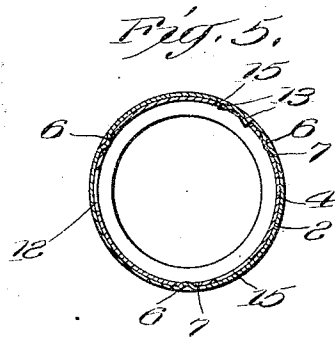
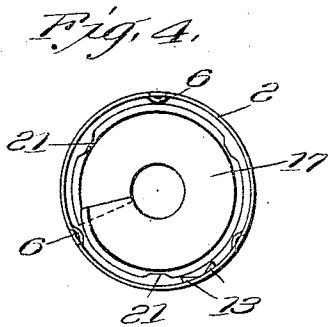
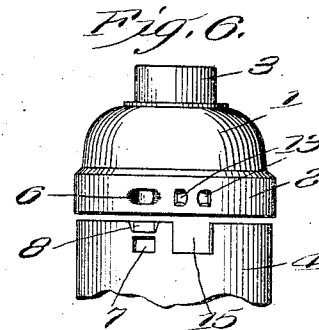
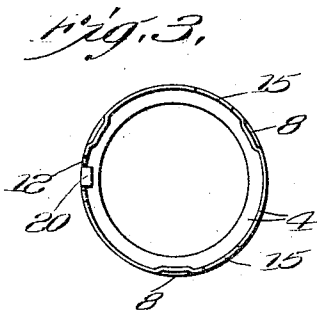
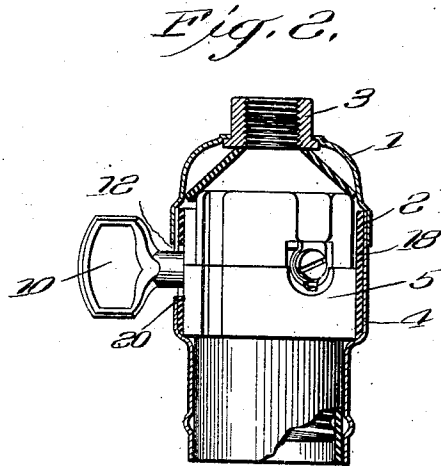
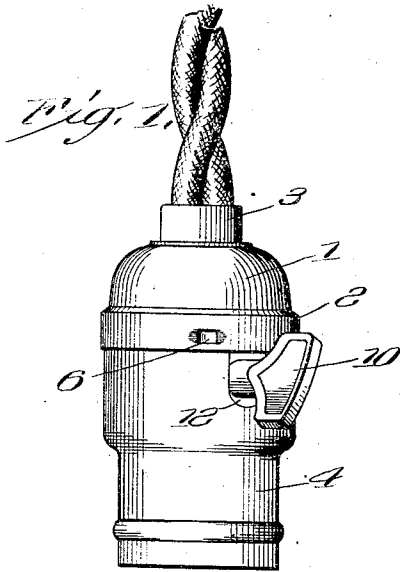


J. K. LUX.
 SOCKET FOR INCANDESCENT ELECTRIC LAMPS.
 APPLICATION FILED MAR. 25, 1909.

1,007,364.

Patented Oct. 31, 1911.



WITNESSES
J. H. Millward
H. L. Beecher

INVENTOR
Julius K. Lux

UNITED STATES PATENT OFFICE.

JULIUS K. LUX, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO PASS & SEYMOUR, INC.,
OF SOLVAY, NEW YORK.

SOCKET FOR INCANDESCENT ELECTRIC LAMPS.

1,007,364.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed March 25, 1909. Serial No. 485,662.

To all whom it may concern:

Be it known that I, JULIUS K. LUX, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented new and useful Improvements in Sockets for Incandescent Electric Lamps, of which the following is a specification.

My invention relates to key sockets for incandescent electric lamps, and consists in a new construction of the sheet brass cap and shell, which support and inclose the base of insulation carrying the metallic parts in circuit.

My invention consists in forming the cap flange and the shell edge with a plurality of engaging parts arranged at equal distances around the circumference to permit the cap first to be installed, as on a fixture, and the shell then to be secured thereto in any one of three or more relative positions, circumferentially considered, by a straight push; to insure the correct registering or alinement of the corresponding engaging parts in any one of the positions, I provide the cap margin with a suitable guide adapted to fit the key-slot in the shell margin and I form corresponding, but preferably smaller, slots in the margin, so that there may be one guide slot to receive the guide in any position of the parts. There may be as many guides on the cap as there are slots on the shell, but only one guide is necessary.

The cap is commonly first screwed on the fixture and the shell inclosing the body of the socket, then secured thereto. Where the relation of the parts is fixed there will be found many locations, for instance on a fixture in a corner or adjacent to a wall and with ornamental husks, in which the key thumb-piece is brought into an inconvenient position. Heretofore in such cases, it has been necessary to unscrew the cap and file down the cap-bushing, or other part, so that the cap might be further rotated on the fixture to bring the key into the proper position for operation. With my invention this trouble is avoided for the shell can be set on the cap in various positions to bring the piece to the desired point.

My invention is shown in the drawing herewith in which the reference numerals of the description indicate the corresponding parts in all the figures.

Figure 1 is the elevation of a socket em-

bodiment of my invention. Fig. 2 is a vertical section of the cap and shell at right angles to Fig. 1, showing the interior parts in elevation. Fig. 3 is a top plan of the shell. Fig. 4 is a bottom plan of the cap. Fig. 5 is a horizontal section through the cap and flange in assembled position and Fig. 6 is a partial elevation of the cap and shell separated.

In the figures, 1 indicates the cap having the usual flange 2 and threaded bushing 3 whereby the cap is secured on the fixture or elsewhere.

4 is the substantially cylindrical shell having an upper margin adapted to be inserted within the cap flange, whereby the interior parts 5 of the socket are supported and protected after they have been wired.

To connect the cap to the shell when the parts are assembled the cap flange is provided with a plurality of small inward projections or lugs 6 which may be desirably formed as here shown by stamping in at regular distances around the flange the small lugs. The shell is provided with an equal number of corresponding slots 7 to engage with these lugs or lips when the shell is inserted straight into the cap. The natural resiliency of the shell permits this margin to slip by the lips or lugs and this is promoted by the marginal guide grooves 8 in alinement with the slots, designed to receive the lugs and guide them into the slots.

As my invention relates particularly to key sockets, it will be understood that the socket is provided with a thumb-piece 10 for its key which extends outwardly through a slot 12 in the shell margin.

Adjacent to one of the lugs on the cap flange is provided a guide 13 which may be formed as here shown by means of two inwardly projecting small lugs adapted to fit the slot and insure the initial arrangement of the parts in order that the shell may be brought into proper position to be inserted into the cap. To permit the arrangement of the shell and operating parts in varying relations on the cap so as to bring the thumb-piece in a convenient position as before described, I have provided the shell with two other marginal grooves 15 to engage with the guides, these additional grooves are preferably shorter so as to be covered by the cap flange when the parts are assembled. By this means the arrange-

ment of the shell on the cap is positively indicated but this arrangement is not limited to one particular position but to any one of the three positions here shown. Evidently I do not limit myself to three positions for there may be more or less thereof as desired, but while there is only one guide on the cap flange, there will be as many slots including the thumb-piece slot on the shell margin as there are engaging lips on one part and grooves on the other.

17 indicates the fiber lining to the cap and 18 the fiber lining to the upper or larger part of the shell. To retain the latter lining in position there is provided a small lip 20 in the bottom of the thumb-piece slot. The lining 17 within the cap similarly may be retained by means of small interior projections 21 engaging its bottom edge.

Separation of the shell from the cap is easily and quickly accomplished by the compression of the marginal portion of the shell adjacent to the key slot, by the thumb or finger, where the shell is most resilient. This action causes the initial disengagement of the cap-lug from the transverse-slot adjacent to the key-slot permitting a slight rocking of the shell to cause the disengagement of the remaining lugs when the shell may be easily withdrawn. As shown the upper portion of the insulating base is reduced in diameter to permit the compression of the shell margin for this purpose. To secure the parts the shell is pushed straight home in the cap; as here shown the cap may assume three different positions, this being permitted by the arrangement of the three sets of securing lugs and slots at equal distances and the provision of additional marginal grooves 15 to that formed by the key-slot for the reception of the guide lugs and guidance for the correct engagement of the parts. Three positions are sufficient though more may be provided for.

Having thus described my invention, what I claim is,

1. In a socket for incandescent electric lamps, the combination with an inclosing cap and shell having a plurality of engaging parts whereby the cap and shell may be assembled and secured in as many positions when the shell is pushed straight home into the cap, said cap being formed with a single guide element and said shell having a plurality of slots to receive said cap-guide in the respective assembled positions.

2. In a key socket for incandescent electric lamps, the combination with a substantially cylindrical base of insulating material, of the terminal and connections secured on said base, a thin metal cap, a tubular metal shell having a resilient upper margin fitting within the cap, said shell having a key slot and additional similar slots in its upper mar-

ginal portion, the slots being arranged at equal distances around the circumference of the shell, the shell having short transverse slots adjacent to each of the guide slots and said cap having inturned guide lugs to engage guide slots when assembled in the respective positions and inturned lips adapted then to engage the transverse slots to secure the cap and shell together.

3. In a key socket for incandescent electric lamps, the combination with a substantially cylindrical base of insulating material, of the terminals and connections secured on said base, a thin metal cap provided with a flange, a thin metal shell having a resilient upper margin fitting within the cap flange, said shell having a longitudinal key slot in its upper marginal portion, a plurality of short, substantially transverse slots adjacent to the margin and arranged equi-distant from each other whereby the parts may be assembled in as many positions as there are slots, and guide grooves on the margin in vertical alinement with the said transverse slots, said grooves being formed by forcing in the metal at the margin, and being of greatest depth at the margin edge and diminishing in depth toward the transverse slots, said cap having inwardly projecting lugs on the flange positioned around the circumference to engage the grooves and slots, and inwardly turned guide-lugs adapted to fit the key slot to guide the insertion of the shell within the cap, in one position, said shell being provided with additional guide slots, to receive the said guide-lugs in the respective positions.

4. In a key socket for incandescent electric lamps, the combination with a substantially cylindrical base of insulating material, of the terminals and connections secured on said base a thin metal cap provided with a lower flanged portion, a thin metal tubular shell having a resilient upper margin fitting within the cap flange, said cap and shell being adapted to form an inclosing case for the base terminals, etc., said shell having a longitudinal key-slot in its upper marginal portion a plurality of short substantially transverse slots adjacent to the margin and arranged equi-distant from each other whereby the parts may be assembled in as many positions as there are slots, and guide grooves on the margin in vertical alinement with the said transverse slots, said grooves being formed by forcing in the metal at the margin, and being of greatest depth at the margin edge and diminishing in depth toward the transverse slots, said cap having inwardly projecting lugs on the flange positioned around the circumference to engage the grooves and slots and inwardly turned guide-lugs adapted to fit the key slot to guide the insertion of the shell within the cap, in one position, said shell

being provided with additional guide slots to receive the said guide-lugs in the respective positions, of a tubular insulating sleeve surrounding the base within the shell, an
 5 intumed lip on the shell to secure the said sleeve, an insulating lining within the cap and internal projections on the cap to retain said lining in place, the base being formed to permit the compression of the resilient
 10 upper shell margin to permit the disengagement of the shell from the cap.

5. In a key socket for electric lamps, the combination with an inclosing cap and a shell adapted to marginal engagement with
 15 the cap, said shell and cap having three points of engagement disposed equi-distant around their circumference, detachably to secure the shell to the cap, a single guide on the cap, said shell having guide slots arranged equi-distant and adjacent to the en-
 20 gaging means, two of said slots being adapted to be covered by the cap margin and the remaining slot having an enlargement to receive the socket key.

25 6. In a key socket for electric lamps, the combination with an inclosing cap and a shell adapted to marginal engagement with the cap, engaging means on said shell and cap arranged equidistant around their cir-
 30 cumference and adapted to cooperate detachably to secure the shell to the cap, said shell having guide slots adjacent to the engaging means, one of said slots having an enlargement to receive the socket key and
 35 a single guide on the cap to fit the slots in the respective assembled positions, said guide being formed by intumed portions of the cap margin adapted to present cut
 40 metal edges to abut the shell at the sides of the slots.

7. In an incandescent electric lamp socket the combination of the cap and the shell provided each with a plurality and equal
 45 number of corresponding engaging parts symmetrically arranged around their margins and adapted to engage when the shell is inserted in the cap, said shell being provided with guide slots in its upper margin
 50 and said cap being formed with at least one guide to fit said slots.

8. In a key-socket for incandescent electric lamps, the combination with the cap and the shell provided each with a plurality and equal number of corresponding en-
 55 gaging parts arranged at equal distances around their margins and adapted to engage when the shell is inserted in the cap, said shell being provided with guide slots on its upper margin, one of said slots being

enlarged to receive the key shank and said 60 cap being provided with a single guide to fit said slots.

9. In a key-socket for incandescent electric lamps the combination of the cap and the shell provided each with a plurality and
 65 equal number of corresponding engaging parts arranged at equal distances around their margins and adapted to engage when the shell is inserted in the cap said shell being provided with a plurality of guide
 70 slots in its upper margin equal in number to the engaging means on the shell margin and said cap being provided with at least one guide to fit said slot.

10. An incandescent electric lamp key 75 socket comprising a thin metal cap and shell for inclosing and protecting the operative parts, the cap having an annular flange and the shell having a resilient upper margin adapted to fit snugly within the cap, the
 80 margin having a slot for the outwardly extending key, and the flange and margin being formed with engaging parts to engage and secure the shell to the cap when the parts are assembled, and a base com-
 85 posed of two substantially cylindrical blocks of insulating material for supporting the operating parts, the lower block fitting snugly within the shell to maintain the parts in position, but the upper block be-
 90 ing substantially smaller than the lower at a point adjacent to the key-slot to permit compression of the margin at that point, permitting disengagement of the shell from the cap.

11. An incandescent electric lamp socket 95 comprising a thin metal casing for inclosing and supporting the inner parts, said casing consisting of a cap having an annular flange and a shell having a resilient upper margin
 100 fitting within the flange, said flange and margin being provided with corresponding elevations and depressions to engage when the parts are assembled, and a porcelain base arranged within the casing, said base
 105 consisting of two substantially cylindrical blocks, the lower block being of larger diameter to fit snugly within the shell, and the upper being substantially smaller in diameter to project up within the cap and permit
 110 compression of the margin and disengagement of the shell from the cap.

Jersey City New Jersey March 19th 1909.

JULIUS K. LUX.

Witnesses:

WM. G. MEYER,

FRANK A. BYRN.