R. B. BENJAMIN.

PLURAL LAMP SOCKET.

APPLICATION FILED FEB. 27, 1907.

898,823.

Patented Sept. 15, 1903.

2 SHEETS—SHEET 1.

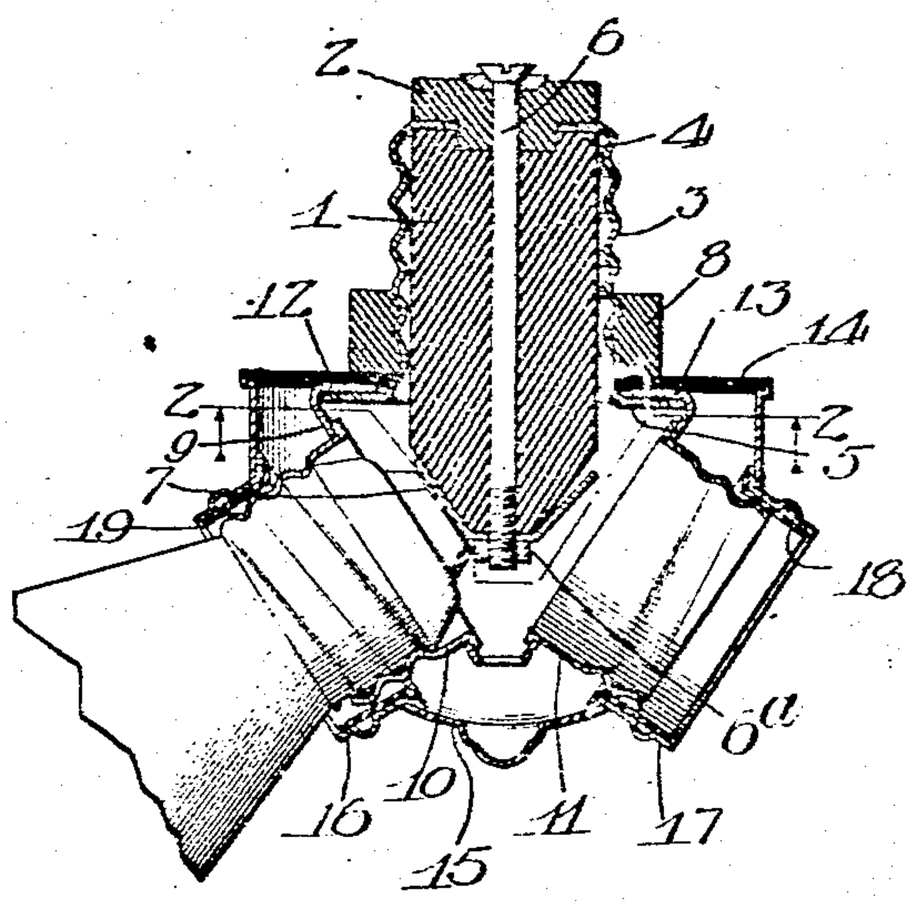

Fig. 1.

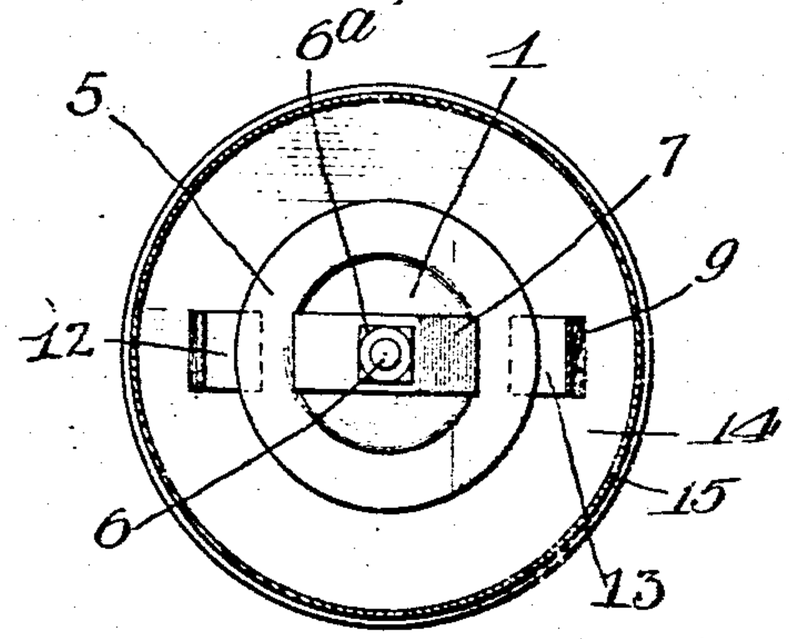

Fig. 2.

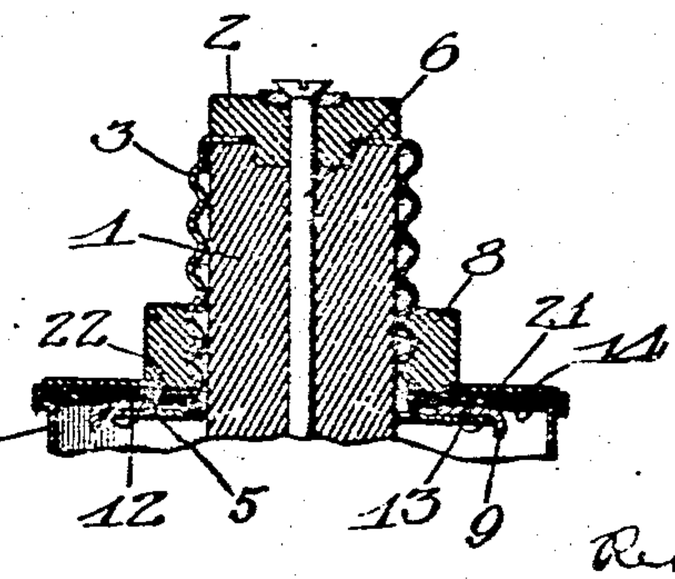

Fig. 6.

Witnesses:
Ira D. Perry
C. L. Hopkins

Inventor
Reuben B. Benjamin
by Jones, Addington & Amies
Attys.

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2 SHEETS—SHEET 2.

Fig. 3.

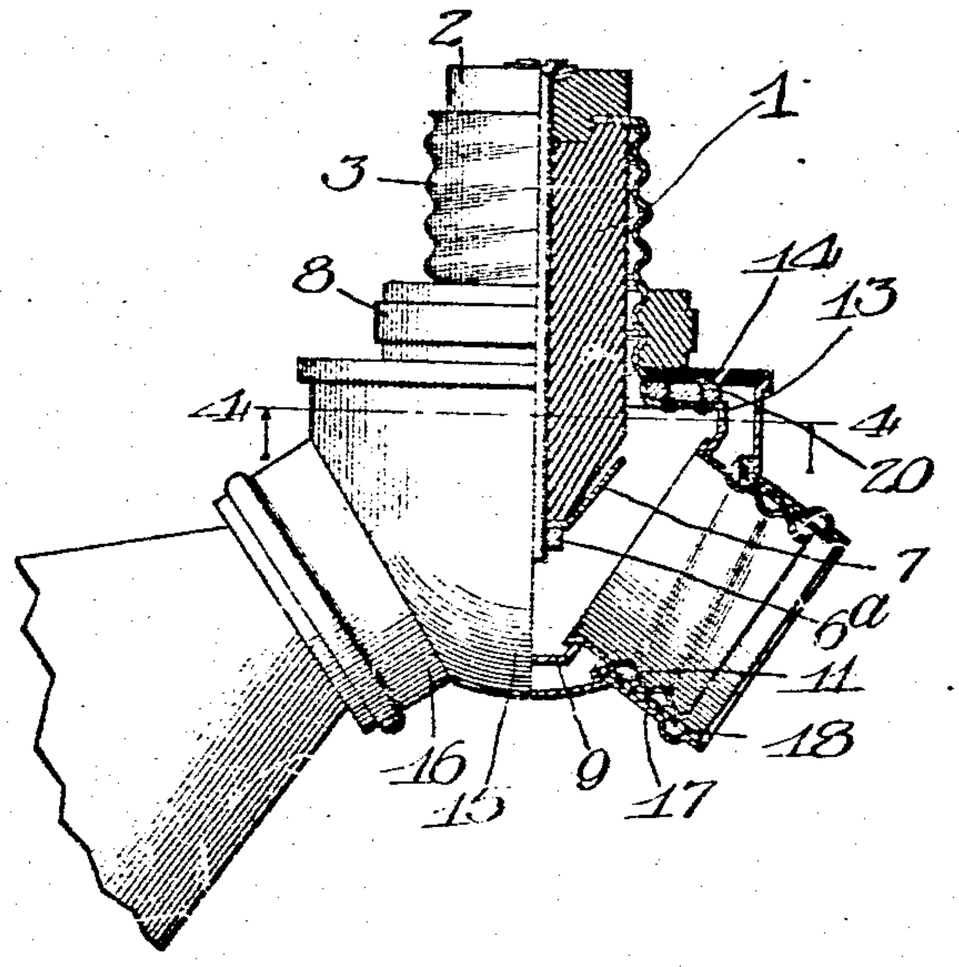


Fig. 4.

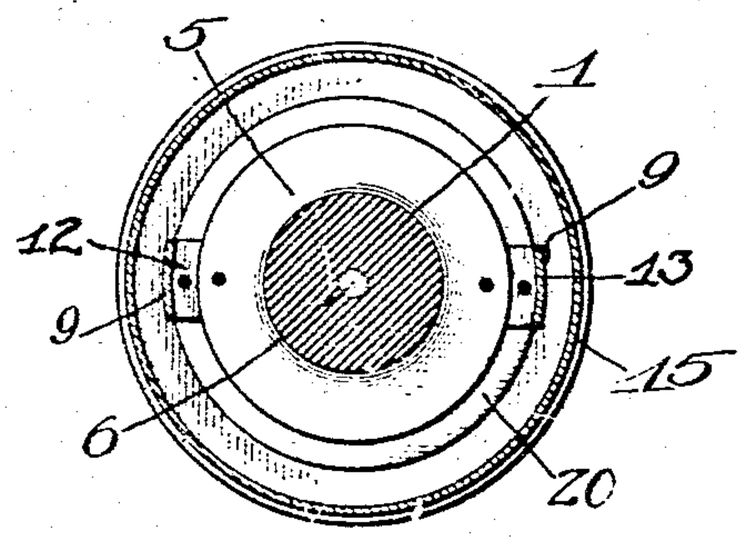
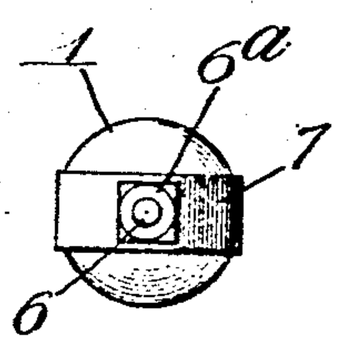


Fig. 5.



Witnesses:
Jas. D. Perry
C. L. Hopkins

Inventor
Reuben B. Benjamin
by Jones, Addington & Ames
Attys.

UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PLURAL LAMP-SOCKET.

No. 898,823. Specification of Letters Patent. Patented Sept. 15, 1908

Application filed February 27, 1907. Serial No. 359,667.

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.

My invention relates to improvements in electric lamp clusters, and particularly to a type of lamp cluster that is adapted to be inserted into the ordinary socket or receptacle, one of the objects of the invention being the production of a device of this type which is of simple and economical construction and at the same time efficient and durable.

In the accompanying drawings, in which the same reference numerals designate like parts throughout the several views, Figure 1 is a central vertical sectional view of a device embodying my invention; Fig. 2 is a cross-sectional view of the same, the section being taken on the line 2—2 of Fig. 1, looking in the direction indicated by the arrows; Fig. 3 shows, partly in section and partly in elevation, a slightly modified form of device embodying the invention; Fig. 4 is a cross-sectional view of the same, the section being taken on the line 4—4 of Fig. 3, looking in the direction indicated by the arrows; Fig. 5 is a detail of a portion of the device; and Fig. 6 is a broken sectional view of a further modification.

Referring to Figs. 1 and 2, 1 indicates the plug, formed of insulating material, this plug being provided with a separable end-piece or cap 2. Carried on the main body-portion 1 of the plug is a corrugated contact member which may conveniently consist of a threaded ring 3 adapted to coöperate with one of the contacts of the ordinary Edison type of incandescent lamp socket. This ring is formed at one of its ends with an inturned flange, or shoulder 4, the opposite end being provided with an out-turned flange or shoulder 5. Extending longitudinally and centrally through the plug 1 is a bolt or the like 6, this bolt serving to secure the cap 2 to the main portion of the plug 1 and to clamp this cap firmly down upon the inturned flange 4. Upon the inner end of the plug 1 is a plate 7, this plate being adapted to serve as one of the contacts for all of the lamps which the device is designed to hold. The outer end of the bolt 6 serves as the center contact for the plug of the device, while the nut 6ª, upon the inner end of the bolt 6, serves to secure the plate 7 in place and to bind the whole together.

8 indicates a sleeve of insulating material which is adapted to pass on over the contact ring 3. Preferably this sleeve 8 will be interiorly screw-threaded to correspond with the threads upon this member 3.

9 is a plate which is adapted to form the outer contact for each of the lamps and may support the lamp sockets or holders 10 and 11. These sockets 10 and 11 are in the form of shells screw-threaded to receive the screw-threaded outer terminals of incandescent lamps of the Edison type. The plate 9 is formed with its opposite ends 12 and 13 approaching each other, these inturned ends overlapping the out-turned flange 5 upon the ring 3.

14 is a disk of fiber or similar insulating material formed with a central circular opening and adapted to be slipped on over the outer contact member 3 before the sleeve 8 is placed thereon. When this sleeve 8 is screwed down firmly, the ends 12 and 13 of the plate 9, and the disk 14, are securely clamped between the flange 5 and the sleeve 8. This forms a very strong and rigid structure.

15 is a circular cover or casing adapted to engage around its periphery the edge of the disk 14 and to make a tight joint therewith. This cover or casing 15 is formed with suitable openings therethrough for the lamp sockets 10 and 11.

16 and 17 are metallic rings or shells secured in these openings in the cover 15. The sockets 10 and 11 are insulated from the shells 16 and 17 by rings 18 and 19 of fiber or similar material.

The circuits through the device are from the outer end of the bolt 6, through this bolt to the plate 7, from this plate through the center contacts of the lamps and the filaments of these lamps to the outer ring contacts of said lamps, then through the plate 9 to the threaded contact member 3.

In the form of the device shown in Figs. 3 and 4 the inturned ends 12 and 13 of the plate 9 do not overlap the flange 5 on the contact sleeve 3 and do not directly engage this flange. A flat metallic ring 20 is supported by the flange 5 and to this ring is se-

cured, by rivets or otherwise, the inturned ends of the plate 9, electrical connection being established between the sleeve 3 and plate 9 through this ring 20.

In the form of the device shown in Fig. 6, a metallic cover-plate 21 is interposed between the fiber disk 14 and the nonconducting sleeve 8. This disk 21 is centered by a projection or shoulder 22 upon the sleeve 8. When this plate 21 is used it forms, in combination with the cover 15, a complete metallic casing for the device.

I claim:

1. In a plug-cluster, a plug of insulating material carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having a shoulder upon its inner end, and a lamp-terminal-contacting plate supported by said shoulder.

2. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having a flanged inner end, and a contact-plate carried by and in electrical connection with said flange.

3. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central and an outer contact member upon said plug to coöperate with the contacts of a suitable socket, said outer contact member having an out-turned inner end, and a lamp-terminal-contacting plate supported by said out-turned end.

4. In a plug-cluster the combination of a plug carrying a plurality of lamp-holding devices, a central contact upon the outer end of said plug, a contact-plate upon the inner end of said plug, electrical connection between said center contact and said plate, an outer contact member upon said plug, said member being formed with a shoulder adjacent the inner end of the plug, and a contact-plate supported by and in electrical connection with said shoulder.

5. In a plug-cluster, a plug adapted to cooperate with a suitable socket and carrying a plurality of lamp-holding devices, said plug having a center contact upon its outer end and an outer contact member extending longitudinally thereof, a plate secured to the inner end of said outer contact member and forming a lamp-terminal contact for each of the lamps, and a plate upon the inner end of the plug and in electrical connection with the center contact of said plug, said last-named plate forming the other contact for each of the lamps.

6. In a plug-cluster, a plug of insulating material, an outer contact member carried by said plug, said member having an inturned end and a removable cap formed of insulating material and adapted to be applied to the end of the plug and, when so applied, to clamp the inturned end of said contact member between itself and said plug, and a lamp-holding device carried by said plug and having a contact electrically connected with said outer contact member.

7. In a plug-cluster, a plug formed of nonconducting material, an outer contact member carried by said plug, said member having one of its ends inturned, a cap adapted to be applied to the outer end of the plug and to confine between itself and said plug the inturned end of said contact member, and a bolt adapted to secure said parts together and also to form a center contact for said plug.

8. The combination of a plug, a corrugated contact member extending longitudinally of the plug and having a flange on its inner end, and a lamp-terminal-contacting plate supported by said corrugated member.

9. The combination of a plug carrying a plurality of lamp-holding devices and having a center contact upon its outer end, an outer contact member upon said plug, and a lamp-terminal-contacting plate supported by said outer contact.

10. The combination of a plug carrying a plurality of lamp-holding devices and having a center contact upon its end, an outer contact member upon said plug and a lamp-terminal-contacting plate supported by and in electrical contact with said outer contact member.

11. The combination of a plug carrying a plurality of lamp-holding devices and having a center contact upon its end, an outer contact member upon said plug and a lamp-terminal-contact-plate supported by and in electrical connection with said outer contact member.

12. In a plug-cluster the combination of a two-part plug, an outer contact member on the plug, said member having an inturned end adapted to be clamped between the parts of the plug, a bolt extending longitudinally through the plug and holding the parts of the plug together, one end of said bolt forming a center contact for said plug, and a plate electrically connected with said bolt and adapted to form one of the contacts for each of a plurality of lamps.

13. In a plug-cluster the combination of a two-part plug, a corrugated contact member on the plug, said member having an inturned flange adapted to be clamped between the parts of the plug, a bolt extending longitudinally through the plug and serving to secure the parts of the plug together, one end of the bolt forming the center contact for the plug, and a plate upon the inner end of said plug, said plate being electrically connected with said bolt and adapted to form one of the contacts for each of a plurality of lamps.

14. In a plug-cluster the combination of a two-part plug, a corrugated member on the plug, said member having an inturned flange adapted to be clamped between the parts of the plug, a bolt extending longitudinally through the plug and serving to secure the parts of the plug together, one end of said bolt providing the center contact for the plug, and a plate secured to the opposite end of said bolt, said plate adapted to form one of the contacts for each of a plurality of lamps.

15. In a plug-cluster, a plug having an outer contact member thereon, said contact member being provided with a flange, a lamp-terminal-contacting plate having its ends adapted to extend over said flange, and a sleeve of nonconducting material adapted to be passed on over the outer contact member and to clamp said plate between itself and said flange.

16. In a plug-cluster, a plug having an outer contact member thereon, said contact member being provided with a flange, a lamp-supporting plate having its ends adapted to extend over said flange, and a sleeve of insulating material adapted to be passed on over the center contact and to clamp the lamp-supporting plate between itself and said flange.

17. In a plug-cluster, the combination of a plug having an outer contact member extending lengthwise of said plug, a lamp-supporting plate carried upon the inner end of said outer contact member, said plate being adapted to form one of the lamp-terminal-contacting members for each of the lamps, a second plate upon the inner end of said plug, and a bolt passing longitudinally through said plug and adapted to secure the said last-named plate to the plug and to constitute a center contact for said plug.

18. In a plug-cluster, the combination of a two-part plug, a threaded contact ring sleeved upon said plug, said ring having an inturned flange upon one of its ends and an out-turned flange upon its opposite end, means extending longitudinally through the plug and serving to secure the parts of said plug together, said means adapted also to provide a center contact and to conduct current to the center contacts of a plurality of lamps, a lamp-supporting plate supported by the out-turned flange of the contact ring, and a threaded insulating sleeve adapted to be secured on to the contact ring and to clamp the lamp-carrying plate between itself and the out-turned flange.

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

REUBEN B. BENJAMIN.

Witnesses:
M. L. FARRAR,
C. L. HOPKINS.