(No Model.)

P. J. CHASSAGNE.

INCANDESCENT LAMP SOCKET.

No. 416,051. Patented Nov. 26, 1889.

Fig. 1.

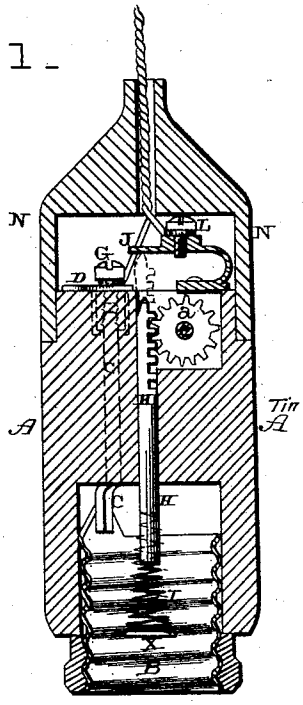
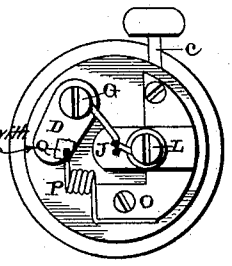


Fig. 2.



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UNITED STATES PATENT OFFICE.

PAUL J. CHASSAGNE, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO S. SAMUEL MILLER AND WILLIAM R. PALMER, OF SAME PLACE.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 416,051, dated November 26, 1889.

Application filed March 28, 1889. Serial No. 305,126. (No model.)

To all whom it may concern:

Be it known that I, PAUL J. CHASSAGNE, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Electric Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in electric lamps; and it consists in, first, the combination of a wooden socket, a metallic ferrule placed in one end thereof, a rod connected to the ferrule, a nut, a clamping-screw connected to the upper end of the rod, and an endwise-moving rod provided with a spring at its lower end for making connection with the lamp, and which rod makes connection with one of the poles of the lamp when the lamp is in use; second, the combination of the two poles of the lamp, a spring for connecting them together, and a piece of coated tin-foil which prevents the short-circuiting of the currents until one of the lamps is broken, as will be more fully described hereinafter.

The objects of my invention are to provide a socket for incandescent or electric lamps in which the endwise-moving rod which makes connection with one of the poles is provided with a spring upon its lower end, which serves as a conductor from the rod to the lamp, and to prevent the rod from slipping after it has made connection with the pole, and to prevent the current from being broken if the lamp is turned by a careless person, and to provide a short circuit which will prevent the lamp from being injured or destroyed in case one of the lamps is broken.

Figure 1 is a vertical section of a socket which embodies my invention. Fig. 2 is a plan view of the poles and their attachments.

A represents the socket, which is made of wood or any other suitable non-conducting material, and which may either be made round, square, or any other shape that may be preferred.

In the hollow end of the socket, into which the lamp is to be screwed, is placed a threaded metallic ferrule B, and to this ferrule is rigidly secured the rod C, which passes through the solid portion of the socket and has the nut or plate D screwed thereon. Through this nut or plate is made an opening, into which the clamping-screw G passes and clamps one of the wires to this pole. A plate, which may form a portion of the nut, extends beyond the nut upon one side, as shown. When the nut is removed from the rod, the ferrule can be withdrawn from the socket, carrying the rod with it.

Passing through an opening in the center of the solid end of the socket is an endwise-moving rod H, having a platinum tip, and which has teeth formed upon one side of its upper or inner end, and to the opposite end is connected a coiled spring I, and to the outer end of this spring is attached a plate X, which makes connection with the lamp when screwed into the socket. The spring causes the plate to keep in contact with the lamp and the spring serves as a conductor of electricity from the rod to the lamp. This spring also serves to prevent the rod from slipping or moving out of contact with the pole J after the lamp has once been put in operation. In case the lamp is turned partially around the spring causes the plate to follow up the lamp and prevent the circuit from being broken. The tension of the spring is not sufficiently great to move the rod endwise, and hence if the lamp is screwed tightly in position, and the rod is moved out of contact with the pole J, the spring will be simply compressed without moving the rod. In order to operate the rod, and thus bring its end in and out of contact with the pole J, a shaft *c* is journaled in the solid portion of the socket, and to this shaft is attached a pinion *a*, which meshes with the teeth upon the rod. When the pinion is turned in one direction, the end of the rod is made to make connection with the pole, and when turned in the other direction the contact is broken. The pole J is formed of a bent piece of metal, as shown, so as to extend directly over the end of this rod, and passing through this pole is the clamping-screw L, which connects the other wire with this pole. Covering the two poles and their connecting parts upon the solid end of the socket is the cap N, which has an opening through its outer end, and through this open-

ing pass the two wires. The current passes through the pole J, the central rod which is operated by the pinion, the spring, and the plate to the lamp, and from the lamp to the ferrule, and from the ferrule to the rod connected thereto, and to which the nut and other wire are connected.

In order to prevent the lamp from burning out in case one of the lamps should be broken or any accident of that kind happen, a plate O is secured to the pole J and extends around in close proximity to the plate or nut D. Connected to the plate O is a spring P, which has its free end to rest upon a piece of tin-foil Q, which is coated a number of times with shellac for the purpose of making it non-conductive. In case a lamp should be broken the current will burn through the tin-foil, and thus be short-circuited, so as to prevent the ferrule from being injured. In incandescent lighting this short circuit is not necessary; but where incandescent lamps are run in series from an arc wire or where a high tension current is used it is necessary.

This socket can be used on any system of lighting by electricity using either high or low tension currents. In either case it is only necessary to turn the pinion which operates the endwise-moving rod provided with a spring in order to turn on or off the current.

Having thus described my invention, I claim—

1. The combination of the socket provided with the metallic ferrule or lining, a rod connected thereto, a nut or plate secured to the rod, and a clamping-screw for connecting one of the wires to this pole with the endwise-moving rod, a mechanism for operating it, and a bent casting or pole J, to which the other wire is fastened, substantially as shown.

2. The combination of the endwise-moving rod, the spring attached to its inner end, a mechanism for moving the rod, and the pole with the ferrule, the rod connected to the ferrule, and the clamping-screw by which one of the wires is connected to the rod, substantially as described.

3. In a socket for electric lamps, the combination of the ferrule and a rod connected thereto with an endwise-moving rod, a spring connected thereto, a mechanism for adjusting the rod, and the poles to which the wires are secured, substantially as set forth.

4. The combination of the pole J, the spring connected thereto, a nut or plate D, and a non-conductor which is placed between the end of the spring and the plate or nut, the conductor being adapted to be burned by the current in case one of the lamps is broken, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

PAUL J. CHASSAGNE.

Witnesses:
O. L. SADLER,
T. E. WELLS.