

(No Model.)

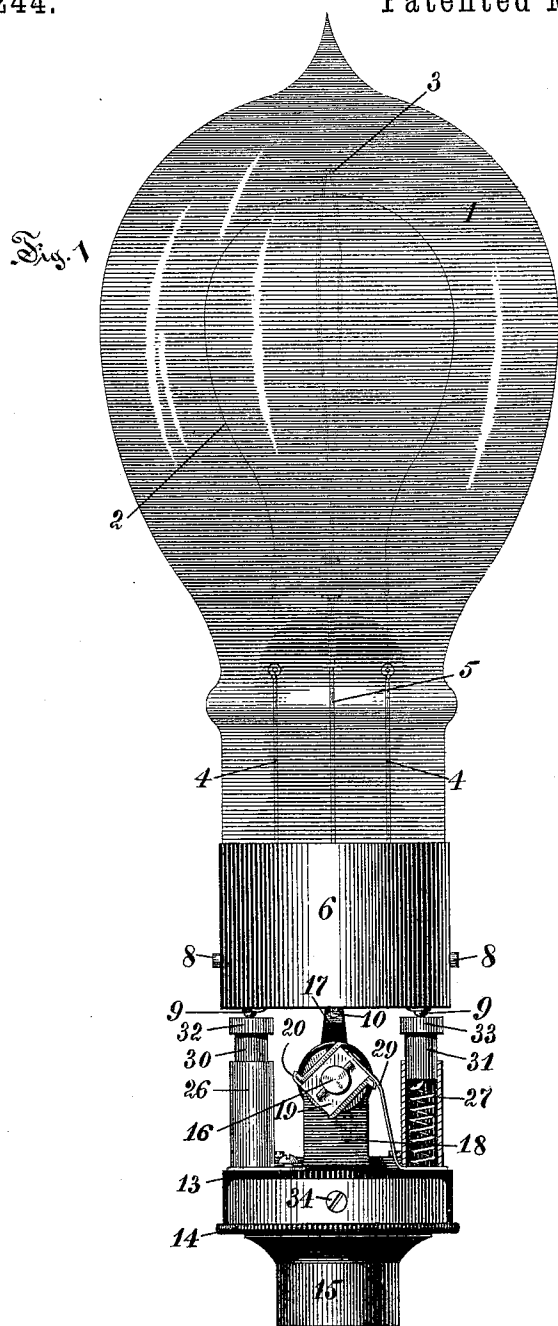
2 Sheets—Sheet 1.

C. G. PERKINS.

ELECTRIC LAMP AND SOCKET.

No. 360,244.

Patented Mar. 29, 1887.



Witnesses

Frank H. Pierpont
Wm. Byrckman.

Inventor

By his Attorney *Charles G. Perkins*
Willard Eddy

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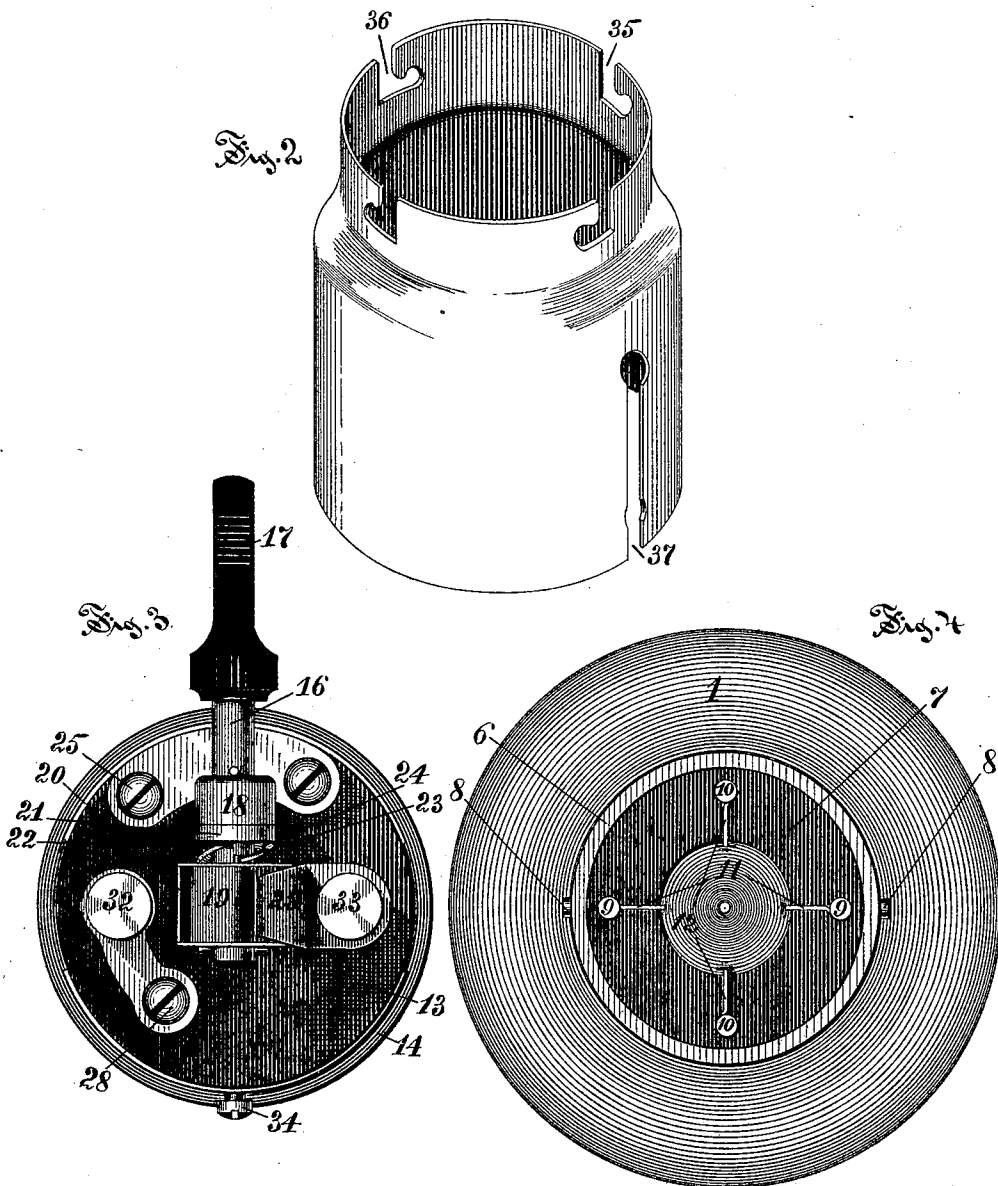
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ELECTRIC LAMP AND SOCKET.

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Witnesses

Frank H. Lusk
W. M. Yorkman.

Inventor

Charles G. Perkins
By his Attorney
Willard Eddy

UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT.

ELECTRIC LAMP AND SOCKET.

SPECIFICATION forming part of Letters Patent No. 360,244, dated March 29, 1887.

Application filed October 11, 1886. Serial No. 215,866. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. PERKINS, of the city and county of Hartford, Connecticut, have invented certain new and useful Improvements in Electric Lamps and Sockets, which are described in the following specification, and illustrated by the accompanying drawings.

This invention relates to incandescent or "glow" lamps, so called, and to switches and switch-sockets appurtenant thereto.

The object of the invention is to produce a multiple-carbon lamp and appurtenant switch and socket, which are certain and convenient in operation and manipulation.

The best mode in which I have contemplated the application of my invention is illustrated in said drawings, in which—

Figure 1 is a side view of my improved lamp, socket, and switch, the casing of the socket being removed. Fig. 2 is a perspective view of said casing. Fig. 3 is a top view of said switch and socket, said casing being removed. Fig. 4 is a bottom view of said lamp.

In these views, the numeral 1 denotes the translucent exhausted globe of the lamp, while 2 and 3 are two independent carbons which are inclosed therein. These carbons are electrically continuous with two pairs of platinum strips, numbered 4 and 5, respectively, which are sealed in globe 1 in the usual manner. The neck of said globe is provided with an external cylindrical metallic casing, 6, which projects beyond said neck, and contains a thick annular disk of insulating material, 7. One end of casing 6 hugs said neck, and the other end of the same hugs disk 7. This casing is provided with two pins, 8, which project radially therefrom. The exposed side of disk 7 is provided with two pairs of nibs or pins, 9 and 10, which are formed of electrically-conductive material, and project a short distance from disk 7, as shown in Fig. 1. Said pairs of pins 9 and 10 are respectively connected with said pairs of platinum strips 4 and 5 by two pairs, 11 and 12, of copper wires, which are terminally soldered to said strips and pins, and pass through the open middle of said annular disk 7.

The numeral 13 denotes the base-plate of the switch-socket. This plate is an annular disk, of bonzalet or other insulating material,

mounted in a brass socket, 14. This socket has a projecting hollow neck, 15, whose internal cavity is continuous with the central perforation through the annular disk 13, and is threaded as a female screw. A brass arbor, 16, provided with finger-piece 17, is journaled in a standard, 18, which rises from disk 13. This arbor carries a loose contact-block, 19, which is of the general form of a quadrangular prism, having, however, each of its several faces a little inclined and prolonged, after the manner of a quadruple cam or a ratchet with four teeth. Two opposite faces of this block and the two ends of the same are sheathed with a thin strip of copper, 20. On arbor 16, between standard 18 and block 19, is a fixed collar, 21, which is provided with an engagement-pin, 22, projecting toward block 19. From this block another engagement-pin, 23, projects in the opposite direction. On arbor 16, between collar 21 and block 19, is a short loose flat spiral or annular spring, 24. Standard 18 has a foot extending upon plate 13 to screw 25, which may be termed the "positive terminal" of the switch. Two hollow cylindrical standards, 26 and 27, rise from plate 13 upon opposite sides of block 19. The foot of standard 26 extends upon plate 13 to screw 28, which is the negative terminal of the switch. The foot of standard 27 reaches up from plate 13 in the form of a contact-spring, 29, which is adapted to press upon block 19. Standards 26 and 27 are provided with spring-seated contact-rods 30 and 31, respectively, and these are provided with fixed terminal stops or collars 32 and 33, respectively.

The brass casing shown in Fig. 2 is of general cylindrical form, and, in conjunction with plate 13, forms a switch-socket. The longer end of said casing fits snugly about plate 13, and is held in position by screws 34. Slot 37 is for the accommodation of arbor 16. The smaller end of said casing is adapted to fit closely upon casing 6, and is provided with two pairs of hook-shaped slots, 35 and 36, for the accommodation of pins 8.

Such being the construction of my invention, its operation is as follows: The switch-socket is applied to the lamp by slipping the casing of Fig. 2 upon casing 6 in such a position that pins 8 enter slots 35, or in such a position that pins 8 enter slots 36, and said casings are

turned relatively to each other by hand, so as to allow pins 8 to enter the hooked portion of such slots. While said casings are being so turned the heads 32 and 33 brush against pins 9, or against pins 10, as the case may be, until one pair of said pins 9 or 10 is brought to a middle position of contact with heads 32 and 33. The springs in standards 27 then acting upon the lamp through said pins 9 or 10, as the case may be, force pins 8 into the hooked portion of slots 35 or 36, as the case may be, and so the socket and the lamp are held to each other by a double spring-catch acting through the electrical contacts between them. In this manner the lamp and socket may be applied to each other in such relative positions that terminals 25 and 28 shall, for the time being, constitute the terminals of carbon 2, as illustrated in Fig. 1, or in such positions that terminals 25 and 28 shall, for the time being, constitute the terminals of carbon 3. From terminals 25 and 28 the leading-wires (not shown in the drawings) pass out through the central hole of the annular disk 13 and through neck 15. The latter may be screwed to a fixture or other convenient support in the usual manner. Assuming that said socket has been applied to the lamp in the position shown in Fig. 1, and that spring 29 is in contact with copper 20, the current passes from terminal 25 successively through standard 18, arbor 16, copper 20, spring 29, standard 27, rod 31, pin 9, wire 11, platinum 4, carbon 2, platinum 4, wire 11, pin 8, rod 30, and standard 26 to terminal 28. The manipulation of the switch by finger-piece 17 requires no detailed explanation. It is sufficient to observe that when arbor 16 turns in one direction spring 24 engages both collar 21 and block 19 by means of pins 22 and 23, as shown in Fig. 1, but engages nothing when said arbor turns in the opposite direction. By using said carbons successively in the manner indicated the life of the lamp is doubled.

I claim as my invention—

1. In an electric lamp, a translucent globe

containing two separate carbons, an insulating-disk which is provided with two pairs of pins or projecting pole-pieces, and a metallic casing which is fitted about the periphery of said disk and the neck of said globe, in combination with four wires or other conductors which pass through a hole in the middle of said disk and connect each of said carbons with one pair of said pole-pieces, substantially as and for the purpose specified.

2. In combination with the globe of an electric glow-lamp, an annular insulating-disk which is fastened to the neck of said globe by a cylindrical casing and is provided with two pairs of projecting contact-points or pole-pieces which are connected with the carbons of said lamp by means of conductors which pass through the central aperture of said annular disk, substantially as and for the purpose specified.

3. A globe of an electric glow-lamp, two separate carbons in said globe, an insulating-disk which is provided with two separate pairs of contact-points or pole-pieces, conductors which pass through said disk and connect each of said carbons with one of said pairs of contact-points, a cylindrical shell which holds said disk to the neck of said globe and is provided with a pair of projecting pins, in combination with a switch-socket which is provided with two pairs of hook-shaped slots adapted to engage said pairs of pins successively, and with a pair of spring-seated contacts adapted to press upon said pairs of contact-points successively, and thereby to maintain the engagement of said pins with each of said pairs of slots in succession, as may be necessary for the successive use of said carbons, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

CHARLES G. PERKINS.

Witnesses:

WILLARD EDDY,

RICHARD H. MATHER.