamps which will be simple, strong, durable and inexpensive in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawing; Figure 1 is a side view of an electric lamp plug and socket embodying the invention; Fig. 2 is a central vertical section thereof; Fig. 3 is a bottom plan view of the support which carries the resistance coil; Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 2; Fig. 5 is a similar view taken on the line 5—5 of Fig. 2; Fig. 6 is a perspective view of the movable contact or switch member of the device.

In the embodiment of the invention as illustrated in the accompanying drawings, 1 denotes a plug of porcelain or other insulating material. The plug 1 has a tapered upper end and is inclosed in a threaded casing of brass or other suitable current conducting metal. The casing 2 terminates short of the upper end of the porcelain plug 1 and in the center of the bottom of the casing is cut a tongue 3 which is preferably of rectangular or oblong shape and which is bent downwardly below the bottom of the

casing, thus forming in said bottom a rectangular shaped passage 4.

Connected to and spaced from the plug 1 is a threaded socket 5 which is adapted to receive the lamp and which is secured to the plug 1 by a combined contact and socket connecting bolt 6 which is passed through the center of the plug 1 and through the opening 4 in the bottom of the casing of the plug. The head of the bolt 6 is countersunk in the upper end of the plug 1, and on the opposite end of the bolt is a nut 7 whereby the socket 5 is fastened to the bolt. The nut 7 and adjacent end of the bolt are insulated from socket 5 by an insulating washer 8 or in any other suitable manner and form one terminal of the electric circuit and a contact for the center or top of the lamp.

Strung on the bolt 6 and firmly clamped thereto between the inner ends of the plug and casing 2 and the inner end of the socket 5 is a coil holding spool 9 constructed of porcelain or other suitable insulated or non-conducting material. On the spool and between the heads or flanges 10 thereof is wound a resistance coil 11, one end of which is in electrical connection with the tongue 3 of the plug casing 2, while the other end of the coil is free. The coil is enameled or is otherwise insulated as shown. In the flange or head 10 of the spool adjacent to the socket 5 is a curved slot 12 above and in line with which the insulation is removed from the coil 11.

Revolubly mounted on the cylindrical portion of the spool 9 and in contact with the inner end of the socket 5 is a circuit switch plate or disk 13 which is in electric contact with the socket 5 and which has pivotally connected thereto on the side thereof adjacent to the spool a brush or spring contact finger 14, the upper end of which is slightly curved and is adapted to work in the slot 12 of the adjacent flange of the spool and to engage the tongue 3 of the casing 2 and to be brought into successive engagement or contact with the convolutions of the coil 11 when the plate or disk 13 is turned. On one edge of the plate or disk 13 is a depending cord attaching hook or clip 15 to which is secured a switch operating cord 16, the ends of which are engaged with guide loops 17 on the upper portion of the socket 5 and which extend downwardly to a suitable distance below the socket. By thus connecting and arranging the switch op-

erating cord 16 the plate or disk 13 may be turned in one direction or the other to shift the switch finger or brush 14 around in the slot 12 thereby bringing the end of the switch into engagement with the different convolutions of the resistance coil 11.

By constructing and arranging the switch operating disk and switch in the manner described, it will be seen that the current, after passing through the screw 6, is carried through the lamp, and then through socket 5, switch plate 13, switch 14, tongue 3 or resistance coil 11 and the casing 2 of the plug 1. When the full power of the current is turned into the lamp the brush or switch finger 14 will be in direct contact with the tongue 3 and in order to reduce the power or current and thus decrease or diminish the light the switch plate or disk 13 is turned by its operating cord to disconnect the brush or switch finger 14 from the tongue 3 and to move the end of the finger across the convolutions of the resistance coil until the desired resistance is obtained. In thus moving the switch finger it will be understood that as the same is moved away from the inner end of the coil and the contact tongue 3, the current will be required to pass through a greater number of convolutions of the coil, thus increasing the resistance and decreasing the power of the current to an extent. In like manner the current will be increased by moving the switch finger in the opposite direction or toward the contact tongue thereby cutting out more or less of the coil and thus decreasing the resistance.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described our invention, what we claim is:

1. In a controlling device for electric lamps, the combination with the plug and its casing, the lamp socket, a bolt connecting the latter with the plug, and an insulating spool mounted on the bolt between the casing and socket and having a spiral slot in its lower head; of a resistance coil wound on said spool and insulated throughout excepting at a point above said slot, one end of the coil being connected with the lamp circuit, a disk revolving in contact with the socket, a contact finger projecting upward from the disk through said slot and into contact with the convolutions of said resistance coil, and means for turning the disk.

2. In a controlling device for electric lamps, the combination with the plug and

its casing, the lamp socket, a bolt connecting the latter with the plug, and an insulating spool mounted on the bolt between the casing and socket and having a spiral slot in its lower head; of a resistance coil wound on said spool and insulated throughout excepting at a point above said slot, one end of the coil being connected with the lamp circuit, a disk revolving in contact with the socket, a contact finger projecting upward from the disk through said slot and into contact with the convolutions of said resistance coil, a clip secured to the disk having and extending out over said socket, cords attached to said clip, and guides through which said cords are extended.

3. In a controlling device for electric lamps, a non-conducting plug, having a casing of conducting material, a lamp socket, a bolt passing through said plug and having its opposite end insulated from said socket, a spool of non-conducting material on said bolt between said socket and plug, a resistance coil wound on said spool, a switch operating disk revolvably mounted on the spool and having an electrical connection with said socket, and a contact finger carried by said disk and adapted to be brought into successive engagement with the convolutions of said resistance coil, whereby the resistance of the current to the lamp socket is increased or diminished.

4. In a controlling device for electric lamps, a non-conducting plug having a casing of conducting material, a lamp socket, a bolt passing through said plug and having an insulated connection with said socket, a spool of non-conducting material on the bolt between said plug and socket, said spool having in one end a curved slot, an insulated resistance coil wound on said spool and having the insulation thereof removed opposite the slot in the end of the spool whereby the convolutions of the coil are exposed at this point, means to connect the inner end of said coil with the casing, a switch operating disk revolvably mounted on said spool and having an electrical engagement with said socket, a contact finger carried by said disk and having its free end engaged with the slot in the end of the spool and in position to be brought into electrical contact with the convolutions of the coil when said disk is turned, and means whereby said disk is operated.

5. In a controlling device for electric lamps, a non-conducting plug having a casing of conducting material, a tongue struck and bent from the bottom of said casing to form an opening therein, a bolt passing through said plug and opening, a lamp socket engaged with and insulated from said bolt, a spool of non-conducting material on the bolt between said socket and the casing of the plug, said spool having in one end a

curved slot into which the tongue of said casing projects, a disk revolubly mounted on said spool and having an electrical connection with said socket, a contact finger pivotally mounted on said disk and having its free end engaged with the slot in said spool, an insulated resistance coil wound on said spool and having its inner end connected with said tongue, said coil having the insulation removed from its convolutions in line with the slot in the spool whereby the convolutions are exposed and are adapted to be engaged by said contact finger, a clip

on said disk, and operating cords connected with said clip whereby the disk may be turned in one direction or the other to shift the contact finger. 15

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

AMOS C. STANBROUGH.
EMERY JOHNSON.

Witnesses:

JOS. BIXBY,
LA FAYETTE F. HALL.