(No Model.)

O. P. LOOMIS.

INCANDESCENT LAMP SOCKET.

No. 396,583. Patented Jan. 22, 1889.

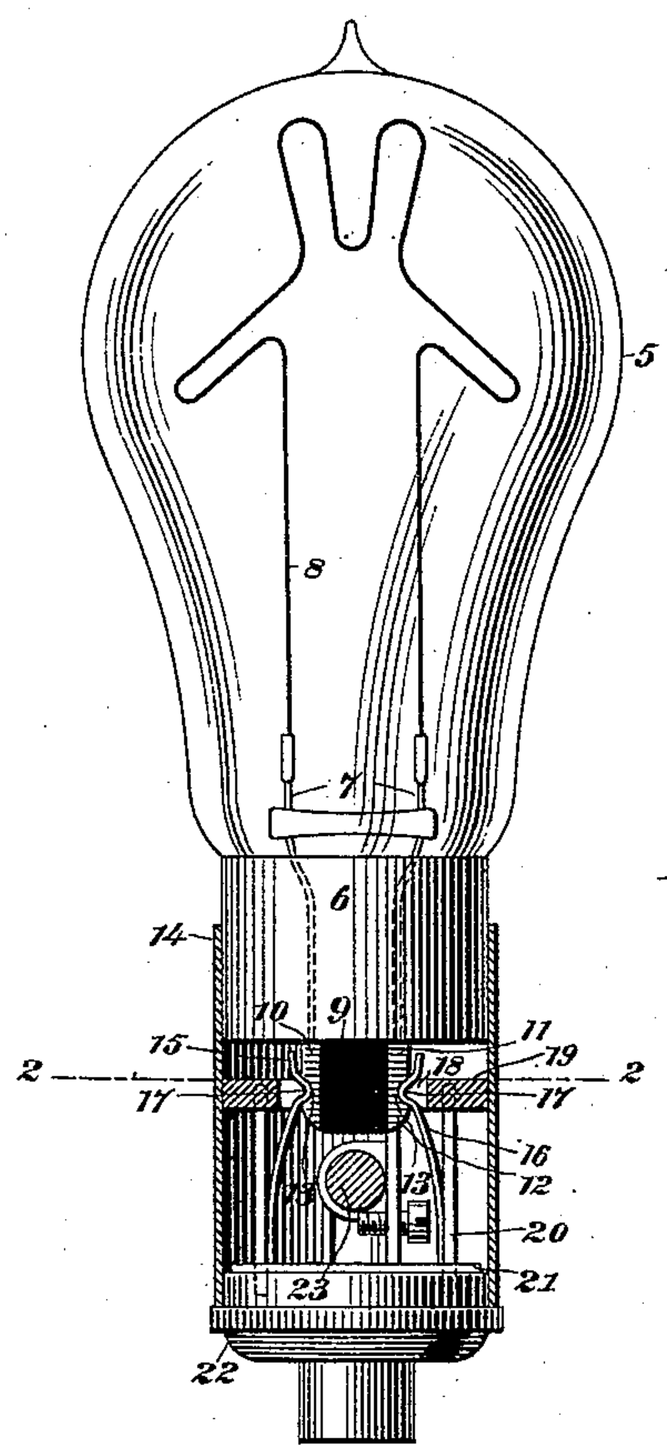

Fig. 1.

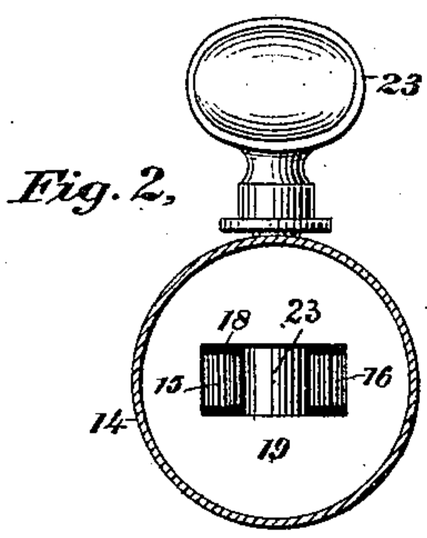

Fig. 2,

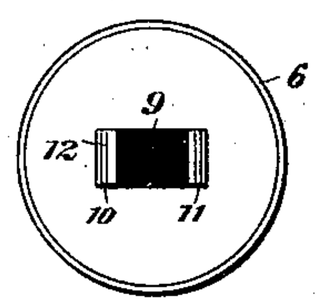

Fig. 3,

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UNITED STATES PATENT OFFICE.

OSBORN P. LOOMIS, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO THE LOOMIS ELECTRIC MANUFACTURING COMPANY, OF NEW YORK.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 396,583, dated January 22, 1889.

Application filed September 3, 1888. Serial No. 284,400. (No model.)

To all whom it may concern:

Be it known that I, OSBORN P. LOOMIS, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Incandescent Electric-Lamp Sockets, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an incandescent electric lamp having an improved socket-piece coupling for coupling the lamp together and at the same time connecting the lamp-terminals to line, the coupling consisting in a post projecting from the lamp-stem and carrying the lamp-terminals, which are connected to the leading-in wires and formed with suitable transverse coupling-corrugations, the post and terminals together being of a cross-section greater in length than breadth, and in a pair of spring-clutching contact-jaws suitably spaced and corrugated in conformation to the lamp-terminals and located in the lamp-socket and adapted to automatically clutch and hold the said lamp-terminals and to connect them to line when they are entered therebetween, and in a guard-plate located within the socket and formed with an opening of greater length than breadth, in order to permit the lamp-terminals to be entered therethrough only when properly presented thereto, the contact-jaws being accessible to the terminals only through the opening in the guard-plate.

In order that my invention may be fully understood, I have illustrated in the accompanying drawings and will proceed to describe the best form thereof so far devised by me, and which form will admit of modification without making a substantial departure from the spirit of the invention.

In the said accompanying drawings, Figure 1 is a side view of an incandescent electric lamp embodying my invention, and in which the lamp-socket and contained parts are shown in longitudinal central section. Fig. 2 is a transverse sectional view of the lamp-socket, taken on a plane indicated by the line 2 2, Fig. 1. Fig. 3 is an under side view of the lamp-stem with the projecting insulating-post for supporting the lamp-terminals.

In the said drawings like numbers of reference designate like and corresponding parts throughout.

Referring to the drawings, 5 designates the glass lamp-globe; 6, the lamp-stem; and 7 7, the leading-in wires, which are attached to the filament 8 in the usual well-known way.

At the center, preferably, of the lamp-stem 6, I arrange a post or projection, 9, constructed of suitable insulating material and rectangular in cross-section, though of course any preferred shape of section may be adopted. Upon two opposite sides of this post I fix the lamp-terminals 10 and 11, which are also preferably rectangular in cross-section and are quite flat, and are formed with the rounded ends, as at 12, so as to facilitate the coupling of the lamp. Across the outer flat faces of the lamp-terminals are formed the transverse coupling-corrugations 13 13.

The end of the cylindrical tubular socket 14 is adapted to readily receive the cylindrical lamp-stem 6. Within the lamp-socket are suitably fixed the upright spring contact-jaws 15 16, having their free ends formed with the transverse coupling-corrugations 17 17, formed in suitable conformation to the corrugations 13 13 of the lamp-terminals 10 10, with which they are to co-operate.

The ends of the contact-jaws 15 16 extend up into the rectangular-shaped opening 18, which is of a greater length than breadth, and is formed centrally in the guard-plate 19, which is made of suitable insulating material and located within the socket 14. This guard-plate is secured, by means of the brackets 20 20, to the usual supporting-plate, 21, and these parts are together removable from the socket-piece when the cap 22 is taken off. To the brackets 20 20 are preferably attached the contact-jaws 15 16, which are to be connected to line, after the usual manner of the contacts in this class of lamps, by means of one of said jaws being connected to line through the intermediary of the usual binding-screw, while the other contact may communicate with the line through the usual switch, of which 23 is

the operating-key for turning the current on and off the lamp. If preferred, the number of the corrugations on the lamp-terminals and the contact-jaws may be increased.

The operations and functions of the several parts of the lamp will now be obvious. The lamp-globe, with its attached stem carrying the post and lamp-terminals, may be readily removed from the lamp-socket by grasping the globe and slightly pulling on the same to release the terminals from the clutch of the contact-jaws. In coupling the lamp the stem is inserted in the lamp-socket, and the terminal post, with the terminals, is forced into the position shown in Fig. 1, when the contact-fingers will automatically seize and hold the lamp-terminals, and thus unite the lamp, and at the same time serving to connect the terminals to line through the intermediary of the usual switch. Proper contact, therefore, can be made only when the terminal post and terminals are presented to the opening 18 of the guard-plate 19 with their sectional length and breadth coincident with the length and breadth of such opening. Should the terminals be presented otherwise it is very evident, from Figs. 2 and 3, that the lamp cannot be united, since the plate 19 will act as a guard to prevent it. Of course either terminal can be placed in contact with either contact-jaw; but no false contact will be possible. The lamp-terminals may be made in any preferred shape, and are to be connected to their respective leading-in wires in any suitable manner.

The grip of the clutching contact-jaws will be sufficient to maintain the parts of the lamp together, and as the stem 6 makes a snug fit in the socket the parts will be firmly united when put together. It will be noted that all the parts within the socket that are included between the supporting-plate 21 and the guard-plate 19, and which parts comprise the contact-jaws, the switch, and contacts therefor, as well as the various sustaining-brackets, are permanently situated therein, and are of course not disturbed whenever the lamp-globe with its stem and lamp-terminals are removed, as will be clearly understood from the drawings.

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

1. In an incandescent electric lamp, the combination, with the lamp-stem provided with the insulating projecting post carrying the lamp-terminals, which are formed with transverse coupling-corrugations, the said post and terminals together having a cross-section of greater length than breadth, of the lamp-socket adapted to receive the lamp-stem, a pair of spring-clutching contact-jaws arranged within the socket and connected to line and spaced correspondingly with the terminals and suitably corrugated, and a guard-plate located within the socket and formed with an opening of greater length than breadth, so as to allow said lamp-terminals to be entered therethrough only when properly presented, the said contact-jaws being accessible to the terminals through the opening of said plate, substantially as described.

2. In an incandescent electric lamp, the combination, with the lamp-stem 6 and the post 9, made of insulating material and having the lamp-terminals 10 and 11 attached thereto, said terminals formed with the transverse coupling-corrugations 13 and connected to the leading-in wires, and the post and terminals together having a cross-section of greater length than breadth, of the lamp-socket 14 and the spring contact-jaws 15 16, located therein and connected to line and formed with the transverse coupling-corrugations 17 17, and the guard-plate 19, formed with the opening 18 of greater length than breadth, and through which the contacts are accessible to the lamp-terminals, substantially as and for the purpose set forth.

3. In an incandescent electric lamp, the combination, with the lamp-stem having the lamp-terminals projecting therefrom, the lamp-socket for receiving the stem, and the line-contacts arranged within said socket and adapted to be engaged by the lamp-terminals when the lamp is put together, of the insulating guard-plate 19, formed with an opening, such as 18, and set within the lamp-socket, the line-contacts being only accessible to the lamp-terminals through said opening 18 of the guard-plate, whereby false contact may be obviated in putting the lamp together, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand and seal, this 20th day of August, 1888, in the presence of the two subscribing witnesses.

OSBORN P. LOOMIS. [L. S.]

Witnesses:
CHAS. A. PIERCE,
ROBT. N. CLARK.