C. D. PLATT.

ADJUSTABLE CASING FOR ELECTRIC LAMP SOCKETS.

APPLICATION FILED JAN. 24, 1910.

954,695. Patented Apr. 12, 1910.

Fig. 1.

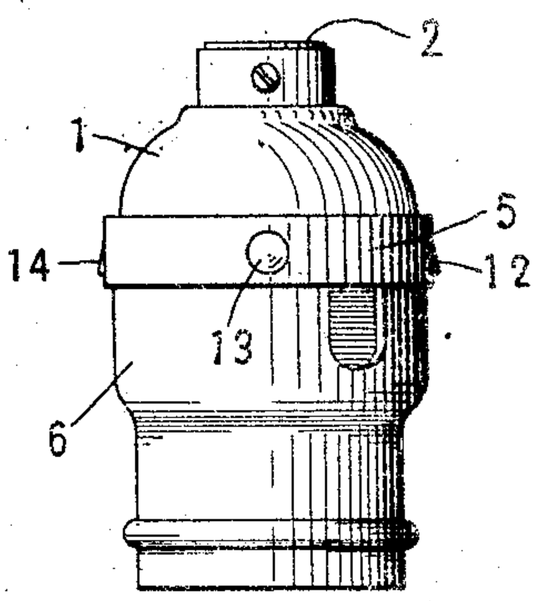


Fig. 2.

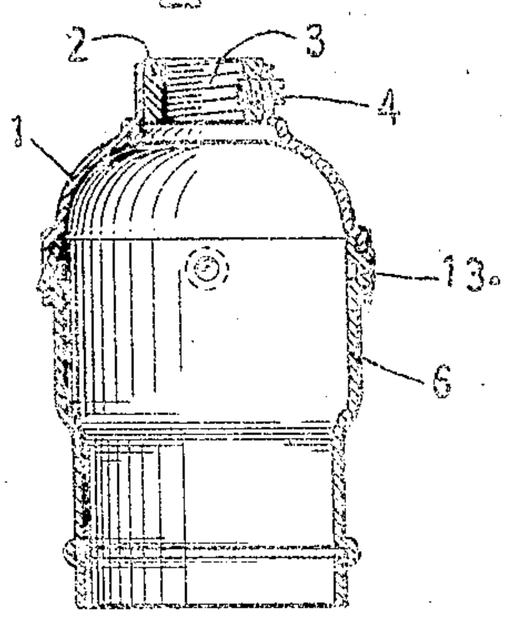


Fig. 3.

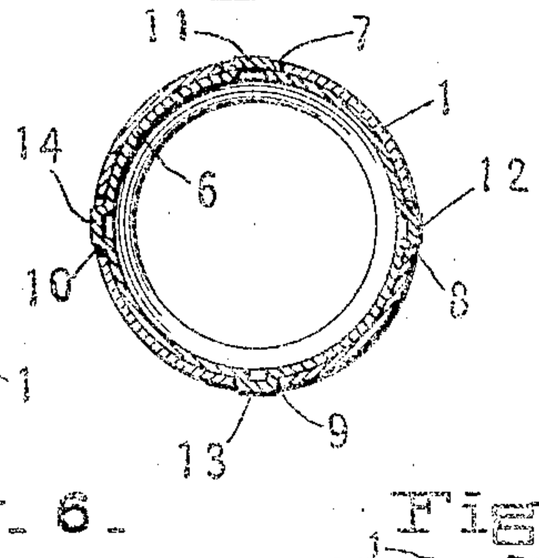


Fig. 4.

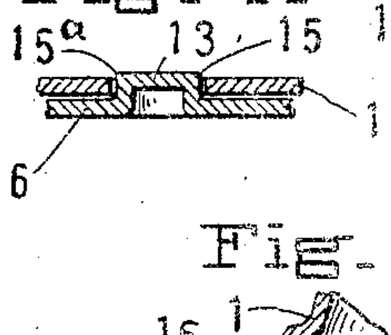


Fig. 5.

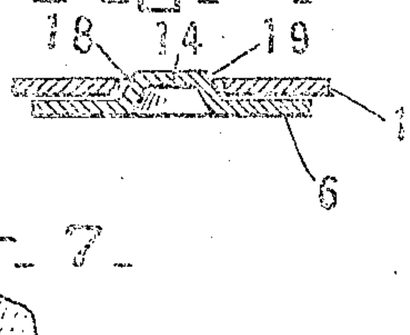


Fig. 6.

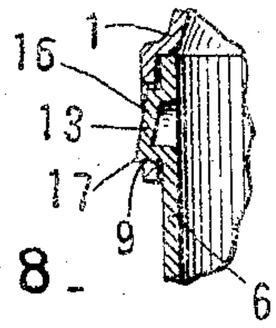


Fig. 7.

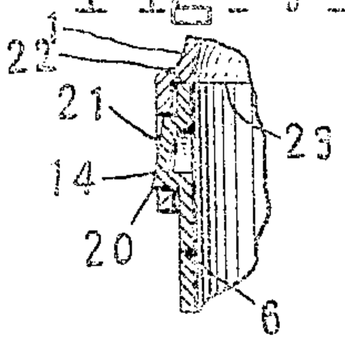


Fig. 8.

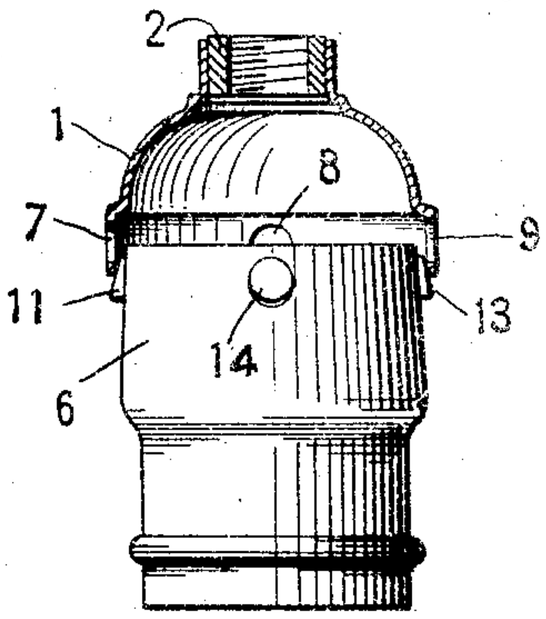
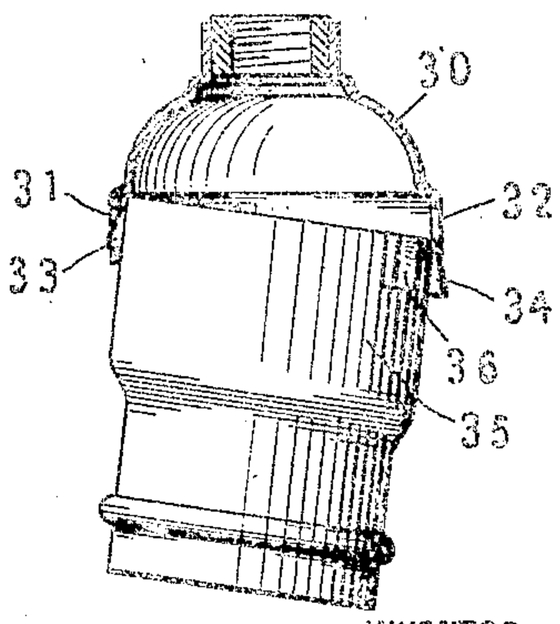


Fig. 9.



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ADJUSTABLE CASING FOR ELECTRIC-LAMP SOCKETS.

954,695. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed January 24, 1910. Serial No. 539,691.

To all whom it may concern:

Be it known that I, CLARENCE D. PLATT, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Adjustable Casings for Electric-Lamp Sockets, of which the following is a full, clear, and exact description, whereby any one skilled in the art may make and use the same.

The invention relates to a shell or closure for incasing the several connector parts of a lamp socket and pertains more particularly to a two-part shell or casing to be used for inclosing the several parts of an electric incandescent lamp.

The object of the invention is to provide a very strong and simple arrangement for interlocking the shell part and the cap part of a casing through a positive locking means which will hold the parts together throughout their entire peripheral contacting surfaces.

A further object is to provide a locking means which will permit insertion or removal of the shell part with reference to the cap, without requiring a tilting motion of the shell.

A still further object is to provide for positive locking of the shell and cap against relative rotary and longitudinal movements.

Referring to the drawings:—Figure 1 is a view in elevation of the shell including the cap. Fig. 2 is a vertical sectional view. Fig. 3 is a cross-sectional view through the locking lugs. Fig. 4 is a cross-sectional view in much enlarged scale through the main lug, which prevents relative rotation of the parts on a horizontal plane. Fig. 5 is a cross-sectional view similar to Fig. 4 through one of the longitudinal locking lugs. Fig. 6 is a vertical section through the main locking lug illustrated in Fig. 4 and taken at right angles to the section of said figure. Fig. 7 is a vertical section through the locking lugs illustrated in Fig. 5, taken at right angles to the section of said figure. Fig. 8 illustrates the method of removing the shell from the cap by a simple longitudinal movement of the parts as permitted by the invention. Fig. 9 illustrates the tilting movement necessary for removal of the shell from the cap commonly used in devices of the art.

In devices of the character herein described, it has been common practice to utilize lugs, bayonet joints, perforations and other means for interlocking the cap-part and the shell-part of a socket closure, but in said devices, so far as known, there have been objections.

Generally speaking, means have been provided for preventing rotary and longitudinal movement of the parts after they were interlocked and various means have been employed for effecting such an interlocking engagement of the parts. In such devices, so far as known, certain disadvantages have been inherent to the structures. For instance, either the cap or shell-part has been greatly weakened by cutting away portions thereof to permit longitudinal engagement of the parts and prevent rotary movements thereof. Again, bayonet joint engagements have been employed wherein either the cap or shell-part has been cut away greatly weakening it in order to permit the initial sliding engagement and rotary movement to secure interlocking of the cap and shell. Even in such devices as above recited, wherein the cap or shell-part has been weakened by cutting away the material, it has been necessary to utilize a form of engaging parts, which though telescopically engaging each other upon insertion of one part with reference to the other, make it necessary, in disengagement of the parts, to use a hinge-action such as illustrated in Fig. 9 of the drawings herein shown.

From the above, it will be seen that even disregarding the weakening of the parts of the structure by cutting away the metal, there is a disadvantage in having a device in which the parts must be separated by a hinge-action. Where sockets are employed in a receptacle or shell which is necessarily made to conform closely to the outlines of the socket and cover, it is very difficult to adjust the shell part to the cap-part of the socket, if said parts are to be separated by a hinge-action. In fact, it is practically impossible in many cases to separate the shell from the cap, as the tilting movement of the shell required for releasing the parts is hampered by the "husk" or other embellishing fixture surrounding the socket.

The socket casings are ordinarily made of very thin spun metal and if this metal is weakened by cutting away portions thereof as in the case of bayonet joints or other en-

gaging parts wherein either the cap or shell, at its peripheral edges is opened and made expansible or contractible, the security of the lock between the parts is greatly endangered. Furthermore, it is desirable to have the shell and cap parts interlocked at various positions and this cannot be accomplished with the various forms of bayonet locks wherein the bayonet joints prevent merely longitudinal movement of the parts, while a main locking lug prevents relative rotation thereof.

It is one of the principal objects of the present invention to overcome these various disadvantages and provide a very simple locking means which will positively lock the shell and cap-part together, both against longitudinal and relative rotary movements and at the same time, permit disengagement of the parts by a slight rotary movement and a direct longitudinal movement with absolutely no hinge-action between the interlocking members.

In the accompanying drawings, the numeral 1, denotes the cap-portion of the casing which has the usual connecting socket 2, which, as indicated in Fig. 2, is screw-threaded as at 3, to be applied to any given fixture, and has a locking screw 4, by which it may be definitely secured to the fixture. The cap 1, has a dependent skirt or annular ring 5, slightly larger in diameter than the main casing 6, and adapted to receive said casing telescopically. The annular ring or skirt 5, is perforated as shown in Fig. 3 at equi-distant points 7, 8, 9, 10, and the shell 6, is provided with projecting lugs or locking members 11, 12, 13, 14, adapted to engage the perforations 7 to 10, inclusive.

One of the locking lugs or members as, for instance, 13, illustrated in section in Figs. 4 and 6, has abrupt locking shoulders 14, 15, at either side thereof to prevent relative rotation of the shell 6 and cap 1, while at its upper edge, as illustrated particularly in Fig. 6, it is beveled as at 16, in order to permit insertion of the shell-member 6, telescopically with reference to the cap 1. This lug, upon its lower side as at 17, has a sharp shoulder engaging the corresponding perforation 9, of the cap 1, which positively locks the adjacent portions of the shell and cap against longitudinal separation.

The locking lugs 11, 12, and 14, are identical in form and as shown in horizontal section in Fig. 5, are beveled upon both sides as at 18, 19, while the lower edge thereof, as illustrated at 20, in Fig. 7, is abrupt and prevents longitudinal separation of the cap and shell. These lugs, as in the case of the lug 13, are beveled as at 21, to permit insertion of the shell telescopically with reference to the cap.

The cap is provided with an abrupt-shoulder 22, where the annular ring 5, is formed and with the arrangement of locking lugs herein described, it is possible to have the upper edge 23, of the shell come into direct and intimate seating contact with the shoulder 22, when the locking lugs are fully engaged. Of course, the shell 6, is provided with the ordinary socket key opening 24, and this permits a certain compression of the casing or shell 6, sufficient to depress the lug 13, and disengage it from the perforation 9. Thereupon, a slight rotary movement of the shell 6, will compress the edges of said shell and through the beveled surfaces 18, 19, of the several locking lugs 12, 11, 14, will disengage said lugs from the corresponding perforations 8, 7, 10. Thereupon a direct longitudinal movement of the shell 6, with reference to the cap 1, will separate said shell and cap.

It will be observed that the perforations in the cap are substantially equi-distant and the corresponding locking lugs, being of the same general conformation and also equi-distant, may engage either of the perforations of the cap. It is therefore possible to insert and rotate the shell 6, within the annular ring 5, of the cap 1, and secure an adjustment for the locking key or key-opening 24, in one of several positions.

There is no weakening of the metal either in the annular ring of the cap or the edge of the casing by cutting away any of the substances thereof. The locking lugs 10, 11, 12 and 13 are formed by pressing out the metal of the shell and the perforations 7, 8, 9, 10, are formed directly through the body of the material of the annular ring of the cap.

In Fig. 8, the method of applying the shell to the cap is illustrated and this constitutes merely a direct longitudinal movement of the shell which telescopes within the ring of the cap and by a partail rotation securely and positively locks the cap and shell against either rotary or longitudinal movement until the shell 6, has been compressed adjacent to its locking lug 13, sufficiently to permit relative rotation of the parts.

In Fig. 9, there is illustrated the method of applying and removing the shell from the cap where a hinge-motion is required. In said figure, 30, represents the cap having longitudinal locking openings 31, 32, with corresponding locking lugs 33, 34, upon the shell 35. To prevent relative rotation of the cap 30, and shell 35, a locking lug 36, is illustrated on the shell, which may be inserted in a slot cut through the peripheral edge of the cap and not specifically shown herein. This is only one of the common forms of interlocking arrangements between the cap and shell-part of a socket casing, but to disengage the casing from the cap, the lug 34, must be depressed and disen-

gaged from the locking opening 32, whereupon the casing 35, may be tilted until the lug 33, is disengaged from the locking opening 31. In such an instance, the flange of the cap must be weakened by cutting away material to receive the lug 36, which prevents rotary movement of the parts and in such a case, the parts can be assembled in only one position.

In the device hereinabove described, any one of the locking perforations will coöperate with the locking lugs to firmly engage the cap and shell-parts and this, without any cutting away of the metal of said parts except, of course, where the perforations occur. There is solid metal to prevent removal of the shell from the cap and there is solid metal to prevent relative rotation of the parts. As illustrated herein, the perforations in the cap and the corresponding locking lugs are indicated as four in number. It is obvious, however, that the number and position of the perforations and lugs might be varied to suit the exigencies of any particular case. However, they should be of such a number as to firmly lock the shell-part and the cap-part at various arcs of the meeting peripheries so that the structure is substantially a firm and solid structure until the main locking lug 13, is removed from its locking perforation.

It is apparent that a reversal of parts as to the locking lugs and perforations might be employed. In lieu of placing the lugs upon the shell, said lugs might be pressed inward from the annular ring 5, of the cap and the corresponding perforations might be formed in the shell 6. The preferred form, however, is to place the perforations and lugs, as above described, in connection with Figs. 1 to 8, of the drawings, inasmuch as the locking lugs are always within view of the user and make it apparent how the device may be assembled or separated.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A casing for electric lamp sockets comprising a cap and shell member, one of said members provided with a plurality of perforations, the other of said parts provided with a corresponding number of interlocking lug members, part of said members adapted for disengagement from the cap upon partial relative rotation of the cap and shell, and locking means adapted for disengagement with the locking perforations only upon compression of said shell, all of said locking lugs coöperating to lock the shell and cap against longitudinal movement.

2. A casing for electric lamp sockets comprising a shell and cap member, perforations formed in one of said members coöperating locking lugs in the other of said members, said lugs beveled to permit telescopic engagement of the cap and shell, and a positive locking lug to prevent relative rotation of the parts, though permitting direct longitudinal separation thereof when disengaged from its coöperating perforation.

3. A casing for electric lamp sockets comprising a cap and shell-part, one of said parts provided with equidistant perforations of identical form, the other of said parts provided with locking lugs corresponding in number to the perforations, beveled surfaces on all of said lugs to permit telescopic engagement of the cap and shell, one of said lugs provided with shoulders to prevent relative rotation of the parts and longitudinal separation thereof, the remaining lugs provided with locking shoulders to prevent longitudinal separation of the parts, and beveled surfaces to permit relative rotation of the parts when the first named locking lug is disengaged from its locking opening, and means whereby one of the parts may be compressed with reference to the other to disengage the main locking lug.

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