

No. 825,434.

PATENTED JULY 10, 1906.

N. WEEKS.  
ELECTRICAL LAMP FIXTURE.  
APPLICATION FILED JUNE 21, 1901.

2 SHEETS—SHEET 1.

FIG. 1.

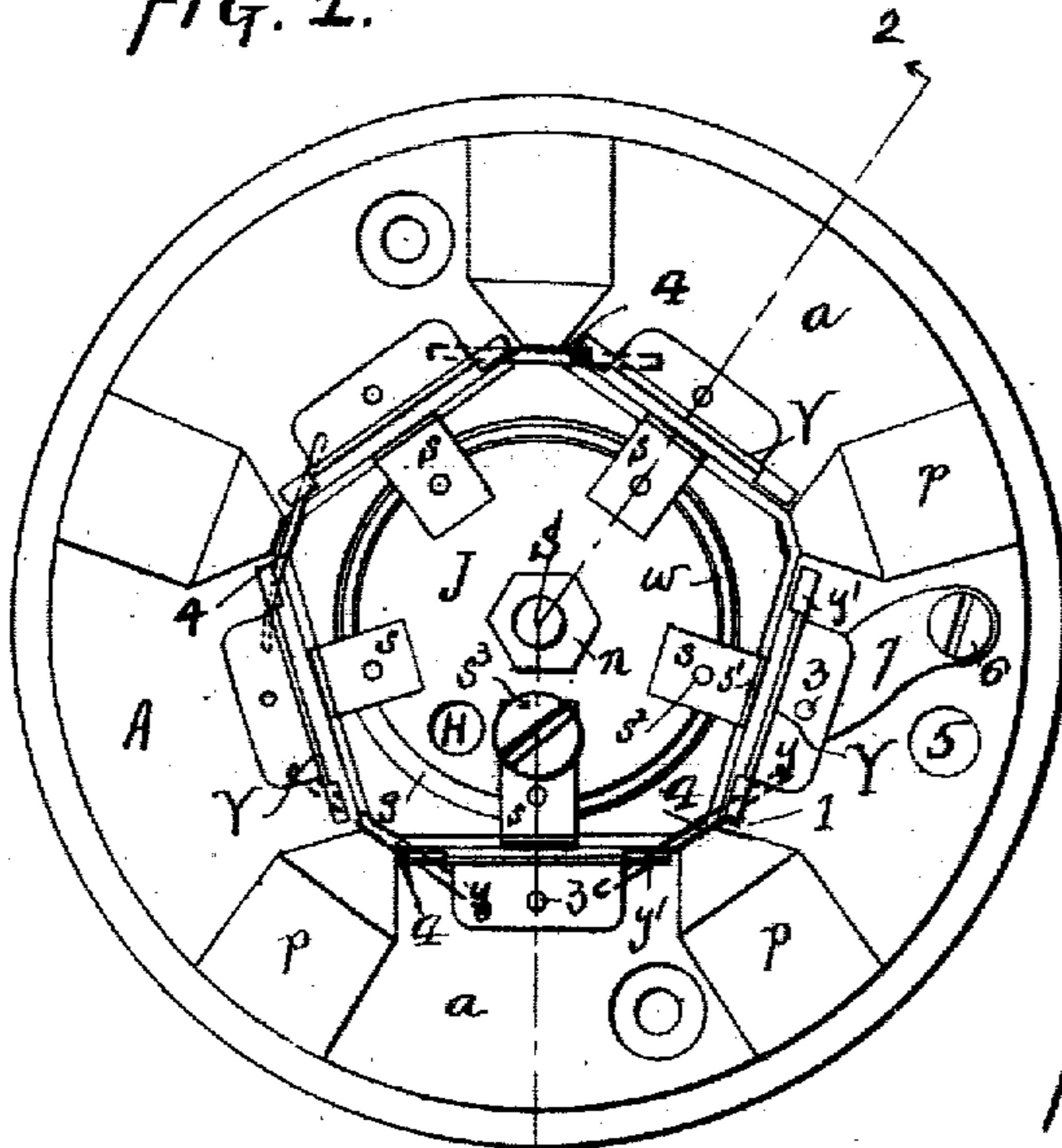


FIG. 2.

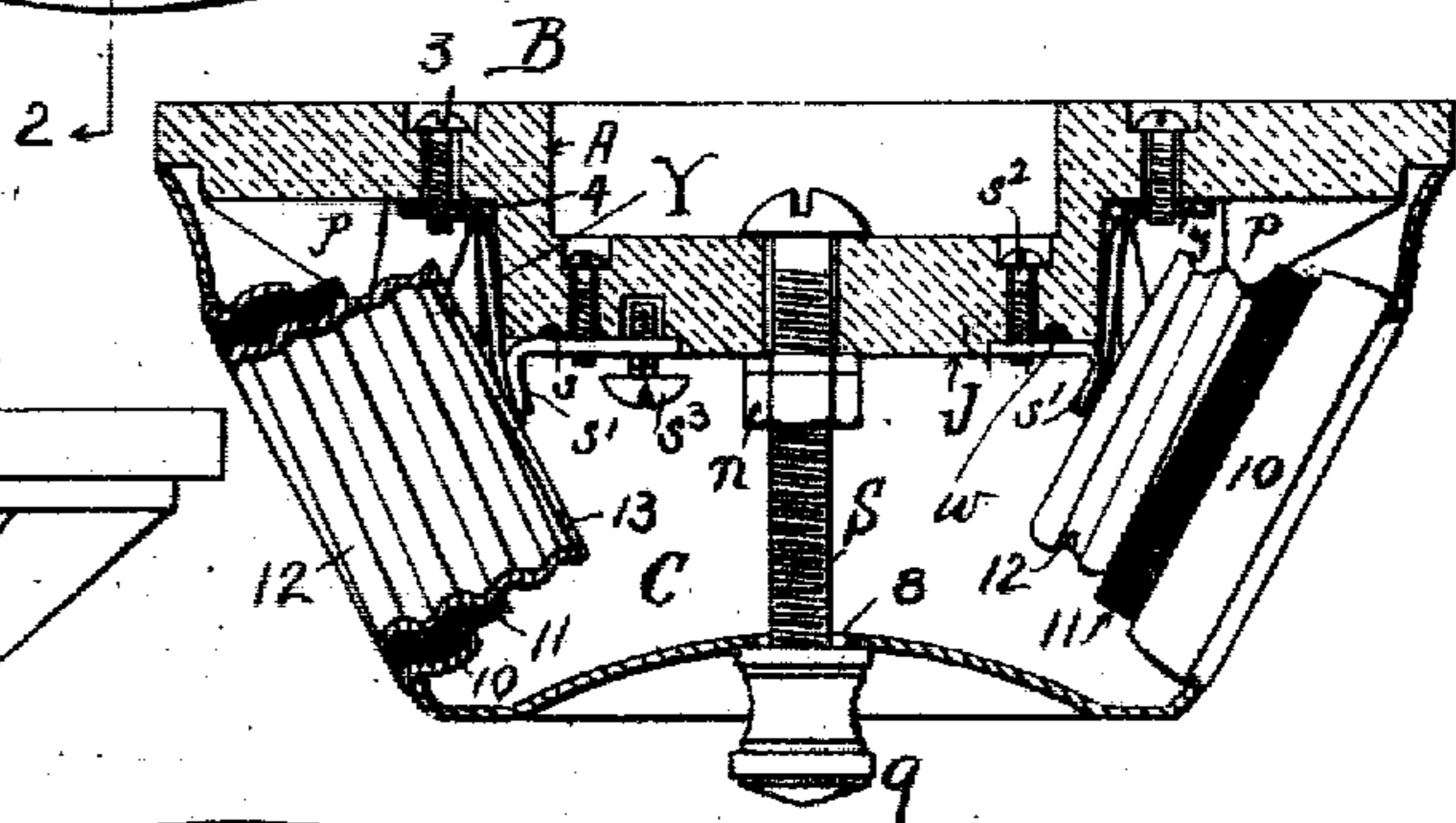


FIG-3...

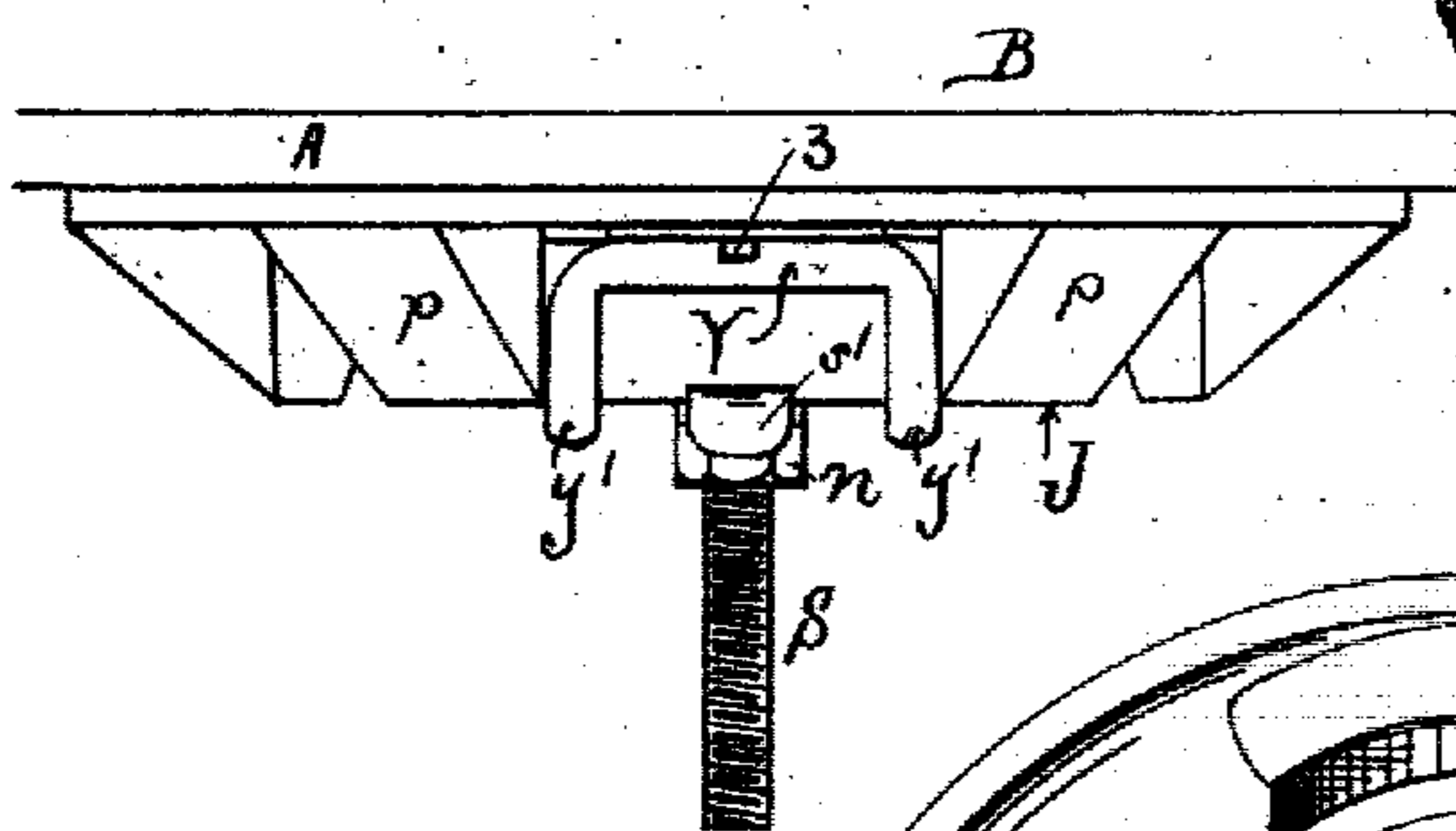
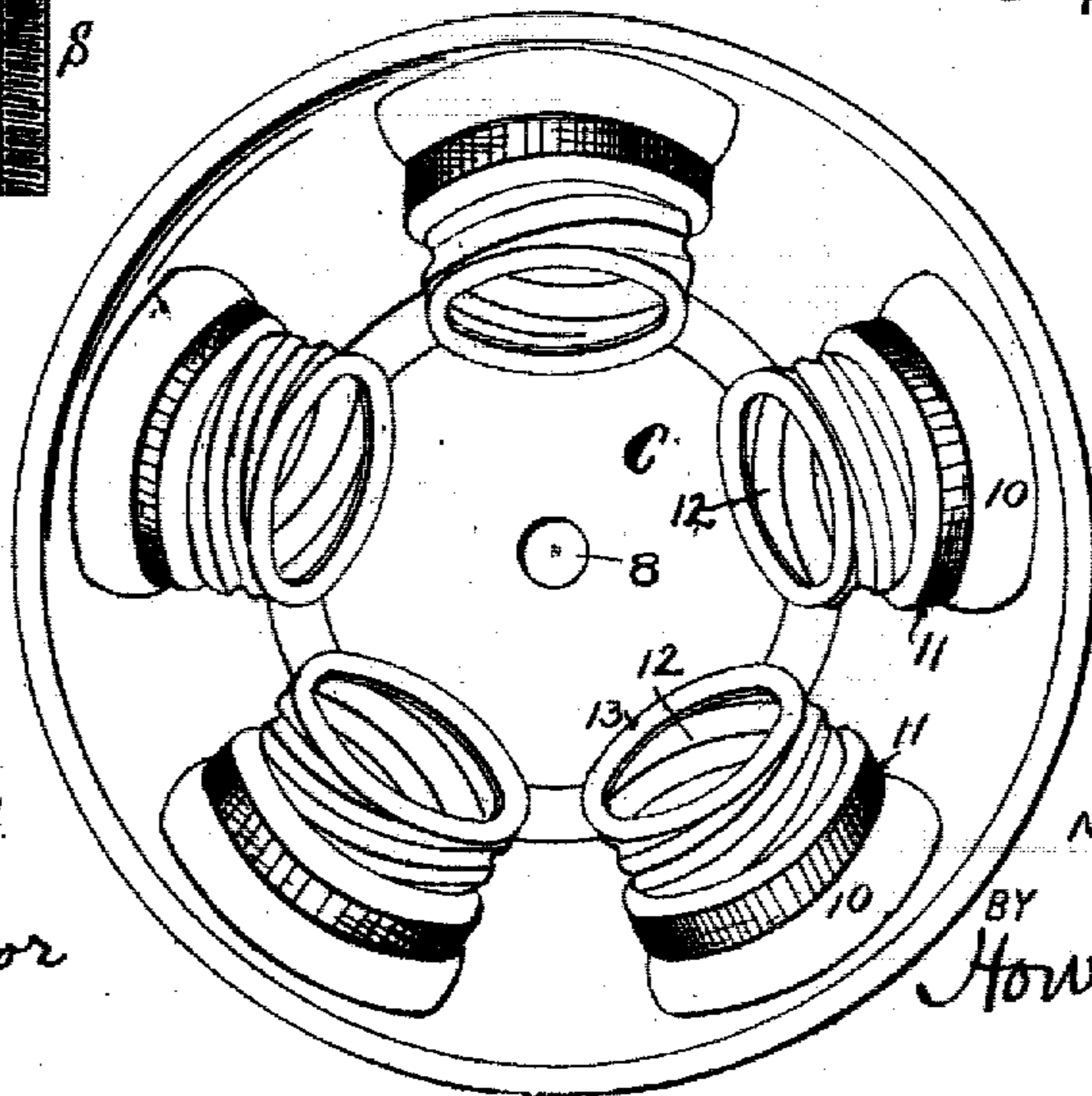


FIG. 4.



WITNESSES:  
B. W. Wright.  
S. C. Connor

INVENTOR  
NELSON WEEKS

BY  
Howze and Howze  
HIS ATTORNEYS

No. 825,434.

PATENTED JULY 10, 1906.

N. WEEKS.  
ELECTRICAL LAMP FIXTURE.

APPLICATION FILED JUNE 21, 1901.

2 SHEETS—SHEET 2

FIG. 5.

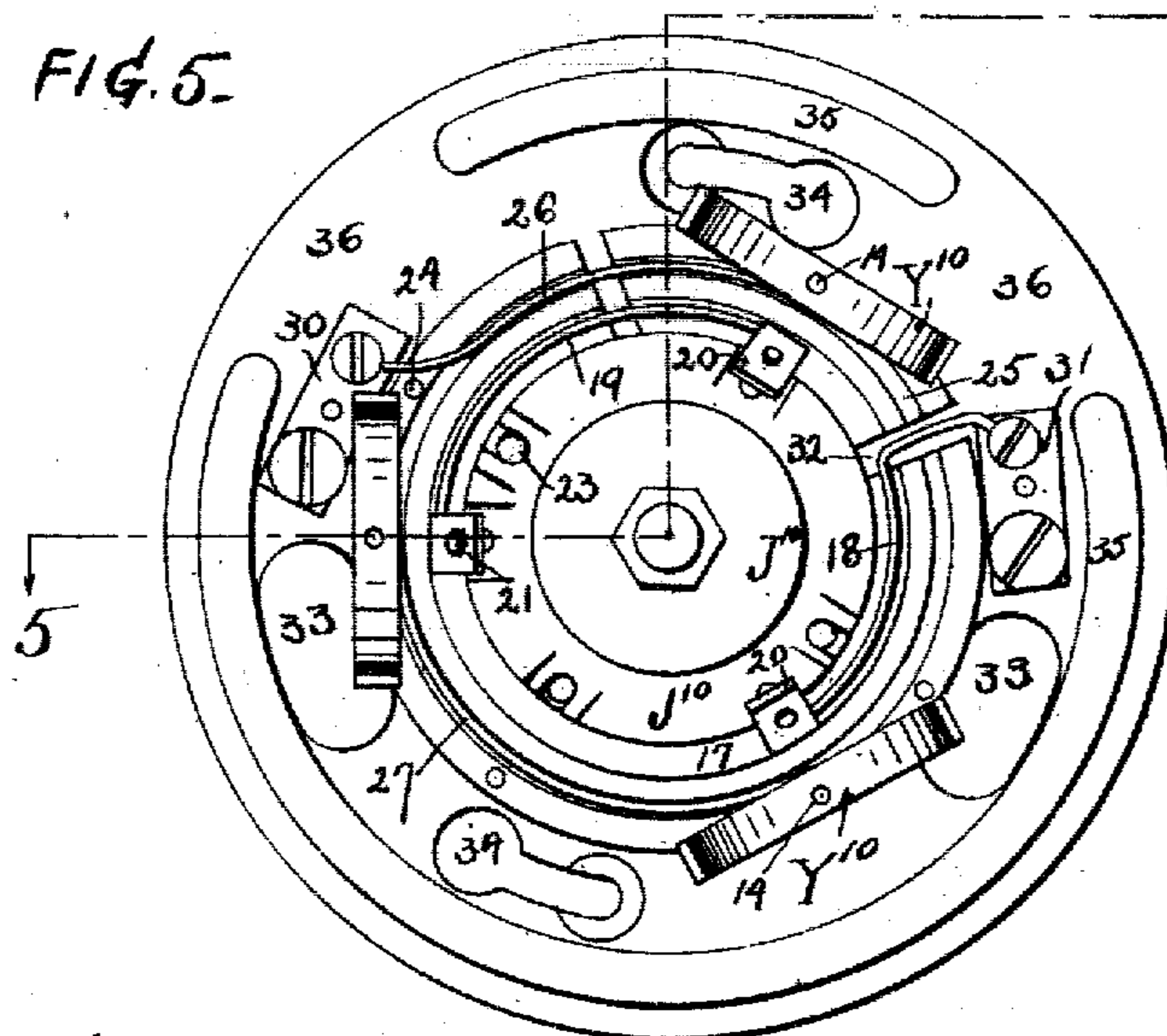
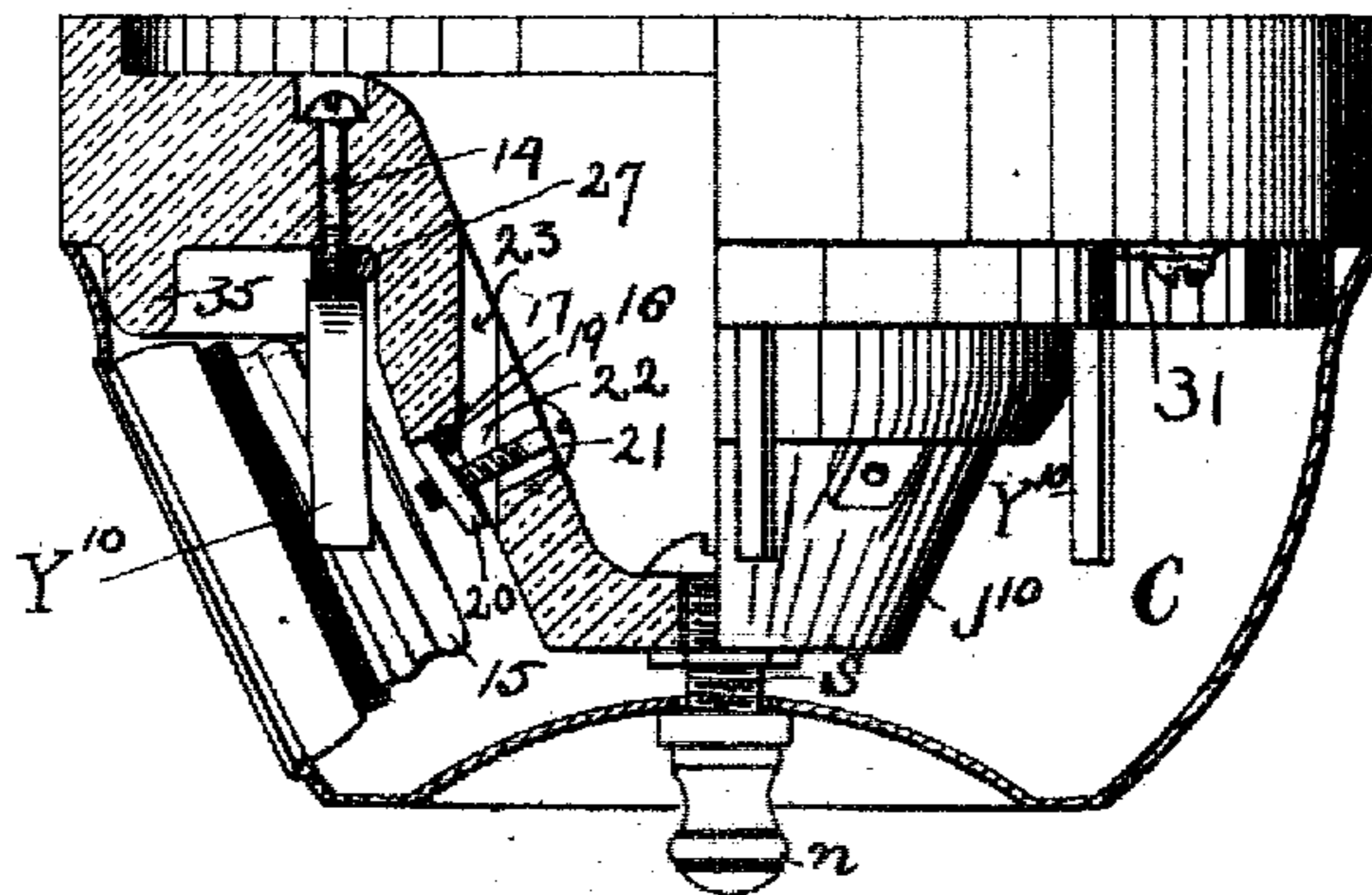


FIG. 6.



WITNESSES:

*G. W. Wright*  
*S. C. Connor*

INVENTOR

NELSON WEEKS

BY

*Howden and Howden*  
HIS ATTORNEYS.

# UNITED STATES PATENT OFFICE.

NELSON WEEKS, OF RICHMOND HILL, NEW YORK, ASSIGNOR TO  
BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO,  
ILLINOIS, A CORPORATION OF ILLINOIS.

## ELECTRICAL-LAMP FIXTURE.

No. 825,434.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed June 21, 1901. Serial No. 65,498.

*To all whom it may concern:*

Be it known that I, NELSON WEEKS, a citizen of the United States, residing in Richmond Hill, in the county of Queens, State of New York, have invented Improvements in Electric-Lamp Fixtures, of which the following is a specification:

My invention relates to cluster or plural electric-lamp fixtures—that is, fixtures for retaining a number of electric lamps in position on one base, the receptacles or sockets for the lamps being electrically connected together either in multiple or in series, or both, as the case may require.

The main object of my invention is to produce such a fixture that all the terminals, contacts, and connections shall be easily accessible to facilitate installation, inspection, and repair. This object I accomplish in the preferred embodiment of my invention which I have developed for commercial use by securing the sockets or receptacles for the lamps in a metallic cover, so that upon the removal of the cover the receptacles, which take up a great part of the interior of the fixture, will be removed with the cover and leave exposed on the face of the base all the connections.

In accordance with my invention, broadly considered, I provide a suitable basic or supporting part, which may be of any suitable form, and cooperating with this basic or supporting part I provide a metallic casing detachably connected therewith and having a plurality of lamp-openings. Registering with these lamp-openings I provide a plurality of lamp-holding devices or receivers, which are carried upon and removable with the casing when detached. The center contacts are mounted within the casing and register with the lamp-holding devices or sockets. The leading-in wires are adapted to pass through the basic or supporting part of the structure, and the binding-posts or connecting devices to which the leading-in wires are adapted to be attached are mounted within the casing, so as to be disclosed when the casing is detached. The lamp-receivers or shells are associated with the casing by means of insulating bushings or rings interposed between the shells and the casing. The inner ends of the shells are electrically exposed, and electrical connectors, constituting a part of

the permanently-organized structure, extend between the shells to connect the same in proper circuit arrangement. Loose leading-in wires extending to the several shells are entirely eliminated. The structure is such that it can be completely assembled at the factory, ready for installation by the connection of the two leading-in wires to the two binding-posts. I preferably mount the binding-posts directly upon the basic or supporting part of the structure and provide separable connecting means between one of the binding-posts and the ring-contacts carried upon and removable with the casing. By means of this separable connecting means the contacts carried upon the casing are connected in circuit when the casing is placed in position. Likewise I preferably mount the center contacts directly upon the basic or supporting part of the structure. While, as above stated, I preferably mount the binding-posts and the center contacts upon the basic or supporting part of the structure, this is not essential, and these parts may be otherwise suitably mounted within the casing.

The invention will be more perfectly understood upon reference to the accompanying drawings, in which—

Figure 1 is a face view of the base with the cover removed. Fig. 2 is a section on the line 2 2 of Fig. 1 with the cover in position. Fig. 3 is a side elevation. Fig. 4 is a plan view of the inside of the cover. Fig. 5 is a view similar to Fig. 1 of a modification; and Fig. 6 is a part-sectional view on the line 5 5 of Fig. 5, the cover being in complete cross-section.

Upon a base B, of porcelain or other suitable insulating material, formed with a central projecting plane J, slightly raised from the annular part of the base A, I secure a number of contact-plates *s*, five in the example shown, grouped about a common center, and each having an outwardly-bent end *s'*. These contacts are secured to the base by screws *s''*, passing through suitable holes formed in the base, Fig. 2. The contacts may be connected up to put the lamps in series or multiple or in multiple series. In the example, Figs. 1 and 2, I have shown the connections for multiple. In an annular groove *g* in the face of the plane J, is placed a wire *w* before the several contacts *s* are finally se

cured, so that when the securing-screws for these contacts are tightened up the contacts will be electrically connected together by the wire.

5 One of the contact-plates *s* is made longer than the others and tapped and threaded to receive a binding-screw *s'*, to which one line-terminal is to be secured. Adjacent to this binding-screw I prefer to form a hole *H* in  
10 the body of the base for the introduction of the line conductor.

Through the center of the base I pass a screw *S*, fastened in place by a nut *n* and projecting from the base some distance to act as a  
15 securing-post for the lamp-carrying cover *C*.

The annular portion *A* of the base is preferably divided into a number of compartments *a*, separated by insulating portions *p*, preferably molded with the base and of a  
20 wedge or pyramidal shape having a gradual slant from the periphery of the base to a point about in the same plane as the projection *J*, but separated from it by an intervening space *1*, through which connecting-wires  
25 4 can be passed, as hereinafter described. At the back of each compartment *a*, standing out a little from the wall of the projection *J*, I place a forked contact *Y*, fastened to the base by a screw 3 in such position (see Fig. 3) that  
30 the ends *y'* of the forks are approximately on a line with the bent-over end *s'* of the contact-piece *s*. These forked contacts *Y* are electrically connected together by a wire 4 and clamped in position behind the parti-  
35 tions *p* under the bent portions *y* of the forked contacts, Figs. 1 and 2, upon the tightening of the securing-screws 3. To one of the forked contacts *Y* is electrically connected a piece 7, Fig. 1, with a binding-screw  
40 6, to which the end of the line conductor is connected a hole 5 in the base serving for the introduction of this conductor.

It will be seen that when the cover is off all connections and terminal wires are exposed  
45 and unobstructed, thereby permitting not only great ease of installation, inspection, and repair but also securing great ease of assemblage in the manufacture.

The cover *C* is bowl-shaped with a central  
50 opening 8 for the passage of the threaded post *S* of the base, on which it is secured by a thumb-screw 9, Fig. 2. To this bowl-shaped cover I secure as many metal rings 10 as there are to be lamps in the cluster. These  
55 rings may be secured in place by flanging over their outer edges against the edges of the corresponding holes in the body of the cover. Within each ring 10 I secure an insulating-bushing 11, which is internally threaded to  
60 receive the open-ended threaded socket or receptacle 12 for the Edison type of lamp. I wish it to be understood, however, that I do not confine myself to sockets of this description, as it is obvious that any other form of  
65 lamp-holding contact to hold the lamps radi-

ating, preferably, in positions oblique to the axis of the cluster can be readily adapted to the clusters of my invention.

Upon placing the cover in place, Fig. 2, the inwardly-turned flange 13 of the socket 70 12 makes contact with each arm of the contact *Y* on opposite sides of the socket, while the contact *s* is opposite the open inner end of the socket and in proper position to make contact with the central end terminal of a  
75 lamp when inserted into the socket. The forks *y' y'* of the contact *Y* are preferably given a slight spring action, which is readily obtained by securing them at the turned-over end (*y*) only, so as to stand out a slight  
80 distance from the projecting plane *J* when the cover *C* is off.

In Figs. 5 and 6 I have shown a modification arranged for series wiring and have shown  
but three lamps in the cluster. The cover 85 and sockets are shown similar to those of the preceding figures. The forked contact *Y<sup>10</sup>*, however, is shaped somewhat differently from the fork *Y* and is secured to the base by a screw 14. It is adapted to make contact on  
90 the outside of the socket-shell 15 instead of at the flange, as hereinbefore described. The projecting central plane is replaced in this modification by a truncated cone *J<sup>10</sup>*, formed with a deep cavity 16, opening to the back  
95 of the base. Externally the cone has a rim 17 part way up its slanting sides for the reception of connecting-wires 18 and 19 and the terminals 20 by which the wires are secured in place. These terminals 20 are fas-  
100 tened in place by screws 21, each passing through a slot 22, extending from the inside of the cavity 16 to the outside. The slot is preferably formed by molding the porcelain with long channels 23 perpendicular to the  
105 base and penetrating from the inside to the outside of the porcelain, leaving a slot, as shown, substantially at right angles to the wall for the reception of the screw 21. Fig.  
110 5 shows six of these channels so placed that the base can be used for either a three or a four lamp cluster, as may be desired. For each channel 23 it is necessary in this construction to provide an adjacent opening 24  
115 to receive the screw 14, which secures the forked contact *Y<sup>10</sup>*. In this modification I have shown the lamps connected up in series. Wires 26 27 in a groove 25 adjacent to the contacts (*Y<sup>10</sup>*) serve to complete connection between the line-terminal 30 and the vari-  
120 ous forked contacts and lamps, while the wire 18 from the contact 20 is connected to a line-terminal 31, a notch 32 being formed in the wall of porcelain, if desired, at this place. The line-wires are brought in through open-  
125 ings 33 in the base, while 34 34 are holes for the screws to secure the base to the ceiling or wall. A raised wall 35 may be formed on the base to hold the cover in position; but it is not essential. It is shown cut away at 36 36  
130

for the line-wires should it be desired to bring them in to the cluster from the side instead of from the back of the base.

I claim as my invention—

5 1. A cluster-lamp fixture comprising an insulating-base carrying a plurality of contacts for the central terminals of the lamps, in combination with a metallic cover, a series of sockets for the lamps, and insulating-  
10 bushings interposed between said cover and the sockets, said cover and sockets constituting a unitary removable structure.

2. A plural electric-lamp fixture comprising a base having insulated lamp-contacts, in  
15 combination with a removable metallic cover and sockets carried by the cover but insulated therefrom.

3. A plural-lamp base carrying contacts, a removable cover carrying insulating-bushings and threaded sockets carried by and  
20 within said bushings, each socket having an opening at its inner end, one contact on the base being adapted to make connection with the socket on the placing of the cover in position and the other contact so placed as to  
25 occupy a position adjacent to the opening in the socket and adapted to make contact with the base-terminal of the lamp inserted in the socket.

30 4. A plural-lamp fixture comprising an insulating-base, two sets of contacts thereon, a metallic cover, lamp-sockets carried by the cover but insulated therefrom, and guides on the base to receive said sockets.

35 5. A plural-lamp fixture comprising a base of insulating material, forked contacts secured to the base, and other contacts between the extending arms of the forked contacts, in combination with a cover carrying  
40 lamp-sockets and lamps adapted to be electrically connected with the two sets of contacts upon the securing of the cover in position.

45 6. In a cluster-lamp socket, the combination with a suitable base or support, of lamp-contacts carried thereby, a suitable casing or shell having a plurality of apertures formed therein, lamp-receivers removable with and carried by said casing and registering with  
50 said apertures, and insulating means disposed between the receivers and casing, said casing being detachably connected with the support to afford access to the interior of the socket.

55 7. In a cluster or plural lamp socket, the combination with a suitable basic or supporting part, a metallic casing detachably connected thereto and having lamp-openings, a plurality of lamp-contacts and holding devices registering with said openings and carried upon and removable with said casing and  
60 another set of contacts for the lamps carried upon the basic or supporting part.

8. In a cluster or plural lamp socket, a  
65 suitable basic or supporting part, a metallic

casing detachably connected therewith and having lamp-openings, lamp-receiving shells registering with said openings and carried upon, insulated from, and removable with, said casing and having their inner ends electrically exposed, registering center contacts electrically exposed and suitably supported within said casing, and permanently-organized electrical connectors within said casing directly connecting said shells and contacts  
70 in circuit relation. 75

9. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and having lamp-openings, threaded lamp-receiving shells carried upon said casing, registering with said openings and having their inner ends electrically exposed, an insulating-bushing interposed between each of said shells and the casing, electrically-exposed center  
80 contacts suitably supported within said casing and registering with said respective shells, and permanently-organized electrical connectors within said casing directly connecting said shells and contacts in circuit relation. 90

10. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and having lamp-openings, lamp-receiving shells  
85 registering with said openings and carried upon, insulated from, and removable with, said casing, registering center contacts suitably supported within said casing, and binding-posts suitably disposed within said casing and adapted to be disclosed by the detachment of said casing. 95

11. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and having lamp-openings, lamp-receiving shells registering with said openings and carried upon, insulated from, and removable with, said casing, registering center contacts suitably supported within said casing, and binding-posts mounted upon, and supported by said basic or supporting part and adapted to be disclosed by the detachment of said casing. 105

12. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and having lamp-openings, registering lamp-receiving shells carried upon, and supported by said casing and removable therewith, registering center contacts suitably supported within said casing, and separable electrical connecting means between conducting parts carried upon said basic or supporting part and said lamp-receiving shells. 115

13. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and having lamp-openings, registering lamp-receiving shells carried upon, and supported  
120 125 130

by, said casing and removable therewith, registering center contacts suitably supported within said casing, a pair of binding-posts mounted upon said basic or supporting part, 5 and separable connecting means between one of said binding-posts and the lamp-receiving shells carried upon said casing.

14. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic 10 casing detachably connected therewith and having lamp-openings, registering lamp-receiving shells carried upon, and removable with, said casing, an insulating-bushing interposed between each of said registering 15 shells and said casing, center contacts mounted directly upon said basic or supporting part, a pair of binding-posts mounted directly upon said basic or supporting part, one of said binding-posts being associated

with said center contacts, and separable connecting means between the other of said binding-posts and said threaded shells. 20

15. In a cluster or plural lamp socket, a suitable basic or supporting part, a metallic casing detachably connected therewith and 25 having lamp-openings, registering lamp-receiving shells carried upon, and removable with, said casing and insulated therefrom, all contacts and electrical conducting parts, except said threaded shells, being mounted 30 upon said basic or supporting part.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NELSON WEEKS.

Witnesses:

F. WARREN WRIGHT,  
HUBERT HOWSON.