R. B. BENJAMIN & J. IMBODEN.

LAMP LOCK SOCKET.

APPLICATION FILED APR. 3, 1914.

**1,210,262.** Patented Dec. 26, 1916.

Fig. 1.

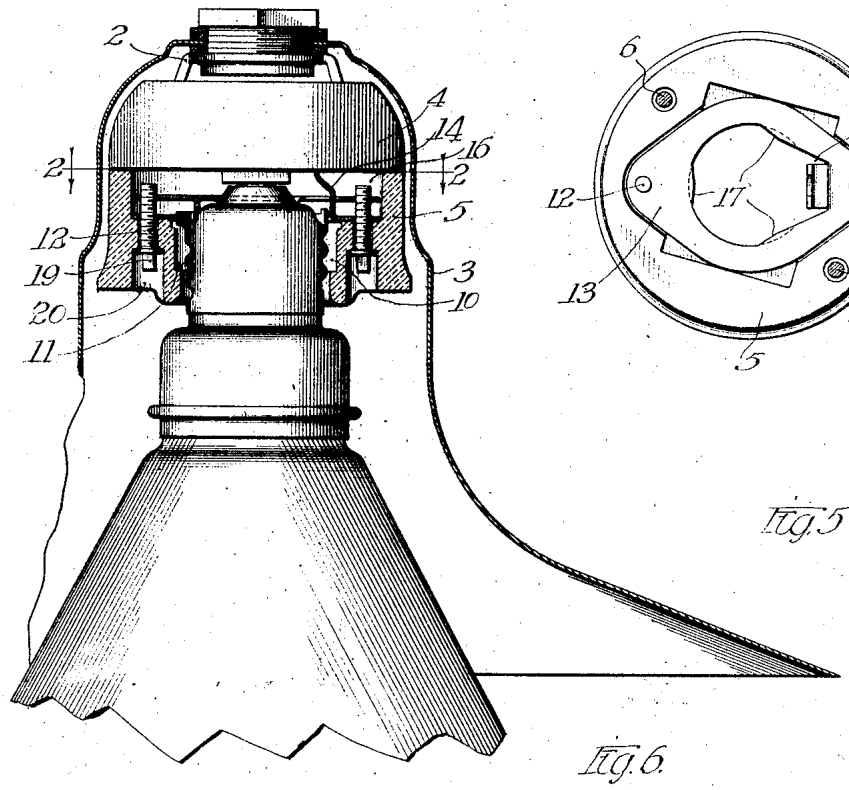



Fig. 2.




Fig. 5

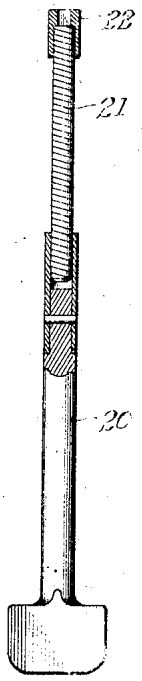



Fig. 6.

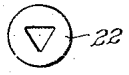



Fig. 3.

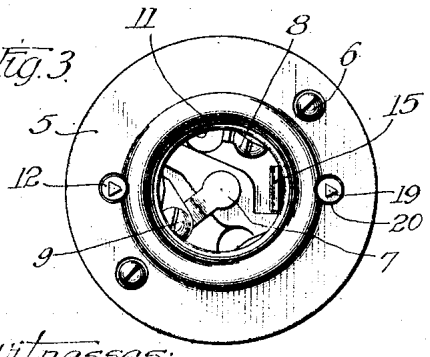
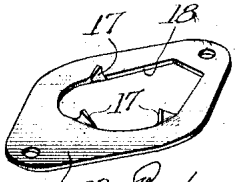



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## LAMP-LOCK SOCKET.

1,210,262. Specification of Letters Patent. Patented Dec. 26, 1916.

Application filed April 3, 1914. Serial No. 829,212.

*To all whom it may concern:*

Be it known that we, REUBEN B. BENJAMIN and JAMES IMBODEN, both citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have jointly invented new and useful Improvements in Lamp-Lock Sockets, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

Our invention relates to improvements in lamp sockets and one of the objects of our invention is to provide locking means for a lamp socket which shall lock the lamp in the socket in such a manner that the same will not jar loose due to vibration, etc., and also to so lock the lamp in that it cannot be removed by unauthorized persons.

For the purpose of disclosing our invention we have illustrated in the accompanying drawings one embodiment thereof, in which—

Figure 1 is a vertical sectional view taken through the socket; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a bottom plan view of the lamp socket; Fig. 4 is a perspective view of the locking plate for locking the lamp in the socket; Fig. 5 is an elevation, partly in section, of the key for operating the locking plate; and Fig. 6 is an end view of the key showing the shaped opening thereof.

The locking means is shown in connection with one form of socket, but it will be understood that various other forms of socket may be used. The socket disclosed in the accompanying drawing comprises a collar 1 adapted to be secured to a conduit or the like and having external screw threads for the reception of a bracket 2 which clamps a casing shade 3 in position upon the collar as shown. The bracket 2 carries a base consisting of an upper member 4 and a lower member 5, which parts are held together and are secured to the bracket by suitable screws 6 adapted to pass through the two base members and screw into the bracket 2. The upper base member carries, on its lower surface, a center contact 7 and a pair of binding terminals 8 and 9 to which the leading-in wires are adapted to be attached. The lower member is formed with a central aperture 10 in which is contained a threaded sleeve 11 which forms the outer lamp-terminal-engaging contact. The sleeve is secured to the member 5 by means of suitable screws 12 which pass therethrough and which engage in the locking member 13. The threaded sleeve 11 is provided with a contact member 14 which makes connection between a pair of spring fingers 15 electrically connected with the binding terminal 8.

Mounted within the recess 16 in the top of the member 5 is a locking plate 13 which lies within the recess 16 and preferably takes the form of an elongated ring having, on its inner periphery, downwardly extending spurs 17. The ring is elongated so that sufficient space may be provided, as at 18, for the passage therethrough of the contact member 14, and is provided at its outer edge with screw threaded recesses adapted to receive the screws 12. The plate is positioned above the top of the threaded sleeve 11 and the downwardly extending spurs project downward within the threaded shell; the spurs preferably being in the form of teeth having their straight sides in a direction to engage the lamp when it is rotated to remove the same from the socket. This plate is held in position by the threaded screws 12, and is drawn down in clamping and locking position by these screws. These screws, at their lower ends, have triangular shaped heads 19 and are countersunk in the recess 20 so that they are not easily accessible, especially when the lamp is in position and when the shade 3 is mounted on the socket.

In operation, the screws 12 are loosened, thereby loosening the clamping plate. The lamp is screwed into position in the usual manner and as the top of its threaded shell engages the spurs, due to the fact that the spurs slope on one side, the plate will be forced upward, it not being held in clamping position by the screws 12. After the lamp has been screwed in so that its center contact may form engagement with the center contact of the socket, the screws 12 are tightened, thereby drawing the locking plate 13 down and forcing the ends of the spurs into the top of the threaded shell on the lamp. Due to the fact that the straightened side of the spurs is in such relation that a backward movement or a movement of the lamp to remove the same causes the spurs

to bite into the threaded shell, it is impossible to remove the lamp until the locking plate has been loosened.

For the purpose of operating the screws 12 with the lamp in position and with the shade in position, I provide a key which comprises an insulating handle 20 having secured thereto a flexible portion 21, which, at its outer end carries a socket 22, triangular in shape to receive the ends 19 of the screws 12. This key is sufficiently long to extend up on the side of the lamp and between the lamp and the shade, the flexible portion 21 permitting the key to be bent around the lamp in event the lamp is so large that there is not a great deal of space left between the sides of the lamp and the shade.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

1. In a lamp lock for sockets, the combination with a lamp socket, of a movable spur-carrying member in the inner part of said socket having a plurality of outwardly extending spurs, on opposite sides of the axis of said socket and means operable from the exterior of the socket to move said member outward to force said spurs into the base of said lamp and hold the spur in locking position.

2. In a lamp lock, the combination with a lamp socket, of a spur-carrying member mounted in the inner part of the socket having a central opening to permit the center contact of the lamp to project therethrough and engage the center contact of the socket, an outwardly extending spur on said member, and means operable from the exterior of the socket for operating said member to force the spur into the top of the base of the lamp.

3. In a lamp lock, the combination with a lamp socket, of a spur-carrying member mounted in the inner part of the socket having a central opening to permit the center contact of the lamp to project therethrough and engage the center contact of the socket, an outwardly extending spur on said member, and means operable from the exterior of the socket only by a specially formed key for operating said member to force the spur into engagement with the base of the lamp.

4. In a lamp lock, the combination with a lamp socket, of a movable spur-carrying member in the inner part of said socket having an outwardly extending spur, and means operable from the outer side of the socket for moving said member to force said spur into the base of the lamp and hold said spur in locking position.

5. In a lamp lock, the combination with a lamp socket, of a spur-carrying member mounted in the inner part of said socket having an outwardly extending spur, a shade secured over said socket, means operable from the outer side of the socket for operating said spur-carrying member to force the spur thereof into the base of the lamp, said means including a screw located at one side of the axis of said socket, and an operating member having a flexible shaft for operating said means insertible between the lamp and said shade.

6. In a lamp lock, the combination with an insulating base, of a center contact and threaded shell contact mounted in said base, a spur-carrying plate mounted in said base above said threaded shell contact, and screws extending through said base from the outer part thereof engaging said plate, and adapted to operate said plate to force the spur thereof into locking engagement with the lamp base.

7. In a lamp lock, the combination with an insulating base having a threaded shell and center contact, of a spur-carrying plate mounted in said base farther in than said threaded shell and having a center opening to permit the center contact of the lamp to engage the center contact of the socket, countersunk screws extending through the base from the outer side for engaging said spur-carrying plate, and adapted to operate the same to force the spur into engagement with the base, said screws having specially formed heads to be engaged by a specially formed operating instrument.

8. In a lamp lock, the combination with a lamp socket, of a movable spur-carrying member in the inner part of said socket having an outwardly extending spur, and means operable from the outer side of the socket for moving said member to force said spur into the base of the lamp and hold said spur in locking position, said means including a screw located at one side of the axis of said socket.

In witness whereof, we have hereunto subscribed our names in the presence of two witnesses.

REUBEN B. BENJAMIN.
JAMES IMBODEN.

Witnesses:
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