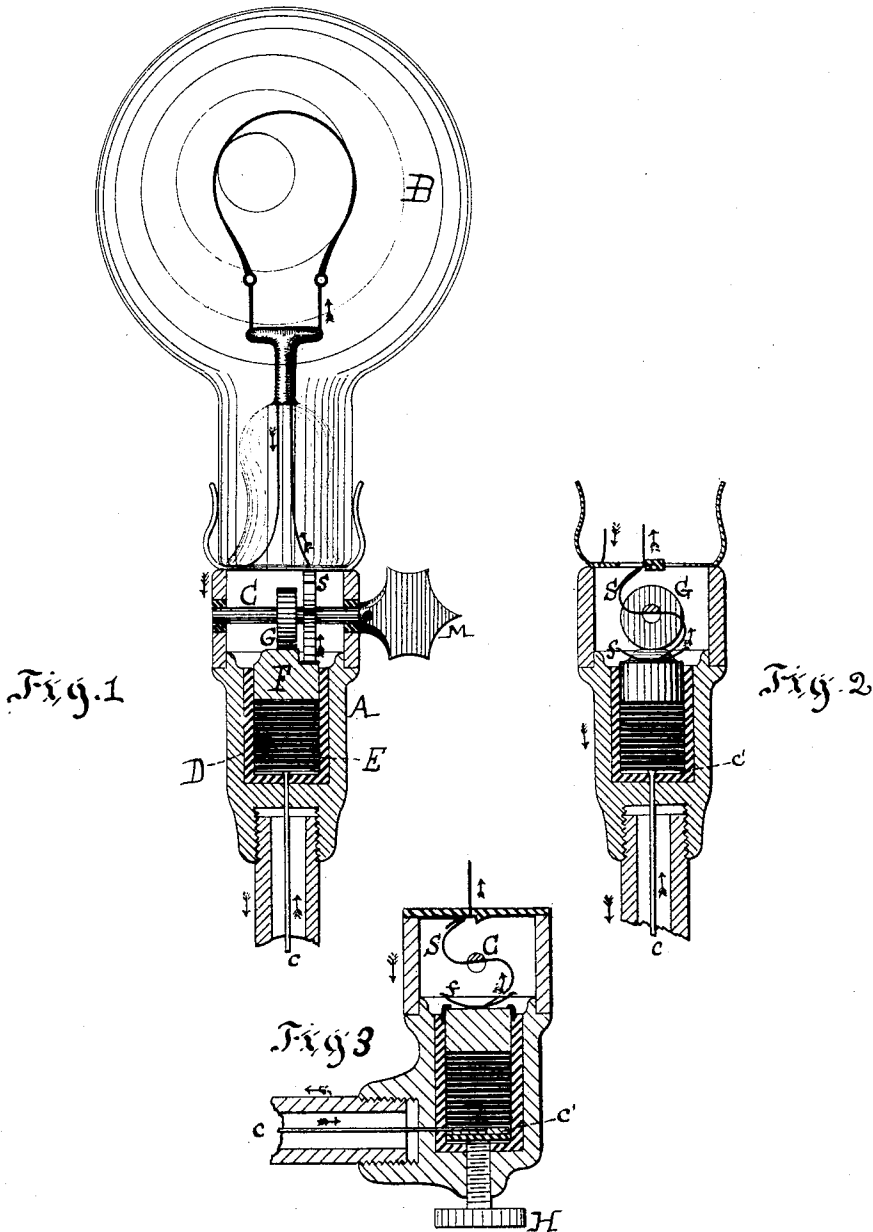


(No Model.)

W. STANLEY, Jr.
CIRCUIT CLOSER FOR INCANDESCENT LAMPS.

No. 244,331.

Patented July 12, 1881.



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CIRCUIT-CLOSER FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 244,331, dated July 12, 1881.

Application filed February 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STANLEY, JR., of the city of Englewood, county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Switches or Circuit-Closers for Electrical Incandescent Lamps, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention depends upon the variations in resistance to the passage of an electric current of carbon when subjected to different degrees of pressure; and it consists in devices for utilizing this property of variable resistance in a system of incandescent lighting for regulating the intensity of the light of the individual lamps, or for adjusting the resistance of the branch circuits in which the lamps are included.

In the drawings hereto annexed, Figure 1 is a view, partly in section, of a lamp and variable-resistance switch combined; Fig. 2, a section taken at right angles to that of Fig. 1 through the base and resistance-switch, and Fig. 3 is a modified form of switch with an adjustable resistance.

A is a hollow base of metal, containing the circuit-closing mechanism and the carbon resistance or rheostat. Through the sides of the base A a shaft, C, turned by a thumb-piece, M, is journaled in insulated bearings, and carries the usual contact-springs, S, for making and breaking the circuit through a lamp, B, fitting in the socket on the base. In addition to the contact-springs S, I fix eccentrically to the shaft C a disk, G.

Immediately below the circuit-closer in the hollow metal base is a resistance device, consisting of a number of carbon plates or disks, E, inclosed in an insulating-jacket, D, and connected to the insulated wire *e*, passing through the bottom of jacket D by a small metal plate, *e'*. Over the carbon disks is fitted a metal plug, F, provided with a curved contact-strip, *f*, and a bearing-surface for the eccentric G. The eccentric G and spring-strip S are fixed to the shaft in such relation to one another that when the shaft is turned to bring the spring in contact with strip *f*, the eccentric will exert a pressure upon the plug F, and this may be increased or diminished by turning the shaft slightly one way or the other. By thus varying the pressure on the carbon through which the current passes on its way to the lamp any

desired amount of light may be obtained to correspond with the variations of resistance in the lamp-circuit.

Fig. 3 shows a modification of the device, in which the pressure on the carbon is regulated by means independent of the rotary shaft of the switch. In this case an ordinary set-screw, H, passing up through the bottom of the insulating-jacket, is employed to impart the requisite pressure, and the plug F is prevented from moving up by being secured to jacket D. In the devices illustrated the path of the circuit to and from the lamp is indicated by arrows. The metallic base is utilized to return the current, and for this reason the carbon resistance is inclosed in an insulating-jacket. This arrangement is not, however, essential, and in fact the invention is capable of many modifications, all involving the same general idea.

It may be stated that this device is peculiarly adapted to those systems in which the lamps are arranged in cross-circuits between two main conductors, the current in which is regulated to correspond to the number of lamps in circuit, for it is obvious that were it used with several lamps in series any change in one would affect all the others.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in the hollow base of an incandescent electric lamp, of a contact-making switch or key, a compressible carbon resistance in circuit therewith, and mechanism for subjecting the carbon to varying pressure, as and for the purpose specified.

2. The combination, in the circuit, of an electric lamp, of one or more carbon disks or plates, and a switch-key provided with means for making and breaking the circuit, and means for exerting an adjustable pressure upon the carbon, substantially as shown.

3. A variable-resistance switch for incandescent lamps, consisting of the rotary shaft C, carrying contact-strips S and eccentric G, in combination with plug F and carbon resistance-disks E.

In testimony whereof I have hereunto set my hand this 17th day of February, 1881.

WILLIAM STANLEY, Jr.

Witnesses:

HENRY HINE,

LEONARD E. CURTIS.