R. B. BENJAMIN.

PLURAL LAMP SOCKET.

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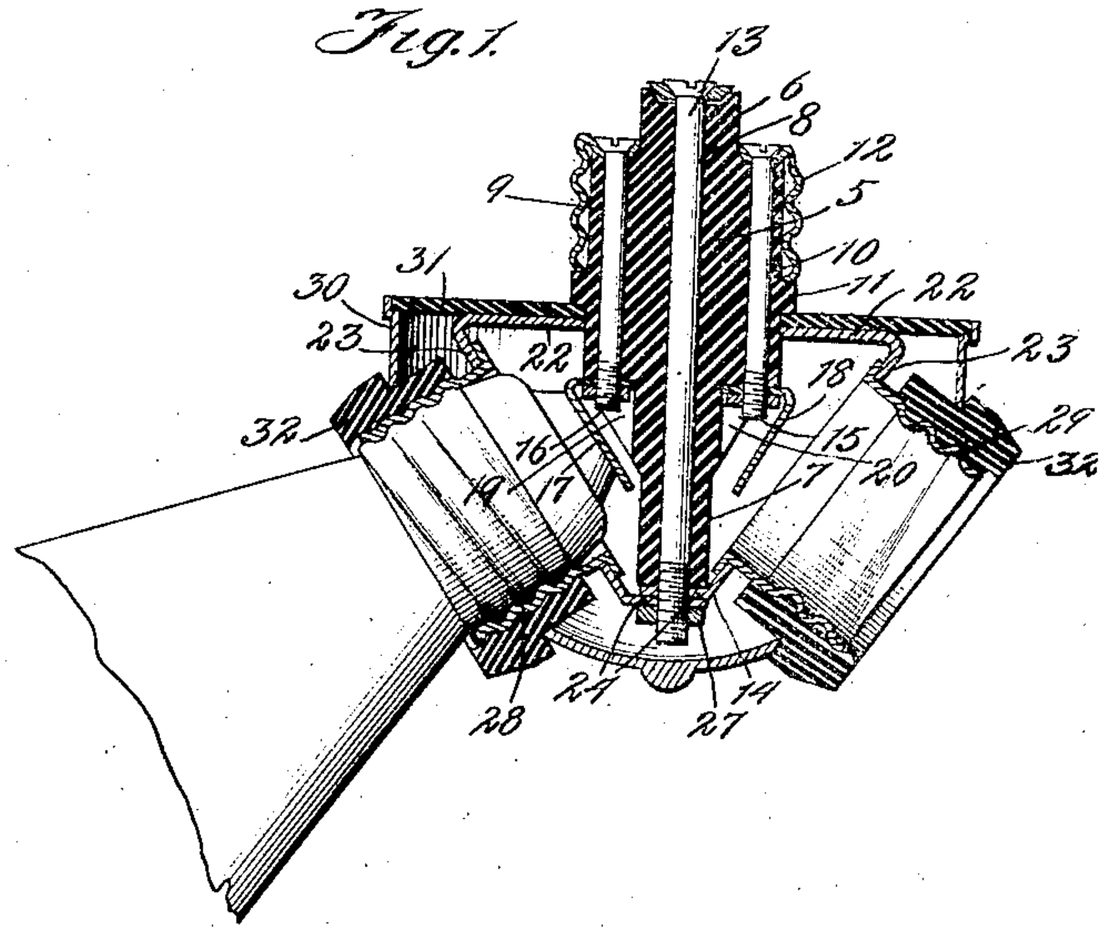
898,825.

Patented Sept. 15, 1908.

Fig. 1.



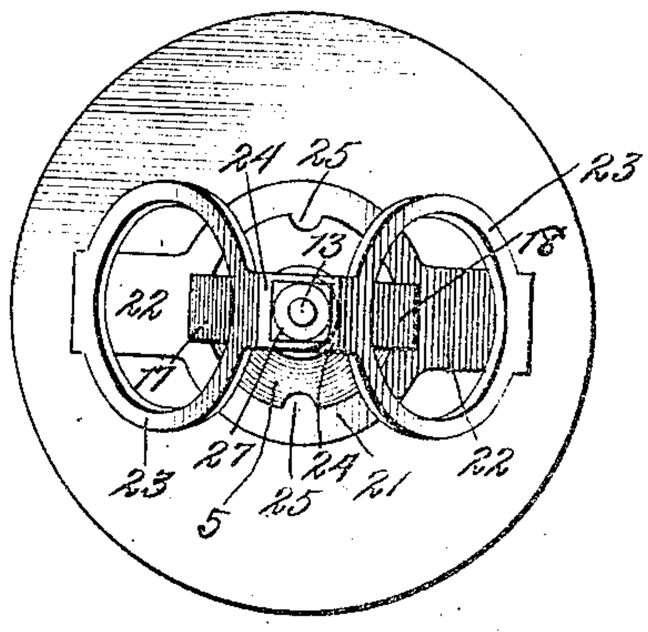
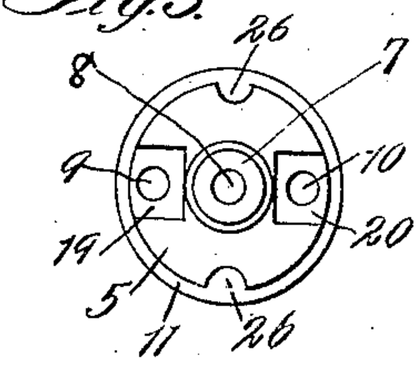


Fig. 2.

Fig. 3.



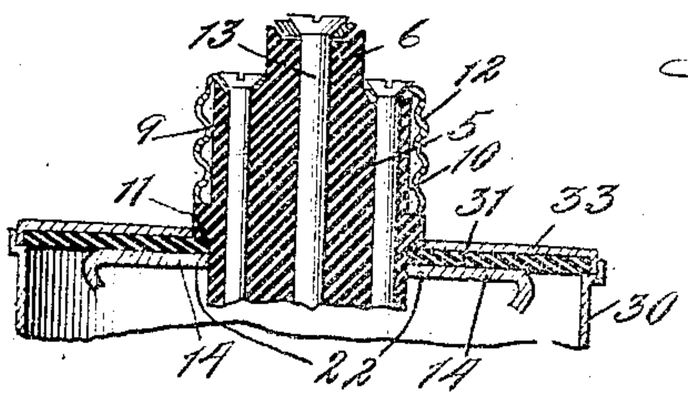


Fig. 4.

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PLURAL LAMP-SOCKET.

No. 898,825. Specification of Letters Patent. Patented Sept. 15, 1908.

Application filed March 1, 1907. Serial No. 360,090.

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, and particularly to that type of plural lamp sockets which are known as "plug clusters", the same being provided with a plug having contacts adapted to cooperate with the contacts on a suitable socket, and carrying a plurality of lamp-holding devices and the appropriate contacts for a plurality of lamps.

One of the objects of the invention is the provision of a device of this class which is made up of but few parts, and which is economical to manufacture, and, at the same time, efficient and durable.

In the accompanying drawings Figure 1 is a vertical central sectional view of a preferred form of my device; Fig. 2 is a bottom plan view of the same with the cover or casing removed to expose to view some of the parts of the device; Fig. 3 is an end view of one of the members of the device disassociated from the other parts; and Fig. 4 is a broken sectional view of a modified form of device embodying my invention.

In the several figures of the drawings, in which like reference numerals indicate the same parts throughout, 5 is a plug formed of porcelain or other suitable insulating material. This plug has formed upon its outer end a short central projection 6 and upon its inner end is provided with a long central projection 7. This plug is formed with an opening 8 which extends longitudinally and centrally therethrough and with openings 9 and 10 parallel with the opening 8. Extending around the plug 5 is a flange or shoulder 11.

The plug 5 is provided with an outer contact member, preferably in the form of a corrugated or threaded metallic shell 12, having the form of an inverted cup with a central circular opening in its bottom. This shell 12 is slipped onto the outer end of the plug 5 so that, when in position, the extended end 6 of the plug projects through the central opening thereof.

The center contact of the plug is formed by a bolt 13 which extends through the central aperture of the plug and carries upon its lower end a metallic plate 14, this plate being adapted to conduct current to the outer contacts of each of the lamps carried by the device. Other bolts 15 and 16 extend through the apertures 9 and 10 and serve to hold the shell 12 in position upon the plug, the edge of this shell resting upon the upper side of the flange 11.

Upon the inner end of each of the bolts 15 and 16 is secured a bent plate, these plates being designated 17 and 18 respectively. Each of these plates forms the center contact for one of the lamps. The under side of the plug 5 is formed with recesses 19 and 20, in each of which rests one end of one of the plates 17 and 18. These plates are thereby prevented from swinging around out of contact with the terminals of the lamps.

The plate 14 comprises a ring 21 with a portion 22 projecting from each side thereof, these projections carrying other rings 23. Each of the rings 23 is provided with a lug 24. This plate 14 is bent into a triangular form, so that each of the rings constitutes one side of the triangle, and with the ends 24 overlapping each other. This triangular plate is slipped on over the inner end of the plug 5 with the ring 21 surrounding the plug, and is prevented from turning on the plug by a pair of lugs 25 formed integral with the ring 21 and adapted to fit into corresponding recesses 26 formed in the sides of the plug. The bolt 13, after being inserted through the opening 8 and suitable openings in the meeting and overlapping ends of the plate 24, is then provided with a screw-threaded nut 27. When this nut 27 is tightened on the bolt 13 these ends 24 of the plate are firmly held between said nut and the lower end of the plug. The plate 14 conducts current from the inner contact of the plug to the outer contacts of the lamps, and, when the device is adapted for lamps of the Edison type, carries sockets or holders for said lamps. These sockets, 28 and 29, are soldered, or otherwise conveniently secured to the plate 14, and project through suitable openings in the cover or casing 30. This cover 30 is substantially hemi-

spherical in form and engages around its upper edge the outer edge of a disk 31, this disk being formed of fiber or similar non-conducting material and being held between the flange 11, of the plug and the plate 14.

A suitable insulating bushing 32, preferably formed of porcelain, is adapted to be screwed onto each of the lamp holding shells 28 and 29, insulating the same from the casing 30. When these bushings are screwed up into place the cover 30 is sustained and held in place without other means.

In Fig. 4, I have shown a portion of a modified form of the device. As shown in this figure, a metallic plate 33 is inserted between the fiber disk 31 and the flange 11 of the plug. When made up in this way the device is provided with a complete metallic cover.

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

1. In a plural lamp socket, a plug carrying a plurality of lamp-holding sockets and provided with a center contact and an outer contact adapted to coöperate with the contacts of a suitable socket, means extending longitudinally through said plug adapted to conduct current to a plurality of lamps, a lateral projection on said plug, an annular disk disposed against said projection, means for securing said disk in such position, said disk forming a part of the casing of the device, a cover adapted to engage said disk around its edge and having openings for the insertion of the lamps, and insulating bushings inserted into said openings and engaging the lamp sockets, said bushings being adapted, when in place, to support said cover and to hold the same in contact with said disk.

2. In a plural lamp socket, a plug provided with a center contact and an outer contact adapted to coöperate with the contacts of a suitable receptacle, said plug having a shoulder extending therearound and an extension on its inner end, a disk of insulating material surrounding said plug and engaging the shoulder on said plug, a plate having an annular portion surrounding said plug, the ends of said plate approaching each other and overlapping at the end of the extension of said plug, said plate carrying the outer contacts of a plurality of lamps, and a member extending longitudinally through said plug, said member securing said plate to said plug and constituting the center contact of said plug.

3. In a plural lamp socket, the combination of a plug having an extension on its inner end, a bolt extending longitudinally through said plug and said extension, a lamp-supporting plate having an annular portion through which the plug extends, said plate being bent so that its ends approach each other and overlap on the end of said extension, said bolt securing said plate to said plug and also forming the center contact of said plug.

4. In a plural lamp socket, the combination of a plug, a plate bent to triangular form and having an annular portion surrounding said plug, said plate carrying lamp-holding devices and having its ends meeting at the inner end of the plug, and a bolt extending longitudinally through the plug and securing the ends of said plate to said plug and also forming the center contact of said plug.

5. In a plural lamp socket, the combination with a plug, of a metallic plate having an annular portion between its ends and surrounding said plug, the ends of said plate meeting each other at the inner end of the plug, lamp-contacting means carried by said plate, and a bolt securing said plate to the plug and providing a center contact for said plug.

6. In a plug-cluster, an elongated plug having a recess in its side, a contact plate having one of its ends inserted into said recess and thereby held in proper position, an outer contact member upon said plug, a bolt extending through said plug and adapted to secure said plate and said outer contact member to the plug and to provide electrical connection between said members, and a lamp-holder disposed to present the center terminal of a lamp to said plate.

7. In a plug-cluster, a plug formed with recesses, plates inserted into said recesses and extending therefrom, an outer contact member on said plug, said member consisting of a corrugated shell surrounding said plug, bolts extending longitudinally through said plug, said bolts securing said plates and said contact shell to the plug and providing electrical connection between said members, and a plurality of lamp-holders each arranged to present the center contact of a lamp to one of said plates.

8. In a plug-cluster, the combination of a plug having a flange formed thereon intermediate its ends, a disk having a central aperture through which extends said plug, a metallic plate having an aperture through which said plug extends, said plate being adapted to conduct current to the outer contacts of a plurality of lamps and having ends approaching each other and meeting at the inner end of the plug, and a bolt extending longitudinally through the plug and securing the ends of said plate to said plug and constituting the center contact of the plug, said bolt also holding said insulating disk in contact with the flange on the plug and securing the said disk between said flange and the plate.

9. In a plural lamp socket, the combination with a plug, of a metallic plate having an annular portion between its ends and arranged to surround said plug, the ends of said plate meeting each other at the inner

end of the plug, lamp-contacting means carried by said plate, and a bolt securing said plate to the plug and providing a center contact for said plug, said plug having a shoulder formed thereon, and a disk confined between said plate and said shoulder and forming part of the casing for the device.

10. In a plug-cluster, the combination of a plug, a disk having an aperture through which said plug extends, a plurality of lamp-holding devices carried by the plug, a cover having openings for the insertion of lamps, means for sustaining the disk on the plug, and means for sustaining said cover in contact with said disk.

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

REUBEN B. BENJAMIN.

Witnesses:

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