

C. D. PLATT.
KEYLESS SOCKET.

APPLICATION FILED OCT. 22, 1908.

941,811.

Patented Nov. 30, 1909.

Fig. 1.

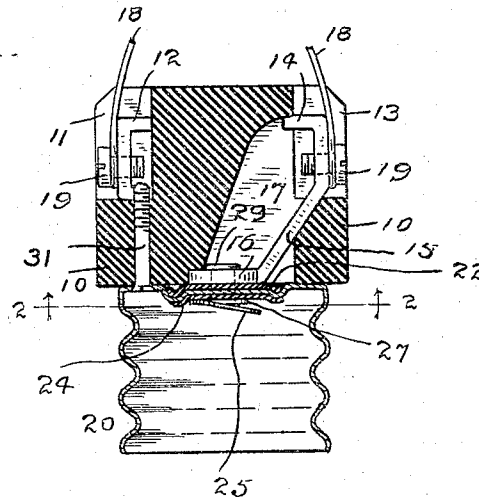


Fig. 2.

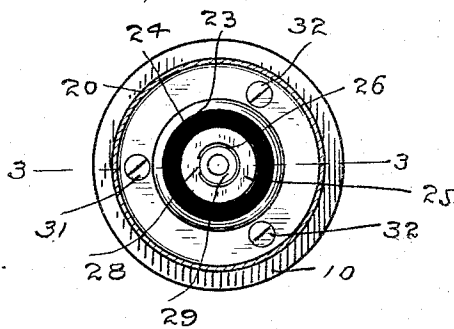
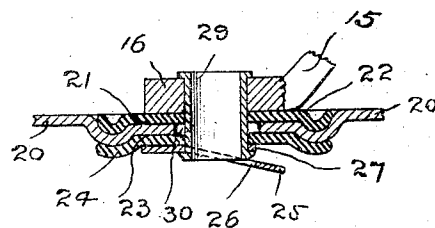


Fig. 3.



Witnesses:

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KEYLESS SOCKET.

941.811.

Specification of Letters Patent. Patented Nov. 30, 1909.

Application filed October 22, 1908. Serial No. 459,058.

To all whom it may concern:

Be it known that I, CLARENCE D. PLATT, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Keyless Socket, of which the following is a specification.

This invention relates to the class of electrical sockets known to the trade as keyless sockets, that is sockets in which no switch mechanism is embodied in the structure, the current through the lamp being controlled by a group switch, and the invention has for its objects to improve the details of construction and perfect the insulation of the parts and to simplify and cheapen the construction by reducing the number of parts and using only parts that can be easily produced.

A special detail of construction is that of the insulating body or block which is made of such form that it can be fashioned in a simple mold, by one compression of the porcelain mass when in plastic condition, by coating dies. And a special object relating to the insulation is to so secure the parts by a simple rivet that they can not possibly become misplaced and cause a short circuit, and so that the correct assembling of the parts may be performed by unskilled labor.

With these and other objects in view I have devised the novel keyless socket of which the following description in connection with the accompanying drawing is a specification, reference characters being used to indicate the several parts.

Figure 1 is a vertical section of my novel socket complete; Fig. 2 a section of a shell on the line 2—2 in Fig. 1, looking in the direction of the arrows, the outer insulating washer and the contact spring appearing in inverted plan; and Fig. 3 is a section on an enlarged scale on the line 3—3 in Fig. 2.

10 denotes an insulating body which is provided in one side with a recess 11 to receive one of the terminals, indicated by 12, and in the opposite side with a recess 13 to receive the other terminal which is indicated by 14. Terminal 14 is provided with a downwardly and inwardly extending arm 15 which is provided at its lower end with a head 16 lying in the horizontal plane and having a hole through it.

17 denotes an internal recess in the body which communicates with recess 13 and is

made large enough to permit the convenient insertion of arm 15 and the head.

The body or block 10 is formed of one piece and the side recesses 11 and 13 extend to the upper end of the body so that when said body is formed of plastic porcelain in a simple mold comprising a casing and upper and lower die members, the said recesses 11 and 13 may be formed by two projections of the upper die member which projections may be readily withdrawn by an upward movement preparatory to removing the molded mass to be baked. The recess 17 extends from the lower face of the block and, as will readily be seen in Fig. 1, is of such shape and location that it can be formed by an upward projection from the lower die member, which projection can be readily withdrawn, or from which projection the molded mass can be readily removed. The holes for the screws hereinafter referred to can be formed by pins projecting from either die member, preferably the lower one. The projection from the die which forms the recess 17 will have, of course, in practice, a side which will slidably contact with the side of the projection from the upper die which forms the recess 13 so that in the finished product the recesses 17 and 13 connect, as shown. This explanation of the method of making the body or block is given for the purpose of explaining the reasons for and advantages of, the particular form of block described and claimed; that is, it is a block consisting of a single piece requiring no special work to produce—no separate finishing operation; in fact nothing but the simplest kind of a single molding operation preceding the baking.

18 denotes circuit wires which are connected to binding screws 19 engaging the terminals.

20 denotes the screw shell whose base is provided with an external depression indicated by 21 to receive an insulating washer indicated by 22 and with an internal depression indicated by 23 to receive an insulating washer indicated by 24, the base of the screw shell lying between said washers.

25 denotes a contact spring for engagement by a lamp base. I preferably form this contact spring from a disk of metal in which I make a circular cut 26 leaving the central portion of the disk, indicated by 27, connected to the outer ring by a neck 28, the

edge of the outer ring opposite to the neck being sprung out of the plane of the central portion, as clearly shown in Figs. 1 and 3. The central portion of the contact spring 5 lies contiguous to insulating washer 24, and head 16 upon arm 15 lies contiguous to insulating washer 22.

The insulating washers, the contact spring and head 16 (and with it terminal 14) are 10 secured to the base of the shell by means of an eyelet or tubular rivet 29 which passes through said parts and is headed down upon the central portion of the spring and the head, as clearly shown in Fig. 3. It should 15 be noted that the base of the screw shell is provided with a central hole 30 of greater diameter than the rivet or eyelet so as to leave the screw shell perfectly insulated from the contact spring, eyelet and head 20 which are of opposite polarity. As the marginal portions of the insulating washers 22 and 24 so engage the shoulders resulting from forming the depressions 21 and 23 that said washers can not possibly shift laterally 25 after being connected by the rivet 29, and as the hole 30 is of sufficiently larger diameter than the said rivet to prevent any short-circuit between said rivet and the screw shell 30, the insulation of these parts remains perfect under all conditions of handling and use. This is of especial advantage when a 35 wire 18 is being connected to the arm 15 by the screw 19, because since said arm is supported by the head 16 which, in turn, is localized by the rivet 29, the act of making the connection might result in so shifting the rivet as to permit contact thereof with the side of hole 30 if said rivet were not firmly held by the washers which, in turn, are held 40 centrally by means of their marginal bearings as described. Unskilled labor can not assemble the parts incorrectly because the depressions in the screw shell determine the location of the washers, the washers determine the location of the rivet, and the 45 rivet, in connection with the recesses 17 and 13, determine the proper placing of the arm 15 and its head 16.

Terminal 14 requires no other support 50 than the insulated attachment of the head to the screw shell. Terminal 12 is secured in place by means of a screw 31 which also serves as a means of attachment of the screw shell to the insulating body. The other 55 screws, indicated by 32, by which the screw

shell is secured to the body, pass through the body longitudinally and engage nuts (not shown).

When a lamp base (not shown) is turned into the screw shell, the center contact of the 60 lamp base engages contact spring 25. The passage of the current is from terminal 12 through screw 31 to the screw shell and returning through the lamp base, contact spring, eyelet, head and arm 15 to terminal 65 14.

Having thus described my invention, I claim:

1. An insulating body having one of its ends formed with side recesses extending to 70 the end surface, and having an internal recess extending from its other end to one of the side recesses.

2. An insulating body having one of its ends formed with side recesses extending to 75 the end surface, and having an internal recess extending from its other end to one of the side recesses, and having walls of the body material between the side recesses and the opposite end of the body, and formed 80 with screw holes passing through the body for the purpose specified.

3. The combination with a screw shell having its base provided with a hole and with shoulders, of insulating washers engag- 85 ing said shoulders and having holes in alignment with the hole of the screw shell, contacts above and below said washers, and a rivet connecting said contacts and passing through said holes, an annular space being 90 formed between said rivet and the edge of the hole in the screw shell.

4. The combination with a screw shell having its base provided with a hole and with shoulders, of insulating washers engag- 95 ing said shoulders and having holes in alignment with the hole of the screw shell, a contact bearing against one washer, a head bearing against the other washer and having an arm and a terminal, and a rivet connecting 100 said head and contact and passing through the holes of the shell and washers, an annular space being formed between said rivet and the edge of the hole in the screw shell.

In testimony whereof I affix my signature, 105 in presence of two witnesses.

CLARENCE D. PLATT.

Witnesses:

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