(No Model.)

W. STANLEY, Jr.

SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

No. 324,894. Patented Aug. 25, 1885.

Fig. 1.

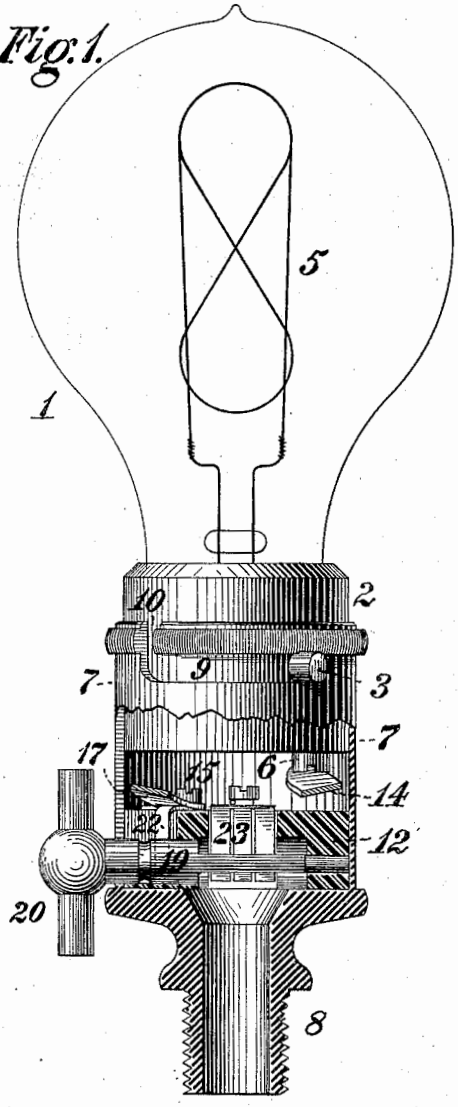


Fig. 2.

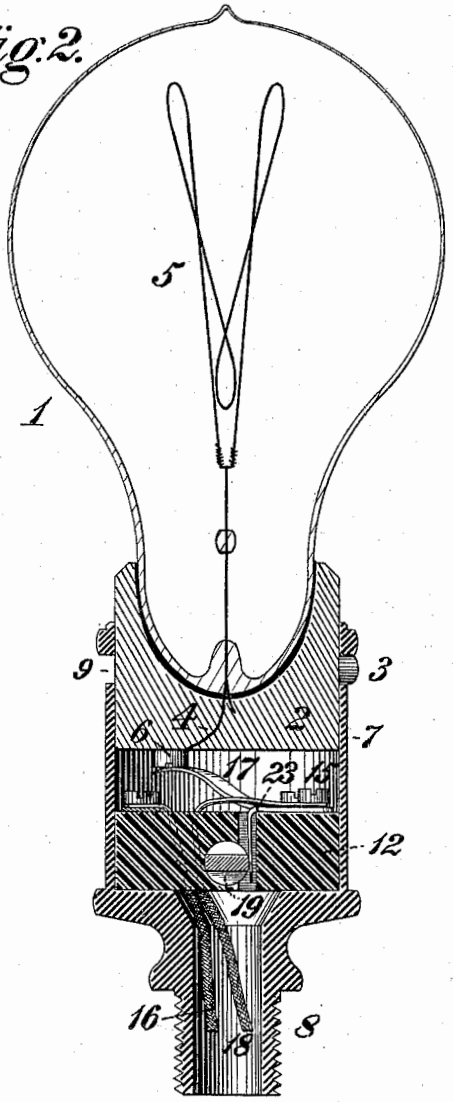


Fig. 3.

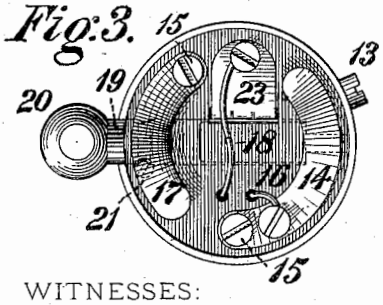
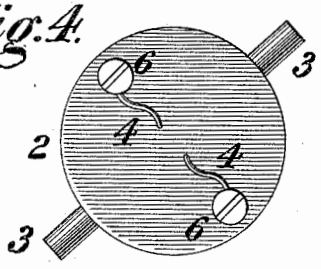


Fig. 4.



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SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 324,894, dated August 25, 1885.

Application filed October 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STANLEY, Jr., of Englewood, in the county of Bergen and State of New Jersey, a citizen of the United States, temporarily residing at Sewickley, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Sockets for Incandescent Electric Lamps, of which improvements the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a view, partly in elevation and partly in longitudinal central section, of an incandescent electric lamp and socket embodying my invention; Fig. 2, a longitudinal central section through the same, taken at right angles to Fig. 1; Fig. 3, a transverse section through the socket, and Fig. 4 a bottom plan view of the base-piece of the lamp.

The object of my invention is to enable an incandescent electric lamp to be readily and conveniently connected to and detached from its support, and to be thrown in to and cut out of circuit at pleasure without change of position or liability to displacement from its socket.

To these ends my improvements consist in certain novel devices and combinations, including a base-piece fixed to the bulb of a lamp, and having a pair of contact-points connected with the conducting-wires of the filament, a cylindrical socket adapted to receive and retain the base-piece by a clutch-connection, a block of non-conducting material fitted in the socket and carrying a pair of spring-plates with which the contact-plates of the base-piece are adapted to be brought into and out of contact by axial movements of the base-piece, wires connected, respectively, to one of said spring-plates and to an independent contact-plate on the insulating-block of the socket, and a key or switch fitted to turn in said block and by its movement therein to make or break an electric circuit between said independent contact-plate and the spring-plate which is not connected to a conducting-wire.

The improvements claimed are hereinafter fully set forth.

In the practice of my invention, the bulb 1 of the lamp is secured to a cylindrical base-piece, 2, of wood, plaster of-paris, or other non-conducting material, which is suitably recessed at top to receive the base of the bulb and is provided with a pair of connecting-pins, 3, fixed in line diametrically and projecting from the base piece, upon opposite sides, respectively, of the axis thereof. The conducting-wires 4, to which the ends of the incandescent filament 5 are connected, pass through the base-piece 2, and are secured at their lower ends to screws 6, fixed therein in a plane at right angles to the plane of the connecting-pins 3, and serving as terminals or contact-points for completing an electric circuit through the conducting-wires of the socket, as hereinafter to be described. A cylindrical socket, 7, having a threaded neck or tubular extension, 8, on one of its ends, is adapted to admit, at its opposite end, the base-piece 2, the connection and disconnection of the base-piece and socket being effected through a clutch-coupling formed by the connecting-pins, 3, of the base-piece, and a pair of circumferential slots, 9, located oppositely one to the other in the socket, near the end into which the base-piece fits, said slots communicating by openings 10 at their opposite ends, respectively, with the adjacent open end of the socket. The connecting-pins are entered through the openings 10, and on being moved through the slots to their opposite ends hold the base-piece and socket securely together, while the detachment of said members is readily effected, when desired, by the movement of the pins in the opposite direction.

To prevent accidental displacement of the pins from their positions at the inner ends of the slots 9, recesses or notches, adapted to partially surround the pins, may be formed at the inner ends of the slots. A block, 12, of wood or other non-conducting material, is fitted within the socket 7, adjacent to its neck 8, and is fixed therein so as to be readily removable when required by a pin or screw, 13, passing through the socket. A pair of spring contact-plates, 14 17, are secured by screws 15 to the top of the block 12, the upper free ends of said springs being located adjacent to and on opposite sides, respectively, of a longitudinal plane passing through the slot-openings 10.

During such period as the connecting-pins 3 stand in line with the openings 10 of the socket-slots 9 the terminals 6 of the filament, which, as before stated, are located in a plane at right angles to said pins, will be out of contact with the spring contact-plates 14 17, and by the movement of said pins through the slots to their opposite ends the terminals 6 will be brought into close contact with the free ends of the springs, thus enabling an electric circuit to be established through the terminals 6, wires 4, and filament, by establishing communication between the spring-plates 14 17 and conducting-wires connected to any suitable source of electrical supply. The base-piece and bulb are held firmly within the socket when the pins 3 stand at the inner ends of the slots 9, and the socket may be supported upon a bracket or pendent fixture by connecting it thereto through the screw-thread of its neck 8.

So far as described, the above construction accords substantially with that set forth in an application for Letters Patent of the United States, filed by me under date of September 23, 1884, Serial No. 143,785, and is not, therefore, claimed, *per se*, herein. In said application, however, a conducting-wire is connected to each of the contact-plates of the insulating-block 12, and circuit through the filament of the lamp is made and broken by the movement of the base-piece within the socket, the circuit being opened when the pins 3 stand in or near the open ends of the slots 9, and closed when they are brought to the inner ends thereof, so as to make contact between the terminals 6 and the spring contact plates of the block 12. Under certain circumstances—as, for example, in the case of lamps which are hung below a suspending fixture or support—it may be considered undesirable, in view of possibility of displacement, to effect the cutting off of the current by the movement of the lamp.

In my present invention, while enabling facility of connection and disconnection to be attained, I provide for throwing the filament into and out of circuit, without requiring the lamp to be moved out of its normal position in operation, as now to be described. A key or switch, 19, provided with a handle, 20, of hard rubber or other suitable insulating material, is fitted, with the capacity of partial rotation about its axis, in the block 12, and is held, as against longitudinal movement therein, by a stop pin or screw, 21, fitting in a circumferential groove in the key. The key 19 may either have a lateral projection or be flattened or recessed on one or both sides adjacent to an independent contact-plate, 23, which is secured to the block 12 and projects downwardly into the opening in which the key 19 works, its lower portion being located in such proximity to the latter that when the key is turned into position shown in the drawings, its projection or the unrelieved portion of its surface, as the case may be, will make contact with the plate, and when turned into a position at right angles to that shown it will be out of contact with the plate, its flattened portion, or that which does not present a projection, then being adjacent to the plate 23. Wires 16 and 18, adapted to be connected to line-wires, are connected to the spring-plate 14 and independent contact-plate 23, respectively, and the spring 17 is provided with a downward projection, 22, which bears against the key 19, so as to be in contact therewith in either position into which it may be turned.

It will be seen that by turning the key 19 into contact with the plate 23 circuit from the supply is established through the wire 18, plate 23, key 19, projection 22, spring-plate 17, contact-screws 6, wires 4, filament 5, spring-plate 14 and wire 16, and by a quarter-turn of the key the circuit is broken between the same and the plate 23, a single movement of the key thus serving to light or to extinguish the lamp without the necessity of changing its position or relation to its socket.

I claim herein as my invention—

1. The combination of an incandescent lamp, a base-piece fixed thereto and carrying the terminals of conducting-wires connected to the filament of the lamp, a socket adapted to receive said base-piece, a pair of contact-plates secured to said socket and adapted to make continuous contact with the terminals of the filament, a key or switch fitted to turn in the socket in contact with one of said plates, an independent contact plate with which said key is adapted to be brought into or out of contact, and a pair of conducting-wires, one of which is connected to said plate and the other to the continuous contact-plate which does not communicate with the key, substantially as set forth.

2. The combination of a socket, a pair of spring contact-plates secured to an insulating-block therein, a conducting-wire connected to one of said plates, a key adapted to be partially rotated in said block while continuously in contact with the other plate, an independent contact-plate fixed to the insulating-block and adapted to receive or be out of the contact of the key, according to the position thereof, and a conducting-wire connected to said independent contact-plate, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM STANLEY, JR.

Witnesses:
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A. L. REINMANN.