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W. ILE

KEYLESS LAMP SOCKET

Filed May 9, 1925

Fig. 1.

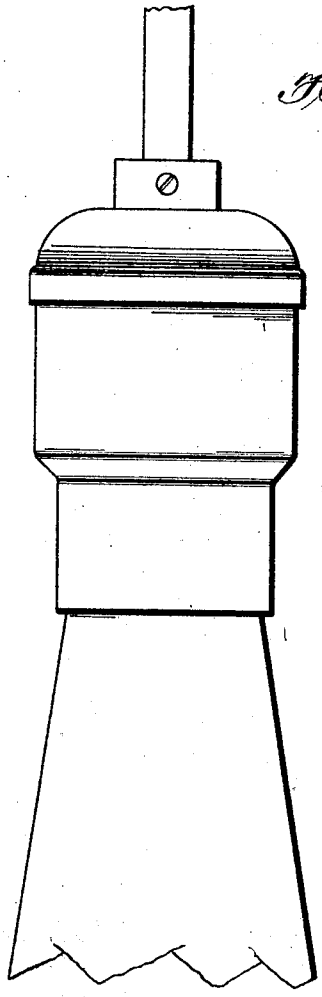


Fig. 2.

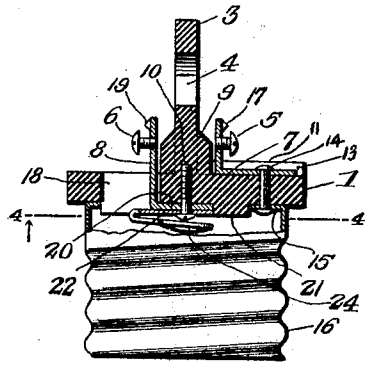
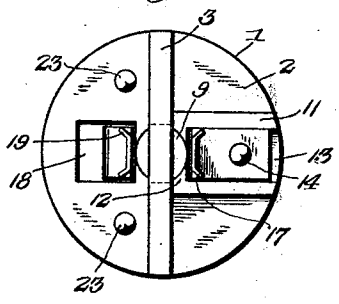


Fig. 3.



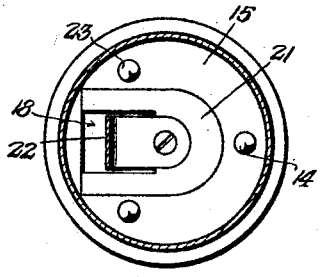


Fig. 4.

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UNITED STATES PATENT OFFICE.

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KEYLESS LAMP SOCKET.

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The invention relates to a keyless lamp socket.

The object of the invention is to provide a simple, practical and efficient keyless lamp socket of strong, durable and comparatively inexpensive construction having an insulating body consisting of a single piece of a phenol condensation product or other suitable material and constructed to receive the center and shell contacts and the terminal plates and engage the same to prevent relative rotary movement thereof so that there will be no liability of the parts becoming loose.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a side elevation of a keyless lamp socket constructed in accordance with this invention.

Fig. 2 is a vertical sectional view of the same, the outer shell or casing and the lining being removed.

Fig. 3 is a plan view of the same.

Fig. 4 is a horizontal sectional view taken substantially on the line 4—4 of Fig. 2.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, the keyless lamp socket comprises in its construction an insulating body 1 constructed of a single piece of a phenol condensation product or other suitable insulating material and comprising a circular base 2 and a vertical diametrically arranged extension 3 having an opening 4 for the passage of electric wires so that the strain of supporting the keyless socket will be borne by an electric wire and the insulating body and not be transmitted to the circuit wire terminals and the binding screws 5 and 6 of the terminal plates 7 and 8. This will prevent the circuit wire terminals from becoming accidentally disconnected from the binding screws. The insulating body is suitably molded and the vertical extension 3 is reinforced at the central portion at the bottom by approximately semi-circular enlargements 9 located at the opposite faces of the extension 3 as clearly shown in Figs. 2 and 3 of the drawing. This will enable an attaching screw 10 to be engaged with the central portion of the insulating body as illustrated in Fig. 2 of the drawing without liability of breaking or otherwise injuring the vertical extension 3. Also the enlargement will provide ample material to enable a threaded bushing to be embedded in the insulating body to be engaged by the attaching screw 10 if desired.

The circular base of the insulating body is provided at one side of the vertical extension 3 with parallel ribs 11 connected at their inner ends by a transverse portion 12 and forming a recess 13 in which is mounted the terminal plate 7. The terminal plate 7 is L-shaped and composed of two arms arranged vertically and horizontally, the horizontal arm being secured in a recess 13 by the rivet 14 or other suitable fastening device which also passes through the circular portion of the base and engages a flange 15 of the screw shell contact 16 of the lamp socket. The vertical portion of the L-shaped terminal plate 7 carries the binding screw 5 and has its upper corners bent at an angle to form projections 17 to cooperate with the binding screw 5 for holding a wire terminal. The walls of the ribs 11 will engage the horizontal portion of the terminal plate 7 and prevent any rotary movement of the same on the rivet 14. The terminal plate 7 is preferably of a width to fit snugly between the ribs 11 as clearly shown in Fig. 3 of the drawing.

The other terminal plate 8 which is L-shaped consists of a vertical portion and a horizontal portion, the vertical portion extending through a slot 18 in the circular portion of the base at the opposite side of the extension 3 from that at which the terminal plate 7 is located. The vertical portion of the terminal plate 8 carries the binding screw 6 and its upper corners 19 are bent at an angle to form projections to cooperate with the binding screw 6 for securely holding a circuit wire terminal. The horizontal portion of the L-shaped plate 8 is arranged in a recess 20 formed by an approximately U-shaped or horse shoe shaped rib 21 in the circular base 2. The rib 21 is composed of spaced parallel sides and a curved transversely disposed con-

necting portion as clearly shown in Fig. 4 of the drawing and its inner and outer edges cooperate with the flange 15 of the shell contact 16 and with the horizontal portion of the terminal plate 8 and also with a center contact 22 for holding the said parts against relative movement on the insulating body. This enables the said parts to be rigidly secured to the insulating body without liability of jarring loose and effecting the electrical connections of the keyless lamp socket. The flange 15 of the shell contact 16 is approximately U-shaped or horse shoe shaped to fit the exterior of the rib 21 and it is secured by side rivets 23 in addition to the rivet 14. The side rivets 23 simply attach the side portions of the flange 15 to the lower face of the circular base of the insulating body while the rivet performs a double function of an attaching element and an electrical connection between the shell contact 16 and the terminal plate 7. A horizontal portion of the terminal plate 8 and the center contact 22 are pierced by the screw 10. The center contact consists of a strip of metal doubled on itself as shown to provide an upper attaching portion and a lower contact portion adapted to be arranged the proper distance from the insulating body to insure a proper electrical contact with the lamp and having a cup shaped terminal portion 24 to engage the lamp. The inner edge of the rib 21 engages both the upper portion of the center contact and the horizontal portion of the terminal plate 8 to prevent the same from turning on the screw 10 so that there will be no liability of the screw becoming incidentally loose through vibration of the said parts.

The keyless lamp socket is designed to be operated by a wall switch or other circuit opening and closing device located at a point remote from the lamp socket.

What is claimed is:

1. A keyless lamp socket including an insulating body comprising a base and a vertical extension having enlargements at the lower portion thereof at the center of the same, said base being provided adjacent one of the enlargements with a slot, a terminal plate extending through the slot to the lower face of the base, a center contact fitted against the terminal plate, a fastening device piercing the center contact and the terminal plate and engaging the insulating body and extending through the base into the extension between the said enlargements of the same, a shell contact secured to the lower face of the base and a terminal plate located at the opposite side of the extension from that at which the slot is arranged and electrically connected with the shell contact.

2. A keyless lamp socket including an insulating body comprising a circular base and a vertical diametrically arranged extension having central enlargements at opposite sides of the bottom of the said extension, said base being provided at its upper face with spaced parallel ribs having a transverse connecting portion, the lower face of the base being also provided with spaced parallel rib members having a transverse connection portion, a terminal plate extending through the said base and fitted between the said rib members, a center contact also fitted between the said rib members, a fastening device piercing the center contact and the said terminal plate and extending through the face into the lower enlarged portion of the said extension, a shell contact provided at the top with a flange fitted against the lower face of the base and surrounding and engaged with the rib members and the transverse connecting portion thereof, and a terminal plate arranged between and engaged by the spaced ribs at the upper face of the base and secured to the same and electrically connected with the shell contact.

In testimony whereof, I have hereunto set my hand.

WILLIAM ILE.