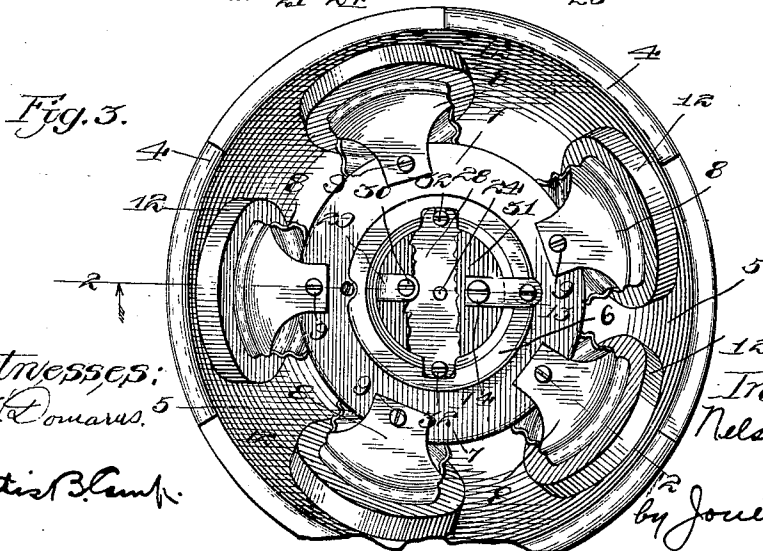
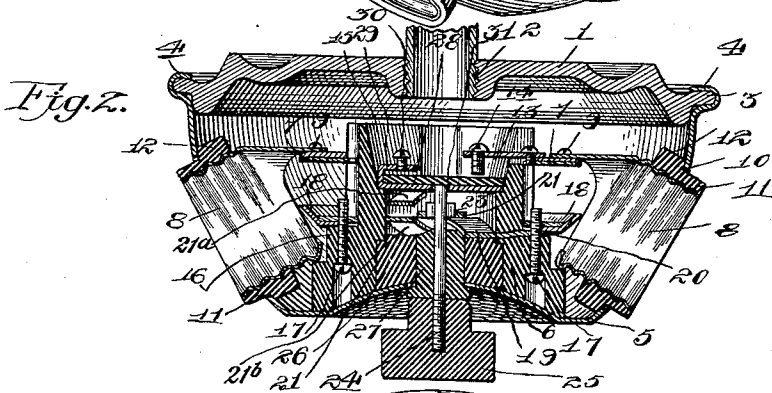
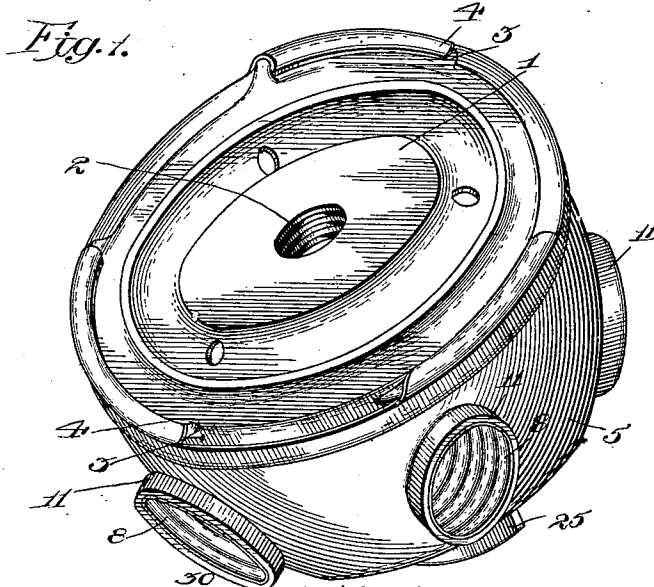


N. WEEKS.
CLUSTER LAMP SOCKET.
APPLICATION FILED MAY 17, 1904.

992,306.

Patented May 16, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS-SHEET 2.

Fig. 4.

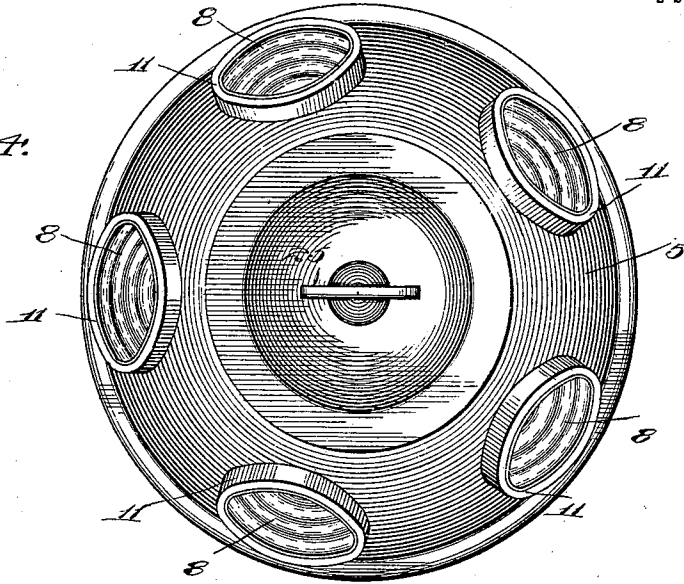


Fig. 5.

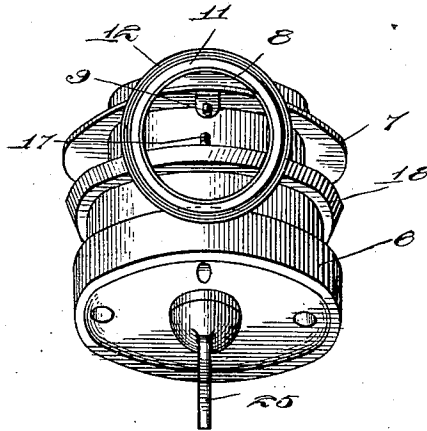


Fig. 7.

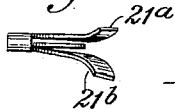
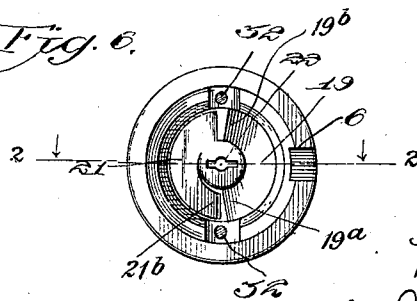


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CLUSTER LAMP-SOCKET.

992,306.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed May 17, 1904. Serial No. 208,476.

To all whom it may concern:

Be it known that I, NELSON WEEKS, a citizen of the United States, residing at Richmond Hill, in the county of Queens and State of New York, 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.

My invention relates to cluster lamp sockets, and has for its object the provision of novel means for mechanically supporting and electrically connecting a plurality of incandescent electric lamps in circuit.

The other novel features of my invention will more fully appear from the following description of the drawings, in which I have illustrated one form of my invention, which I have worked out for the purpose of revealing my invention to others, and for commercial purposes.

In the drawings, Figure 1 is a perspective view of the supporting plate or base showing the shell secured thereto; Fig. 2 is a sectional view, taken on the line 2—2 of Fig. 3, looking in the direction of the arrows; Fig. 3 is a rear plan view with the supporting plate removed; Fig. 4 is a front plan view of my improved cluster socket; Fig. 5 is a perspective view of the insulating base, showing the contact rings and one of the lamp receiving shells; and, Fig. 6 is a detail view of the switch contacts; Fig. 7 is an elevational edge view of the movable contact member of the switch mechanism detached from the device.

Referring to the drawings by reference characters, in which like reference numerals are used to indicate like parts in all of the figures, I provide a supporting plate 1, preferably of metal and having a central screw-threaded aperture 2 therein adapted to be screwed upon a suitable conduit or support, said conduit conducting the leading-in wires to the interior of the socket and supporting the socket in position. Segmental extensions or lips 3 are carried by the supporting plate 1, adapted to be engaged by suitably turned-over edges 4, of a metal inclosing casing or shell 5, as shown in Fig. 2. The turned-back edges or lips 4 of the casing are made slightly larger at one end than at the other and the projections 3 of the support-

ing plate 1 are correspondingly formed, said lips and projections preferably having a slight depression formed therein, said depressions being adapted to aline with each other when the casing is in position, and tending to lock said parts together and retain the casing upon the plate 1 by reason of the resilient quality of the turned over edges 4 of the casing. By rotating the casing 5, the turned back edges 4 of the casing may be disengaged from the segmental extended portions 3 of the plate 1 and the casing disengaged therefrom. The casing 5 is preferably a thin metallic structure and has apertures formed therein, adapted to receive the lamp bases. The lamp receivers and their connections are preferably carried by said casing, as hereinafter described.

An insulating base 6 has secured thereto an annular contact ring or plate 7, to which is secured, in any suitable manner, lamp receiving shells 8, 8, said shells preferably being secured by screws 9, as shown in Fig. 2. The lamp receiving shells 8 project radially from the base 6 and are adapted to register with apertures 10, 10, formed in the casing 5. Insulating bushings 11 are carried by said shells and are screwed thereon from the interior of the casing 5, said bushings being adapted to insulate the lamp receiving shells 8 from the inclosing casing. The bushings 11 have flanges 12 formed thereon, said flanges being screwed home against the interior surface of the casing 5 and serving to retain the insulating base 6 in position. The flanges 12 of the insulating bushing 11 bear radially against the interior of the casing 5 and serve to mechanically secure the lamp contacts and their connecting parts to the casing 5. Any other method of carrying the live parts of the socket upon the inclosing casing or shell 5 and insulating said parts therefrom, may be adopted in lieu of the insulating bushings without departing from the spirit of my invention. Secured to the contact plate or ring 7 is a link 13, carrying a binding screw 14 for connecting the lamp receiving shells 8 with one of the leading-in wires, said binding screw being preferably disposed within a central aperture 15 formed in the base 6.

Secured to an annular shoulder 16 formed upon the base 6, in any suitable manner, as by the screws 17, 17, is an annular contact

plate or ring 18, the outer edge of said ring being bent upwardly and adapted to form a center spring contact for the lamps.

Preferably disposed within the central aperture 15, formed in the base 6, is a switch mechanism, consisting of a stationary contact member 19, said member having a projection 20, extending through the wall of the base 6 and held in electrical connection with the center lamp contact plate or ring 18, by means of the screw 17. The contact member 19 is inclined to the horizontal, the end 19^a (see Fig. 6) being higher than the end 19^b. This contact member is stationary and is adapted to be engaged by the revoluble contact member 21, said revoluble contact member 21 having a portion 21^a thereof bent back upon itself, as shown in Fig. 7, this portion engaging the under side of a circular plate 28. The contact plate 21 has a central aperture or key-way 22 formed therein, adapted to receive the switch rod 24, and lateral extensions to receive lugs 23 carried upon the switch rod 24, said rod having a thumb piece 25 attached thereto for rotating the same.

An insulating block 26 is preferably located within the insulating base 6 for supporting the switch mechanism, above described, in position, a bushing 27 being fitted within the insulating block 26 and being adapted to rotate with the switch rod 24.

Disposed within the central aperture 15 formed in the insulating base 6, is the circular plate 28 above mentioned said plate carrying a projection 29, said projection being bent back upon said plate and carrying a binding screw 30, for making connection with the other leading-in wire. A disk 31 of insulating material is preferably disposed upon the contact plate 28 and is adapted to insulate the binding screw 14 from said plate. The plate 28 is also adapted to form a bearing for the end of the switch rod 24, although this is not essential. Said plate may be secured in position by screws 32, 32, passing through the base 6, or in any suitable manner.

While I have described the construction of the switch members with particular reference to the details of their construction, it is apparent that any suitable switch mechanism may be substituted therefor, or the switch for controlling the lamp circuit may be omitted entirely, without departing from the spirit of my invention.

When the switch rod 24 is rotated a half turn to the right, the switch member 21 is carried around between the switch member 19 and the plate 28, the bent back portion 21^a of the member 21 engaging and forming electrical contact with the plate 28, while the end 21^b (see Figs. 6 and 7) engages the upper side of the contact 19, thus electrically connecting the plate 28 with the contact 19. When the switch rod 24 is rotated another

half turn to the right, the contact member 21 is carried from engagement with the contact plate 28 and drops from the raised portion 19^a of the contact member 19 and the electrical connection between said member 21 and the contact plate 28 is broken.

It will be seen that my improved socket may be carried by a suitable support or conduit, said support being secured in the screw-threaded aperture 2, the leading-in wires entering through said conduit, and being secured to their respective binding screws. The current being traced from binding screw 14 to the contact plate or ring 7, through the lamps and center contact plate or ring 18 to the switch member 19 and thence through the switch member 21 to the contact plate 28 and binding screw 30. It will also be seen that the insulating base and the lamp contacts are carried upon the casing 5 and that by detaching said casing from the supporting plate 1, access is readily afforded to the binding screws and the other live parts of the socket.

I have described my improved cluster socket with particular reference to the details of construction, but I am aware that said details are not essential and I do not wish to limit myself to said details of construction further than is defined in the appended claims.

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

1. In a cluster-socket, the combination of a finishing-cap and a block of insulating material located centrally therein, and having lamp-contacts attached thereto for a plurality of lamps, said block being supported wholly by said cap, and a suitable support with which said cap is removably connected.

2. A cluster-socket, comprising a finishing-cap, means for attaching it to a support, a block of insulating material located centrally inside of the cap, lamp-socket terminals attached to the block, and means for supporting and suspending the block upon or from the cap whereby it is removable with the cap from the support.

3. A cluster-socket comprising a finishing-cap having a plurality of openings therein, means for attaching the cap to the ceiling or other support, a block of insulating material located centrally inside of the cap, lamp-socket pieces attached to said block and projecting respectively through said openings and means whereby said block is positioned in the cap through the engagement thereof by said socket-pieces.

4. A cluster-socket comprising a finishing-cap, having a plurality of openings therein, a plurality of threaded shells projecting into said openings, threaded insulating-sleeves engaging said shells and the cap and connecting the same rigidly together and a

centrally-disposed block of insulating material carrying circuit-terminals inside of said cap and secured therein by attachment to said shells.

5 5. A cluster-socket comprising a finishing-cap having a plurality of openings therein, a disk of insulating material contained in said cap, metallic plates fixed to the opposite
10 sides of said disk, metallic threaded shells attached to one of said metallic plates and projecting through the respective openings in the cap, and contact-pieces attached to the other plate and presented respectively
15 opposite the inner ends of said shells, means for connecting and insulating said shells to and from the cap, whereby the disk and its attachments are positioned in the cap, and a support for the cap independent of said disk, shells and contacts, substantially as described.

20 6. A cluster-socket, comprising a finishing-cap having a plurality of openings therein, a metallic disk closing the top of said cap, and removably connected therewith
25 and having means for attachment to a support, a block of insulating material wholly within the cap and mounted independent of said disk and electric terminals carried by the insulating-block and presented at the re-
30 spective openings in the cap.

35 7. A cluster-socket comprising a dome-shaped finishing-cap having a plurality of openings therein, a support-plate adapted to cover the concave side of said cap and re-
movably connected therewith, a block of insulating material inside of said cap, circuit-terminals attached to said block and binding-screws for conductors connected with
40 said terminals and located on that face of the block adjacent to said support-plate, whereby the removal of the cap from the support-plate will expose the binding-screws.

45 8. In a plural lamp socket, the combination with a suitable base plate, said plate having a centrally located screw-threaded aperture formed therein adapted to receive a suitable conduit or support, of an inclosing casing or shell for the socket, said casing
50 carrying a plurality of threaded contacts and a ring contact for engagement with all of the lamps and a suitable bayonet joint associated with said plate and casing, whereby said casing may be readily removed from said plate to reveal the said contacts.

55 9. In a plural lamp socket, the combination with a suitable casing or shell, of a plurality of lamp receivers and associated contacts carried by said shell, a suitably supported center contact for each of said receivers, a centrally disposed switch carried
60 by said casing for controlling the circuit of said contacts, a suitable supporting plate for the socket adapted to be secured to a suitable conduit or support, and means for detachably securing said casing to said sup-
65

port, said casing being readily removable therefrom to afford access to the interior of the socket.

70 10. In a plural lamp socket, the combination with a suitable inclosing casing or shell having apertures formed therein, adapted to receive lamp bases, of a plurality of lamp receivers and associated contacts, said receivers being adapted to register with said apertures, means for mechanically securing
75 said receivers to said casing and electrically insulating said receivers therefrom, a supporting plate for the socket adapted to be secured to a suitable conduit or other support, means for detachably securing said
80 casing to said plate and a centrally disposed switch carried by said casing for controlling the circuits of said receivers.

85 11. In a plural lamp socket, the combination with a suitable inclosing casing or shell, of an insulating block disposed within said casing, a contact plate carried by said block, lamp receivers carried by said plate, means carried by said receivers for mechanically securing said block within said casing, a switch
90 carried by said insulating block and means for detachably securing said casing to a suitable support, said casing being readily removable therefrom to afford access to the interior of the socket.

95 12. In a plural lamp socket, the combination with a suitable inclosing casing, an insulating base disposed within said casing, a conducting plate carried by said base, lamp receiving shells secured to said plate and constituting the outer contacts for the lamps, a center contact for each of the lamps also carried by said base, insulating bushings on said shells adapted to insulate said shells from said casing and to mechanically secure
105 said shells and said base thereto, a supporting back plate and means for detachably securing said casing to said back plate, said casing being adapted to be readily removed therefrom to reveal the interior of the socket.

110 13. In a plural lamp socket, the combination with a suitable inclosing casing, of an insulating base disposed within said casing, an annular contact plate carried by said base, lamp receiving shells carried by said plate, a second annular contact plate carried by said base, said second plate constituting the center contacts for the lamps, insulating bushings carried by said shells adapted to mechanically secure said base within said casing and to insulate said shells from said casing, a suitable supporting plate for said casing, said plate being adapted to be connected with a suitable conduit or support,
125 and means for detachably securing said casing to said plate, said casing being readily removable therefrom to afford access to the live parts of the socket.

130 14. In a plural lamp socket, the combina-

tion with a suitable inclosing casing, of an insulating base disposed within said casing, an annular contact plate carried by said base, lamp receiving shells carried by said plate, 5 a second annular contact plate carried by said base, said second plate constituting the center contacts for the lamps, insulating bushings carried by said shells adapted to mechanically secure said base within said casing and to insulate said shells from said casing, 10 a centrally disposed switch carried by said base for controlling the circuit of said lamp receiving shells, a suitable supporting plate for said casing, said plate being adapted to be connected with a suitable conduit or support, and means for detachably securing said casing to said plate, said casing being readily removable therefrom to afford access 15 to the live parts of the socket.

20 15. In a plural lamp socket, the combina-

tion with a suitable insulating base, of a plurality of lamp receivers associated with said base, an inclosing casing or shell for the socket having a plurality of apertures 25 formed therein adapted to register with said lamp receivers, and a plurality of insulating bushings adapted to electrically insulate said receivers from said casing and to support said base and lamp receivers in position, said bushings having shoulders formed thereon, 30 said shoulders being disposed upon the interior of said casing.

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

NELSON WEEKS.

Witnesses:

F. WARREN WRIGHT,
HUBERT HOWSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
