R. B. BENJAMIN.

WIRELESS CLUSTER.

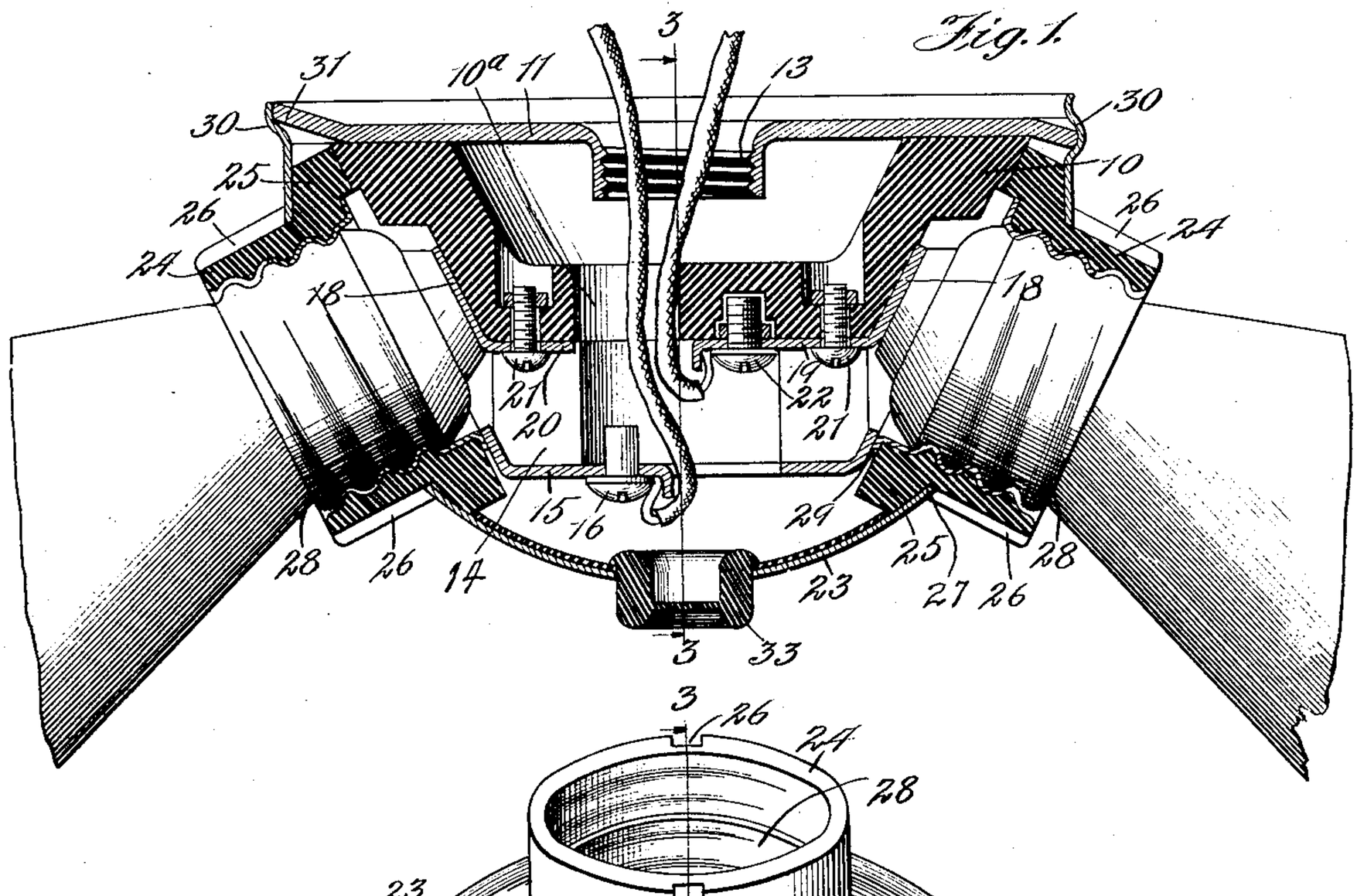
APPLICATION FILED JUNE 10, 1907.

938,631.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



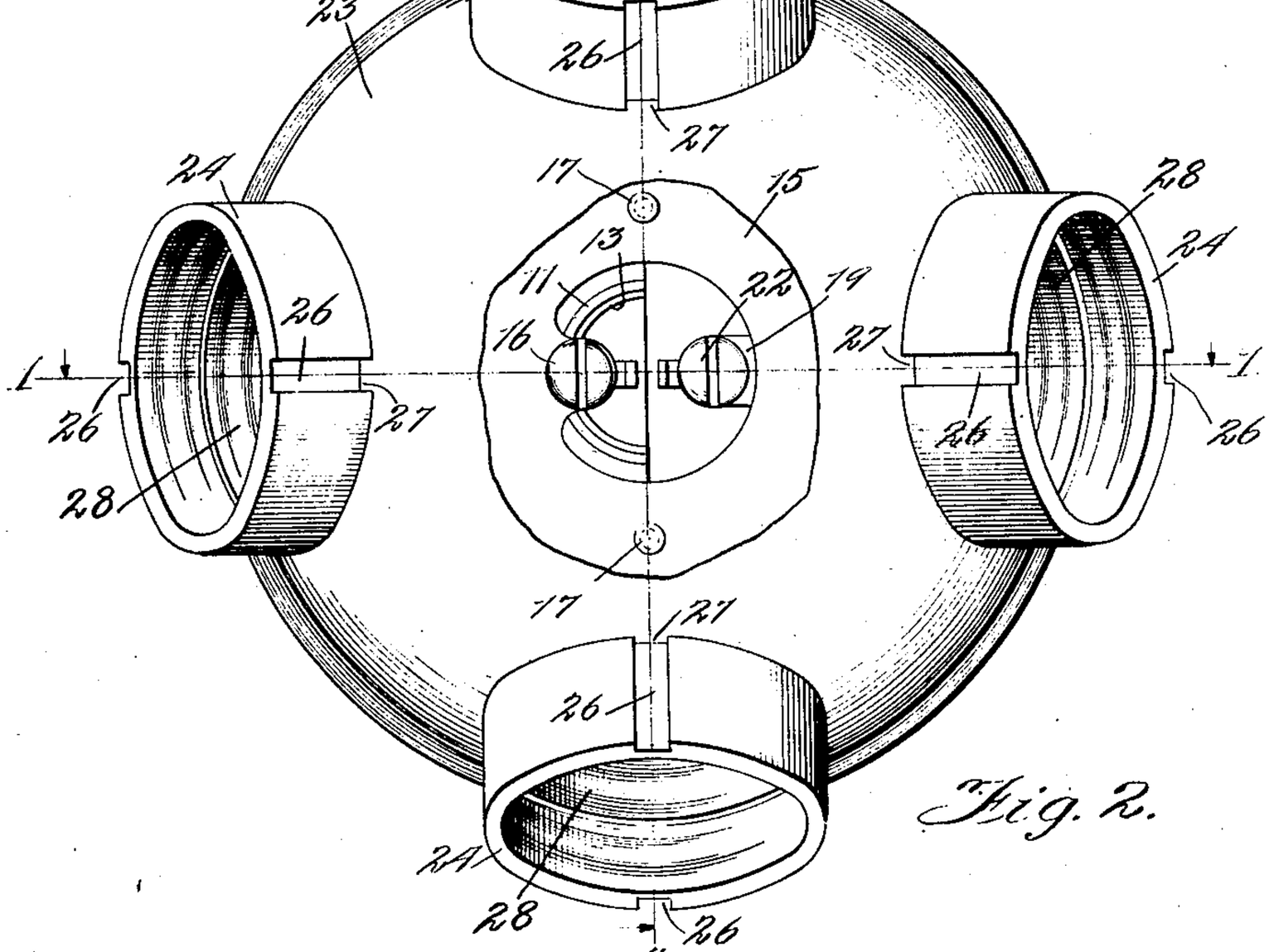


Fig. 2.

Witnesses:

B. B. Perry

C. L. Hopkins

Inventor:

Reuben B. Benjamin,

By Jones, Addington & Sims.

Attys

R. B. BENJAMIN.

WIRELESS CLUSTER.

APPLICATION FILED JUNE 10, 1907.

938,631.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 2.

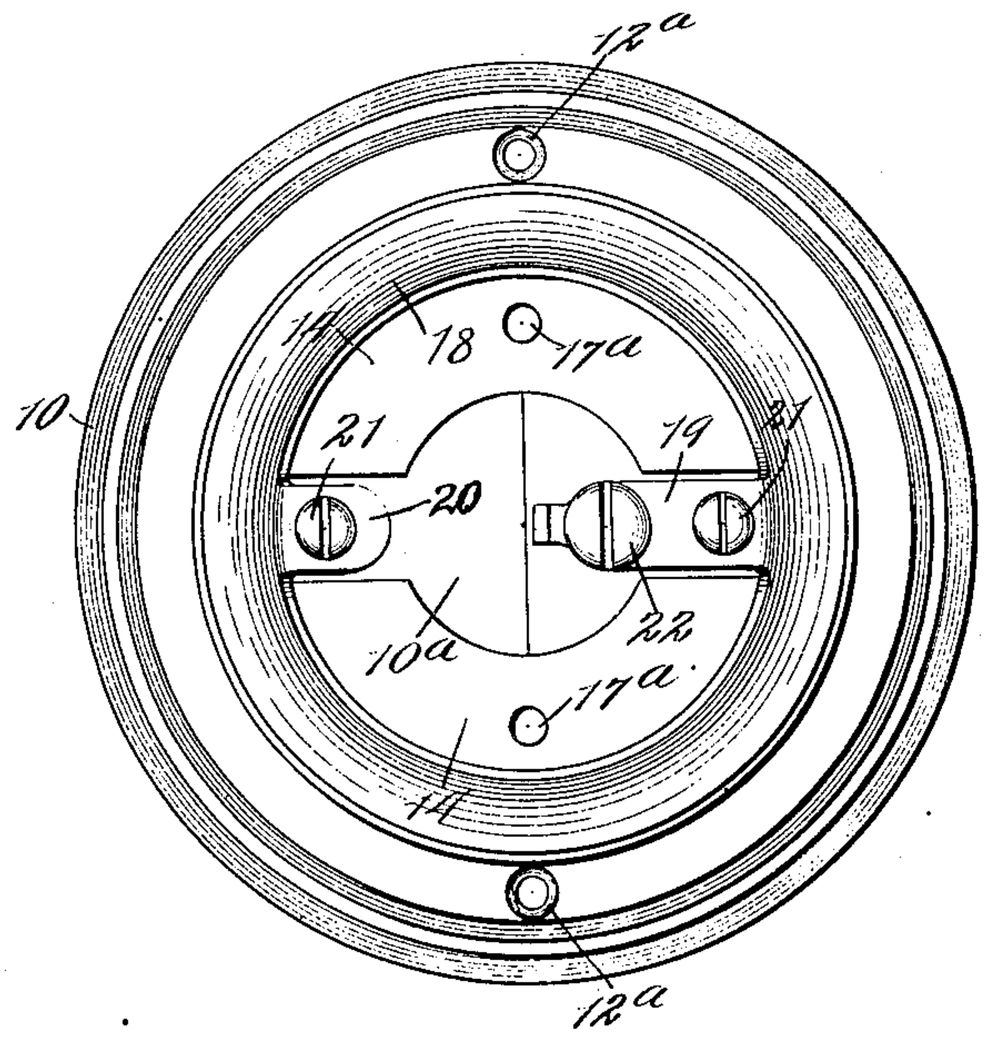


Fig. 4.

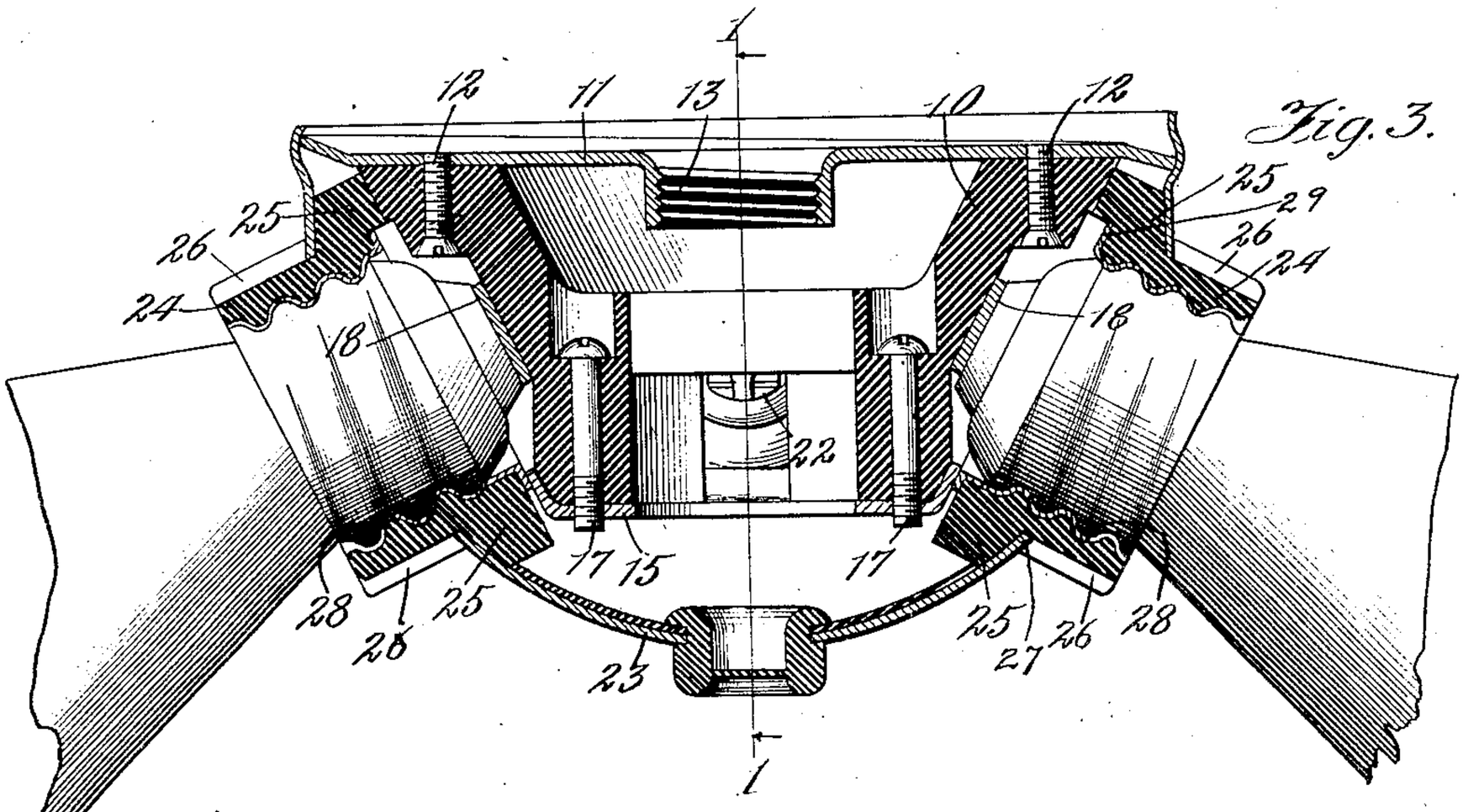


Fig. 3.

Witnesses:

Ira D. Perry

C. L. Hopkins

Inventor:

Reuben B. Benjamin

By Jones, Addington & Thum.

Attys.

UNITED STATES PATENT OFFICE.

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

WIRELESS CLUSTER.

938,631. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed June 10, 1907. Serial No. 378,265.

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 Wireless Clusters, 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-holding devices of that class wherein a supporting base carries conducting plates which are so arranged as to engage the terminals of incandescent electric lamps when such lamps are inserted into the sockets of the device and to conduct current to each of said lamps.

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

In the accompanying drawings, I have illustrated a device embodying my invention.

In these drawings Figure 1 is a vertical central sectional view of the device, the section being taken on the line 1—1 of Figs. 2 and 3; Fig. 2 is a bottom plan view of the device without lamps, a portion of the outer casing being broken away to expose to view the binding-screws whereby the leading-in wires are secured to the conducting plates; Fig. 3 is a central vertical sectional view taken on a plane at right angles with the plane of Fig. 1, this plane being indicated by the line 3—3 of Figs. 1 and 2; Fig. 4 is a bottom plan view of the insulating supporting base with one of the conducting plates secured in place thereon.

In the several figures of the drawings, in which like reference numerals indicate the same parts throughout, 10 is a supporting base formed of insulating material, preferably porcelain. This base 10 has substantially the form of a truncated cone and is secured to a supporting plate 11 by means of a pair of screws 12, 12 which pass through openings 12^a, 12^a in the base 10. This supporting plate 11 is formed with a screw-threaded neck 13 adapted to receive the threaded end of a pipe or similar conduit. The under side of the base 10 is provided with a pair of substantially semi-annular ribs 14, 14, the ends of which are somewhat separated. These ribs 14, 14 support a conducting plate 15 which is substantially annular and is provided with an inwardly projecting lug carrying a binding-screw 16. The base 10 is formed with a semi-circular opening 10^a extending therethrough, through which is led the leading-in wires, one of which is secured to the binding-screw 16. The plate 15 is secured in place by a pair of screws 17, 17 which extend through apertures 17^a, 17^a in the ribs 14, 14. A second conducting plate 18 surrounds the base 10 and is arranged to engage the center terminal of each of the lamps carried by the device. This plate 18 is ring-shaped and is provided with a pair of inwardly extending lugs 19 and 20, through each of which extends a screw 21 by means of which the plate is secured in position to the base. These lugs 19 and 20 lie in the spaces between the ends of the ribs 14, 14. The longer lug 19 is provided with a binding-screw 22 adapted to receive the end of the other leading-in wire.

The outer casing or housing 23 is provided with a series of openings for the reception of lamps. This housing is substantially bowl-shaped and is supported at its upper edge by the supporting plate 11 as will be hereinafter explained. In each of the openings in this housing 23 is arranged an insulating bushing 24. These bushings are provided with enlargements or shoulders 25 on their inner ends to prevent the bushings from falling out of the openings in the casing. To prevent rotation of the bushings they are each formed with one or more grooves 26 and the casing 23 is provided with lugs 27 adapted to enter the grooves 26 when the bushings are passed out through the openings in the casing. The insulating bushings 24 are interiorly screw-threaded, and in each of these bushings is arranged means for engaging and making electrical connection with the outer contact member of an incandescent lamp when the latter is screwed into the socket. In the form of device shown in the drawings this outer contact member comprises a threaded metallic socket shell 28 having its inner end outwardly flanged at 29 and adapted to engage the plate 15 when the casing 23 and sockets carried thereby are in place.

The means whereby the casing 23 is secured to the supporting plate 11 may consist of a spirally arranged bead 30 on the casing 23 into which bead the edge 31 of the plate 11 projects. This edge 31 is bent so as to have the general form of a screw-thread having but a single turn. In this form of device, when it is desired to get at the binding-posts 16 and 22, the casing 23 will be rotated and thereby unscrewed from the supporting plate 11 and may then be separated therefrom, carrying with it the lamp-receiving sockets 24. The ends of the conductors may then be secured in place to the binding-screws and the cover or casing 23 will then be put up into place and revolved to screw it upon the plate 11. The metallic socket shells 28 will engage the edge of the plate 15 and will make electrical connection with this plate. When the lamps are screwed into these sockets, their inner or center terminals will engage the plate 18.

It will be seen that a lamp-holding device made up in accordance with the present invention comprises two unitary structures, one of which includes a plurality of lamp-receiving sockets and a suitable common support for said sockets, the other including suitable conducting plates, all so arranged that when these two unitary structures are combined and secured together the terminals of lamps inserted into the sockets of the device will make electrical connection with the conducting plates. It is to be observed also that there is thus provided ready access to the binding-screws of the device and that it is not necessary in order to make the proper connections for the leading-in wires to disassemble the parts of the device further than to merely disconnect the outer casing from its support. After the electrical connections have thus been made the simple replacement of the outer casing and the securing of the same in place puts the device into condition for the reception of the lamps.

A device made up in accordance with the present invention possesses the advantage of permitting the number of lamps carried by the device to be readily changed at will. To affect this, it is merely necessary to remove the casing 23 and substitute therefor another casing similar in all respects to the first except that it is formed with a greater or lesser number of lamp-receiving openings. As the contact plate 18 is circular this plate may be engaged by the terminals of lamps at any point or points around its circumference. The plate 15, being also circular, may be engaged by socket shells 28 placed at all points around its circumference. This feature of my device is one of great commercial and practical value for the reason that it affords the possibility of fitting up, from parts carried in stock, a device arranged to carry any number of lamps desired, up to the capacity of the device. The dealer can keep in stock a supply of bases with contact plates in place thereon and a quantity of porcelain lamp-receiving bushings and threaded shells. These parts are exactly the same whatever number of lamps the device is fitted up to carry. The dealer will also have in stock a supply of outer shells with various numbers of lamp-receiving openings. When he receives an order for a device of this class he will select a casing having the required number of openings and will insert into each of these openings a bushing and threaded shell and will supply the customer with a structure thus formed and with a base with contact plates thereon. In devices of this character this feature of interchangeability in the number of lamps employed is of great value, as it permits the dealer to carry in stock a smaller amount of material, without lessening his ability to supply devices of any required capacity from stock on hand.

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, a contact carried by said block and adapted to engage a variable number of lamps, an insulating ring disposed in each of said openings and having two diameters, said ring having its larger portion confined between said casing and said insulating block and having its smaller portion extending outwardly through the casing, a threaded contact within said ring, and a plate carried by said block and adapted to engage a variable number of said threaded contacts.

2. In a plural lamp-holding device, a back-plate, a casing, an insulating base to said back-plate within said casing, said casing having a plurality of openings, an insulating bushing in each of said openings, a threaded shell in each of said bushings, flanged outwardly to prevent its passing out of said bushing, a conducting plate secured to said base and adapted to engage a variable number of said threaded shells, means for securing said casing to said back-plate, a conducting member carried by said base adapted for engagement with the center terminals of a variable number of lamps, and a binding terminal for said member.

3. In a plural lamp-holding device, 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 a plurality of openings arranged in a circle, an insulating ring within each of said openings, a threaded ring within each of said insulating rings, a circular plate secured to said insulating member and adapted to engage said rings

n said casing is secured to said base, and ntact member adapted to engage the cen- terminals of a variable number of lamps.

In a plural lamp-holding device, a back te, an insulating base secured to said back te, a contact plate carried by said base, asing inclosing said base and having p-receiving openings, a threaded shell erted into each of said openings from the de of said casing and disposed to engage l contact plate when said casing is in ition, means upon said threaded shells for venting the passage of said shells out- rd, means for securing said casing in po- on, and a contact member carried by said e and adapted for engagement with the ter terminals of a variable number of ps.

. In a plural lamp-holding device, an in- ating base, a contact member carried reby and adapted for engagement with center terminals of a variable number lamps, a casing provided with openings, ushing inserted into each of said openings m the inside of the casing, said bushings ng formed to prevent their being drawn out of said openings, means for preventing rotation of said bushings, a threaded shell in each of said bushings, and a member carried by said base and adapted to conduct current to a variable number of said shells.

6. In a plural lamp-holding device, the combination of a base, a contact member extending therearound and adapted for engagement with a variable number of lamp-terminals, a casing formed with openings, an insulating bushing inserted into each of said openings from the inside of the casing and having its inner end enlarged and confined between the base and the casing, a threaded lamp-receiving shell in each of said bushings, and means carried by said base for conducting current to a variable number of said shells when said casing is in position.

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

REUBEN B. BENJAMIN.

Witnesses:
ARTHUR H. BOETTCHER,
C. L. HOPKINS.