Jan. 14, 1930. A. H. NERO 1,743,929

ELECTRIC LAMP SOCKET

Filed Dec. 22, 1923

Fig. 1.

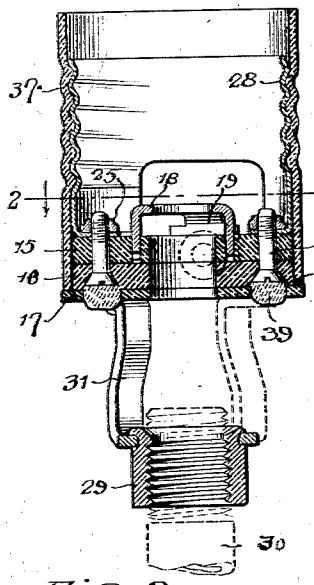


Fig. 3.

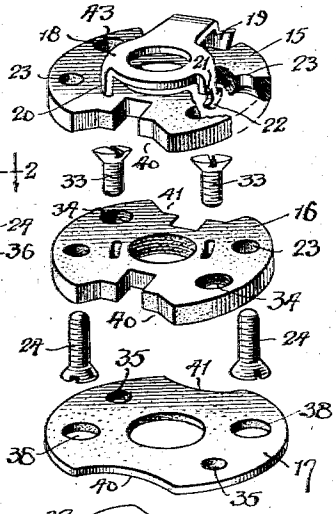
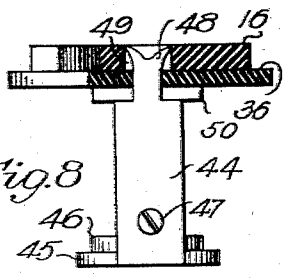


Fig. 8



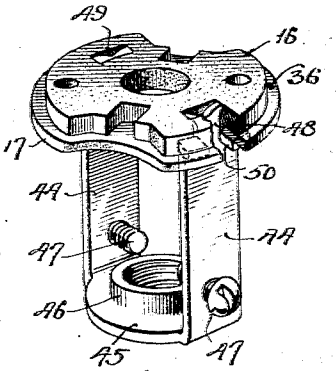


Fig. 4.

Fig. 2.

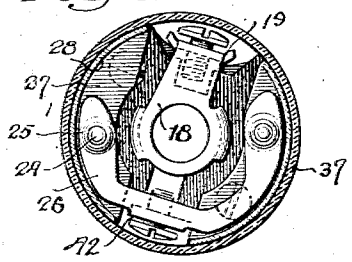


Fig. 5.

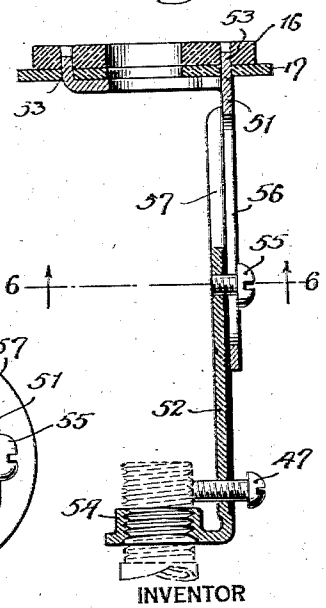


Fig. 7.

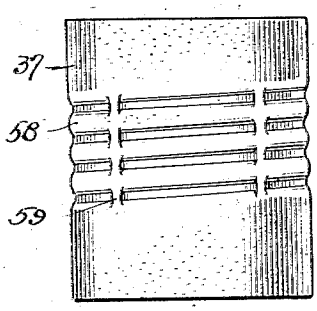
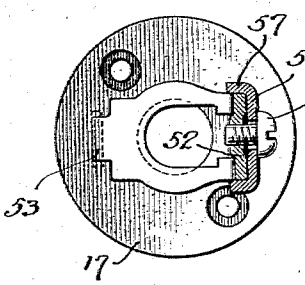


Fig. 6.



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UNITED STATES PATENT OFFICE

ARVID H. NERO, OF WEST HARTFORD, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE ARROW-HART & HEGEMAN ELECTRIC COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT

ELECTRIC-LAMP SOCKET

Application filed December 22, 1923. Serial No. 682,275.

My invention relates to electric lamp sockets and particularly to what are commonly known in the trade as "candle sockets." The object of my invention is to provide a socket adapted to this type of installation, which while meeting all technical requirements with regard to current-carrying capacity and structural strength is a very economical construction.

Referring to the accompanying drawings—

Fig. 1 is a vertical section through a socket in which my invention is embodied in one form;

Fig. 2 is a section on the line 2—2, Fig. 1;

Fig. 3 is a broken and dropped perspective of some of the socket parts;

Fig. 4 is a broken perspective of a modified construction of the supporting bracket, and the attached portion of the socket body;

Fig. 5 is a vertical section showing a modified form of support;

Fig. 6 is a section on the line 6—6, Fig. 5; and

Fig. 7 is a side elevation of the insulating jacket which surrounds the screw shell.

Fig. 8 is a side elevation view partly in section of the supporting bracket and attached portion of the socket body, shown in Figure 4.

The present socket comprises an insulating body formed of a plurality of juxtaposed flat washers 15, 16 and 17 of insulating material, such as fiber or the like, which may be readily stamped out from sheet material. They are thus extremely economical to manufacture, both from the standpoint of material used and method of formation.

The washer 15 carries the center contact 18 which is integral with the offset binding screw lug 19. The contact 18 is secured to the washer 15 by integral, offset side wings 20 shouldered at 21 to rest upon the upper face of the washer, the reduced free ends of the wings passing through appropriate holes in the washer and being staked at 22 (Fig. 3) beneath or into the lower face of the washer to firmly anchor the contact thereto.

The washer 16, which may be identical with the washer 15 in order to simplify manufacture, is pierced in register with the latter at 23 to accommodate the screws 24 which pass through both washers and enter tapped bosses 25 formed in the yoke 26 which overlies the base flange 27 of the screw shell side contact 28. The latter is thus secured upon the face of the washer 15 and both of the washers are firmly united.

In the form shown in Fig. 1, the support for the socket is in the form of a screw bushing 29 adapted to fit upon the threaded end of a wire conduit 30 and carrying bracket standards 31 which space the bushing from the socket body. At the socket end, the standards 31 are offset to form supporting feet 32, tapped to receive securing screws 33, the heads of which are confined between the juxtaposed faces of the washers 15 and 16 and are substantially flush with the face of the washer 16, while the screw shanks pass through holes 34 in the latter and take into the tapped holes in the feet 32 of the standards 31.

The washer 17 is interposed between the washer 16 and the bracket feet 32, and is apertured at 35 to permit the passage therethrough of the shanks of the screws 33. As will be noted this washer is much lighter than the washers 15 and 16, since itself carries none of the metal parts. Its normal diameter, however, is greater than that of the washers 15 and 16, and thus projects beyond the periphery of the latter to form shoulders 36 upon which rests the insulating jacket 37 which surrounds the screw shell side contact 28. The washer 17 is also apertured at 38 in register with the apertures 23 in the washers 15 and 16, in order to form fill apertures into which insulating wax 39 may be poured to cover the heads of the through screws 24.

The three washers are marginally recessed on opposite sides and in register at 40 and 41, the recess 41 serving to accommodate within the area of the jacket 37 the wire terminal lug 19 of the center contact 18 and the lead wire, (not shown) while the recess 40 similarly accommodates the offset bind-

ing screw lug 42 of the yoke 26 and its lead wire (not shown).

If desired, wax may be poured into the holes 43 in the washer 15 to cover the heads of the screws 33 with which the holes 43 register, but this is an unnecessary precaution and an additional expense, since the screw heads are spaced from the flange 27 of the screw shell 28 by the washer 15, while the flange 27 furthermore overlies the holes 43 and prevents the entry of dirt or dust. The holes 43 in the washers 15 are as a matter of fact unnecessary, and are present merely incidentally, due to the fact that the washers 15 and 16 are cut in the same die as a matter of economy in manufacture of the socket.

In the modification shown in Fig. 4, the supporting bracket for the socket is modified. It comprises a one-piece sheet metal structure having a pair of spacing standards 44 integral with the web 45 from which is drawn a cylindrical boss 46, tapped to form a screw bushing. Set screws 47 passing through the standards 44 engage the projecting end of the conduit 30 to lock the bracket thereto. The upper ends of the standards 44 are slotted to form a central anchoring tongue 48 which enters slots 49 in the washer 16, and is there spread or staked into secure engagement with the washer. The lugs 50 on opposite sides of the tongue 48 are offset to form supporting shoulders which rest against the lower face of the washer 17 and thus secure it beneath the washer 16, to which the tongue 48 is anchored.

In the modification shown in Figs. 5 and 6, the bracket is adjustable and comprises upper and lower sections 51 and 52 respectively, the upper section being riveted to the washer 16 by means of the anchor tongues 53, while the lower section 52 has a threaded nipple 54 formed integral therewith, after the fashion illustrated in Fig. 4. The section 52 carries a clamping screw 55, the shank of which passes through a slot 56 in the section 51. In order to keep the two sections aligned, marginal flanges 57 in the section 51 embrace the edges of the section 52. A set screw 47 passes through the lower portion of the section 52 to engage the pipe end.

It is to be noted that, in each of the species shown, the bracket forms, with the large washer 17 and the washer 16, a base to which the other washer 15 is attached. Such a built up structure simplifies the manufacture and the assembly and materially lessens their cost.

In Fig. 7 I have illustrated a screw shell jacket of novel construction. Ordinarily the threads of the jacket are formed by a rolling-in operation, which adds materially to its cost. The threads 58 of the present jacket are formed in a power press, and incidentally the threaded area is reinforced or stiffened by longitudinally extending ribs 59. The latter also impart a distinctive appearance to the jacket, without in any way interfering with the engagement of the threads with the threads of the screw shell. The formation of the jacket in this fashion is an economy constituting an improvement of considerable practical importance.

The structure as a whole fully meets the underwriters' requirements with regard to current-carrying capacity, structural strength, and overload tests for devices of this type, which, as well known, are not called upon ordinarily to carry heavy current.

Various modifications in detail of constructions and arrangement of parts will readily occur to those dealing with the problem without departing from what I claim as my invention.

I claim—

1. In an electric lamp socket, an insulating body comprising a pair of washers of insulating material, a combined center contact and wire terminal having wings with off-set ends to engage one of the washers, a screw shell contact resting upon said washer, together with screws piercing said washers and engaging the screw shell element to secure the latter in position and to hold the washers in assembled relation.

2. In an electric lamp socket, an insulating body comprising a pair of flat washers of insulating material, center and screw shell contacts carried thereby and projecting from one face of one washer, a washer of greater diameter secured against the opposite face of the other washer, and a jacket of insulating material surrounding the screw shell and resting against the projecting peripheral area of said washer of greater diameter, together with a supporting bracket for said socket, and means for securing said bracket to the socket body, said means serving also to hold said washer of greater diameter in assembled position.

3. In an electric lamp socket, an insulating body comprising a perforated disc marginally recessed, in combination with a center contact having offset therefrom shouldered wings with reduced ends which pass through the apertures in the disc and are offset to rivet the contact thereto, said contact having also an integral offset side terminal flange projecting into said marginal recess.

4. A candle socket comprising a screw shell formed with a flange at its lower end, a flat disc of non-flexible, insulating material fixedly secured to said flange and a yoke shaped shell support for said shell, comprising a pair of shell supporting arms, each terminating in a forked neck portion which

extends through the disc and is clinched down thereon, the disk being gripped between end flanges of the arms and the clinched down forked portion of the neck.

5. In a lamp socket, an insulating disc, center and screw shell contacts on said disc, terminals conductively connected with said contacts, a second insulating disc, means for securing the said discs together, a third disc of greater diameter than the other discs to afford a projecting peripheral shoulder for receiving a jacket, a supporting bracket for the socket and means securing the bracket and the third disc to the second disc.

6. In a lamp socket, an insulating disc, center and screw shell contacts on said disc, terminals conductively connected with said contacts, a second insulating disc, means for securing the said discs together, said means serving to secure the contact shell on the first disc, a third disc of greater diameter than the other discs to afford a projecting peripheral shoulder for receiving a jacket, a supporting bracket for the socket and means securing the bracket and the third disc to the second disc.

7. In a lamp socket, an insulating disc, center and screw shell contacts on said disc, the center contact being formed with wings having off-set ends to engage said disc, a second insulating disc, means for securing the said discs together, a third disc of greater diameter than the other discs to afford a projecting peripheral shoulder for receiving a jacket, a supporting bracket for the socket and means securing the bracket and the third disc to the second disc.

8. In a lamp socket, a base construction consisting of two slotted insulating discs and a bracket, one end of the bracket having an off-set shoulder portion and a tongue, the two discs being in engagement with their slots in register and resting on the shoulder portion of the bracket, the tongue extending through the slots and having its end spread into a securing engagement with the disc away from the shoulder portion whereby the parts are held together.

9. In a lamp socket, an insulating body comprising a perforated disc-like body of insulating material and a supporting bracket therefor having a shoulder portion and a tongue, the disc-like body resting on the shoulder portion with the tongue extending into a perforation in the body, the end of the tongue being spread into securing engagement with the body, the tongue being of such extent that it does not protrude from the perforation.

In testimony whereof I have signed my name to this specification.

ARVID H. NERO.