F. E. SEELEY.

ELECTRIC LAMP SOCKET.

APPLICATION FILED OCT. 14, 1907.

957,719.

Patented May 10, 1910.

Fig. 1.

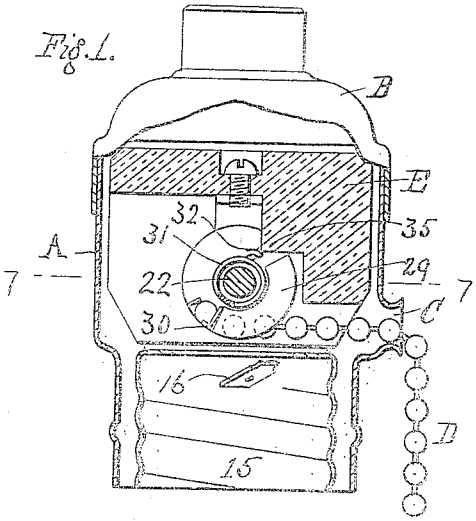


Fig. 2.

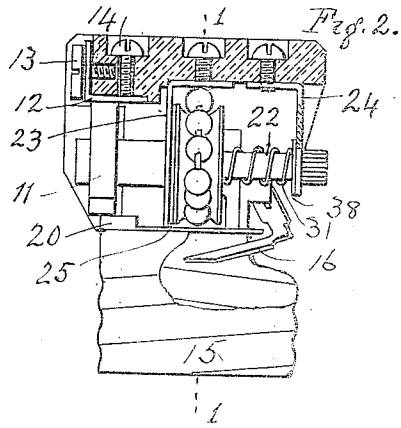


Fig. 4.

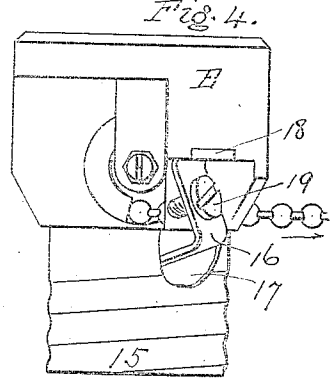


Fig. 3.

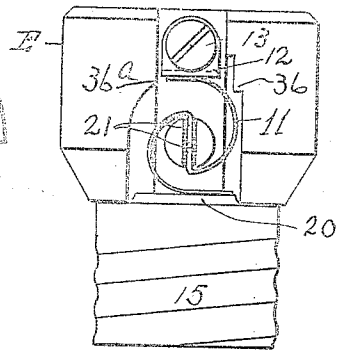
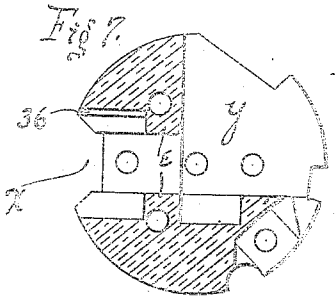


Fig. 7.



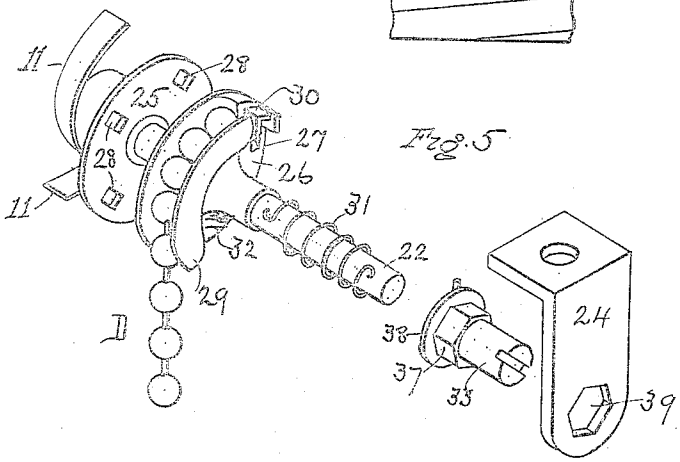
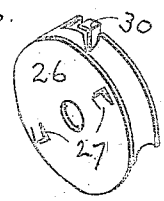


Fig. 5

Fig. 6.



WITNESSES:

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INVENTOR

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his ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK E. SEELEY, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELECTRIC-LAMP SOCKET.

957,719. Specification of Letters Patent. Patented May 10, 1910.

Application filed October 14, 1907. Serial No. 397,297.

To all whom it may concern:

Be it known that I, FRANK E. SEELEY, a citizen of the United States of America, residing in the city of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Electric-Lamp Sockets, of which the following is a specification.

My invention relates more particularly to that class of electric lamp sockets which are commonly known as "pull sockets" in which the lamp circuit is made and broken by a rotating contact piece actuated by a cord or chain instead of by the usual key.

The main object of my invention is to provide an efficient and economically constructed improved device of the character mentioned.

In the accompanying drawings: Figure 1 is a vertical section of the device on the line 1—1, Fig. 2; Fig. 2 is a view partly in section at right angles to Fig. 1; Fig. 3 is a side elevation showng the rotary contact; Fig. 4 is a side elevation of the opposite side of the socket; Fig. 5 is a perspective of the main spindle with the various parts displaced and enlarged for the sake of illustration, and Fig. 6 is a perspective of the pull wheel showing the projecting angled catches; Fig. 7 is an inverted horizontal section through the porcelain base alone, on the line 7—7, Fig. 1.

The device is shown incased as usual in a metallic shell A and cap B, the former being provided however with a lipped aperture C instead of the usual key slot, for the passage of the operating chain D.

As will be noted from Figs. 1 and 2, I mount my device upon a single insulating block E thus obviating the use of two disks found in the sockets of this character now generally upon the market. Two recesses *x* and *y* (Fig. 7) are formed on opposite sides of the base separated by semi-partition *e*. In the smaller recess *x* and at the base of the recess in which I locate the rotary switch 11, a terminal plate 12, with binding screw 13, is secured by means of a screw 14 passing through the base of the block. Between this terminal and the usual shell terminal 15 for the lamp, I locate the rotary switch 11. The other terminal 16 for the lamp is led in through an aperture 17 in the shell in the customary manner from the plate 18 on the opposite side of the block from plate 12 and provided with a binding screw 19.

The switch 11 comprises a spring conducting plate of S form mounted between insulating leaves 21 in the split end of the spindle 22 which may be conveniently enlarged as shown in Fig. 2 for this purpose. By the revolution of the switch so that one arm of the S is in contact with the base of the shell 15 and the other is in contact with the terminal plate 12, the lamp circuit is completed. The bottom of the shell 15 is preferably stamped so that a portion 20 projects into the recess in the insulating base in which the switch is located. This not only facilitates the proper location of the shell in assembling the parts, but also insures a cleaner break as well as closer contact between the spring switch arm and the shell and thus establishes a perfect circuit for the lamp.

The mechanism by which I operate the switch is located in recess *y* and is clearly shown in Fig. 5. Upon the switch spindle which is supported by bearings in the standards 23 and 24 secured to the base I mount rigidly a disk 25 provided with four apertures 28, 90 degrees distant from one another and equidistant from the axis of the spindle. Adjacent and in frictional contact with this disk I mount freely on the spindle a second disk 26 provided with angled catches 27 adapted to engage in the apertures 28 in the disk 25, and provided with a peripheral collar 29 extending part way around its circumference and carrying the actuating chain D which is secured to the disk 26 at 30. The latter disk is also subjected to the torsional strain of a spring 31 one end of which is secured thereto at 32, and the other end to an adjusting device 33, while the rotation of the disk is limited to an angle of approximately 90 degrees by suitable stops, *e. g.* the shoulder 35, against which one end or the other of the collar 29 impinges. It is thus apparent that upon the rotation of the disk 26 by the chain 30, the angled catches 27 engaging in the holes 28, in the disk 25, rotate the latter through an angle of 90 degrees and thus correspondingly rotate the switch 11 either into or out of contact with the terminal plate 12 and the shell 15 and thus makes or breaks the lamp circuit.

As the disk 26 is returned to its original

position under the influence of the spring 31, its frictional contact with disk 25 tends to rotate the latter also, and thus reëstablish the circuit just broken. This is prevented by providing a slight jog 36 in the side of the recess in which the switch is located, adapted to receive an end of the switch arm and oppose its return rotation. A similar opposition is afforded by the side 36ª of the recess in which the plate 12 is sunk, when the switch is in position to complete the lamp circuit. Thus in either position of the switch the spindle is held against a return revolution.

In connection with the spring 31, I provide an adjusting device 33 which comprises a sleeve bearing for the spindle 22, having an angled portion 37 to correspond to the angled hole 39 in the standard 24 in which it is supported, and a shoulder 38 to prevent said sleeve from being pushed through the hole 39 by the spring. To tension the spring the adjusting device is pushed in until the angled part 37 is clear of the hole 39. The sleeve may then be freely rotated. After the desired tension for the spring has been attained, the sleeve is drawn out or forced out by the spring until the part 37 engages in the hole 39 and is thereby held against rotation, while the spindle 22 is free to rotate in the sleeve as may be necessary for the operation of the switch.

The construction may be varied in detail from that illustrated and described, without avoiding my invention.

I claim as my invention:

1. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber and a contact member on the switch spindle adapted to establish the circuit between said circuit terminal and a lamp terminal.

2. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber and a rotary switch member in said chamber having spring arms bearing against the sides of said chamber, the latter being offset to act as stops against which said arms impinge to prevent the rotation of the spindle in one direction.

3. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber, a screw shell above said terminal and a contact member on the switch spindle adapted to establish the circuit between said circuit terminal and shell, the latter being offset to insure a better contact with said switch member and to facilitate the assembly of the shell and base, as described.

4. In a pull socket for an electric lamp, having lamp and circuit terminals, a circuit closer operating between a lamp and a circuit terminal, a spindle carrying the same, standards supporting said spindle, a spring actuated ratchet device to actuate said spindle and means for adjusting the tension of the spring of said ratchet device, said means comprising a sleeve to which one end of the spring is secured and forming a bearing for said spindle and comprising a hollow shank, a retaining flange thereon and an angled portion adjacent thereto, said retaining flange being adapted to be pressed against the side of one of said spindle standards by the spring and said irregular portion being adapted to enter a corresponding aperture in said standard, the shank affording means for disengaging said sleeve from the standard, and guiding the same in said aperture during its rotation for the purpose of adjusting the tension of the spring.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

FRANK E. SEELEY.

Witnesses:

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H. W. GOLDSBOROUGH.