R. B. BENJAMIN.

CLUSTER LAMP SOCKET.

APPLICATION FILED OCT. 28, 1907.

938,632. **Patented Nov. 2, 1909.**

Fig. 1.

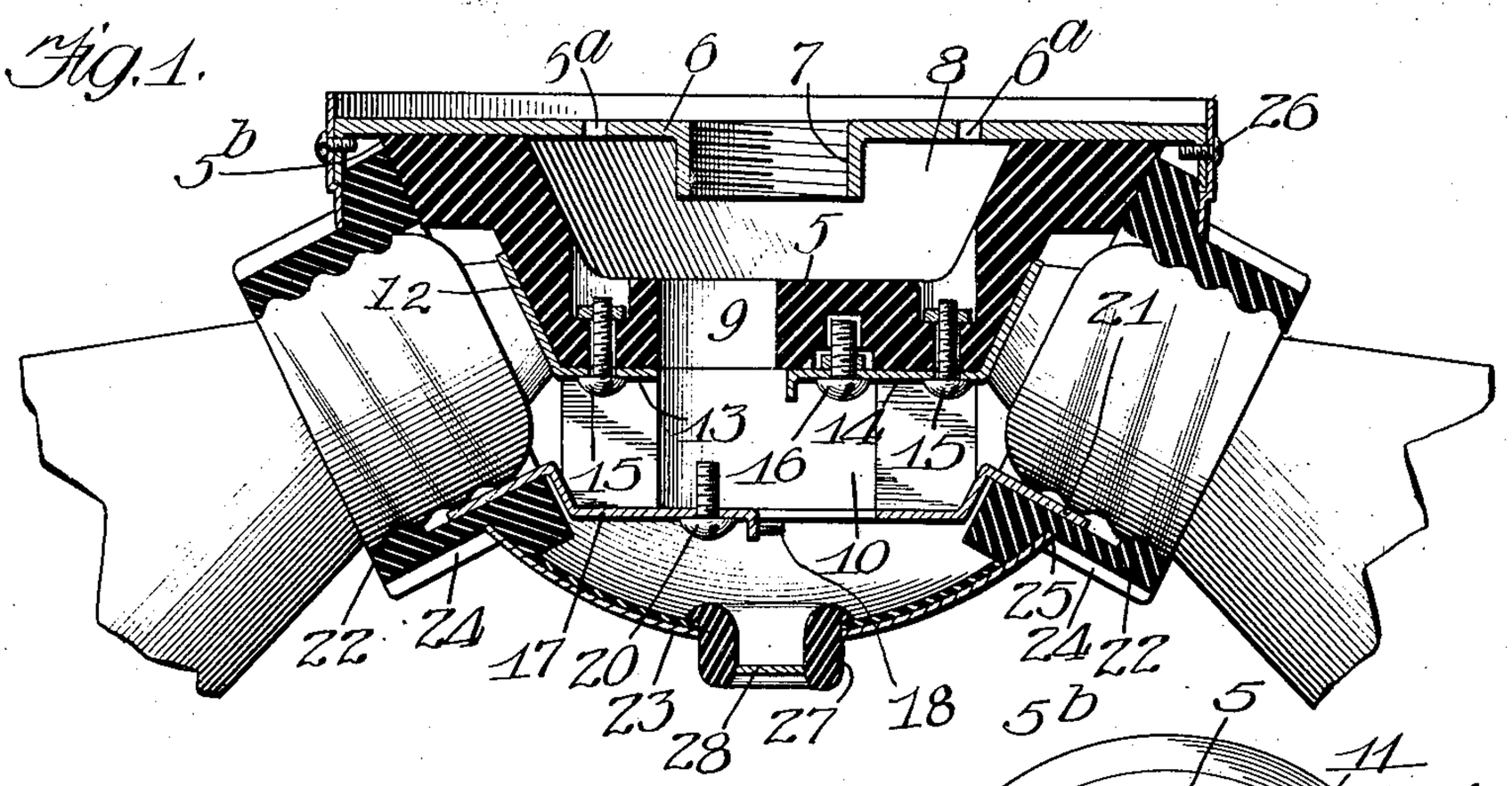


Fig. 3.

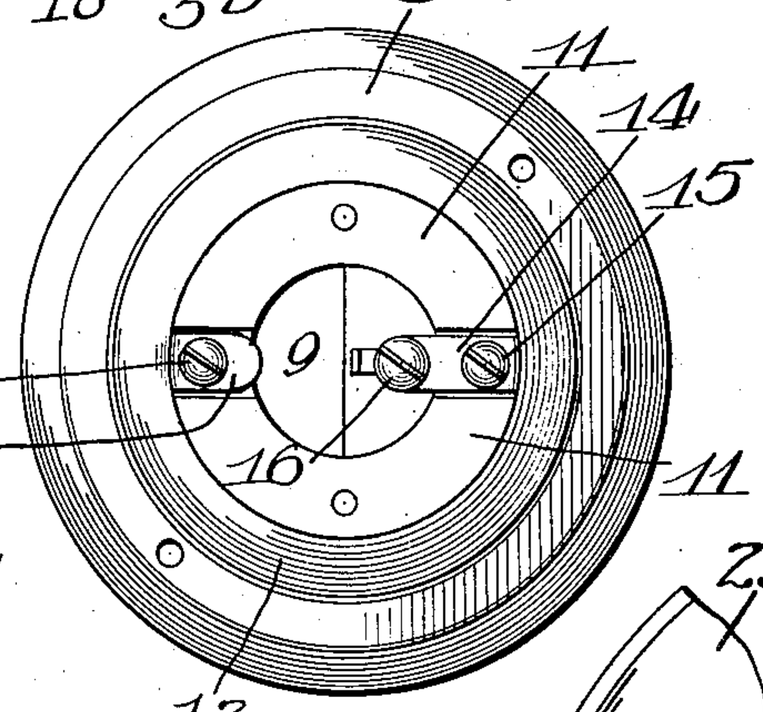
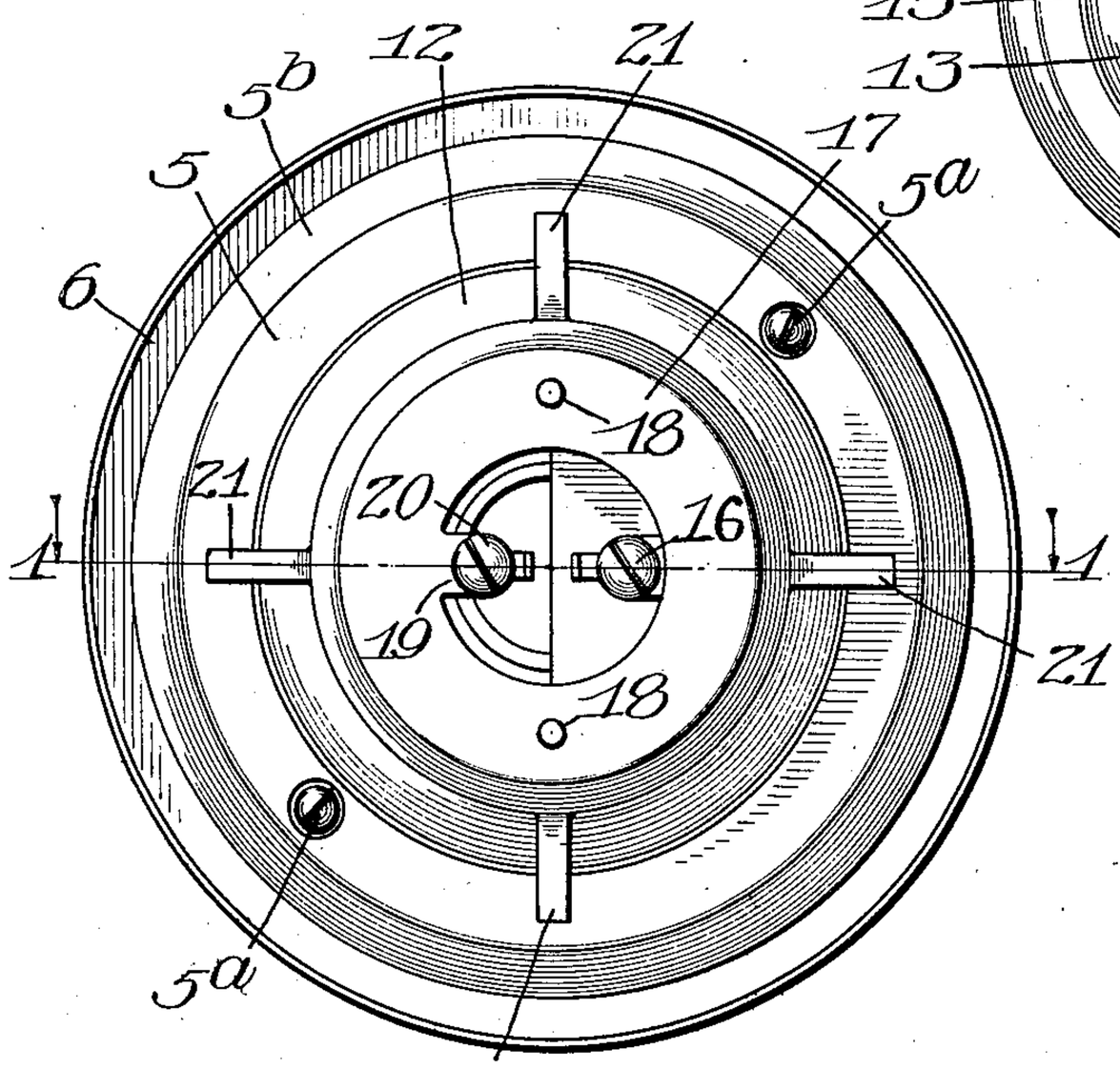


Fig. 2.



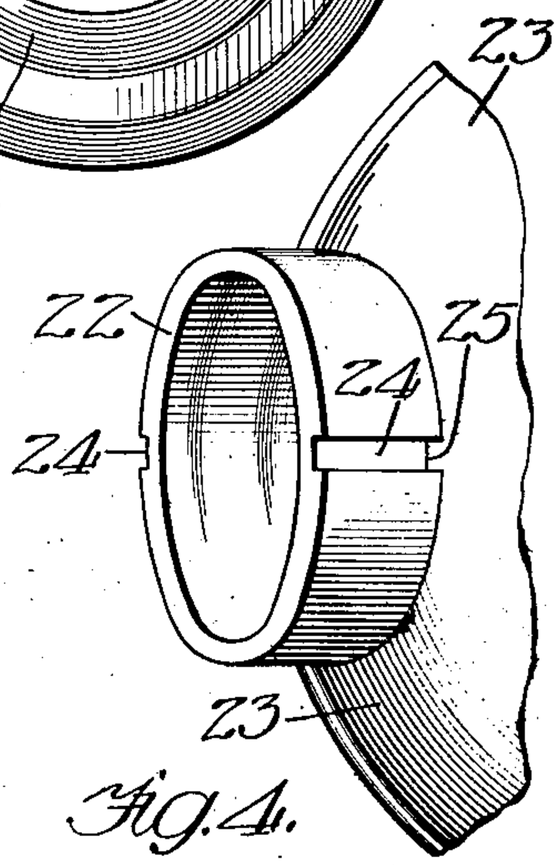


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CLUSTER-LAMP SOCKET.

938,632. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed October 28, 1907. Serial No. 399,552.

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 Cluster-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 cluster lamp sockets of that class wherein an insulating base carries conducting plates which are so arranged as to engage the terminals of incandescent electric lamps when such lamps are inserted into the holders of the device and to conduct current to each of said lamps.

The object of the present invention is the provision of a device of this class which is of simple and economical construction and which is so constructed as to permit convenient connection therewith of the leading-in or supply wires.

In the accompanying drawings, in which I have illustrated a device embodying my invention, Figure 1 is a vertical diametrical sectional view of the device, the section being taken on the line 1—1 of Fig. 2, looking in the direction indicated by the arrows; Fig. 2 is a bottom plan view of the device with the outer casing and lamp-holders removed; Fig. 3 is a bottom plan view of the insulating contact-carrying part with the lower contact plate removed; Fig. 4 is an elevational view of one of the lamp-holders and a portion of the casing through which this holder projects, showing a means for preventing rotation of the lamp-holder in the opening in the casing when a lamp is screwed into the holder.

In the several figures of the drawing, in which like reference numerals indicate the same parts throughout, 5 is the insulating contact-carrying member, preferably formed of porcelain and secured to a metallic back plate 6 by means of screws 5^a, 5^a. This back plate is provided with a neck 7 interiorly threaded for the reception of the threaded end of a pipe or conduit. The leading-in wires may be brought into the device through the conduit or through openings 6^a, 6^a provided for this purpose in the back plate.

The insulating member 5 has substantially the form of an inverted truncated cone and is formed with a depression 8 in its upper side. A semi-circular passage 9 extends from the depression 8 through this member. This passage is enlarged at its lower end, where it becomes circular at 10. Extending across the lower portion of the insulating member is a channel which divides this part of the member into two substantially semi-annular portions or ribs 11, 11.

Surrounding the member 5 is an annular plate 12 with which the center terminals of the lamps engage. This plate 12 is provided with a pair of inwardly extending lugs 13, 14 lying in the channels between the ends of the ribs 11, 11. A screw 15 passes through each of these lugs 13 and 14 and suitable apertures in the member 5, whereby the plate 12 is secured in position on the insulating member. Each of the screws 15, 15 is provided with a suitable nut upon its upper end. The lug 14 is provided also with a binding-screw 16 to which will be brought one of the leading-in wires through the opening 9.

Upon the lower side of the insulating member 5 is secured an annular contact plate 17, held in place by screws 18, 18, which pass through the member 5 and screw into suitable threaded openings in this plate. The plate 17 is formed with an inwardly projecting lug 19 which carries a binding-screw 20 to which will be brought the other leading-in wire through the opening 9. This plate 17 is provided with a number of radially extending tongues 21, these tongues being as many in number as the number of lamps which the device is designed to carry. Each of these tongues serves as a contact for engaging the outer or ring contact of a lamp when the latter is screwed into its receptacle. These receptacles consist of insulating rings 22, interiorly threaded to correspond with the threads on the lamp bases. These insulating rings are passed outwardly through suitable openings in the casing or shell 23 of the device and are enlarged at their inner ends to prevent them from passing out through these openings, and are prevented

from turning in the openings by suitable means which I have illustrated as taking the form of one or more grooves 24 in the exterior of each ring and corresponding projections 25 on the casing adapted to enter the grooves 24.

In installing the device for use, the back plate 6 with the insulating member 5 secured thereto will first be placed in position. The leading-in wires will then be brought down through the neck 7 or through the openings 6^a, 6^a, which are provided for this purpose in the plate 6, and will be led through the opening 9 to the binding-screws 16 and 20. The casing 23, carrying the insulating lamp receivers 22, will then be put up in place and will be secured to the back plate 6 by means of small screws 26 passing through the upper edge of the casing and into the downturned edge of the base plate. When the lamps are screwed into the receivers each lamp will engage with its center terminal the ring 12, and will engage with its outer terminal one of the tongues 21.

The casing 23 is formed with a central opening in which is disposed an insulating bushing 27 having a partition 28 therein. When it is desired to lead a conducting cord from the device to a drop light, fan motor, or other translating device, the partition 28 will be broken away and the cord will be passed in through the bushing 27 and will be led to the binding-screws 16 and 20. If desired these conductors may carry or lead to a switch for turning the lamps off and on, in which case the proper connections may be readily made to include the switch in the circuit.

It will be observed that a cluster socket made up according to the present invention may be readily adapted for different numbers of lamps by merely applying a casing having the required number of socket-receiving openings, and by employing a lower contact plate having a suitable number of tongues 21. This feature of my invention is one of commercial value as it affords the possibility of making up, as required, from a small number of parts carried in stock, clusters having any desired number of lamp-holders within the physical capacity of the device.

By making the lamp receivers in the form of threaded rings having two diameters and passing these rings out through the openings in the casing from the inside, and by confining the enlarged inner portions between the inner side of the casing and the insulating contact-carrying block, I am enabled to provide a readily assembled and cheaply formed construction. The ring being held between the insulating member and the casing in this manner is held very rigidly against movement in the opening in the casing.

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

1. In a plural lamp-holding device, a casing having a plurality of openings, an insulating block within said casing, and an insulating threaded lamp-holder in each of said openings, each of said lamp-holders comprising a ring having two diameters and having its smaller part passed outward through one of the openings of the casing, the larger portion of the ring being confined between said casing and said insulating block and thereby held against inward movement.

2. In a plural lamp-holding device, a casing having a plurality of openings, an insulating block within said casing, a contact carried by said block and adapted to engage a variable number of lamps, a lamp receiver disposed in each of said openings and comprising a ring having two diameters, said ring having its larger portion confined between said casing and said insulating block and thereby held in position, and having its smaller portion extending outwardly through the casing, other contacts for engagement with the lamps, and means for preventing rotation of said ring.

3. In a plural lamp-holding device, a casing having a plurality of openings, an insulating block within said casing, a contact carried by said block and adapted to engage a variable number of lamps, a lamp receiver disposed in each of said openings and comprising a ring having two diameters, said ring having its larger portion confined between said casing and said insulating block and thereby held in position, and having its smaller portion extending outwardly through the casing, other contacts for engagement with the lamps, and interengaging means on said casing and said receiver for preventing rotation of said receiver.

4. In a plural lamp-holding device, a casing, an insulating block, a contact carried thereby and adapted to engage a variable number of lamps, a lamp-holder carried by said casing and having a portion of enlarged diameter within said casing, a tongue and groove connection between said lamp-holder and said casing for preventing rotation of said lamp-holder, the inner edge of said holder bearing upon said insulating block to prevent inward movement of said lamp-holder and a second contact for each of said holders, said second contacts comprising resilient strips extending into said holders.

5. In a plural lamp-holding device, the combination of a back plate, an insulating member secured to said back-plate, a casing independently secured to said back-plate and inclosing said insulating member and having

plurality of non-circular openings arranged in a circle, an insulating non-circular ing within each of said openings, and a plate secured to said insulating member and having radially extending tongues for engagement with the outer contacts of the amps.

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.