

J. H. DALE.  
CLUSTER LAMP SOCKET.  
APPLICATION FILED MAY 6, 1908.

958,728.

Patented May 24, 1910.

Fig. 1.

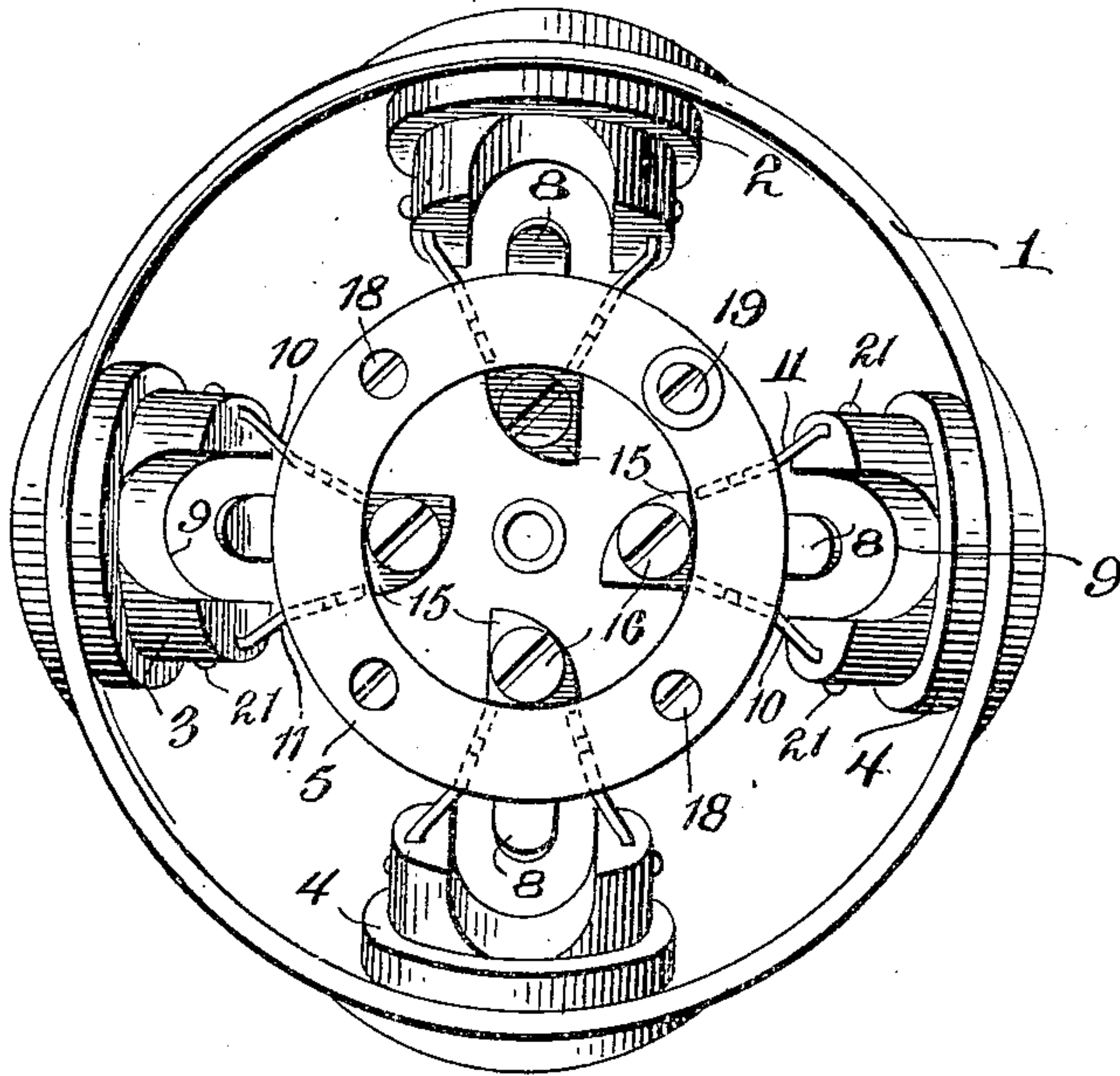
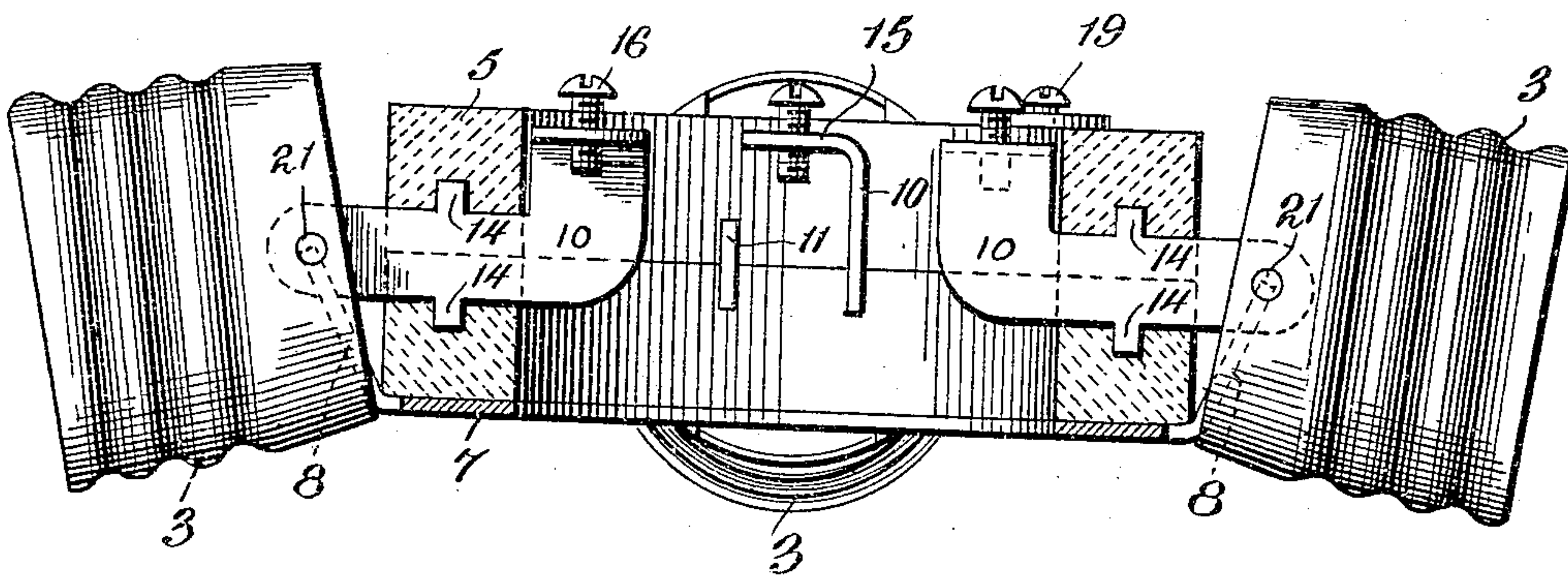


Fig. 2.



WITNESSES:

*Louis C. Storker*

*Andrew B. Graham*

*John H. Dale* INVENTOR

BY *Rosendamm & Storker*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN H. DALE, OF NEW YORK, N. Y.

CLUSTER LAMP-SOCKET.

958,728.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed May 6, 1908. Serial No. 431,145.

*To all whom it may concern:*

Be it known that I, JOHN H. DALE, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Cluster Lamp-Sockets, of which the following is a full, clear, and exact description.

My invention relates to cluster lamp sockets, particularly of that type having a substantially hemispherical casing from which the lamps project symmetrically outward at a slight downward inclination. Receptacles of this class ordinarily have stamped sheet metal parts organized with porcelain or other connecting blocks, so as to rigidly hold all the operating parts in place in properly insulated relation from one another, and establish the necessary circuit connections therewith. By the present invention, I provide a very advantageous construction in these respects, making use of a ring of porcelain or other insulating material which is equatorially or transversely, split or divided into two separate halves or sections between which certain metallic parts are engaged. This ring construction not only serves to secure all the metallic parts firmly in place, but presents the terminal screws or devices in a convenient way for the circuit connections, and also furnishes a very effectual insulation, because the metallic parts are wholly covered up and protected where they are inclosed between the sections or halves of the split ring.

I have illustrated the present invention applied to a socket which is adapted for either multiple, series multiple or individual circuit use, although the multiple arrangement is made with the greatest facility, and is designed to constitute the ordinary method of connection.

With the above and other objects in view, the invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a top or plan view of a multiple cluster socket embodying the principles of my invention; Fig. 2 is an enlarged vertical sectional view of the same.

Referring to the drawings in which like parts are designated by the same reference sign, 1 indicates a casing conveniently of spun sheet metal, and which has peripheral openings 2, for the various lamp sockets.

3 designates the threaded or other shells received and held in the openings 2 by means of insulating bushings 4. The various threaded shells are mechanically connected together by an insulating ring 5, which has an additional function of supporting the center contacts. I prefer to make all the center contacts part of a common metallic plate 7, fastened on the lower side of the block 5. A preferred construction is that shown in which the plate 7 is in the form of a ring corresponding to the outline of the insulating ring 5, and has upwardly and outwardly extending prongs 8, at points corresponding to the separate sockets. The threaded shells are deeply notched or cut away at 9, opposite the location of the prongs 8, so as to be properly spaced apart therefrom.

The threaded shells 3 are each attached to the ring 5 by bifurcated fastenings which straddle or embrace the center contact prongs 8. In this way the shells are operatively connected in the structure. In practice, I employ separate clips 10 and 11, of sheet metal which are respectively received transversely through the wall of said ring 5.

As above stated, I prefer to make the ring 5 transversely or equatorially divided into two separate halves or sections which have registering grooves adapted to receive between them the clips 10 and 11. Each of these grooves is made quite narrow corresponding to the thickness of the metal used, and deep enough so that the grooves together accommodate the entire vertical height of the clips. To impart still greater security to the fastening, I provide lugs 14, on the respective clips at points adapted to lie wholly within the body of said ring 5. The grooves of the ring are deepened or recessed inward at points opposite said lugs 14 so as to engage and hold the clips with greater security, forming virtually a mortised joint therewith.

The clip 10 is shown longer than the clip 11 and projects into the interior hollow portion of the ring 5. At the inner extremity of each such clip 10 there is a turned-over ear or portion 15, which receives a terminal screw 16. I make the other clip 11 terminate flush with the interior annular wall or surface of said ring.

The use and operation is as follows: The threaded shells being provided with their appropriate fastening and connection clips



10 and 11, are assembled upon the ring 5 by clamping the two sections or halves thereof in place, the clips entering the corresponding grooves of said ring sections. The sections or halves are thereupon fastened together by any suitable screws or fastening devices 18. The screws or fastening devices 18 pass downward and enter the ring or plate 7 and thereby exert an additional function of holding said plate in place. The assembled parts are then placed within the casing 1 with the threaded shells projecting through the holes thereof in which position they are afterward secured by the bushings 4. One of the circuit wires may now be connected to each of the terminal screws 16, and the other circuit wire connected to a screw 19, passing downward through the ring 5 to the plate 7. If series multiple connections are desired for a 220 volt or three-wire circuit, it is merely necessary to connect one circuit wire to half the terminals 16, and the other circuit wire to the other half of said terminal 16. Separate circuit connections may be made by connecting a common return circuit wire to the terminal 19, and the other circuit connections to the various terminals 16.

It will be evident that the clips 10 and 11 are very efficiently insulated at the portions where they pass through the ring 5, and are firmly anchored or fastened to said ring by the virtually mortised connection therewith. At the same time the terminal screws 16 and 19 are presented very conveniently for making the circuit connections.

I have referred to the clips 10 and 11 as being connected to the threaded shells 3, and it is evident that this connection may be made in any desired way. For the purpose of facilitating the assembling of the parts within the casing, I prefer to pivot or otherwise flexibly connect the threaded shells to said clips 10 and 11 at the points 21. This feature is not in itself novel, being made the subject of my Letters Patent No. 826,152, but is believed to be novel in the present combination.

What I claim, is:

1. In a cluster socket, a casing having peripheral holes, bushings in said holes, lamp receiving shells in said bushings said shells having rearward extensions, a two part insulating ring engaging and operatively connecting said extensions together, and means affording center contacts.

2. In a cluster socket, a casing having holes, bushings in said holes, lamp receiving shells engaged in said bushings, and a transversely divided insulating ring operatively connecting said shells together around the outside periphery of said ring.

3. In a cluster socket, a casing having holes, bushings in said holes, lamp receiv-

ing shells engaged in said bushings, said shells having rearward extensions, a transversely divided insulating ring operatively connecting said extensions together around the outside periphery of said ring, said extensions being included between the sections of said ring for establishing a circuit connection.

4. In a cluster socket, a casing having holes, bushings in said holes, lamp receiving shells engaged in said bushings, said shells having rearward extensions, a transversely divided insulating body operatively connecting said extensions together around the outside periphery of said body, said extensions being included between the sections of said body for establishing circuit connections with said shells.

5. In a cluster socket, a two part insulating ring, lamp receiving shells, means included between the parts of said ring for supporting said shells and establishing circuit connections therewith, and means affording center contacts.

6. In a cluster socket, an insulating ring, threaded shells having clips received transversely through said ring, and means affording center contacts.

7. In a cluster socket, an insulating ring, threaded shells having clips received transversely through said ring, terminal screws on said clips at the interior of said ring, and means affording center contacts.

8. In a cluster socket, an insulating body, threaded shells each having a pair of clips received transversely through said body, and a plate attached to said ring and having prongs between said clips and constituting center contacts.

9. In a cluster socket, an insulating ring, threaded shells each having a pair of clips received transversely through said ring, a plate attached to said ring and having prongs between said clips and constituting center contacts, and terminal screws on said clips within said ring.

10. In a cluster socket, a two part insulating ring, threaded shells having projecting clips received between the sections of said ring, and center contacts.

11. In a cluster socket, an insulating ring, threaded shells having clips received transversely through said ring and supporting said shells, and terminal screws on said clips at the interior of said ring.

12. In a cluster socket, a ring formed of two transversely divided sections, means for connecting said sections, threaded shells projecting outward from said ring, means received between the sections of said ring for supporting said shells, and means affording center contacts.

13. In a cluster socket, a ring formed of two transversely divided sections, each of which has narrow vertical grooves, shells



having clips received edgewise in said grooves, and means affording center contacts.

14. In a cluster socket, a ring formed of  
5 two transversely divided sections, each of  
said sections having narrow vertical grooves  
with a deepened or recessed portion at the  
middle thereof, threaded shells having clips  
to enter said grooves and having lugs to  
10 enter the deepened or recessed portions  
thereof, and means affording center contacts.

15. In a cluster socket, an insulating ring,  
threaded shells each having a clip project-  
ing transversely through said ring and hav-  
15 ing an upturned portion within said ring,

said upturned portion having a bent-over  
extremity, terminal screws received in said  
bent-over extremities, and affording center  
contacts.

16. In a cluster socket, a two part insulat- 20  
ing ring, threaded shells having clips flexi-  
bly connected thereto and passing between  
the parts of said ring, and means affording  
center contacts.

In witness whereof, I subscribe my signa- 25  
ture, in the presence of two witnesses.

JOHN H. DALE.

Witnesses:

WALDO M. CHAPIN,  
JAMES D'ANTONIO.