Feb. 20, 1934. W. C. TREGONING 1,948,144

ELECTRIC CANDLE SOCKET

Filed Oct. 16, 1929 2 Sheets-Sheet 1

Fig. 1

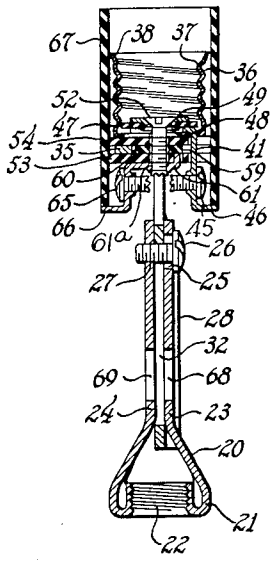


Fig. 2

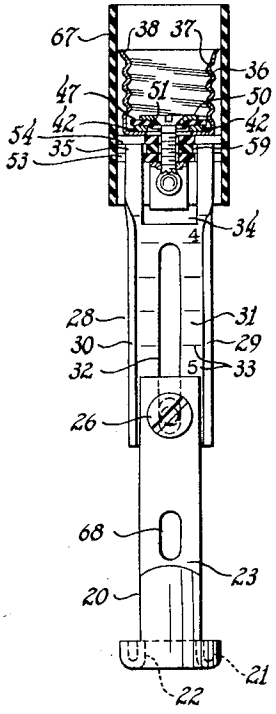


Fig. 3

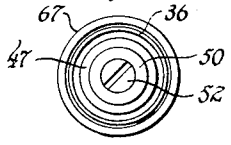


Fig. 4

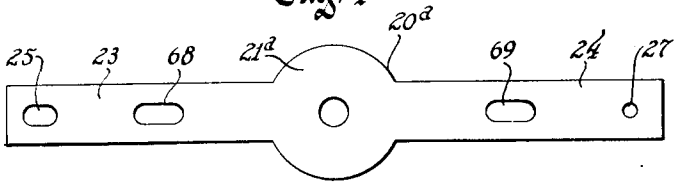


Fig. 5

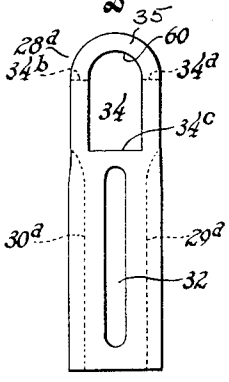


Fig. 7

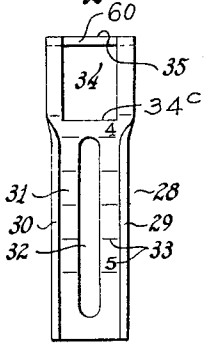


Fig. 8

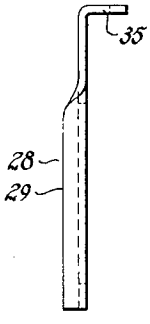
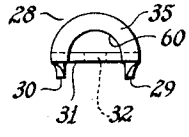


Fig. 6



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ELECTRIC CANDLE SOCKET

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Fig. 9

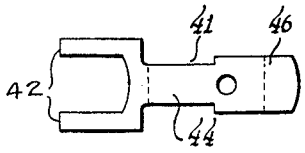


Fig. 10

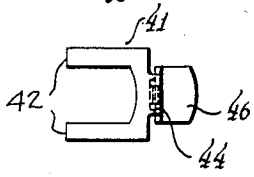


Fig. 11

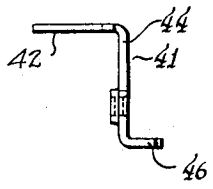


Fig. 12

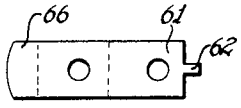


Fig. 13

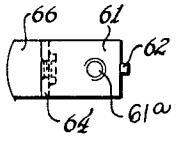


Fig. 14

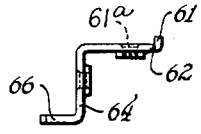


Fig. 15

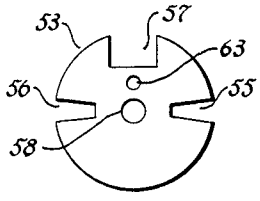


Fig. 16

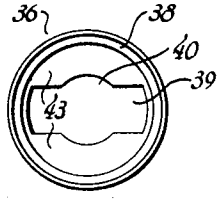
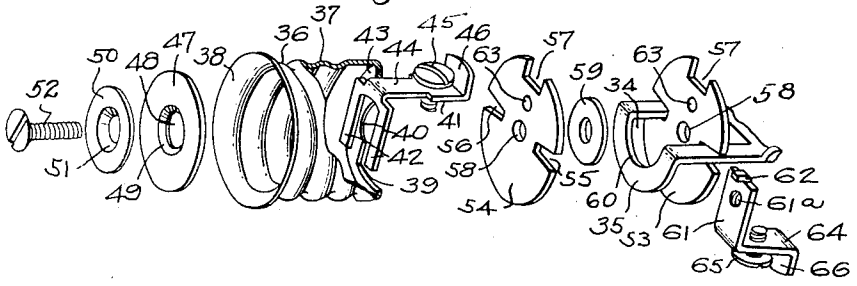


Fig. 17



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Patented Feb. 20, 1934 1,948,144

UNITED STATES PATENT OFFICE

1,948,144

ELECTRIC CANDLE SOCKET

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Application October 16, 1929. Serial No. 399,967

7 Claims. (Cl. 173—358)

This invention relates to improvements in electric candle sockets, and more particularly to improvements in adjustable candle sockets of the keyless type.

An object of the invention is to generally improve the details of construction and assembly of the socket parts.

Another object is to provide novel interlocking connections between the several parts of the socket and the support therefor.

Another object is to provide improved and simplified means for effecting adjustment of the socket height.

Another object is to provide novel means for facilitating attachment of the assembled socket and support to a suitable outlet fixture.

Another object is to provide wiring terminal members of novel form whereby the insulating tube of the socket may be supported.

Other objects and advantages of the invention will hereinafter appear.

The accompanying drawings illustrate an embodiment of the invention which will now be described, it being understood that the embodiment illustrated is susceptible of modification in certain details thereof within the scope of the appended claims.

In the drawings, Figure 1 is a vertical sectional view of an adjustable keyless candle socket constructed in accordance with my invention.

Fig. 2 is a view partly in elevation and partly in section, showing the adjusting elements in extended relation,—the section being taken in a plane at right angles to the section of Fig. 1.

Fig. 3 is a top plan view of the socket shown in Figs. 1 and 2.

Fig. 4 is a plan view of a metal blank from which the lower element of the adjustable support may be formed.

Fig. 5 is a plan view of the blank from which the upper element of the adjustable support may be formed.

Figs. 6, 7 and 8 are, respectively, top plan, front and side elevational views of said upper element of the adjustable support.

Fig. 9 is a plan view of the blank employed to provide the screw shell contact wiring terminal.

Figs. 10 and 11 are top plan and side elevational views of said screw shell terminal.

Fig. 12 is a plan view of the blank employed to provide the center contact wiring terminal.

Figs. 13 and 14 are top plan and side elevational views of said center contact terminal.

Fig. 15 is a plan view of one of the duplicate insulating disks of the socket.

Fig. 16 is a top plan view of the screw shell contact of the socket, and

Fig. 17 is an enlarged perspective view, in separated relation, of certain of the parts illustrated in Fig. 1,—a part of the screw-shell contact being broken away for purposes of illustration.

Referring to the drawings, the numeral 20 designates the lower element of the adjustable support for the lamp socket. Said element as shown is preferably formed from a metal blank of the character illustrated at 20^a in Fig. 4,—the intermediate perforated disk-shaped portion 21^a of said blank being pressed or swaged to form the annular channel or reflexed end 21, the inner cylindrical surface of which is tapped as indicated at 22 for cooperation with the usual threaded end of a wire conduit or fixture support (not shown).

Extending inwardly from opposite sides of the end portion 21 and then upwardly in slightly divergent relation to each other is a pair of arms 23 and 24 of equal length,—arm 23 being provided adjacent to its upper end with a slot 25 to freely accommodate the shank of a clamping screw 26, and arm 24 being provided adjacent to its upper end with a tapped opening 27 for cooperation with said screw shank.

Prior to insertion of screw 26, however, the arms 23 and 24 are adapted to receive therebetween the upper element 28 of the adjustable support. Element 28 may be formed from the flat metal blank shown at 28^a in Fig. 5,—the sides of said blank being bent upwardly at right angles along the dotted lines 29^a and 30^a thus forming the flanges 29 and 30 which coact with the main body of said element to form a portion 31 of channel shape in cross section. Portion 31 is provided with a slot 32 extending throughout the major portion of the length thereof, said slot providing clearance for the shank of screw 26.

As shown the arm 23 of the lower element 20 is adapted to slidably fit within the channel-shaped portion 31 of the upper element, whereas the arm 24 is adapted to overlie the rear face of said portion 31. Portion 31 is also preferably provided with graduations and numerals 33 to indicate the overall length of the device in various positions of adjustment thereof. Assuming the desired relative positioning of the upper and lower elements of the support, said elements may be held in adjusted relation by merely tightening the screw 26 to clamp the portion 31 between the arms 23 and 24 of the lower element.

The upper end of the blank 28^a of Fig. 5 is

provided with a relatively large perforation 34, and said blank is bent at right angles along the dotted lines 34a, 34b to provide the integral semi-annular strip or flange 35. As best shown in Figs. 1 and 2 the flange 35 forms a support to which all parts of the lamp socket are clamped in interlocking relation to each other.

The lamp socket comprises essentially a stamped metal shell 36 having the usual thread 37 formed therein, the upper end of said shell being preferably slightly flared, as indicated at 38, to facilitate insertion of the lamp base (not shown). The lower end of said shell is provided with a diametrical slot or perforation 39 having an intermediate enlargement 40 (Fig. 16). Freely insertable either upwardly or downwardly through the slot 39, 40 is a punched and stamped sheet metal member 41 which forms the wiring terminal for said screw shell contact,—member 41 having spaced arms 42 adapted to rest upon the bottom flanges 43 of said screw shell.

The downwardly extending neck portion 44 is adapted to engage the walls of slot 39 at either end of the latter to prevent substantial lateral movement of said parts with respect to each other. The portion 44 is provided adjacent to the lower end thereof with a tapped opening for reception of the usual binding screw 45. The dotted lines in Fig. 9 indicate the points at which the blank is bent to form the member 41.

The lower end 46 of member 41 is bent outwardly at right angles to the portion 44 to provide the usual wiring guard, said end 46 having an additional function as will be pointed out hereinafter. Superimposed upon the arms 42 of member 41 and snugly fitting within the screw shell is an insulating disk or washer 47 having a central perforation 48 surrounded by a downwardly tapered flange 49. Superimposed upon disk 47 is a metal washer 50 of less diameter than said disk, washer 50 being also provided with a central perforation and a downwardly tapered flange 51 to accommodate the tapered lower face of the flat-head screw 52.

The asssembly also comprises a pair of relatively thin insulating disks 53 and 54. Said disks may preferably be of identical form, and one of the same is shown in detail in Fig. 15. Each disk is provided with a pair of diametrically opposed radial slots 55 and 56, the walls of said slots being preferably slightly divergent outwardly. Each disk is also provided with a relatively wider substantially rectangular notch 57 at a point peripherally equidistant from the slots 55 and 56, and a central circular perforation 58 is provided to permit free passage of the shank of screw 52.

The lower disk 53 is interlocked with the upper supporting element 28 by fitting one of the slots over the edge 34c formed by the perforation 34, said disk being so inserted that the notch 57 is located on the same side of element 28 as the flanges 29 and 30 of the channel portion. Thereafter a small circular insulating disk 59 is seated upon the disk 53 and within the cut away portion 60 of flange 35 (Figs. 1, 6 and 17), said disk also having a perforation to accommodate the shank of screw 52. Thereafter the insulating disk 54 is superimposed upon the disk 59 and flange 35, with the notch 57 and slots 55 and 56 of the former alined with those of the lower disk 53,—the notches 57 of said disks being adapted to accommodate the depending portion 44 of terminal member 41.

The shank of screw 52 is then passed downwardly through the disks 54, 59 and 53 and into cooperative engagement with a tapped opening 61a in the horizontal portion 61 of a center contact terminal member, said portion 61 having an upwardly projecting extension 62 adapted to enter a perforation 63 in disk 53 to insure proper positioning of said terminal member. The depending portion 64 of said center contact terminal member is provided with a tapped opening to receive the binding screw 65, and said terminal member is provided with an outwardly extending end 66. The dotted lines in Fig. 12 indicate the points at which the blank is bent to form the center contact terminal member.

Upon tightening of the screw 52 all of the interlocked parts of the lamp socket are rigidly held in assembled relation to each other and to the element 28. The lower end of screw 52 is thereafter upset or staked to permanently secure said parts in position. The inner ends of the binding screws 45 and 65 are also preferably staked to prevent accidental removal thereof from the terminal members.

After the various parts are assembled in the manner aforedescribed a wound paper tube 67 or the like is telescoped downwardly over the lamp socket until it rests upon the projecting ends 46 and 66 of the terminal members,—said tube preferably frictionally engaging the peripheries of disks 53 and 54 to prevent accidental removal of the former. The device as a whole is adapted to be enclosed within the usual tube (not shown) of insulating material to simulate a candle.

It will be noted that the arms 23 and 24 of the lower supporting element are provided with alined slots 68 and 69 to permit insertion of the shank of a screw driver or similar tool to facilitate threading or attachment of the device to the usual wire conduit or fixture support. Moreover, the alinement of slot 32 in the upper element 28 provides for utilization of said slots 68 and 69 in substantially any relative positioning of the adjustable supporting elements.

While I have shown the adjustable elements 20 and 28 as applied to the support of a keyless socket for lamps of relatively small or intermediate size, it will be obvious that the same is adaptable to other sizes and types of lamp sockets. Also as will be apparent to those skilled in the art, an eyelet or rivet or equivalent securing element may be substituted for the screw 52.

What I claim as new and desire to secure by Letters Patent is:

1. In an electric candle socket assembly, in combination, a screw shell contact having a diametric slot in the bottom wall thereof, said slot having an enlargement intermediate the ends thereof, a separable terminal member therefor, said member having a horizontal bifurcated portion of substantially rectangular contour the diagonally opposed corners of which are spaced a distance substantially equal to the internal diameter of said screw shell, said terminal member having a depending neck portion engageable with the edges of said slot to hold said parts against relative rotary movement, a binding screw carried by said depending portion, and an end portion extending outwardly at substantially right angles to said depending portion, for the purpose set forth.

2. In an electric candle socket assembly, in combination, a screw shell contact having a diametric slot in the bottom wall thereof, a terminal member having a depending portion and a bifurcated portion engageable with the bottom wall of

said shell on opposite sides of said slot, a perforated insulating disk superimposed upon said bifurcated portion, a pair of substantially circular insulating disks underlying said screw shell, a sheet metal supporting member having a semi-annular horizontal flange interposed between said insulating disks, a relatively smaller insulating disk interposed between said first mentioned disks and nested against the inner edge of said flange, a second terminal member underlying the lower insulating disk and having an end portion projecting upwardly into an opening in the latter, a center contact member penetrating all of said elements and having engagement with said second terminal member, each of said terminal members having a lower end portion extending outwardly at right angles thereto, and an insulating shell slidable over said screw shell and engageable with said end portions of the terminals for support and positioning by the latter.

3. In an electric candle socket assembly, in combination, a screw shell contact having a diametric slot in the bottom wall thereof, a terminal member having a depending portion and a bifurcated portion engageable with the bottom wall of said shell on opposite sides of said slot, a perforated insulating disk superimposed upon said bifurcated portion, a pair of substantially circular insulating disks underlying said screw shell, a sheet metal supporting member having a semi-annular horizontal flange interposed between said insulating disks, a relatively smaller insulating disk interposed between said first mentioned disks and nested against the inner edge of said flange, a second terminal member underlying the lower insulating disk and having an end portion projecting upwardly into an opening in the latter, a center contact member penetrating all of said elements and having engagement with said second terminal member, each of said terminal members having a lower end portion extending outwardly at right angles thereto, an insulating shell slidable over said screw shell and engageable with said end portions of the terminals for support and positioning by the latter, said sheet metal member having a depending portion of channel shape in cross section, a second sheet metal member having a pair of spaced arms between which said channel portion is adapted to slide, and a screw penetrating said channel portion and each of said arms and having threaded engagement with one of the latter, whereby said arms may be held in clamping engagement with said channel portion.

4. In an electric candle socket assembly, in combination, a screw shell contact having a diametric slot in the bottom wall thereof, a terminal member having a depending portion and a bifurcated portion engageable with the bottom wall of said shell on opposite sides of said slot, a perforated insulating disk superimposed upon said bifurcated portion, a pair of substantially circular insulating disks underlying said screw shell, a sheet metal supporting member having a semi-annular horizontal flange interposed between said insulating disks, a relatively smaller insulating disk interposed between said first mentioned disks and nested against the inner edge of said flange, a second terminal member underlying the lower insulating disk and having an end portion projecting upwardly into an opening in the latter, a center contact member penetrating all of said elements and having engagement with said second terminal member, each of said terminal members having a lower end portion extending outwardly at right angles thereto, an insulating shell slidable over said screw shell and engageable with said end portions of the terminals for support and positioning by the latter, said sheet metal member having a depending portion of channel shape in cross section, said channel portion having a slot extending longitudinally thereof, a second sheet metal member having a threaded bushing formed integrally therewith and a pair of spaced arms between which said channel portion is adapted to slide, a screw penetrating the slot in said channel and each of said arms and having threaded engagement with one of the latter, whereby said arms may be held in clamping engagement with said channel portion, and said arms having a pair of slots alined with each other and with the slot in said channel portion in certain positions of said parts, the walls of said slots being adapted for engagement by a screw driver or similar tool to facilitate attachment of said bushing to a threaded support.

5. In an electric candle socket, the combination with a punched metal blank formed to provide a threaded bushing with centrally arranged integral inwardly and upwardly extending arms, a second punched metal blank formed to provide a portion of channel shape adapted for slidable adjustment between said arms and having edgewise engagement with one of the latter to insure vertical alinement of said parts, said channel-shaped portion having a slot, a single screw penetrating said slot and engaging said arms to bring the latter into clamping engagement with said portion in various adjusted positions of said parts, said channel-shaped member having at its upper end an integral outwardly extending flange of substantially semi-annular form, a pair of substantially circular insulating disks respectively positioned above and below said flange, a relatively smaller insulating disk interposed between said first mentioned disks and nested against the inner edge of said flange, a screw shell contact adapted to seat upon the upper insulating disk, said screw shell having a diametric slot in the bottom wall thereof, a terminal member having an enlarged portion engageable with said bottom wall on opposite sides of said slot and a depending portion engageable with said upper and lower disks to restrain the same against relative rotary displacement, a second terminal member underlying the lower insulating disk and having a lug formed thereon to positively engage the latter, and a center contact member penetrating all of said elements and having engagement with said second terminal member, whereby said elements are retained in assembled relation to each other and to said flange.

6. In an electric candle socket, the combination with a punched metal blank formed to provide a threaded bushing with centrally arranged integral inwardly and upwardly extending arms, a second punched metal blank formed to provide a portion of channel shape adapted for slidable adjustment between said arms and having edgewise engagement with one of the latter to insure vertical alinement of said parts, said channel-shaped portion having a slot, a single screw penetrating said slot and engaging said arms to bring the latter into clamping engagement with said portion in various adjusted positions of said parts, said arms having a pair of slots alined with each other and with said first mentioned slot in certain positions of said parts, the walls of said slots being adapted for engagement by a screw driver or similar tool

to facilitate attachment of said bushing to a threaded support, said second mentioned blank also having a horizontal flange formed at the upper end thereof, insulating elements respectively positioned above and below said flange, and screw shell and center contact and terminal elements associated with said insulating elements, said insulating elements and said contact and terminal elements being inter-engaged with each other respectively, and certain of said insulating elements being also inter-engaged with said second mentioned blank, whereby all of said parts are secured in assembled relation to each other and to said flange.

7. In an adjustable electric candle socket, in combination, a support having a pair of centrally arranged arms extending upwardly in spaced and slightly divergent relation to each other, a channel-shaped member slidable between said arms and having its channel sides engaging the side edges of one arm to provide for vertical alinement of said elements, said channel-shaped member having a closed slot extending throughout the major portion of the length thereof, said arms having perforations alined with each other and with said slot, a screw penetrating said slot and having threaded engagement with one of said perforations to provide for clamping engagement of said arms with said channel member, the shank of said screw being engageable with the ends of said slot to limit the degree of longitudinal adjustment of said elements, said channel-shaped member having at its upper end an integral outwardly extending flange of substantially semi-annular form, a pair of substantially circular insulating disks respectively positioned above and below said flange, a relatively smaller insulating disk interposed between said first mentioned disks and nested against the inner edge of said flange, a screw shell contact adapted to seat upon the upper insulating disk, said shell having a diametric slot in the bottom wall thereof, a terminal member having a relatively large horizontal portion engageable with said bottom wall on opposite sides of said slot, said first mentioned disks having alined notches formed therein and said terminal member having a depending portion engageable with the walls of said notches to restrain said disks against relative rotary displacement, a second terminal member underlying the lower insulating disk and having a lug formed thereon, said lower disk having an opening formed therein the walls of which are engaged by said lug, and a center contact member having a portion thereof penetrating all of said elements and having engagement with said second terminal member, whereby said elements are retained in assembled relation to each other and to said flange.

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