

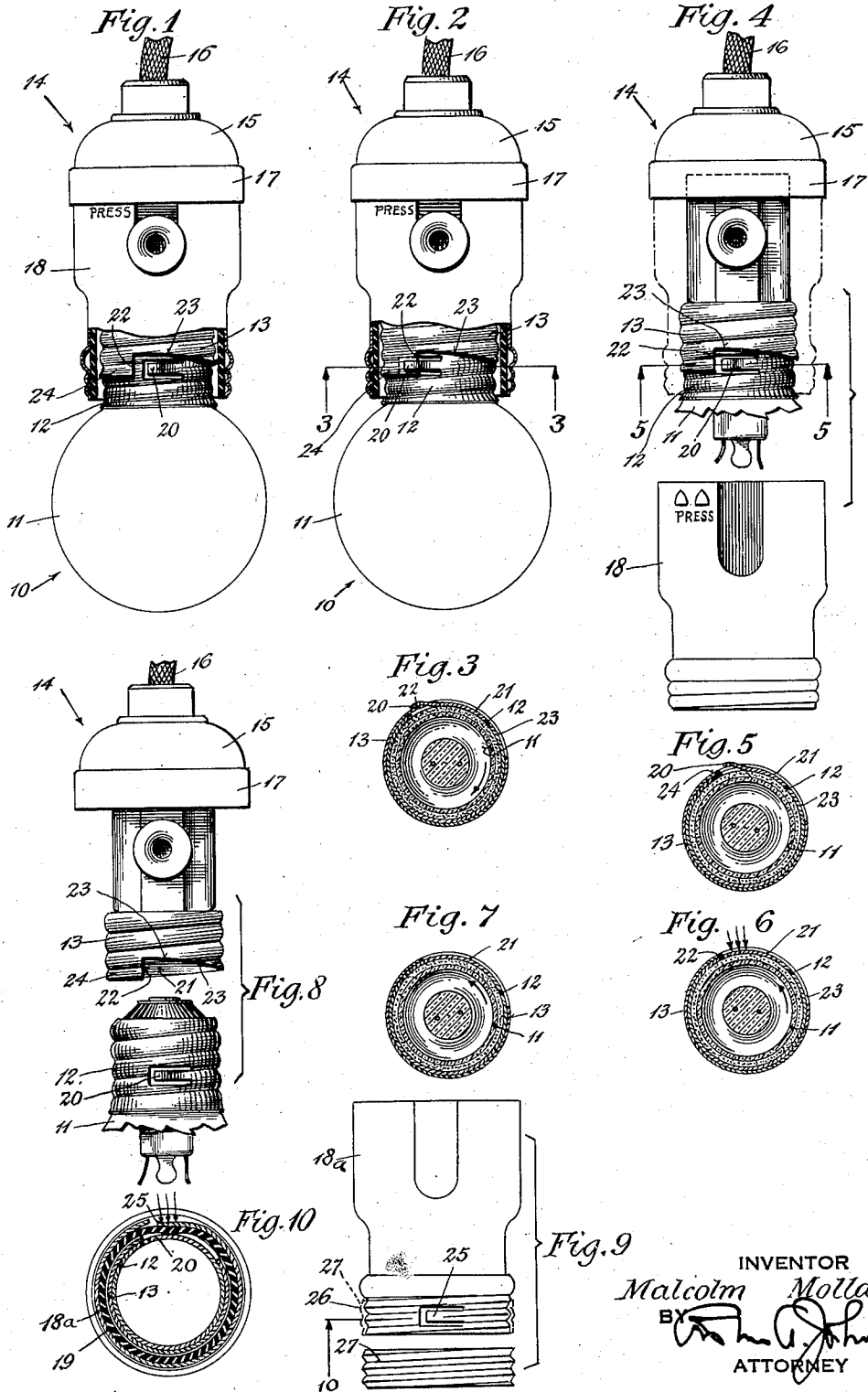
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ANTITHEFT BULB AND SOCKET

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ANTITHEFT BULB AND SOCKET

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9 Claims. (Cl. 176—31)

This invention relates to incandescent electric lamps and sockets, and more particularly to means for locking the electric lamps within the sockets.

It is an object of the present invention to provide an anti-theft means for an electric lamp and socket which is absolutely theft-proof so that an excess of force applied in attempting to unscrew the lamp will not render the anti-theft means inoperative, but said means will withstand a force sufficient to cause breakage of the glass bulb of the lamp, or cause failure of the cement holding the bulb in the lamp base.

Thus, according to the preferred embodiment of the invention, the glass of the electric lamp positively must be broken and the lamp destroyed before it can be removed from the socket.

It is another object of the present invention to provide a fool-proof anti-theft means as above described, which is extremely simple in construction, and which does not require heavy or substantial parts.

Another object of the invention is to provide an electric socket, in an anti-theft device of the above character, such that should it be desired not to use the locking means, the socket may be used with an ordinary electric lamp in the usual manner, without any change being made in the parts thereof.

Yet another object of the present invention is to provide an anti-theft electric lamp and socket wherein the anti-theft means may be rendered inoperative before insertion of the lamp in the socket by a simple adjustment of the lamp base.

These and other objects are attained in the preferred embodiment of the invention by providing, in the electric lamp base, a resilient tongue lanced from the material of the base and biased outwardly, and by providing, in the screw-threaded inner shell of the lamp socket, a notched portion forming a lip adapted to coact with the tongue of the lamp base so that attempted unscrewing of the lamp will cause interlocking of the lip and tongue. The notched portion of the socket shell will not interfere in any way with unscrewing of an ordinary lamp from the socket, however, and if it is desired to render the anti-theft means inoperative when using the lamp and socket of this invention, it is merely necessary to bend inwardly the resilient outwardly biased tongue of the lamp base so that it will not engage with the slotted portion of the socket shell.

Another object of the present invention is to provide an anti-theft electric lamp and socket wherein the lamp is releasable for unscrewing

from the socket by manually operable means, yet wherein, should this means not be properly operated, the lamp positively can not be removed without destroying same.

Yet another object of the present invention is to provide, in such a manually releasable locking lamp and socket, means for concealing the manually operable parts so that a person unfamiliar with the mechanism would have difficulty in discovering the proper method of removing the lamp.

These objects are attained in a modified form of the invention, wherein the outer metal shell of the locking socket is provided with a portion adapted to be depressed by hand, and which portion transmits said pressure to the resilient tongue of the lamp base so as to depress same for releasing the lamp, and wherein said depressible portion of the socket shell is located so that a ring-like member may be secured thereover without unduly altering the appearance of the socket to cause suspicion.

Other features and advantages will hereinafter appear.

In the accompanying drawing:

Figure 1 is an elevation of the present improved electric lamp and socket in normal position, a portion of the socket being cut away and shown in section to reveal the slotted inner shell thereof, and the lanced base of the lamp.

Fig. 2 is a view similar to Fig. 1, but showing the lamp as having been unscrewed a slight extent, as when an attempt is made at removal.

Fig. 3 is a section taken on the line 3—3 of Fig. 2, but omitting the outer shell and insulating sleeve of the socket.

Fig. 4 is an elevation of the improved lamp and socket, but showing the glass of the lamp as having been broken, and showing the outer shell of the socket as having been slipped over the broken lamp and removed.

Fig. 5 is a section taken on the line 5—5 of Fig. 4, with the outer shell and insulating sleeve.

Fig. 6 is a section similar to that of Fig. 5, but showing the resilient outwardly biased tongue of the lamp base as depressed (see arrows) so that said base can be removed from the socket shell.

Fig. 7 is a similar sectional view, but during removal of the lamp base, showing the resilient tongue as having moved past the slotted portion of the shell.

Fig. 8 is an elevation showing the base of the broken lamp removed from the socket.

Fig. 9 is a modified form of the invention, showing the outer shell as having a resilient tongue to be depressed for releasing the lamp, and show-

ing a ring to be screwed on the shell for concealing the tongue.

Fig. 10 is a section taken on the line 10—10 of Fig. 9.

5 The present preferred embodiment of the invention is shown in Fig. 1 as applied to an incandescent electric lamp carried in a socket having the usual type of metal shell or cap. As shown, the lamp 10 includes a glass bulb 11 and a threaded metal base 12 screwed into an inner threaded metal shell 13 of the electric socket 14. The socket 14 is of the pull-chain type having a metal cap 15 through a bushing of which the electric cord 16 passes, and said cap also having a clasp rim 17. The cap 15 is connected to an outer metal shell 18 of the socket, holding the shell by the usual clasp means, said shell having an insulating lining or sleeve 19 for preventing electrical contact to the inner threaded shell 13.

20 According to this preferred embodiment of the invention, the base 12 of the lamp 10 and the inner threaded shell 13 of the socket 14 are provided with improved means for preventing removal of the lamp from the socket once the lamp has been fully inserted therein. As shown in the drawing, the metal base 12 has lanced therefrom a resilient tongue 20 which extends in a peripheral direction opposite to the direction of turning when the lamp is screwed into the socket, and said tongue is biased outwardly as shown in Fig. 5. Preferably the base 12 is fabricated on a spring metal so that the tongue 20 retains its resiliency.

35 For the purpose of engaging the tongue 20, the threaded shell 13 of the socket is provided with a cut or slot 21, see Fig. 7, having a locking edge 22. Preferably the remaining edge 23 of the cut 21 is slanting or helical, although other shapes may be employed if desired.

40 Thus when the lamp 10 is inserted fully into the socket 14 the tongue 20 will pass under, being depressed by, the locking portion or lip 24 of the shell 13, and said tongue after passing said lip will spring outwardly in reaching the position shown in Fig. 1. The tongue 20 is disposed on the base 12 of the bulb, and the slot 21 and lip 24 are located in the shell 13 of the socket in such position that when the lamp 10 is fully inserted in said socket the tongue 20 will have just passed the lip 24 of the shell (Fig. 1). This is the normal position of the bulb and socket during use.

50 If an attempt should be made to surreptitiously remove the lamp 10 from the socket 14 by unscrewing, the tongue 20 will overlap the lip 24 of the shell 13, as shown in Figs. 2 and 3, and, the more forceful the attempt to unscrew the bulb, the tighter will the locking action of the tongue 20 become.

As seen in Figs. 1 and 2, the tongue 20 of the lamp base and the slot 21 in the inner shell 13 are disposed substantially inwardly from the lower edge or rim of the outer metal shell 18, so that all attempts at releasing the bulb by depressing the tongue 20, as by a flexible blade or by any other method, are positively defeated. There is no room, in the actual device, for insertion of a blade to accomplish removal of the bulb by depressing the tongue, nor could any injury be done to the interlocking parts in this manner.

70 Also, although the outer shell 18 could be removed from the cap 15, as when disassembling the socket, there would still be no opportunity to release the interlocking elements which prevent unscrewing of the lamp. Of course, as is well understood, such a procedure of disassembling

the socket for an illegitimate purpose requiring manipulation and trial processes involves danger of electric shock to the person attempting this, and such person would therefore hesitate before pursuing this unsafe procedure.

5 An important feature of the invention to be noted is that the lip 24 of the shell 13 is gripped between the tongue 20 and the base 12 of the lamp in an interlocking manner such that there is positively prevented any possibility of slipping 10 of the engaging parts, or failure of said parts to inadequately prevent removal of the bulb. The entire organization of elements is of a nature that will withstand stresses far in excess of those which can cause destruction of the glass 15 bulb 11 of the lamp, or failure of the cement holding said bulb in the base 12, and therefore the present improved locking means positively prevents removal of the lamp unless the latter is first destroyed, in which case of course it is not again 20 useable.

When the lamp has served its useful life, so that it must be replaced by a new lamp, it is legitimately removed as shown in Figs. 4 through 8.

25 First, a rag or bag or other suitable wrapper should be wrapped around the glass bulb 11, and the latter crushed as by a blow from a hammer or other implement, whereupon the broken glass is suitably disposed of. Then the outer metal 30 shell 18 is released from the cap 15 in the conventional manner by pressing as indicated, and removed over the broken bulb and base, all as shown in Fig. 4. Thus access is had to the resilient tongue 20, which can be depressed to the position of Fig. 6, whereupon the bulb base is unscrewed as in Figs. 7 and 8. The outer metal shell 18 is then replaced in the cap 15 and a new bulb inserted.

40 It is pointed out that, should the locking means be found undesirable to use, this means can be rendered inoperative by merely bending inwardly the tongue 20 of the lamp base before inserting the lamp in the socket, so that said tongue will not engage the slot of the socket shell.

45 A modification of the present invention is shown in Figs. 9 and 10, wherein an outer metal shell 18a is provided with a resilient tongue 25 lanced therefrom as shown, said tongue being disposed directly over the cut or slot in the shell 13, see Fig. 10. According to this embodiment, when it is desired to remove the lamp from the socket the glass bulb of said lamp need not be broken first. Referring to Fig. 10, when the tongue 25 is manually depressed it will cause the insulating sleeve 19 to bend inwardly, in turn depressing the resilient tongue 20 of the lamp base. While still maintaining this pressure, a person can easily unscrew the lamp and remove it from the socket.

60 Preferably the outer metal shell 18a is of the type commonly provided with a threaded rim 26, and, for the purpose of concealing the tongue 25 there is provided a threaded ring 27 adapted to screw over the threaded rim 26 of the shell. The 65 ring 27 is preferably of the same material as the shell 18a, having a similar finish and appearance, and when said ring is in place it is difficult to perceive that there is anything extra on the shell. Thus the ring 28 effectively conceals the manually operable means of the shell 18a and, because of the resemblance of the ring to the threaded rim of the socket it is not at all apparent to the uninitiated that the socket has been altered in any manner, and therefore it is exceedingly unlikely 75

that an average person discover the method of removing the lamp. Of course, the ring must be unscrewed an extent when it is desired to expose and depress the tongue 25 for lamp removal.

5 In many instances the shell 18a of the socket carries a glass or other shade by means of a fixture adapted to screw over the threaded rim 26, and this fixture may be employed instead of the ring 27 to conceal the resilient tongue 25. When
10 it is desired to remove the lamp for renewal, the fixture may be unscrewed from the shell 18a a sufficient extent to permit access to the tongue 25.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

I claim:

1. An electric lamp locking device, including, in combination, an electric socket having an inner threaded shell, said shell having a cut therein providing a locking edge, and having an outer shell covering the inner shell; an electric lamp, including a glass bulb, a threaded metal base therefor adapted to screw into the inner shell
20 of the socket; a tongue carried by said base, biased outwardly therefrom, and adapted to receive thereunder the locking edge of the shell; and manually operable means secured to and carried by the outer shell of the socket for depressing the tongue of the lamp base when the
30 lamp is fully screwed in said socket.

2. An electric lamp locking device, including, in combination, an electric socket having an inner threaded shell, said shell having a cut therein providing a locking edge, and having an outer
35 shell covering the inner shell; an electric lamp, including a glass bulb, a threaded metal base therefor adapted to screw into the inner shell of the socket; a tongue carried by said base, biased outwardly therefrom, and adapted to receive thereunder the locking edge of the shell; manually operable means carried by the outer shell of the socket for depressing the tongue of the lamp base when the lamp is fully screwed in said socket; and a concealing cover for the outer shell
45 to hide said manually operable means.

3. An electric lamp locking device, including, in combination, an electric socket having an inner threaded shell, said shell having a cut therein providing a locking edge, and having an
50 outer shell covering the inner shell; an electric lamp, including a glass bulb, a threaded metal base therefor adapted to screw into the inner shell of the socket; a tongue carried by said base, biased outwardly therefrom, and adapted to receive thereunder the locking edge of the shell; manually operable means carried by the outer shell of the socket for depressing the tongue of the lamp base when the lamp is fully screwed in said socket; and a concealing cover for the outer
60 shell to hide said manually operable means, said cover being so constructed and arranged that

it forms a continuation of the outer surface of the shell.

4. The invention as defined in claim 1, in which the manually operable means includes a resilient tongue lanced from the outer shell.

5. In an anti-theft electric lamp socket, a threaded metal shell adapted to receive a lamp base, said shell having a slot therein providing a substantially longitudinal locking edge; and an outer shell covering the threaded metal shell, having a resilient tongue lanced therefrom and disposed over the slot of said metal shell.

6. In an anti-theft electric lamp socket, a threaded metal shell adapted to receive a lamp base, said shell having a slot therein providing a substantially longitudinal locking edge; an outer shell covering the threaded metal shell, having a manually depressible portion disposed over the slot of said metal shell; and a cover attachable to the outer shell for concealing the depressible portion thereof.

7. In an anti-theft electric lamp socket, a threaded metal shell adapted to receive a lamp base, said shell having a slot therein providing a substantially longitudinal locking edge; an outer shell covering the threaded metal shell, having a manually depressible portion disposed over the slot of said metal shell; and a cover attachable to the outer shell for concealing the depressible portion thereof, said cover being so constructed and arranged that it forms a continuation of the outer surface of the shell.

8. In an anti-theft electric lamp socket, a threaded metal shell adapted to receive a lamp base, said shell having a slot therein providing a substantially longitudinal locking edge; a semi-rigid insulating sleeve surrounding said shell; and a second and outer metal shell surrounding the sleeve, having an external threaded portion for carrying a lamp shade fixture, and having a resilient tongue lanced from said threaded portion, and disposed over the portion of the sleeve covering the slot of the first-mentioned shell.

9. In an anti-theft electric lamp socket, a threaded metal shell adapted to receive a lamp base, said shell having a slot therein providing a substantially longitudinal locking edge; a semi-rigid insulating sleeve surrounding said shell; a second and outer metal shell surrounding the sleeve, having an external threaded portion for carrying a shade fixture, and having a resilient tongue lanced from said threaded portion, and disposed over the portion of the sleeve covering the slot of the first-mentioned shell; and a threaded cover adapted to screw over the threaded portion of the outer shell and tongue thereof to conceal said tongue, said cover being so constructed and arranged that it forms a continuation of the outer threaded surface of the shell.

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