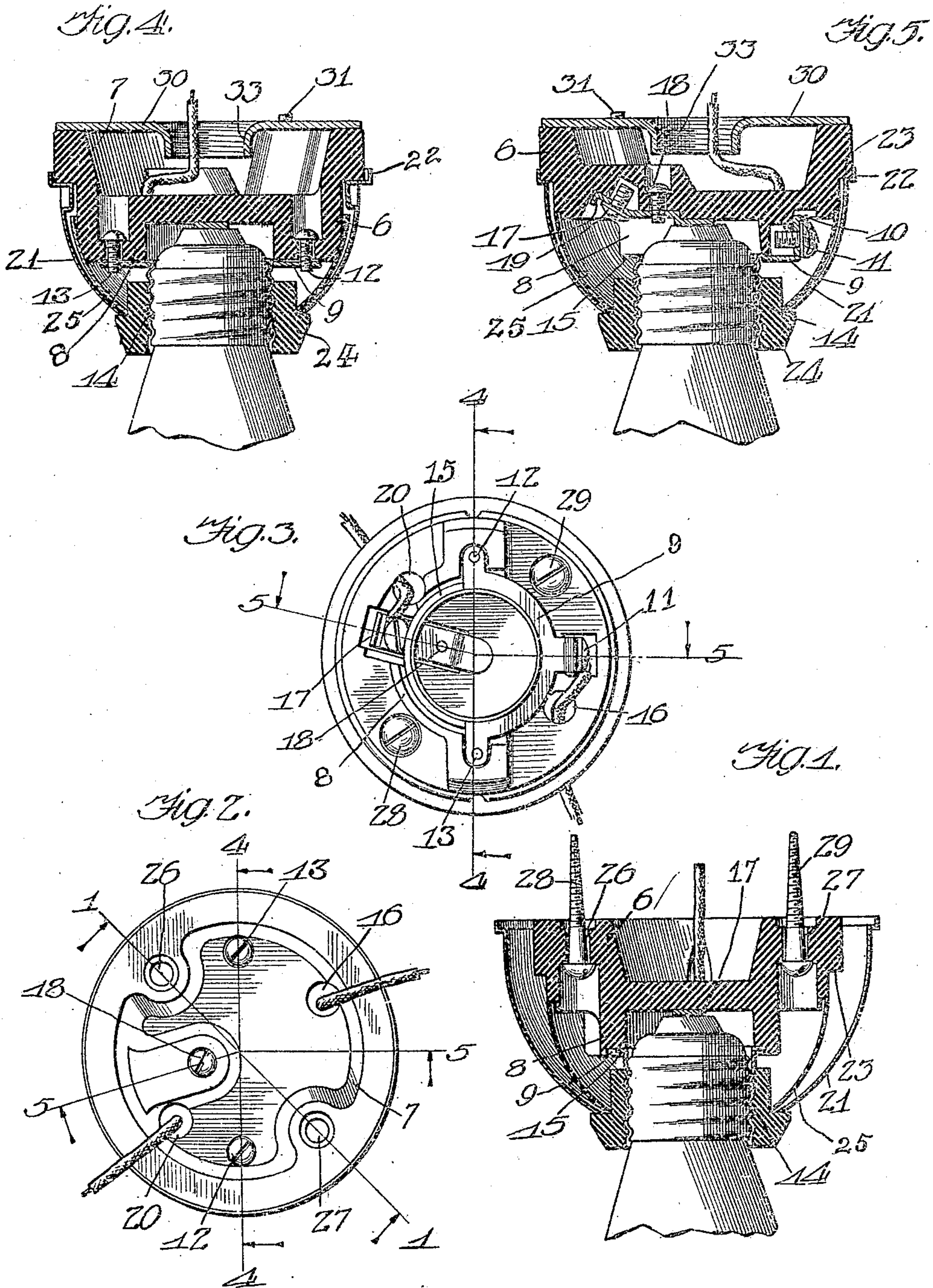


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ELECTRIC LAMP SOCKET.  
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# UNITED STATES PATENT OFFICE.

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## ELECTRIC-LAMP SOCKET.

958,216.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed April 11, 1907. Serial No. 367,656.

*To all whom it may concern:*

Be it known that I, REUBEN B. BENJAMIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Electric-Lamp Sockets, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

This invention relates to improvements in electric-lamp sockets, and particularly to a type of lamp socket wherein a base formed of insulating material carries upon one of its sides lamp-receiving means and upon the opposite side means for securing the device to a suitable support.

The object of the present invention is the production of such a device that is of pleasing design and which is compactly and substantially constructed.

In the accompanying drawings, Figure 1 shows, in central vertical section, a form of device embodying my invention which is adapted to be secured to a ceiling or, if desired, to a wall or other suitable support; Fig. 2 is a top plan view of this form of the device; Fig. 3 is a bottom plan view of the same device without the outer casing or the insulating bushing which surrounds the lamp socket and separates the same from the casing; Fig. 4 is a vertical sectional view of a device similar to that shown in Fig. 1, but having added thereto means whereby the same may be secured upon the end of a pipe or similar conduit, the section being taken on the line 4—4 of Figs. 2 and 3, looking in the direction indicated by the arrows; and Fig. 5 is a vertical sectional view of the same device, the section being taken on the line 5—5 of Figs. 2 and 3, looking in the direction indicated by the arrows.

In the several figures of the drawings, 6 is a base formed of porcelain or other suitable non-conducting material. This base has a recess or depression in its upper or outer face, this recess being inclosed by the inclined walls 7 extending around the upper side of the base. The lower or inner side of the base is formed with a rib or projection 8 having the form of a circle with an opening cut therethrough, this rib thus forming an incomplete or broken ring. Upon the lower or inner side of this rib is secured a plate 9 having substantially the form of a

half-ring with an upturned lug 10 through which passes a binding screw 11. This plate 9 is secured in place by screws 12 and 13, which extend through suitable holes in the base 6. The lamp socket 14 consists of a metallic threaded ring having its inner end formed with an out-turned flange 15, this flange being confined between the plate 9 and the rib 8. The base 6 is provided with an opening 16 through which may be led one of the supply wires. This wire will be carried to and secured under the binding screw 11 and will thus be electrically connected with the socket 14. A metallic plate or strip 17 is secured to the lower side of the base 6 by a screw 18 which passes through said base. This plate 17 is provided near its outer end with a binding screw 19, while the opposite end of the plate 17 extends through the opening which is left through the rib 8 so as to form a contact for engagement with the center terminal of a lamp when the latter is screwed into the socket 14. An opening or aperture 20 is provided in the base through which a second supply wire may be led in and brought to the binding screw 19, whereby electrical connection is made between this wire and the center contact.

An outer casing or cover 21 is provided and has an outer substantially circular flanged edge 22 adapted to lap over and engage a shoulder 23 formed on the base 6. This cover 21 is substantially bowl-shaped in contour, and is provided with an opening registering with the lamp socket 14, and with an insulating bushing 24 adapted to be inserted through the opening and screwed onto the socket 14. When the bushing 24 is thus in place, the cover 21 is held firmly up in place against the shoulder 23. A fiber shell 25 serves as an insulating lining for the cover 21 and prevents accidental short-circuiting.

The base 6 is formed with suitable openings 26 and 27 for the reception of screws, bolts or the like, for securing the device to a support. In Fig. 1, I have shown screws 28 and 29 inserted through these openings 26 and 27, these screws being ordinary wood-screws such as would be used in securing the device to a ceiling. In Figs. 4 and 5 I have shown a plate 30, preferably metallic, this plate being secured upon the upper side of the base 6 by suitable bolts 31 passing



through these openings 26 and 27. The plate 30 is formed with an interiorly-screw-threaded neck portion 33 adapted to be screwed onto the end of a pipe or other suitable conduit. This plate 30 will be employed when the device is to be sustained on the end of a pipe which depends from the ceiling, so as to bring the socket to a lower position instead of securing the same directly to the ceiling.

In Fig. 1 I have shown the outer casing 21 formed with its outer edge of somewhat larger diameter than is shown in the other figures of the drawings. When thus formed this casing 21 will engage the wall or ceiling directly instead of abutting the shoulder 23 on the base. The appearance is in this way somewhat altered as no porcelain is visible. This may in some cases be desirable.

It is to be observed that in the present invention there is employed a substantially flat base having arranged upon one of its sides a single lamp-receiving socket so disposed that the axis of a lamp which is inserted therein occupies a plane at right angles with the plane of the base, the parts of the device being concealed by a housing which is continuous, except for a single opening for the lamp-socket and lamp. The depression in the upper side of the base 6 forms, when the base is secured to a wall or ceiling, or when the plate 30 is employed, a chamber in which slack wire may be contained, this wire being thus kept out of contact with the other parts of the device.

It is to be observed that in a device made up in accordance with the invention disclosed in this application the lamp-receiving socket 14 is not at any point in close proximity with the center contact-plate 17. This is of great importance where the device is used in series lighting, and especially where the lamps are subjected to vibration as in street-car lighting. In such cases the lamps are then arranged in series so as to employ the high potential currents used in railroad work. The excessive vibration to which the lamps are subjected frequently causes a lamp to become gradually unscrewed and an arc is then formed between the center terminal of the lamp and the center contact of the socket, which arc is gradually lengthened by the widening of the space between the lamp-terminal and this contact. When the arc becomes longer than the distance between the center terminal of the lamp and the shell of the socket, it will then leap across the space between the center contact and this shell, which then becomes burned out and the device is rendered useless and inoperative. By arranging the projection 8 on the base and securing the socket shell on this base so that the socket and center contact are widely separated, all danger of an arc destroying the usefulness of the

device is obviated because of the extreme distance between the current-carrying parts of the device.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a lamp-holding device, the combination of a base having upon one of its sides a rib in the form of a ring having an opening, a lamp-receiving socket upon said rib, a contact plate upon the same side of the base, said contact plate projecting through the opening in said rib and arranged to be engaged by the center terminal of a lamp, and a binding screw on said plate, said binding screw being accessible through the opening in said rib.

2. In a lamp-holding device, the combination of a base having upon one of its sides means for securing the same to a suitable support, a rib having the form of an incomplete circle on the opposite side of said base, a lamp-receiving socket on said rib, a plate arranged on said base and projecting through the opening in the rib and forming the center contact for the socket, and means for electrically connecting a conductor to said socket, a binding screw carried by said plate and accessible from the front of the device, and a finishing cap normally concealing said screw.

3. In a lamp-holding device, the combination of a base having upon one of its sides means for securing the same to a suitable support, a rib in the form of an incomplete circle on the opposite side of said base, a plate secured to said rib, a lamp-receiving socket secured to said plate, means for making electrical connection between a supply wire and said plate, a second plate secured to the lower side of said base and extending through the opening in the rib and forming a contact for said socket, and suitable means for making electrical connection between another supply wire and said last-named plate.

4. In a lamp socket, the combination of a base having upon one of its sides a center contact member, a projection on the same side of the base having an opening through which said member extends, a lamp-receiving socket supported on said projection beyond the plane of said center contact-member, a binding screw carried by said center contact member and accessible from the front of the device through said opening.

5. In a lamp socket, the combination of a base having upon one of its sides an annular rib, said rib having a portion thereof cut away, a lamp-receiving socket having an outturned flange, a curved plate clamping said flange between itself and said rib, a binding terminal on said plate, a center contact plate extending through said cut-away portion of said rib, a binding screw on said



center contact plate, and a finishing cap made removable to expose said binding screw.

5 6. In a lamp socket, the combination of an insulating base, a threaded cylindrical shell, said base being formed with a portion extending from the face thereof for supporting said threaded shell, said projecting portion extending around the axis of  
10 said shell and being interrupted at one point, and a conducting member secured to the face of said base and serving as a center contact for engagement with a lamp carried by said threaded shell, said member extending out-

wardly from its point of engagement with 15 the lamp between the ends of said projecting portion, a binding screw carried by said member and accessible between said ends of said portion, and apertures in said base for the passage of conductors to the front of 20 said base.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

REUBEN B. BENJAMIN.

Witnesses:

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C. L. HOPKINS.