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Patented Mar. 27, 1900.

M. PFATISCHER.
DEVICE FOR ELECTRICAL CONNECTIONS.

(Application filed Nov. 24, 1899.)

(No Model.)

2 Sheets—Sheet 2.

FIG. 3.

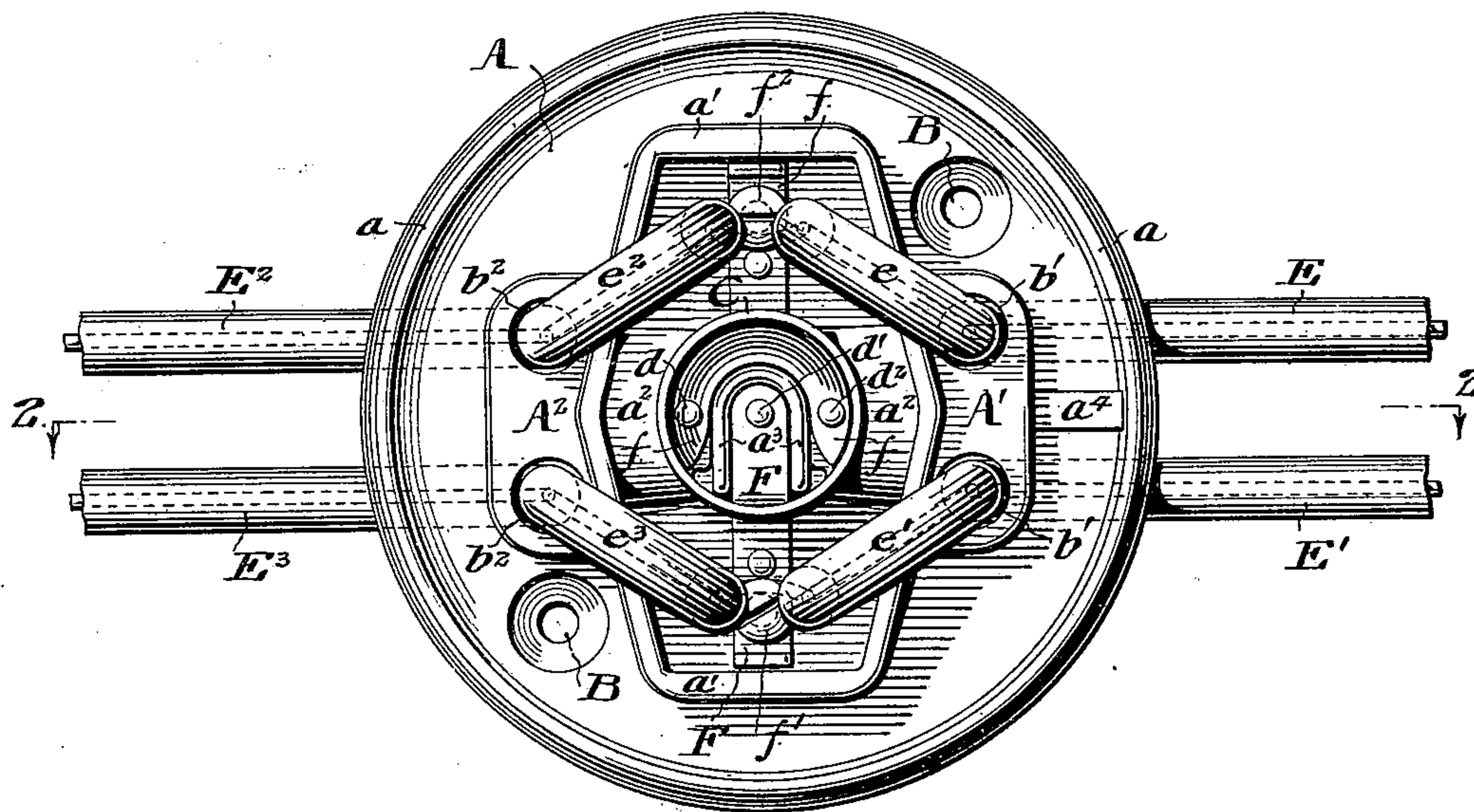
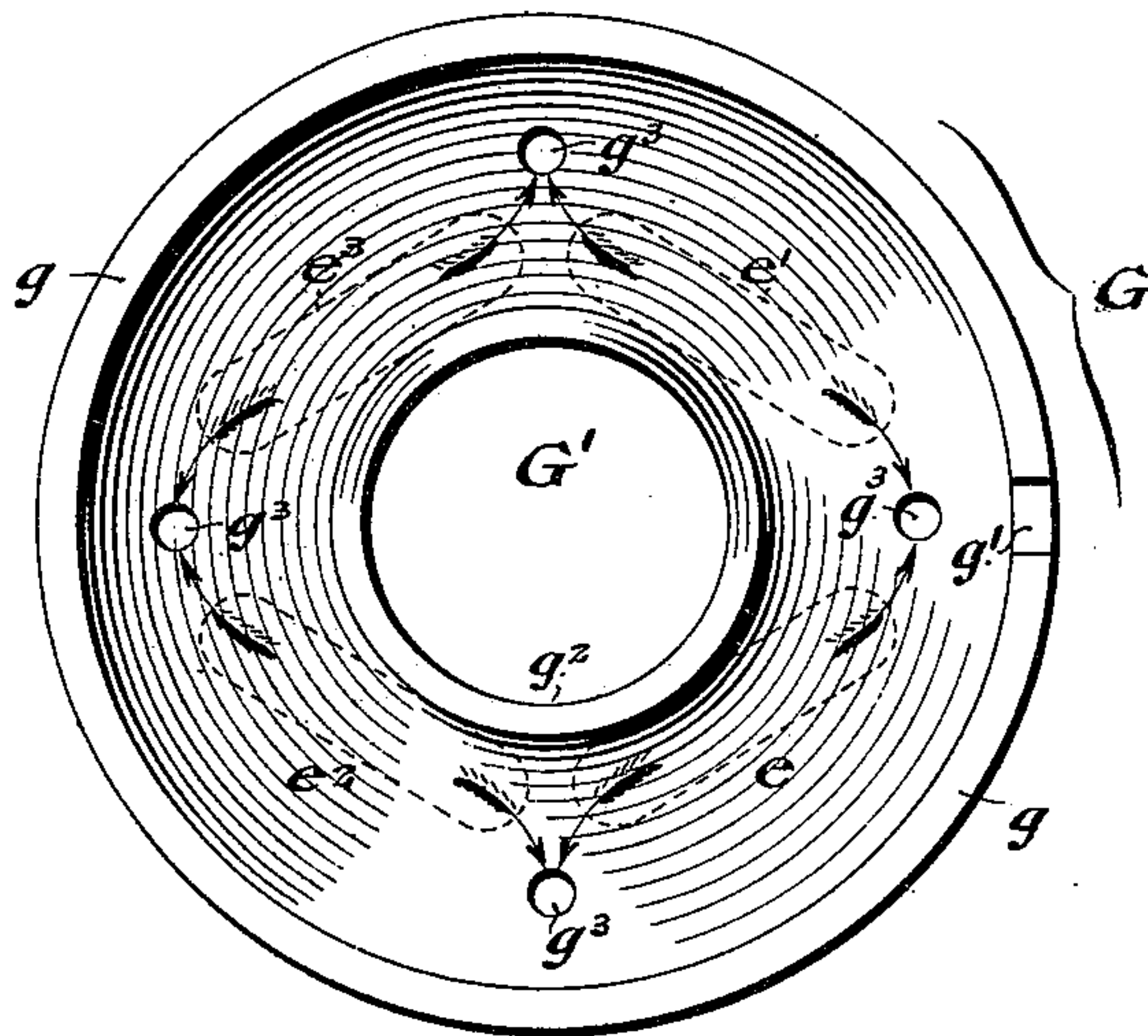


FIG. 4.



WITNESSES:

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DEVICE FOR ELECTRICAL CONNECTIONS.

SPECIFICATION forming part of Letters Patent No. 646,009, dated March 27, 1900.

Application filed November 24, 1899. Serial No. 738,133. (No model.)

To all whom it may concern:

Be it known that I, MATHIAS PFATISCHER, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful
5 Improvements in Devices for Electrical Connections, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to that class of devices which includes ceiling-rosettes, branch blocks, cut-outs, lamp-receptacles, switches, and the like, which consist of a suitable base upon which terminals are fixed and provided with means to secure the ends of flexible conductors to said terminals.

My improvements are especially adapted for use on shipboard or under other conditions where there is liability to leakage or condensation of water, which, accumulating upon
20 the conductors, would follow them to the region of the terminals and occasion short-circuiting. Hitherto it has been usual to locate the terminals within a water-tight casing having conductor-inlets provided with stuffing-boxes or similar means to secure a more or
25 less water-tight relation of the conductors to the casing. Such sealing means are not only expensive in construction, but are difficult to maintain and frequently fail of their purpose
30 by reason of slight structural defects.

The object of my present invention is to provide simpler, less expensive, and more efficient means for obviating the dangers above referred to; and to this end my invention,
35 generally stated, consists in so arranging the conductor-inlets and terminals of such an electrical connecting device as to insure that the conductors in extension between said inlets and said terminals shall be flexed in
40 bights below said terminals, with the result that the water accumulated upon the conductors gravitates to said bights and drips therefrom without reaching the terminals. Such a construction of course renders a water-tight
45 casing for the terminals unnecessary.

In the accompanying drawings I have shown a convenient embodiment of my invention in the preferred form for a lamp-receptacle comprising a socket adapted to receive
50 the plug of an incandescent lamp or similar device. It is to be understood, however, that

my invention is not limited to the particular embodiment shown, which is merely a type of the general class of devices to which my improvements are applicable, as aforesaid. 55

In said drawings, Figure 1 represents an exterior side view of the receptacle, showing the adjacent portions of the electrical conductors. Fig. 2 is a vertical central section through the same on a plane which is indicated by the lines 2 2, Fig. 3. Fig. 3 is a plan view of the under side of the main portion of the receptacle, which, although actually uppermost, is for convenience termed the "base." Fig. 4 is a plan view of the upper
60 side of the cap or cover which fits upon the under side of the base and incloses the parts carried thereby. Fig. 5 is a view in perspective of the screw-ring which holds said cap in position. 65

In said drawings the bulb of the lamp proper and its appurtenances are not shown, as they may be applied in the ordinary manner to the socket in the receptacle. 70

The base or supporting portion of the receptacle is indicated at A and, together with the other parts, is preferably constructed of porcelain or glazed earthenware. The base A is approximately disk-shaped and may be provided with a short downwardly-depending
75 flange a around its outer periphery. Adjacent to its central portion it is preferably provided with a downwardly-depending flange a' of considerably greater depth than the flange a and having the outlines of an oblong
80 hexagon whose center of figure coincides with the center of the base itself, as seen clearly in Fig. 3. Within said flange a' is a boss a^2 , which forms the immediate support of the terminals and which may conveniently be
85 provided with a shallow U-shaped flange a^3 upon its lower extremity. Lateral blocks A' A^2 extend outward from the hexagonal flange a' in the direction of its shortest diameter, said blocks being somewhat less in
90 depth than the flange itself, and a short rib a^4 projects radially from the outside edge of the block A' to the inner face of the flange a .

All the above-described portions of the base are preferably made integral, and the base is
100 provided with various vertical holes to effect its attachment to its own support and to per-

mit the entrances for and means of connecting the conductors, &c. Thus the counter-sunk holes B are adapted to receive the supporting screws or bolts whereby the base is
 5 secured in position. The holes b' and b^2 in the blocks A' A^2 are the inlets for the insulated conductors E, E', E², and E³. The three vertical holes D, D', and D², which terminate upwardly within the sunk recess b , receive
 10 the screws d , d' , and d^2 , which engage with the inner ends of the terminals F and f , respectively. Suitable holes are also provided for the other accessory screws, such as f' and f^2 . The terminal f serves to secure in posi-
 15 tion the threaded cylindrical shell C of the lamp-socket, which depends downwardly from the boss a^2 , and the terminal F lies within the recess formed by the U-shaped flange a^3 , so as to be effectually separated from the other
 20 by means of said flange.

The conductors E, E', E², and E³, entering at the inlets b' and b^2 , are flexed in bights e , e' , e^2 , and e^3 , depending below the terminals. The details of the terminals themselves and
 25 the means whereby they are connected with the lamp proper are not described, as they are well understood.

The cap or cover G of the receptacle is cup-shaped, having a deep cylindrical outer wall
 30 g , which fits against the under side of the base A, said wall g being notched at g' to receive the rib a^4 , which latter prevents the horizontal turning of the cap when suspended in position. The cap has a central opening
 35 G' of larger diameter than the lower end of the boss, and said opening is surrounded by an upwardly-projecting flange g^2 , fitting around the boss a^2 . Vertical drip-holes g^3 are formed through the bottom of the cap G, preferably at quadrant-points, as seen more clearly
 40 in Fig. 4. A porcelain ring I, screw-threaded on its inner face to engage with the external thread upon the shell C of the lamp-socket, is provided with a peripheral shoulder i of
 45 greater diameter than the opening G' of the cap G, and when secured in position upon said shell C serves to support the outer wall g of the cap G in close contact with the base.

By the arrangement above described the
 50 bights of the conductors provide suitable points for the discharge of water which has leaked in or condensed thereon, and it is of course impossible for the water to rise from said bights to the terminals. The several interior flanges also tend to discharge water or
 55 condensed moisture into the cap G, whence it readily escapes through the drip-holes g^3 . Furthermore, the device thus embodied is

readily and cheaply constructed and has no weak points liable to be disarranged. 60

Having thus described my invention, I of course do not limit myself to the particular embodiment above described; but

I claim—

1. In a device for electrical connections, the combination, with a base; of a terminal, fixed
 65 with respect to said base; a conductor; and a conductor-inlet in said base, arranged to direct an inserted conductor in a bight depending below said terminal, in extension between
 70 said inlet and said terminal, substantially as set forth.

2. In a device for electrical connections, the combination, with a base; of a terminal fixed
 75 with respect to said base; a conductor-inlet in said base; and a flexible electrical conductor extending through said inlet, flexed in a bight below said terminal and secured, beyond
 80 said bight, to said terminal, substantially as set forth.

3. In a device for electrical connections, the combination with a casing, comprising a base and a removable cover for the same; of a plurality of terminals fixed in said casing; means
 85 to secure the ends of flexible conductors to said terminals; conductor-inlets in said casing respectively adjacent to said terminals; flexible conductors entered through said inlets, depending in drip-discharging bights
 90 within said casing and below the respective terminals to which they are connected; and a drip-outlet in said casing, substantially as set forth.

4. In a receptacle for electric lamps, the combination of a base having a downwardly-
 95 depending boss and provided with suitable inlets for the admission of conductors, &c.; of a cap fitting upon said base and having an upwardly-projecting flange which surrounds the boss, said cap being provided with a drip-
 100 hole; and means for holding said cap in position against said base, substantially as described.

5. The combination, with the base, A, having a downwardly-depending flange, a' , forming an elongated inclosure therein; of the
 105 boss arranged within said inclosure; the cap, G, fitting upon the base and having an inner flange, g^2 , surrounding the boss, said cap being provided with a drip-hole; and means,
 110 substantially as set forth, whereby said cap may be secured in position.

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Witnesses:

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