

R. B. BENJAMIN.  
PLURAL LAMP SOCKET.  
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972,987.

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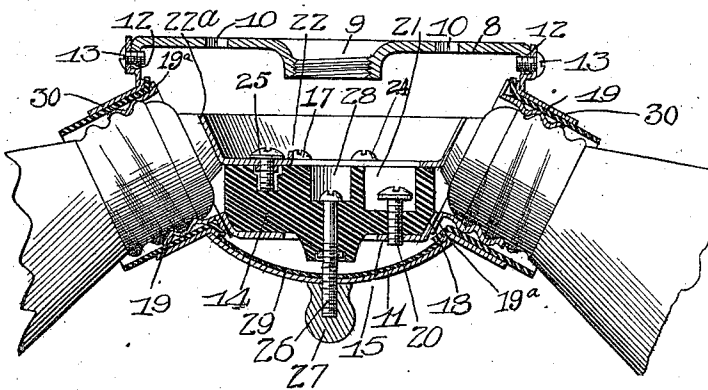


Fig. 1.

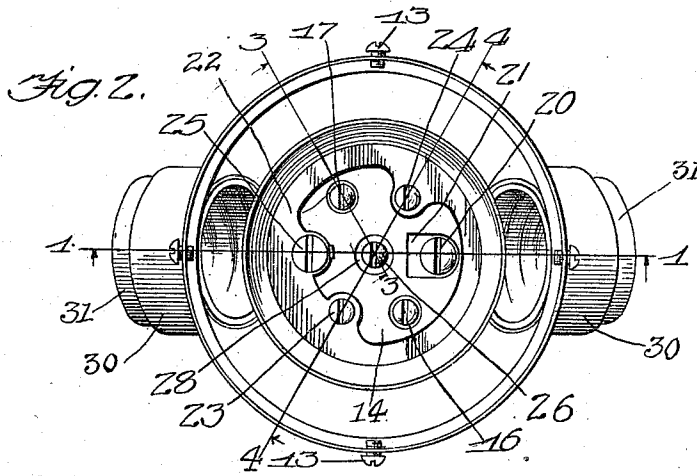


Fig. 2.

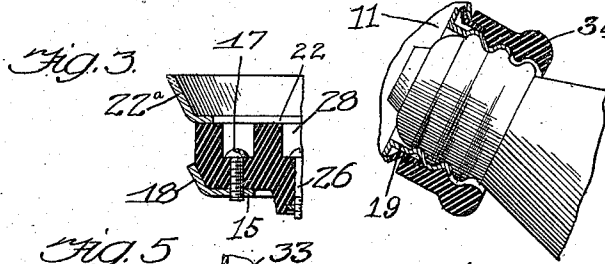


Fig. 3.

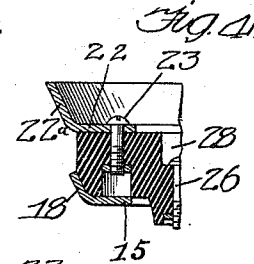


Fig. 4.

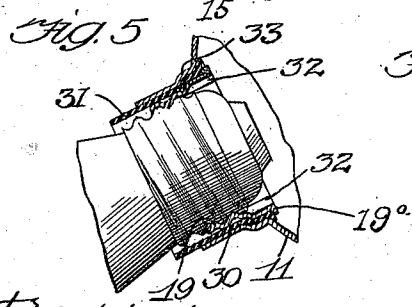


Fig. 5.

Fig. 7.

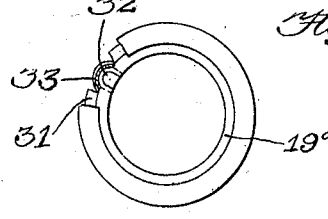


Fig. 6.

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# UNITED STATES PATENT OFFICE.

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## PLURAL LAMP-SOCKET.

972,987.

Specification of Letters Patent.

Patented Oct. 18, 1910.

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*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 Plural 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 plural lamp-sockets, one of the objects of the invention being the provision of a device of this class which is of substantial and simple construction and which is at the same time easily installed and of pleasing appearance.

Another object of the invention is to provide a cluster lamp socket which is so constructed that it may be readily adapted for the reception of a variable number of lamps.

In the accompanying drawings, in which I have illustrated a form of device embodying the features of my invention, Figure 1 is a vertical sectional view of the device, the section being taken on the line 1—1 of Fig. 2, looking in the direction of the arrows; Fig. 2 is a top plan view of the device with the supporting back-plate removed therefrom; Fig. 3 is a sectional view of a detail, the section being taken on the line 3—3 of Fig. 2, looking in the direction indicated by the arrows; Fig. 4 is a sectional view of a detail, the section being taken on the line 4—4 of Fig. 2, looking in the direction of the arrows; Fig. 5 is a sectional detail showing the method of securing the lamp-receiving sockets against rotation. Fig. 6 shows in elevation the same parts as are shown in Fig. 5; and Fig. 7 is a broken sectional view showing a slightly modified method of securing a lamp-receiving socket in place.

In the several figures of the drawings, in which like reference numerals indicate the same or similar parts throughout, 8 is a supporting cover-plate adapted to be secured to a suitable support and sustaining the other parts of the device. This plate 8 is provided with a neck portion 9, screw-threaded for the reception of the threaded end of a pipe or other suitable conduit for supply wires. This plate 8 is also formed with openings 10—10 for the passage of screws when the device is secured to a ceiling or wall. A substantially hemispherical outer cover or casing

11 is provided, this casing being adapted to engage, around its edge, the edge of the plate 8, the latter being perfectly formed with a down-turned flange 12 extending therearound. Suitable means, such as screws 13, are adapted to secure the casing 11 in place on the plate 8.

Within the casing 11 and supported thereby is a base 14, formed of porcelain or other suitable non-conducting material. The base 14 has a contact-plate 15 secured to its lower side by suitable screws 16 and 17. This plate 15 is substantially bowl-shaped, having an upturned or dished edge 18, adapted to engage the outwardly-flanged inner edge 19<sup>a</sup> of each of the lamp-receiving sockets 19. These sockets 19 are passed through openings in the cover 11, and are so secured in said openings as to be held against rotation, in a manner hereinafter explained. The plate 15 is provided with a binding-screw 20, the head of which occupies a recess or depression 21, formed in the upper side of the base 14. The base 14 carries upon its upper side a second dished plate 22, so arranged and disposed with relation to the sockets 19 that when a lamp is screwed into each of these sockets the center terminals of the lamps will engage the upturned edge 22<sup>a</sup> of this plate 22. The plate 22 thus serves as a center contact for all of the lamps carried by the device. Bolts 23 and 24 secure the plate 22 in position, and a binding-screw 25 provides means for the connection of a supply wire thereto. The base 14 is secured to the casing 11 by a bolt 26, passing centrally through these parts and provided upon its outer end with a nut 27. The upper side of the base 14 has formed therein a central depression or recess in which lies the head of the bolt 26. The cover 11 is lined with a fiber shell 29, which serves to separate the plate 15 from the cover 11 and also to prevent short-circuiting in case any dampness condenses inside the casing 11.

In Figs. 5 and 6 I have shown in detail the method of securing the sockets in place in the casing 11, and the means whereby these sockets are prevented from rotating with the lamps when the latter are screwed thereinto. The casing 11 is provided with cylindrical sleeve-like projections 30, fixed in and surrounding the openings which receive the sockets and inclosing these sockets. Separating the sleeves 30 and the sockets 19

are insulating rings 31. The sockets 19 are prevented from passing through the openings in the cover by outturned flanges 19<sup>a</sup>, formed on the inner ends of these sockets.

5 To prevent the sockets 19 from turning in the sleeves 30, I form these sockets with one or more projections 32 adapted to fit into corresponding depressions 33 formed in the sleeves 30.

10 Fig. 7 shows a modified arrangement of insulating sleeve and lamp-socket which may in some cases be preferred to that shown in the other figures of the drawings. In this form of the device the outer metallic sleeve  
15 30 is dispensed with and in its stead there is provided a threaded sleeve 34, of porcelain or similar insulating material, which is screwed onto the socket 19.

In installing a lamp-holding device constructed in accordance with this invention, the supporting-plate 8 will first be secured in place on the ceiling or wall by means of screws passing through the openings 10—10 or by securing the same on the end of a pipe  
25 or conduit by means of the screw-threaded neck 9. The supply wires which are led in through the neck 9 will then be secured to the binding-screws 20 and 25, after which the structure comprising the casing 11, contact  
30 plates 15 and 22, and lamp-receiving sockets 19 will be placed up in position on the plate 8 and secured thereto by the insertion of the screws 13.

It will be seen that in the device forming the subject of the present invention, I have provided a plural lamp-socket in which all of the parts except the back-plate 8 are carried by and supported on the cover 11, the whole device except this back-plate thus constituting a unitary structure which need not be disassembled in making the proper electrical connections and installing the device.

I have illustrated a cluster lamp-socket embodying my invention in which provision  
45 is made for the reception of two lamps. It is to be observed that the form of contact employed for engaging the center terminals of the lamps is adapted to contact with the terminals of any number of lamps that the device could be constructed to carry, and up to the limit imposed by the size of the device. It is to be observed also that the means employed for establishing communication between the outer contacts of the  
50 lamp-holders and the source of current is adapted to perform this function with any number of such contacts within the capacity of the device. This feature of the invention is one of great practical and commercial  
60 importance. The dealer, by carrying in stock a quantity of the insulating blocks 14, each provided with the plates 15 and 22, and by having on hand also a quantity of threaded rings 19, insulating rings 31 and casing  
65 shells 11, the latter adapted for various num-

bers of lamps, may fill an order for a cluster socket to carry any desired number of lamps. When he receives an order for a device of this class he will select a casing having the required number of lamp-receiving open- 70 ings, and will insert into each of these openings a fiber ring and a threaded contacting. One of the structures consisting of an insulating block and a plate on each side of it will then be inserted into the casing shell 75 and will be secured in place therein by the bolt 26, whereupon the device is ready for use. The dealer is thus enabled to fill orders for clusters adapted for any number of lamps without being required to carry a 80 large amount of material in stock.

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

1. In a plural lamp-socket, the combination of a substantially hemispherical cover, 85 a base within said cover, said base having a dished plate upon each of its sides, the cover having a plurality of openings disposed in a circle, a lamp-receiving socket located in each of said openings and located to be brought into electrical contact with one of said plates when said cover is in place, the other of said plates being so disposed as to be engaged by the center terminals of lamps 95 carried by the device, binding-screws carried by each of said plates, and means for securing said base to said cover independently of said sockets.

2. In a plural lamp-socket, the combination of a bowl-shaped cover, supporting means to which said cover is secured, a base inclosed by said cover, a plate upon one side of said base, a plurality of lamp-receiving sockets carried by said cover but insulated 105 therefrom and engaging said plates only when the cover is in place, a second plate secured to the opposite side of said base and having a portion adapted to be engaged by lamps when inserted into said sockets, and 110 means independent of said sockets for securing said base and cover together.

3. In a plural lamp socket, the combination of an insulating base, a plate upon one side of said base adapted to serve as a contact plate for engagement with the center 115 contacts of a plurality of lamps, a cover, a plurality of lamp-receiving sockets secured thereto but insulated therefrom, a circular plate located upon the opposite side of said base and engaging peripherally all of said sockets when the cover is put in place, and means for securing said cover and the sockets carried thereby to said base, said means being located in the axial line of said cover 125 and base.

4. In a plural lamp socket, the combination of an insulating base, a plate carried by said base upon each of its sides, a cover inclosing said base and provided with open- 130

ings arranged radially about the axis of said cover, a lamp-receiving socket in each of said openings, said sockets having each an outturned flange adapted to retain said sockets in place in said openings, said flanges being electrically connected with one of said plates, and means independent of said sockets for securing said cover and said base together.

5. In a plural lamp-holding device, an insulating block, a circular plate secured to each side of said block, means for connecting a lead with each of said plates, a casing surrounding said block and threaded lamp-receiving shells carried by said casing and adapted to engage one of said plates when the casing and block are assembled, said shells being so located that the center terminals of lamps inserted therein will engage the other of said plates.

6. In a plural lamp-holding device, a back-plate, a casing supported thereby, lamp-holders carried by said casing, an insulating block located within said casing and supported thereby, a center contact for each of said lamp-holders, an outer contact member for each of said lamp-holders, said outer contact members being carried by the

casing, and means on said block for completing the circuit through said outer contact members when the parts are assembled, said means being adapted to cooperate with any number of such contacts within the capacity of the device.

7. In a lamp-holding device, a back-plate, a casing supported thereby and having lamp-receiving openings, an insulating block located within said casing, a circular inner contact member adapted to contact with a variable number of lamps, a conducting member carried by said block, an outer contact member for engagement with each lamp, said outer contact members being carried by the casing and arranged to engage said conducting member when the parts are assembled, and means centrally disposed relatively to said casing and block for securing said block in said casing.

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

REUBEN B. BENJAMIN.

Witnesses:

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