M. V. SMITH.

INCANDESCENT LAMP SOCKET.

APPLICATION FILED JULY 26, 1916.

1,247,026. Patented Nov. 20, 1917.

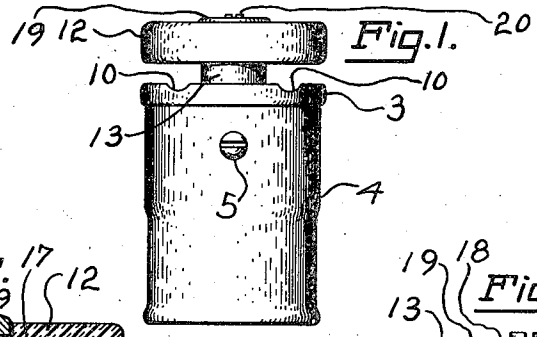


Fig. 1.

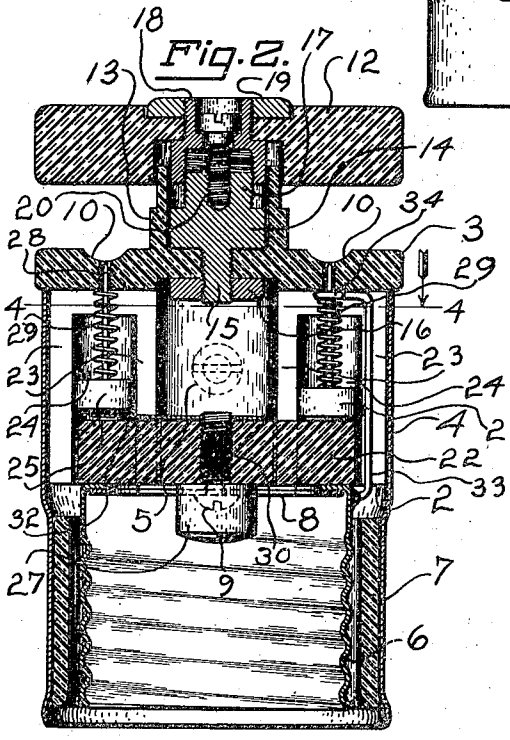


Fig. 2.

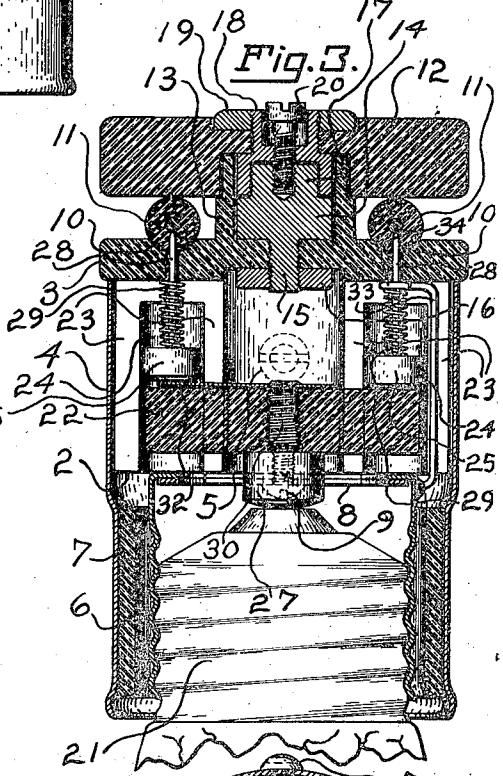


Fig. 3.

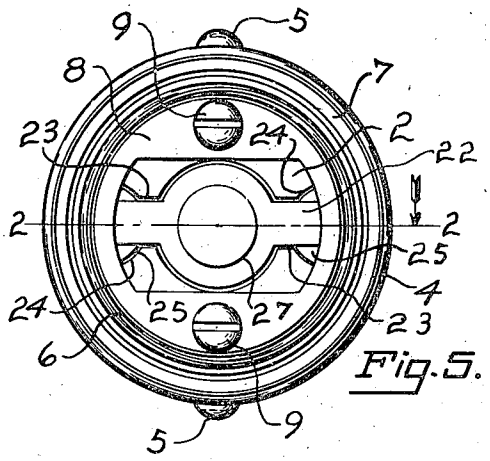


Fig. 5.

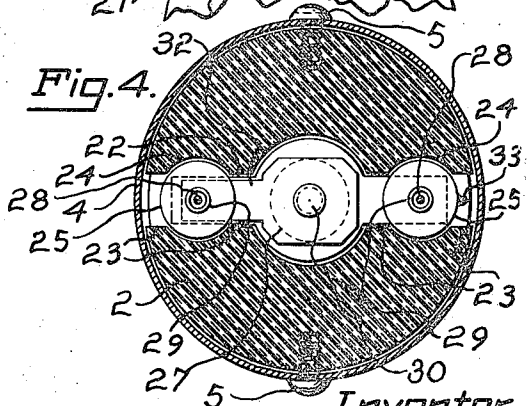


Fig. 4.

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INCANDESCENT-LAMP SOCKET.

1,247,026. Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed July 26, 1916. Serial No. 111,378.

To all whom it may concern:

Be it known that I, MARTIN V. SMITH, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Incandescent-Lamp Sockets, of which the following is a specification.

This invention relates to incandescent lamp sockets, the object of the invention being to provide a simple and inexpensive article of this kind, which can be easily made and the parts readily assembled and which can be connected with facility to wires or similar conducting means. As a matter of fact the device generally speaking is along the lines of that shown in United States Patent No. 1,171,471 issued to me February 15, 1916.

In the drawings accompanying and forming part of the present specification I have shown in detail one convenient form of embodiment of the invention which I will set forth fully in the following description. I do not restrict myself, however, to this disclosure; I may depart therefrom in several respects within the scope of the invention defined by the claims following said description.

Referring to said drawings:

Figure 1 is an elevation of an incandescent lamp socket involving the invention.

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 5, looking in the direction of the arrow and with the contacts retracted and the clamping member unset.

Fig. 3 is a similar view with the contacts advanced and the clamping member set, part of an incandescent lamp being shown in the socket.

Fig. 4 is a vertical section on the line 4—4 of Fig. 2, and,

Fig. 5 is a bottom plan view of the device.

Like characters refer to like parts throughout the several views, Fig. 1 being on a smaller scale than the remaining figures.

The device involves in its make-up a suitable body, that denoted by 2 answering satisfactorily in this connection. This body is practically in the form of a plug having an enlarged or overhanging base portion 3. Said body is generally made of insulating material and some of the several plastic compositions or porcelain answer satisfactorily in this regard. Around the reduced portion of the insulating body 2 is fitted a shell as 4, the two parts being united in any suitable manner as by screws 5. The lower edge of the metal shell or case 4 abuts against the flange or base portion 3, the upper portion extending beyond the corresponding portion of the insulating body, and this upper projecting portion of the shell constituting a suitable means for receiving the contact shell 6 of the socket. Between the contact shell 6, which is shown as interiorly threaded as familiar in the art, and the projecting portion of the shell or case member 4 is interposed the insulating band or ring 7 united in some convenient manner to said shell 4. The inwardly projecting base portion 8 of the contact shell 6 is united in some desirable manner to the upper surface of the body or plug member 2, screws 9 being shown for the purpose. The base portion of the body 2 as illustrated has wire seats such as the parallel grooves 10 in which wires as 11 are laid and clamped as by the clamping member 12 which is illustrated as consisting of a disk of suitable insulating material such as composition or porcelain. Depending from the base or flange portion 3 of the body is the boss 13 integral with the body 2. Inside the boss 13 is the screw 14 having a reduced upward extension 15 projecting through an approximately central hole or perforation in the closed upper end of the cylindrical body 2, the threads of said extension 15 within the hollow body 2 receiving the holding nut 16 by which the body of the screw 14 is held in substantial engagement with the under surface of the bottom of the body. The screw 14 in addition to the reduced upward extension 15 has a second downward threaded extension 17 within the boss 13. Extending centrally through the clamping member 12 is a nut 18 which like the screw 17 and nut 16 is of metal. This nut 18 is of two diameters, the portion of less diameter being externally threaded to receive the holding nut 19 by which the inner nut 18 is held in assembled relation with the insulating clamping member 12. The internal threads of this nut 18, as will be understood, coöperate with the reduced portion 17 of the fixed screw 14. By turning the clamping mem-

ber 12 to the left the nut 18 will be run off the threaded portion 17 so as to cause the recession of said clamping member from the base portion 3, it being shown retracted in Fig. 2. It will be assumed that the contacts hereinafter described are also retracted, and in this event at this time line wires can be laid in the two grooves 10. When this is accomplished, the clamping member 12 will be turned to the right to clamp the wires solidly in the two grooves. The web of the nut 18 and the extension 17 may have complemental threads to receive the threads of the screw 20 which when run in aids in maintaining the clamping member 12 in operative relation, the nut 18 being furnished with a counterbore to receive the head of the screw 20 when set. I have described a simple and advantageous way of connecting the clamping member and for maintaining the same set. This clamping member as may be understood turns on the reduced lower part of the boss, which constitutes a convenient pivot or stud for this purpose.

I have spoken hereinbefore of two contacts. These contacts are projectable through the insulation of the wires 11 and into engagement with the cores or conducting portions of the wires, this action in the present case being accomplished by the lamp 21 as broadly covered in my prior patent already identified. Extending diametrically of the body or plug 2 is a bridge piece 22 of insulating material, this bridge piece having a movement longitudinal of the body 2 which is slotted as at 23 to receive and guide the terminal portions of the bridge piece. As shown the slots 23 are in pairs and the slots of the respective pairs open into chambers as 24 extending depthwise of the body or plug 2 from the upper edge toward but short of the closed end thereof. These cylindrical chambers 24 receive for sliding movement the elements 25 which as shown are of metal, one of the disks 25 as that on the left being in electrical connection with the central end contact of the socket and the other or the contact associated therewith being in electrical connection with the contact shell 6. Rigid with the disks 25 are pins 28 constituting suitable contacts and the pointed end portions of which are projectable through perforations in the closed bottom of the body 2, these perforations intersecting the respective grooves or wire seats 10. Surrounding the shanks of the pins 28 are springs as 29. The spring 29 on the left bears at its ends against its disk 28 and closed end of the body 2, the companion spring bearing also against its disk and against a wire, hereinafter described, which engages the bottom of said body. These springs exert a constant tendency to retract the disks and therefore the pins 28 thus to normally maintain the penetrating or pointed ends of the pins flush with or above the walls of the grooves 10 as shown in Fig. 2. The central end contact 27 to which I have referred is connected as by the threaded shank 30 integral therewith, with the bridge member 22 practically centrally of the length of the latter. The lower end of this shank 31 is in threaded connection with the metallic strip 32 which bears at its free end at all times against the metallic disk 25 on the left in Fig. 2. Connected as by a solder joint or otherwise with the shell 6 is the wire 33 extending downwardly from said shell and inclosed in the body 2, said wire having at its lower end an eye 34 to slidingly receive the pin 28 on the right in Figs. 2 and 3, the result being that said pin 28 on the right and wire 33 are in electrical connection at all times. It will be assumed that the clamping member 12 is in its inoperative or wire releasing position as shown in Fig. 2 and that the pointed contacts 28 are retracted as also illustrated in said view. To use the socket wires will be laid in the grooves 10 and the clamping member 12 operated to clamp the wires in the manner already set forth. When this is done the base of the lamp 21 will be screwed into the contact shell 6, and when the lamp has moved a certain distance its central end contact will engage the central end contact 27 and will, therefore, on the further movement of the lamp advance the bridge member 22, the latter in turn advancing the disks 25 and thus the pointed pins 28 so as to cause the points to penetrate the insulation of the wires and engage the conducting cores thereof. When the contacts 28 are in electrical connection with the cores of the wires, the wires will of course, be electrically connected through the connections described with the contact shell and the central end contact of the lamp 21 consequently causing the filament thereof to glow.

What I claim is:

1. An incandescent lamp socket comprising an insulating body, a contact shell connected with said body, a bridge piece, the body being slotted to receive the bridge piece for sliding movement, said bridge piece having a central contact extending into said shell, a disk, the body being chambered to receive the disk and the disk having a pointed pin constituting a contact, projectable through the body, electrical connections between said disk and said central end contact, a second disk, the body being chambered to receive the second disk, said second disk having a pin complemental to the other pin, also projectable through the body, and a wire connected with the contact shell and having an eye to slidingly receive the second pin.

2. An incandescent lamp socket comprising an insulating body, a contact shell con-

nected with said body, a bridge piece, the body being slotted to receive the bridge piece for sliding movement, said bridge piece having a central contact extending into said shell, a disk, the body being chambered to receive the disk and the disk having a pointed pin constituting a contact, projectable through the body, electrical connections between said disk and said central end contact, a second disk, the body being chambered to receive the second disk, said second disk having a pin complemental to the other pin also projectable through the body, a wire connected with the contact shell and having an eye to slidingly receive the second pin, and springs around the pins acting against the disks to normally yieldingly hold the disks and therefore the pins in their retracted positions.

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

MARTIN V. SMITH.

Witnesses:
L. L. MARKEL,
HEATH SUTHERLAND.