C. D. PLATT.

CASING FOR INCANDESCENT LAMP SOCKETS.

APPLICATION FILED JAN. 24, 1910.

978,483. Patented Dec. 13, 1910.

Fig. 1.

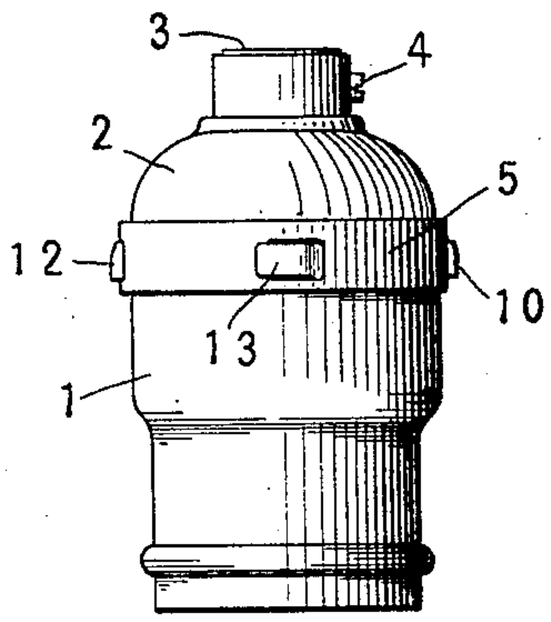


Fig. 2.

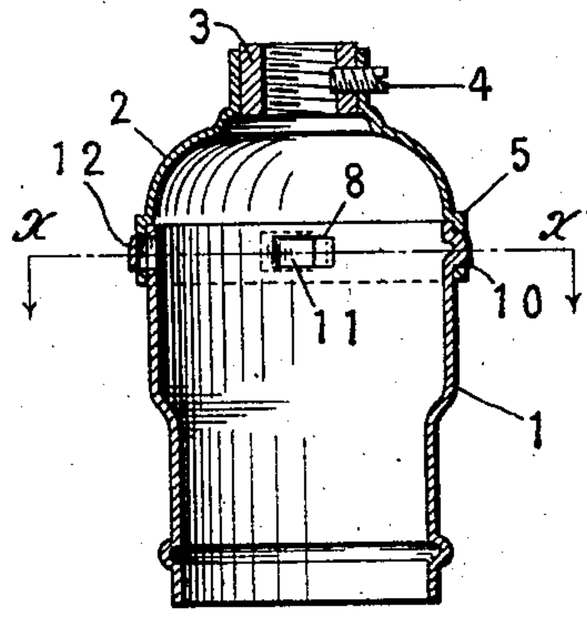


Fig. 3.

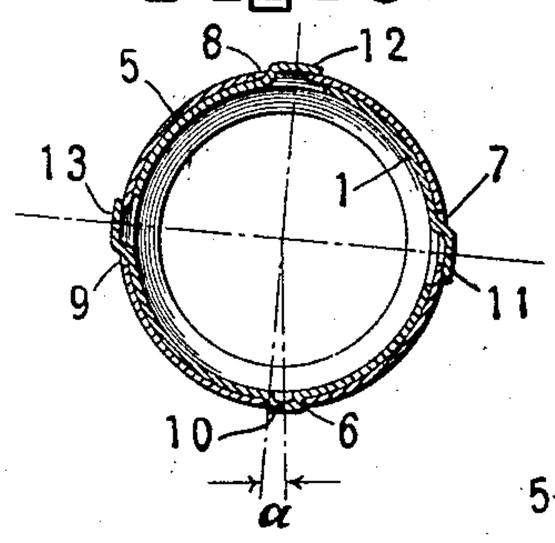


Fig. 5.

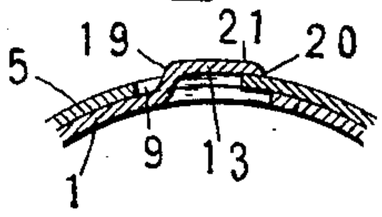


Fig. 6.

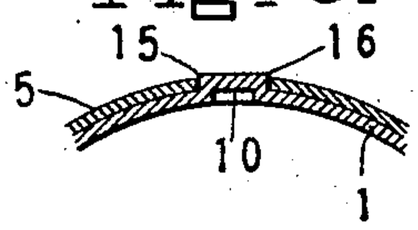


Fig. 4.

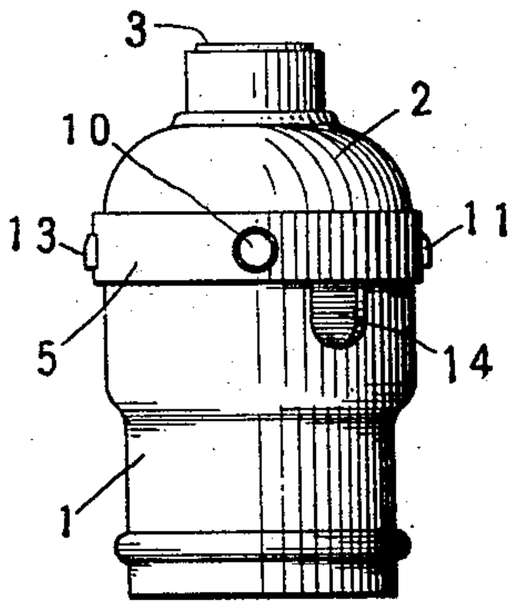


Fig. 7.

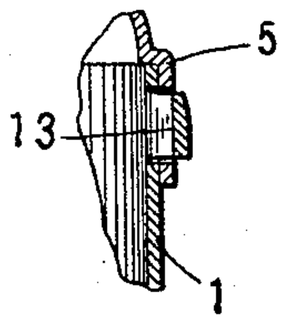
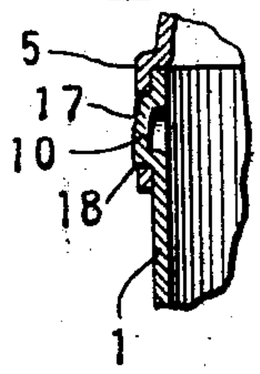


Fig. 8.



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CASING FOR INCANDESCENT-LAMP SOCKETS.

978,483. Specification of Letters Patent. Patented Dec. 13, 1910.

Application filed January 24, 1910. Serial No. 539,359.

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 Casings for Incandescent-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 primarily to incandescent lamp sockets and more particularly to the casings thereof. These ordinarily comprise a cap portion and a shell or body portion, which are adjustably locked one with reference to the other and when in place, inclose the several parts which form the connection between the main line circuit and the lamp or other device to be used in connection therewith.

The object of the invention is to provide a very simple interlocking arrangement of parts between the cap and shell of a socket closure which will preclude the possibility of accidental disarrangement of the casing as a whole.

A further object is to provide a direct and positive means for locking the two parts together both against relative rotation and longitudinal movement with a locking arrangement which will interlock firmly and forcibly and necessitate a definite operation for the separation of the parts.

A still further object is to provide a locking device which will prevent separation of the parts even though the cap and shell are distorted as to their normal diameters.

Referring to the drawings:—Figure 1 is a view in elevation of a socket shell and Fig. 2 is a cross-sectional view through the main locking lug in vertical section. Fig. 3 is a detail cross-sectional view on the line *x*—*x* of Fig. 2, illustrating the angular position of the several locking members. Fig. 4 is a view in elevation of the shell and cap illustrating the position of the main locking lug. Fig. 5 is a detail sectional view in a horizontal plane through one of the auxiliary locking members. Fig. 6 is a horizontal section through the main locking lug. Fig. 7 is a vertical section through the auxiliary locking member illustrated in Fig. 5, said section being taken at right angles to that illustrated in said figure. Fig. 8 is a sectional view through the main locking lug shown in Fig. 6 and at right angles to the section shown in Fig. 6.

In devices of the character herein described, it has been common practice to press out lugs and cooöperating locking openings of various forms. Such locking devices have usually consisted of bayonet joints or interlocking lugs and openings which materially weaken the peripheral edges of the cap and shell to be locked together.

In the present invention, there is a main locking lug to prevent relative rotation of the cap and shell member and a series of auxiliary locking members which not only project through perforations in the cap but overlie and firmly grasp the material of the cap beyond the perforations. These perforations in the cap and the main locking lug, as well as the auxiliary locking members do not materially weaken the joining parts inasmuch as the peripheral edges of both the cap and the shell are maintained intact and are only compressible at a point adjacent the main locking lug, where the shell is cut away to form the key-opening.

In the accompanying drawings the numeral 1, denotes the main shell which telescopes with reference to a cap 2. This cap is, of course, provided with a screw-threaded nipple 3, and locking screw 4, by which it may be secured to any desired fixture.

The cap 2, has a dependent annular ring 5, provided with perforations 6, 7, 8, 9, through which may project locking members 10, 11, 12, 13.

The perforations are, of course, punched out of the material of the ring or dependent flange of the cap 2, and the locking members are also pressed out of the material of the shell 1, in such relation that they will interengage and lock with reference to the cap 2, as hereinafter defined.

The main locking lug 10, is arranged adjacent to the key-opening 14, and thereby the shell 1, may be collapsed to a sufficient extent to release the lug 10, from its locking perforation 6. This will in no wise effect the interlocking of the auxiliary locking members 11, 12, 13, until the shell 1, is partially rotated to release said members from the locking perforations of the cap.

The lug 10, is of somewhat peculiar form having abrupt shoulders 15, 16, through its horizontal section, as illustrated in Fig. 6,

and a beveled surface 17, at its upper side with an abrupt locking shoulder 18, at its lower side, as illustrated in Fig. 8. Obviously, this lug will permit insertion of the shell 1, telescopically with reference to the cap 2, owing to the beveled surface 17, but will prevent movement of the parts not only in a relative rotary sense but will preclude the possibility of separation longitudinally.

The auxiliary locking lugs 11, 12, 13, are of somewhat peculiar form. They are pressed out of the material of the shell and are formed at one side as at 19, while they are sheared through at the opposite end or side as at 20, so that the end or nose 21, of each of said auxiliary lugs may pass over the outer surface of the dependent ring 5, of the cap 2, at one side of the coöperating perforation in said cap.

The formed portion 19, is so beveled that a relative rotary movement of the shell with reference to the cap in one direction will disengage the auxiliary locking lugs from their perforations and the upper sides of these lugs are beveled as in Fig. 7, so that the two parts may be pressed together telescopically, causing a compression of the shell 1, sufficient to permit perfect engagement of the main locking lug and auxiliary lugs when the shell has been introduced within the cap and partially rotated.

As illustrated in Fig. 3, the main locking lug is located a few degrees away from the common axes of the auxiliary locking lugs and obviously, with this arrangement, when the shell is telescopically inserted with reference to the cap, a slight rotary movement will cause the auxiliary locking lugs to extend through the locking perforations of the cap and fully engage the outer edges of said perforations before the main locking lug 10, engages its perforation. Thereupon, the parts are firmly and positively locked together and can only be disengaged by a compression of the casing 1 sufficient to release the main locking lug 10, and a partial rotation of the shell sufficient to disengage the projecting edges of the auxiliary lugs from the casing. In fact, a sufficient rotation must be given to the shell to draw the auxiliary locking members 11, 12, 13, fully within the ring of the cap 2. With the arrangement of locking devices hereinabove described, it is apparent that the main locking lug 10, holds the shell and cap against relative rotation as well as against longitudinal separation. The auxiliary locking lugs 11, 12, and 13, hold the shell and cap against longitudinal separation and through their over-lapping engagement with the surface of the cap adjacent to the locking perforations thereof, prevent such a collapse or compression of the shell as to permit disengagement of any of the locking members.

It appears, from the above, that the locking members not only prevent relative rotary and longitudinal movement of the shell and cap, but also prevent disengagement of the locking members through compression of the shell 1, or expansion of the cap 2. The device, therefore, provides for a positive lock against all the contingencies, unless the main locking lug is depressed and the shell 1, rotated in the specific manner as intended.

Obviously, the form or shape of the perforations and coöperating locking members is quite immaterial, although as herein shown, the main locking member 10, is of cylindrical form, while the auxiliary locking members are of oblong form. It is apparent that the shape of the interlocking openings and locking members might be varied so long as the main locking member holds the shell and cap positively against rotary and longitudinal movement, while the auxiliary locking members prevent longitudinal or collapsible movements of the parts.

It is apparent that the interlocking parts might be reversed as regards projections and perforations. For instance, the perforations might be formed in the shell and the locking lugs might be pressed out of the material of the cap and still contain all of the features of advantage enumerated. Furthermore all of the locking openings and lugs might be of the same general contour so long as the main locking lug is provided with abrupt shoulders to prevent relative rotation of the parts, and an abrupt locking shoulder to prevent longitudinal separation thereof until it has been positively disengaged from the locking opening. With such an arrangement, it is apparent that the locking lug might engage any of the perforations of the cap.

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

1. A casing for incandescent lamp sockets comprising a cap and a shell-member, one of said members having locking perforations punched from the body of the material leaving an unbroken peripheral edge, the other of said members having a series of locking lugs coöperating therewith and beveled to permit longitudinal engagement of the cap and shell-member, said lugs likewise formed from the body of the material leaving an unbroken peripheral edge, with interlocking means appurtenant to said lugs for positively engaging opposite sides of the member bearing the locking openings, whereby said members are interengaged against compressible or expansible action, and a locking member for preventing relative rotation of the parts.

2. A casing for incandescent lamp sockets comprising a cap and a shell-member, respective series of locking perforations and

locking lugs coöperating with the perforations and formed from the body of the material of the cap and shell, leaving unbroken peripheral edges, said lugs having bevels to permit longitudinal engagement of the parts, interlocking means appurtenant to the lugs for positively engaging opposite sides of the member bearing the locking openings whereby said cap and shell-members may be separated only upon partial rotation, and means for preventing rotation of the parts.

3. A casing for incandescent lamp sockets comprising a cap and a shell member, locking perforations formed in one of said members above its peripheral edge leaving said edge unbroken, a series of locking members coöperating therewith and formed in the cooperating member within its peripheral edge leaving an unbroken peripheral edge, abrupt shoulders upon one of said members to prevent relative rotation of the parts and longitudinal separation thereof, shoulders upon the auxiliary locking lugs to prevent longitudinal separation of the parts, said lugs provided with over-lapping tongues engaging and holding the cap and shell-part against relative compression or expansion.

4. A casing for incandescent lamp sockets comprising a cap and a shell member, one of said members provided with equi-distant locking perforations, the other of said members provided with locking lugs, a series of said lugs being equi-distantly spaced one from the other, a main locking lug unequally spaced with reference to said equi-distant lugs and disposed to engage one of the equi-distant locking perforations after full engagement of the equi-distant locking lugs and shoulders appurtenant to the main locking lug to prevent relative rotation of the parts.

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