No. 686,910. Patented Nov. 19, 1901.

F. C. SCHOFIELD.

REGULATOR FOR INCANDESCENT LAMPS.

(Application filed Mar. 9, 1901.)

(No Model.)

Fig. 1.

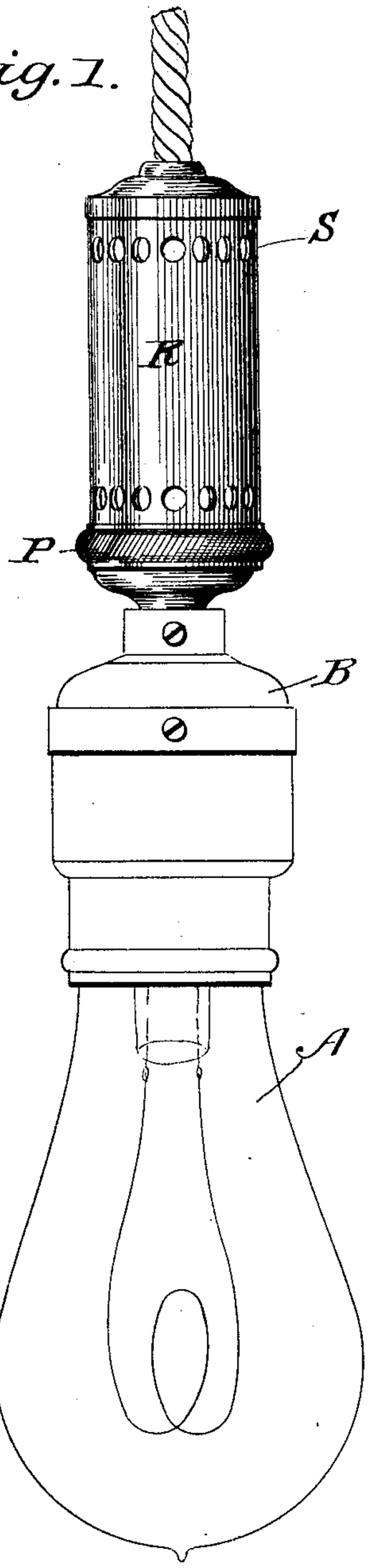


Fig. 2.

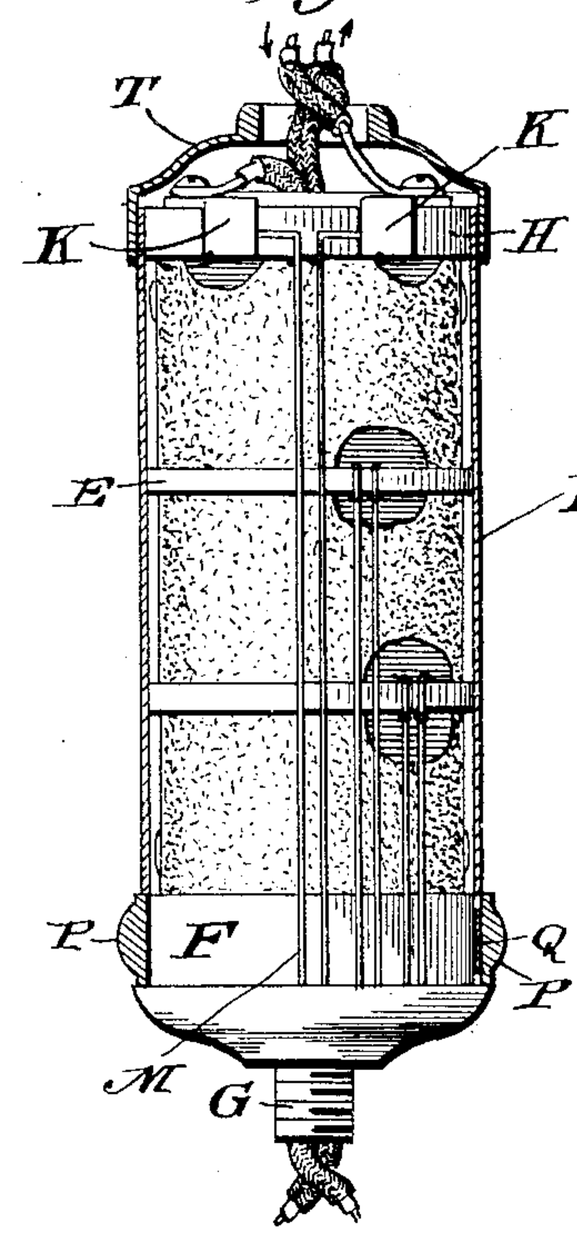


Fig. 3.

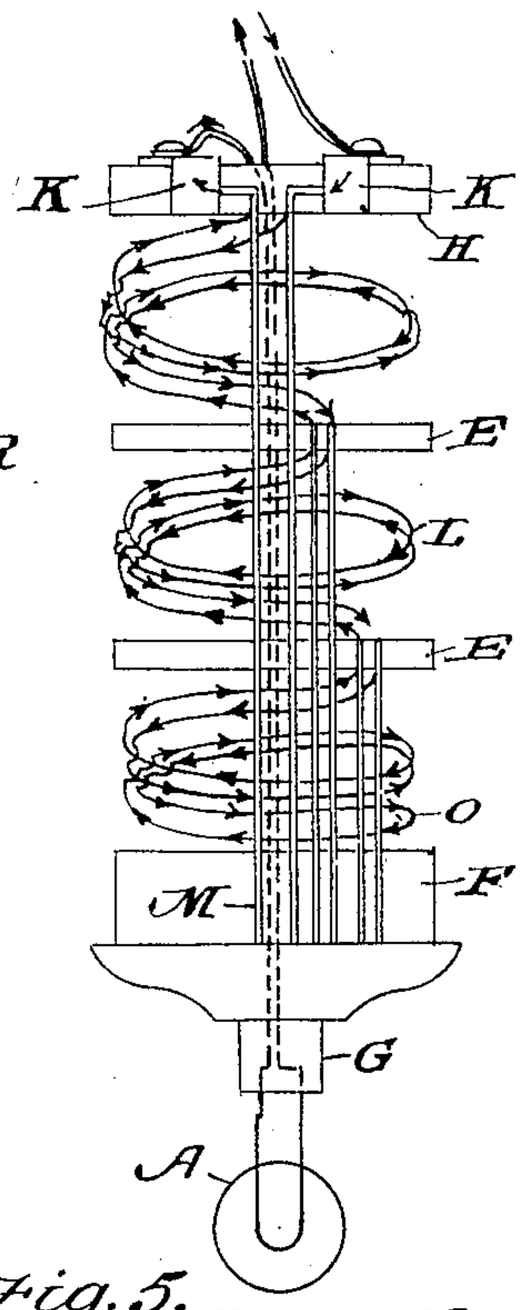


Fig. 4.

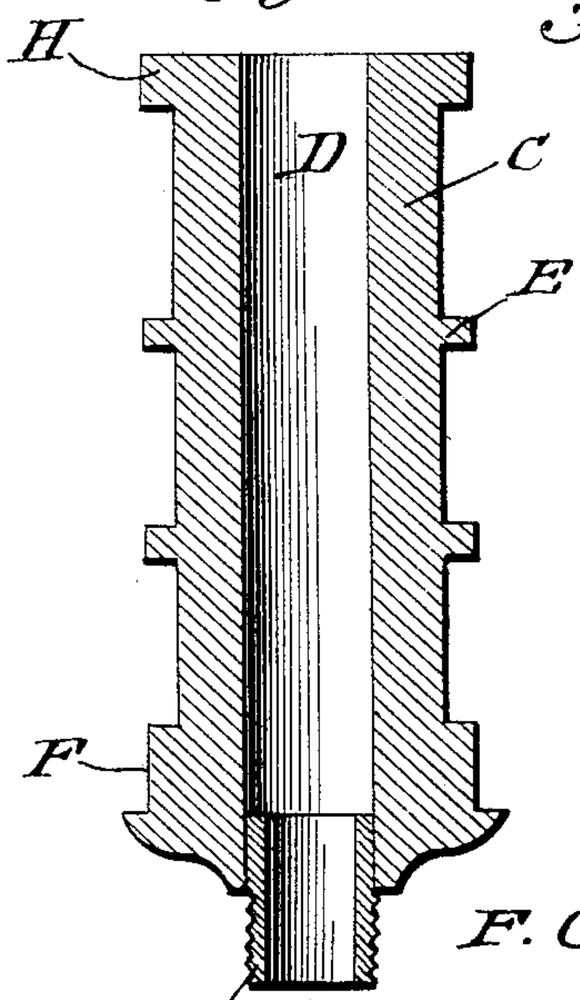


Fig. 5.

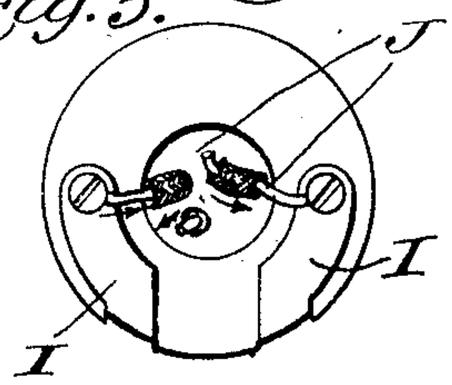
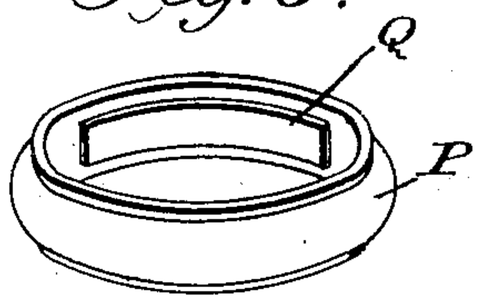


Fig. 6.



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REGULATOR FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 686,910, dated November 19, 1901.

Application filed March 9, 1901. Serial No. 50,468. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. SCHOFIELD, a citizen of the United States, residing at Lonaconing, in the county of Allegheny and State of Maryland, have invented a new and useful Regulator for Incandescent Lamps, of which the following is a specification.

This invention relates to improvements in regulators for incandescent electric lamps; and the object is to provide a simple construction for readily and conveniently regulating the intensity of the electric current for the purpose of increasing or decreasing the illuminating power of the lamp.

The invention contemplates the use of a resistance in connection with an incandescent lamp with means for including more or less of said resistance in the circuit, according to whether it is desired to increase or decrease the intensity of the light.

With the above object in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is an elevation of an incandescent lamp provided with my improved regulator; Fig. 2, a longitudinal view, partly in section, through the regulator; Fig. 3, a diagrammatic view showing the manner of coiling the resistance about the body; Fig. 4, a longitudinal sectional view of the body with the casing thereof and the wires removed; Fig. 5, a plan view of the outer end of the body, showing the terminals positioned thereon; and Fig. 6, a perspective view of the circuit-closing ring.

Referring now more particularly to the accompanying drawings, A designates an incandescent electric lamp provided with the usual socket B, the same being of the ordinary construction and forming no part of my present invention.

My improved regulator consists of a body C, having a central longitudinally-extending bore D and formed upon its outer surface with annular flanges or ribs E, which divide it into a number of spaces or wire-receiving sections. The inner end of the body is formed with a shoulder F, upon which the circuit-making ring slides or rotates, as will be more fully described hereinafter. Said body is formed of some non-conductive material and at its inner end carries a screw-threaded nipple G, by means of which it is attached to the socket B of the incandescent lamp. The body is formed at its outer end with an annular flange H, and secured upon the outer side of said outer end are the plates I, which form terminals for the ends of the line-wires J. These terminals have their ends bent downwardly into grooves or recesses formed in the edge of flange H, as illustrated at K in Figs. 2 and 3.

L designates the resistance-wire, which is wound about the body C in the sections formed thereon in the manner illustrated in Fig. 3. Said resistance-wire is started from one of the terminals I and wound in the first section or space upon the body one or more layers deep. It then crosses the separating-rib E to the next space, and so on until the innermost space is reached, when it is wound in a reverse direction back to the other terminal I, to which it is connected. Wherever the wire of this resistance crosses one of the ribs E in both its winding from one of the terminals and its winding to the other terminal, it is soldered or otherwise secured to a wire M. Thus the wire in each section or space on the body C has two wires M connected therewith and extending downwardly to the bottom of the body, the first pair of wires extending directly from the terminals, so as to cut out all of the resistance when the circuit is closed between said wires by a circuit-closer presently to be described.

Rotatable upon shoulder F is a ring P, having upon its inner side a contact-spring Q, which as the ring is rotated contacts with the wires M, closing the circuit between any two thereof and including as much of the resistance as desired or cutting the same entirely out, thereby regulating the intensity of the light.

The body is provided with a casing R, having formed therein vent-holes S. At the up-

per end of the casing is a cap T, having an opening for the line-wires to extend therethrough and when in position upon the casing entirely covering the terminals I.

One of the wires from the source of electricity is connected with one of the lamp-wires, as shown in Fig. 3, while the other is connected with one of the terminals I. The other terminal I is connected with the other wire of the lamp, as clearly illustrated in said figure.

From the above description it will be seen that I have provided a very simple construction for regulating the intensity of electric incandescent lamps by including more or less of the resistance in the electric circuit according as it is desired to increase or decrease the power of the lamp, the regulator being in series with the lamp.

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

1. A regulator for incandescent electric lamps comprising a body portion provided with circumferential ribs, resistance-coils wound around the body and lying in the spaces between said ribs, wires leading to the coils, a ring rotatable on the body, the latter having an annular shoulder to support the ring and the ring having a circuit-closer on its inner face, and a casing surrounding the resistance-coils, substantially as described.

2. A regulator for incandescent electric lamps comprising a body portion provided with circumferential ribs, resistance-coils wound around the body and lying in the spaces between said ribs, wires leading to the coils, a ring rotatable on the body, the latter having an annular shoulder to support the ring and the ring having a circuit-closer on its inner face, a perforated casing, the lower edge of which is contiguous to the upper edge of the ring, and a cap for said casing having a hole for the leading-in wires, substantially as described.

FREDERICK C. SCHOFIELD.

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