Dec. 4, 1928. 1,694,330

O. LUNDBERG

RESISTANCE SWITCH

Filed Dec. 15, 1927

Fig. 2.

Fig. 1.

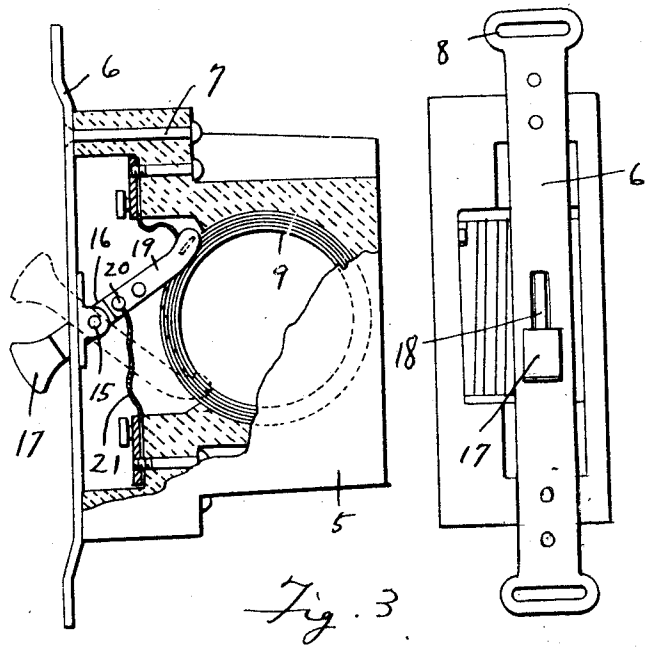


Fig. 4.

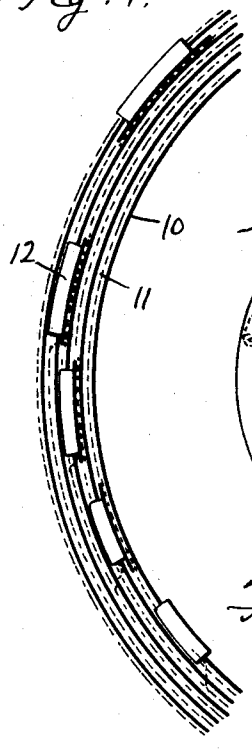


Fig. 3

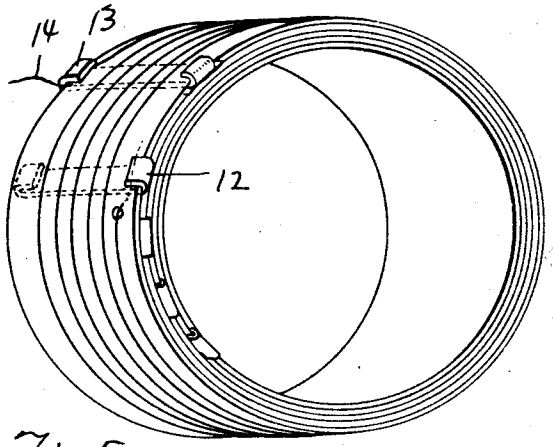
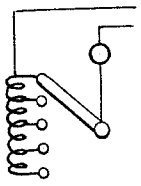


Fig. 5.



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UNITED STATES PATENT OFFICE.

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RESISTANCE SWITCH.

Application filed December 15, 1927. Serial No. 240,165

The present invention relates to electrical apparatus, and more particularly to wall switches for buildings and has for its object to provide a novel switch embodying the rear stacked construction and adapted to be used in series with the electric light of the building or other place where desired in order to control the power of the current transmitted to the light whereby to dim the same. Devices of this character are admirably adapted for use in the rooms and corridors of hospitals, office buildings or stores enabling a single wall switch to be used in regulating the power of the light so that when desired the light may be dimmed a desired extent through the proper manipulation of the switch.

Another object of the invention is to provide a switch of this character by means of which the degree of illumination may be regulated step by step depending upon the brilliance of the illumination desired.

A still further object is to provide a wall switch embodying the foregoing features of a simple and practical construction, efficient and reliable in performance, neat and attractive in appearance, inexpensive to manufacture and otherwise well adapted for the purpose for which the same is intended.

Other objects and advantages reside in the special construction and combination of the various elements comprising the invention, reference being had to the accompanying drawings forming a part hereof, wherein:

Figure 1 is a side elevational view of the register box with parts broken away disclosing the manner of arranging the resistance unit therein,

Figure 2 is a front elevational view thereof,

Figure 3 is a perspective view of the mounting for the resistance unit,

Figure 4 is a fragmentary end view of the resistance unit mounting showing the relative position of the contact for each unit, and

Figure 5 is a diagrammatic view of the electric circuit showing the manner in which the switch is adapted to control the same.

Referring to the drawing in detail, the invention comprises a switch box indicated at 5 which may be of any desired construction adapted to be recessed in the wall of a building and preferably constructed of insulation material. The front of the box is formed with an opening upon which a cover plate 6 is attached by means of bolts 7 or the like, said cover plate having attaching slots 8 formed at each end thereof by means of which the box may be secured in position to the wall.

The interior of the box provides a mounting for a resistance unit assembly indicated at 9, which as shown in Figures 1 and 3 of the drawings is of a cylindrical formation and constructed of a series of laminated sections including alternately arranged mica insulation sections 10 and a winding of resistance wire 11, each of said windings being interposed between a pair of the insulation sections 10. Each of the windings are connected in series with each other and each winding is attached to a separate contact member indicated at 12, comprising a width of material interposed between the adjacent laminations of insulation material between which the respective windings are disposed, with one end of the material extending outwardly of the end of the assembly and bent over the edge of the adjacent insulation section and the end of the wire forming the related winding in a manner to clinch the end of the wire under the bent end of the contact member. As more clearly illustrated in Figure 4 of the drawing the contact members 12 are all disposed adjacent one side of the assembly in spaced relation with respect to each other to the end or outermost contact member indicated at 13 is attached the feed wire 14 for supplying current to the various resistance units carried by the mounting. Upon the inner face of the cover plate 18 is arranged a pivot pin 15 on which is pivotally mounted a switch arm 16 having a handle 17 formed at one end thereof and extending through a slotted opening 18 formed in the cover plate, said handle end of the arm preferably being constructed of insulation material. The inner end 19 of the arm is formed of dielectric material and adapted for selective engagement with either of the contact members 12. The inner end of the arm carries a binding post 20 to which a wire 21 may be attached for communication within the electric light bulb or other electrical device desired to be energized.

It will be apparent that by moving the switch arm into a position for bringing an increased number of the resistance units into the circuit, the current may be reduced and the brilliance of the lights connected with the switch controlled in a desired manner.

It is obvious that the invention is suscep-

tible to various changes and modifications, without departing from the spirit or scope of the invention or sacrificing any of its advantages, and I accordingly claim all such forms of the device to which I am entitled.

Having thus described my invention, what I claim as new is:

1. In a resistance switch of the class described, a switch box, a resistance assembly mounted therein comprising a plurality of insulated resistance units connected in series with each other and arranged in cylindrical formation about a common axis, contact members for each of said units arranged at one side of the mounting in spaced relation with each other, one of said units being connected with a feed wire an attaching plate for the box and a switch arm pivotally mounted on said plate having a circuit wire connecting therewith for communication with an electrical appliance and adapted for selective engagement with said contact.

2. In a resistance switch of the class described a switch box having an attaching plate attached at one side thereof, an assembly mounted within the box composed of a plurality of resistance units wound in circular formation about a common axis, an insulated section interposed between each of said units, said units being connected in series with each other, a contact member for each of said units disposed in spaced relation with the said insulation section and having one end extending outwardly of the mounting with the ends thereof formed with a return bend and disposed in clinching engagement with its associated unit, one of said contact being adapted for connection with an electric feed wire and a switch arm pivotally mounted on said attaching plate with a handle formed at one end and extending outwardly therefrom and with its inner end arranged for selective engagement with said contact and said inner end of the arm having a circuit wire connected thereto.

In testimony whereof I affix my signature.

OSCAR LUNDBERG.