

R. B. BENJAMIN.
LAMP SOCKET.
APPLICATION FILED JULY 14, 1904.

916,829.

Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

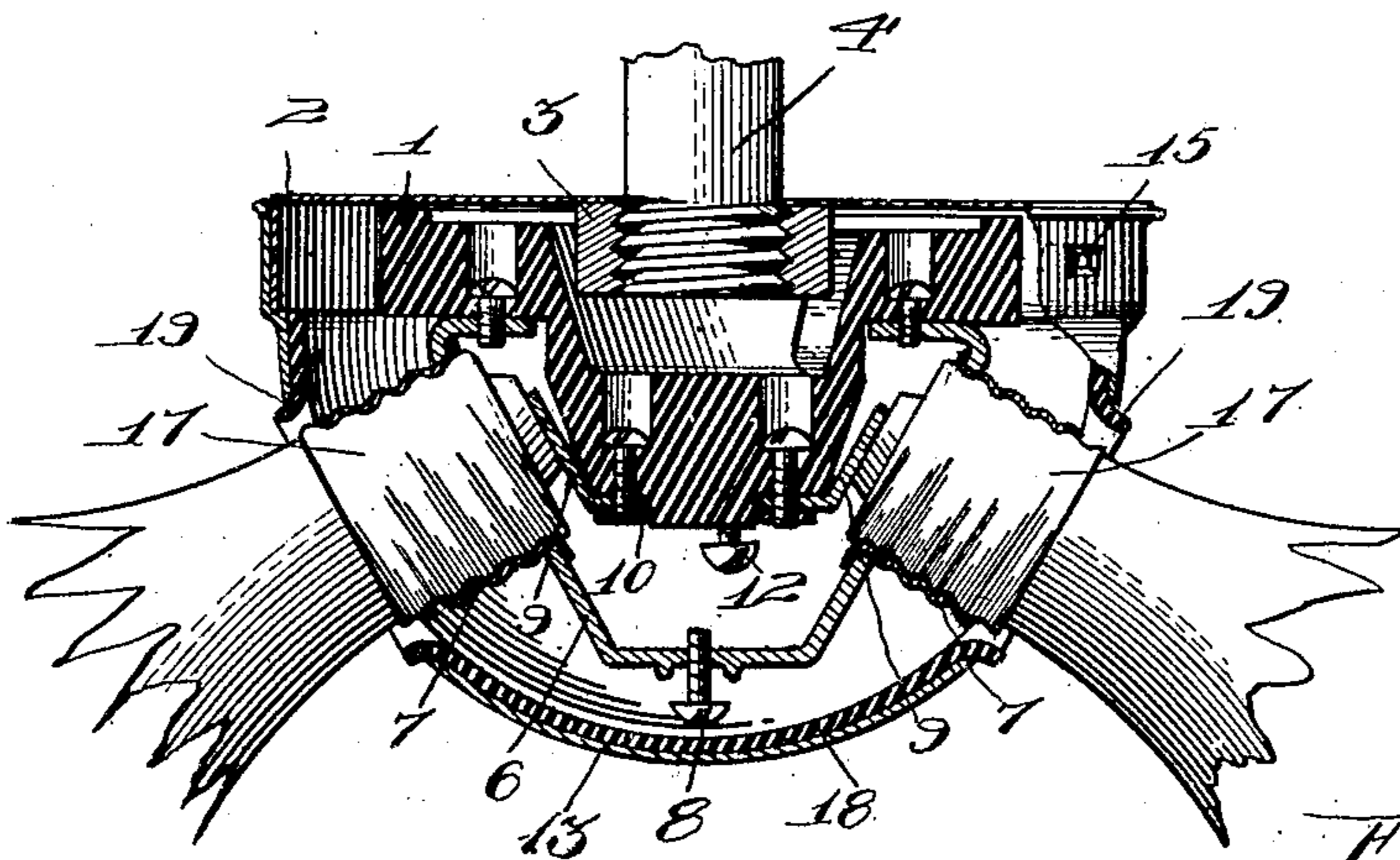


Fig. 2.

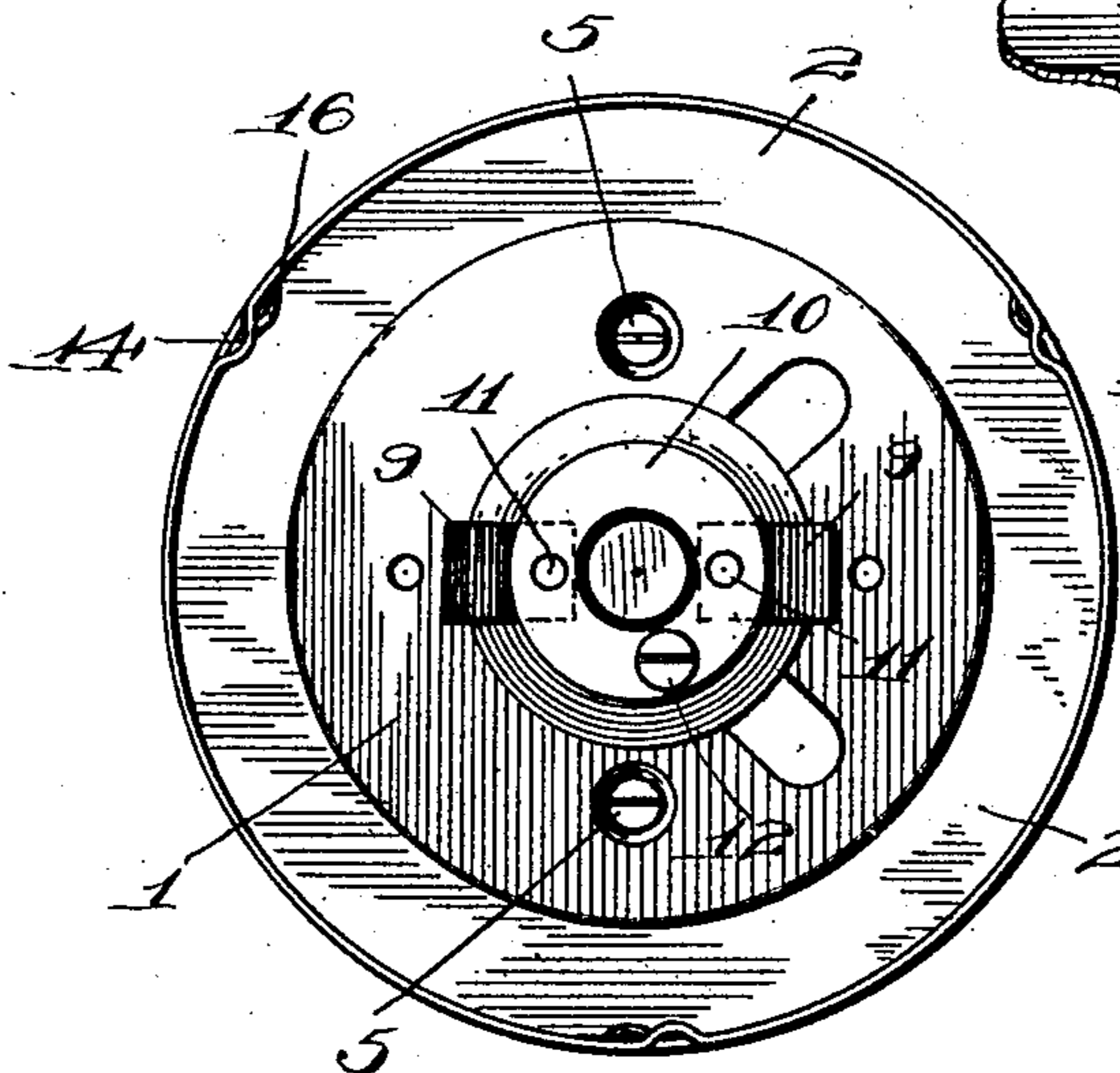


Fig. 3.

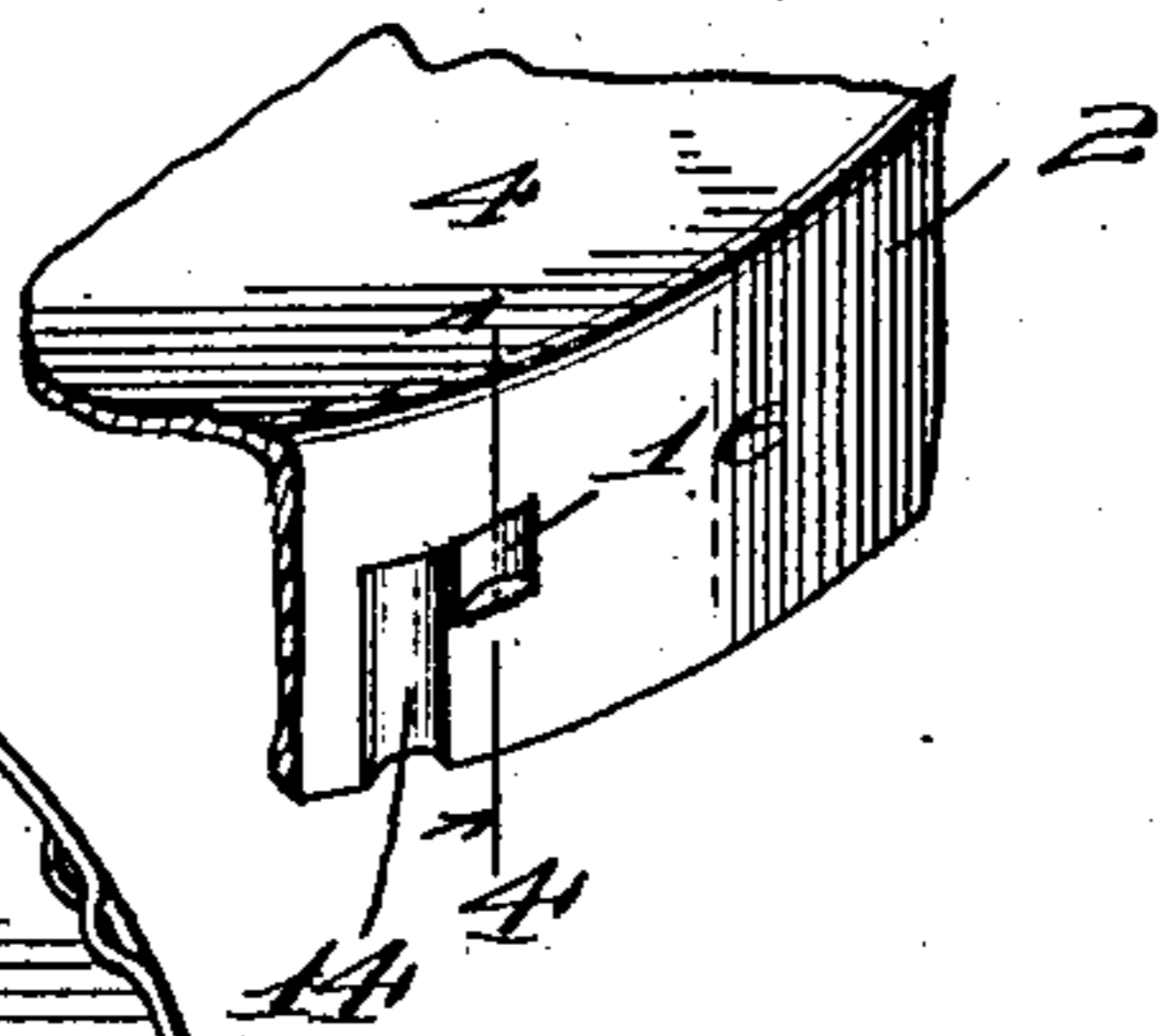
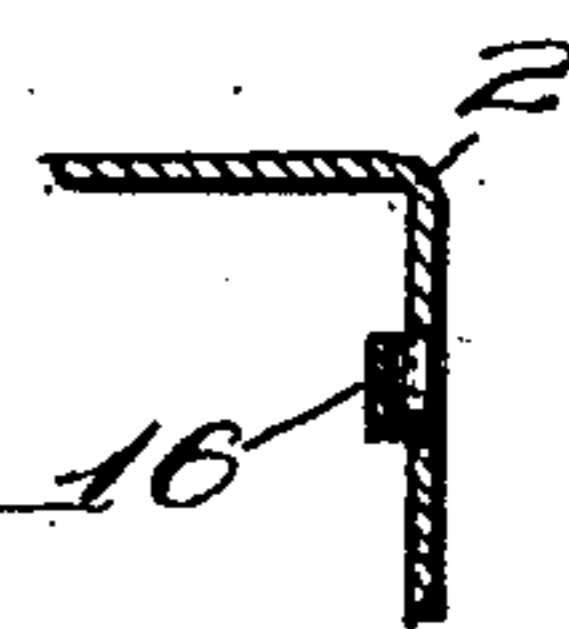


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

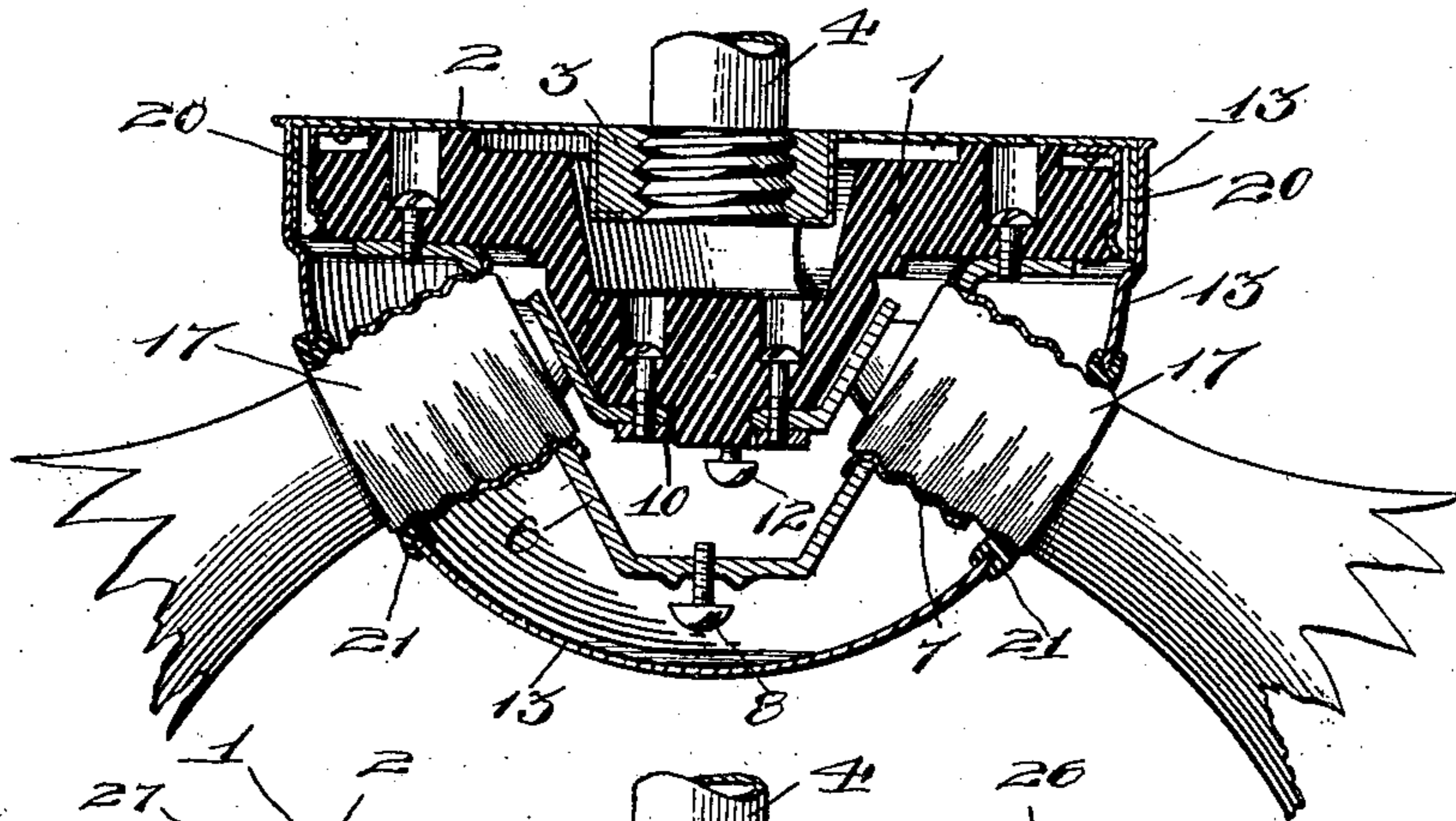


Fig. 6.

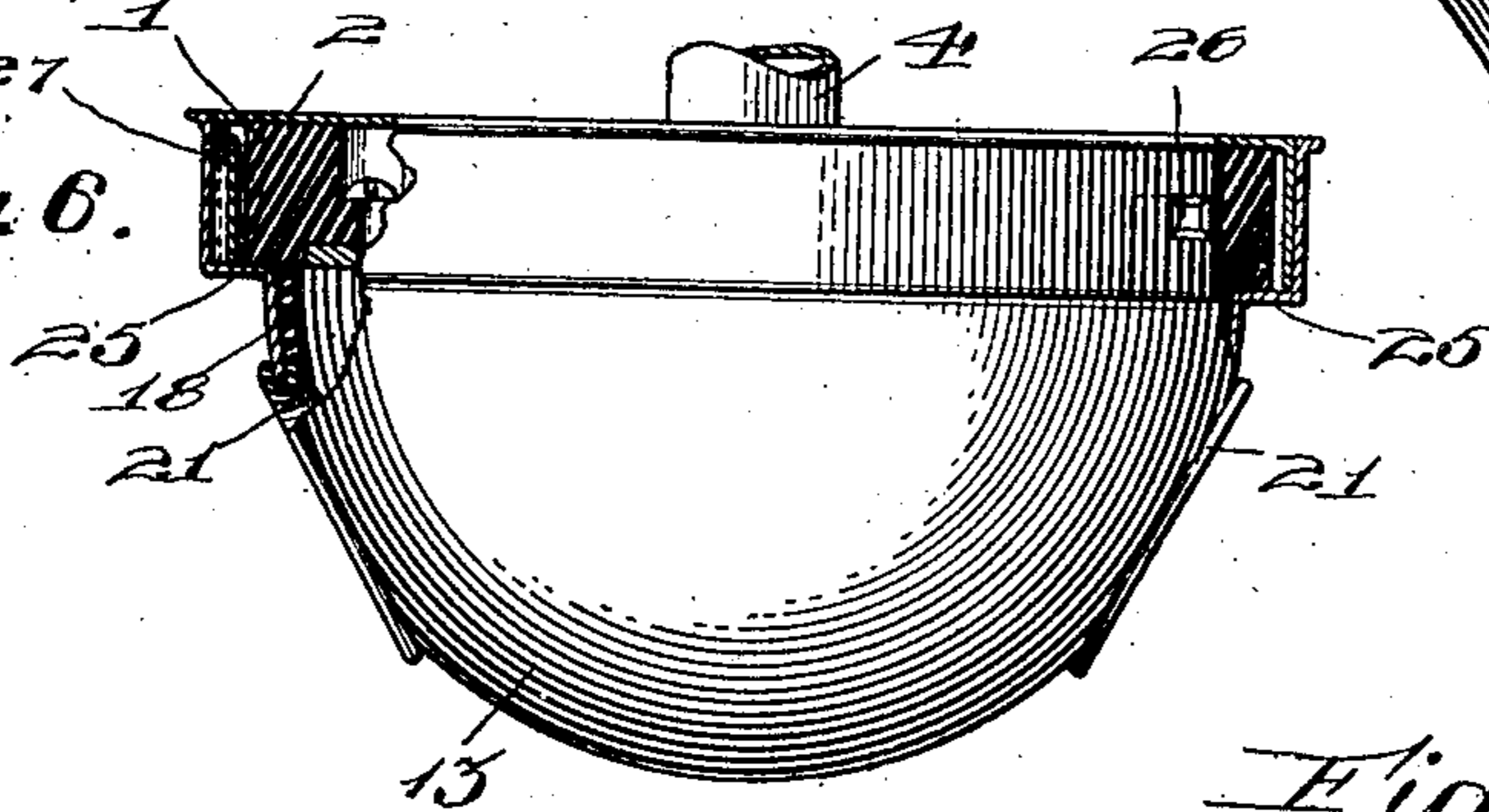


Fig. 7.



Fig. 8.

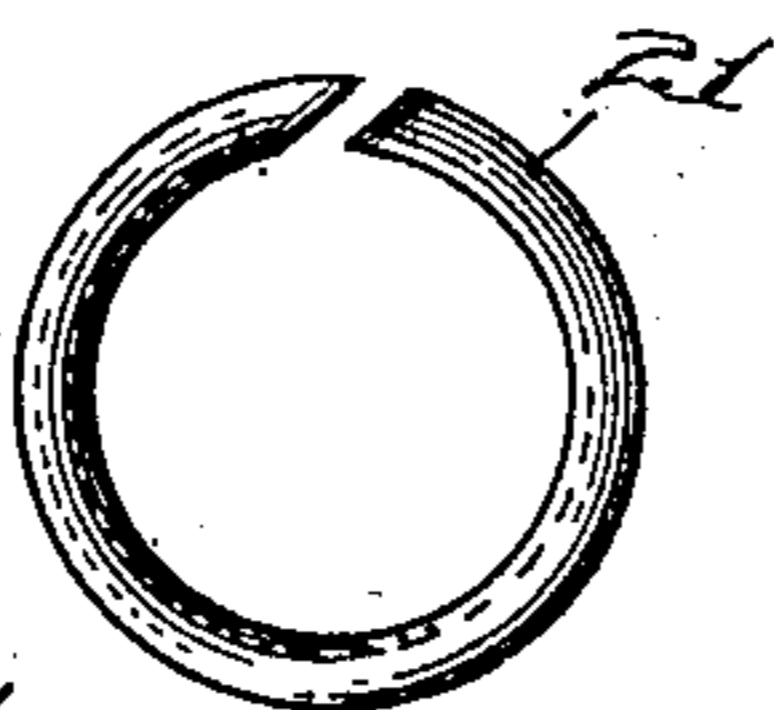


Fig. 9.

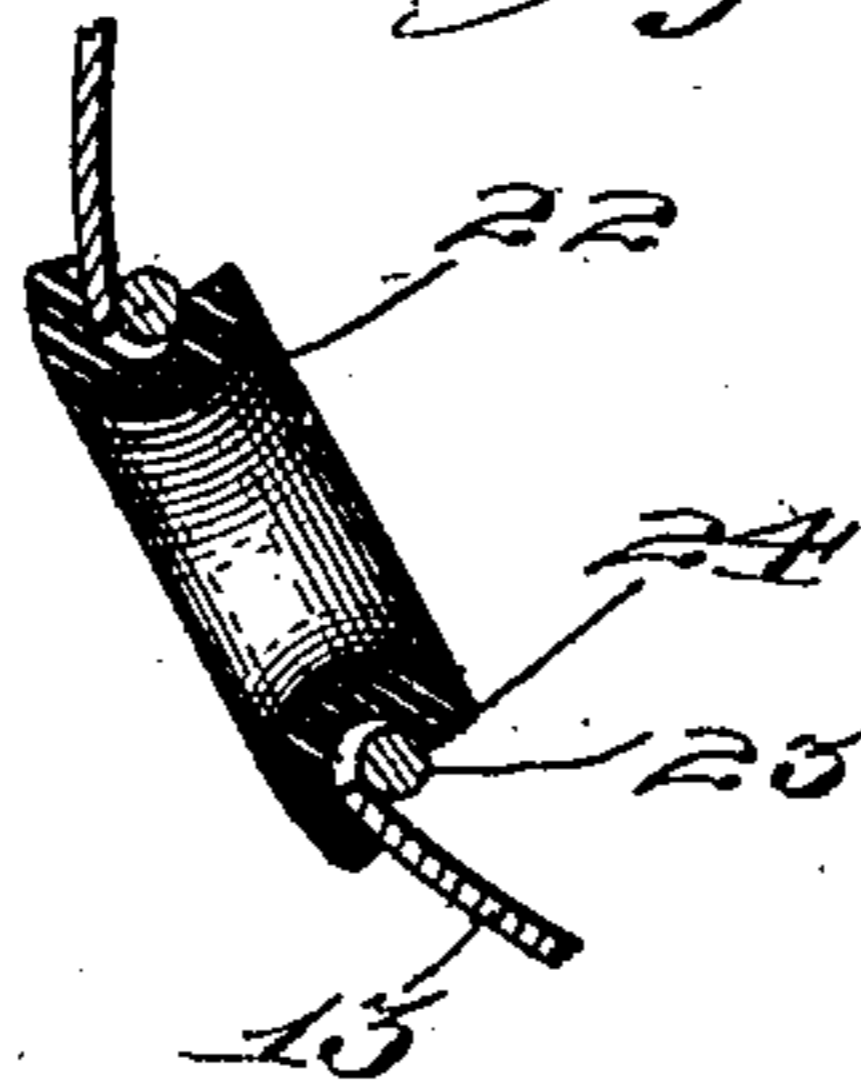
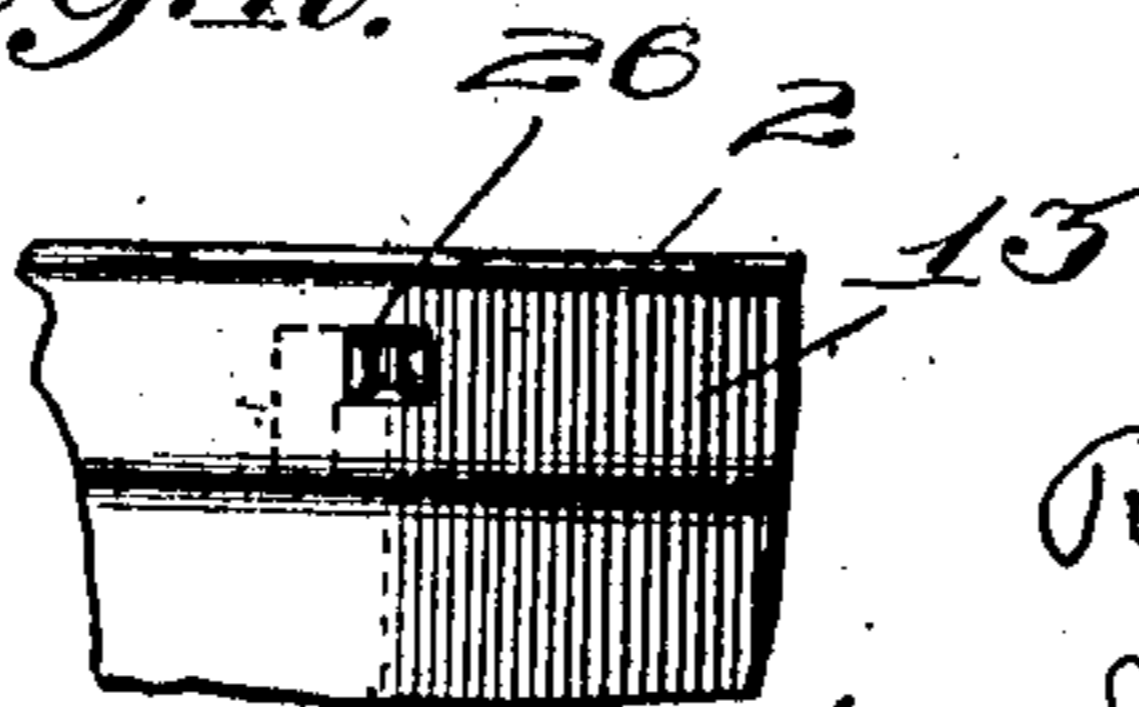


Fig. 10.



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UNITED STATES PATENT OFFICE.

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

LAMP-SOCKET.

No. 916,829.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed July 14, 1904. Serial No. 216,580.

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 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 plural lamp sockets, and has for one of its objects the provision of novel insulating means therefor.

Another feature of my invention is the provision of improved means for supporting the lamp contacts in position.

The other special features of my invention will appear from the following specification in which I have described the construction of my invention, as illustrated in the accompanying drawings.

The drawings are designed to illustrate embodiments of my invention which I have worked out for commercial purposes and for the purpose of revealing my invention to others, and other constructions than those illustrated may be adopted without departing from the spirit of my invention.

Referring to the drawings in which like reference numerals are used to designate like parts in the several figures: Figure 1 is a sectional view of my improved socket with a portion thereof shown in elevation to disclose the interlocking casings; Fig. 2 is a plan view of the back plate and insulating base with the lamp receiving shells and their support removed; Fig. 3 is a detail view showing the bayonet joint for locking the casing together; Fig. 4 is a view taken on the line 4-4 of Fig. 3; Fig. 5 is a sectional view showing another form of my invention; Fig. 6 is a side elevation of my invention showing parts broken away; Figs. 7, 8 and 9 are detail views of insulating means for the socket, and, Fig. 10 is a detail view of the casing locked together.

Referring to the drawings by reference characters, an insulating base or block 1, preferably formed of porcelain or other suitable material, is secured to a metallic back plate 2, provided with a screw threaded central aperture 3, into which is adapted to be screwed the end of a conduit or pipe 4, which supports the socket in position, and also serves as a conduit for the leading-in

wires. Any suitable means may be provided for securing the base to the back plate, as screws or bolts 5 passing therethrough and screwing into the back plate 1. A plate 6 adapted to mechanically support and electrically connect in circuit the lamp receiving shells 7, 7, is carried by the insulating block 1, and is provided with a binding screw 8, to which may be secured one of the leading-in wires of the supply circuit. Center lamp contacts 9, 9, are arranged upon a central projection of the insulating base, and are held in position thereon by a contact ring 10 secured to the base by screws 11, 11. A binding screw 12 is also carried by the contact ring 10, whereby the same may be suitably connected with the opposite leading-in wire of the supply circuit.

An inclosing metallic casing or shell 13 is provided for the socket which is substantially semi-spherical in form, and is adapted to telescope upon the downturned peripheral flange of the back plate 2. A recess or depression 14 is formed in the flange of the back plate which receives an inwardly extending projection 15, formed on the inclosing casing or shell 13. The recess 14 has an angular extension 16, and in connecting the casing 13 and the back plate 2 together after the casing has telescoped upon the flange of the back plate 2 by slightly rotating the same, the projection 15 will engage in this recess 16 and effectually connect the casing and back plate together.

A plurality of apertures are formed in the casing 13, which when the casing is in position, aline with the lamp receiving shells 7 to permit the lamp bases 17 to be inserted in the lamp receivers. The depressions 14 on the back plate and the projections 15 on the casing are so arranged that the apertures formed in the casing are slightly out of alinement with their respective lamp receivers when the projection 15 is inserted in the depression 14, but when the casing is rotated to engage the projection 15 in the recess 16, the apertures aline with their respective lamp receiving shells 7, 7. By this construction, the lamp bases serve to aid in preventing the rotation of the casing 13 with respect to the back plate 2, and when the lamp bases are in position, the casing 13 cannot be removed from position.

The casing 13 is preferably provided with a suitable sheath or lining formed of insu-

lating material, such as insulating fiber which serves to insulate the casing 13 from the live parts of the socket, and prevent any danger of short circuits. This feature is especially advantageous in wet and damp weather where the moisture forms a conductor and tends to short circuit the parts. Out turned flanges or annular projections 19 of the lining are adapted to project into the apertures formed in the casing and insulate the same from the lamp receiving shells and the lamp bases.

In Fig. 5 I have illustrated a modification of my invention in which the downwardly extending springs 20 are secured to the back plate 2, and are provided with suitable projections upon the ends thereof which are adapted to be sprung into an annular groove formed in the insulating base 1, to detachably connect the base on the back plate 2. Projections 27, shown more particularly in Fig. 6, may also be formed on the inner side of the back plate 2, which engage in recesses or depressions in the insulating base to prevent the same from rotating within the casing. A ring or strip of insulating fiber 21 may also be placed within each of the apertures formed in the casing which insulate the lamp bases 17 and the lamp receivers 7 from the inclosing casing, the edges of this ring being turned back upon the casing to secure the ring in position. An insulating bushing 22 (see Fig. 9) may be substituted for the insulating ring 21. This bushing is preferably formed of porcelain, glass or other suitable insulating material, and has a wire or metallic ring 23 disposed between the inner flange 24 thereof, and the casing 13 to aid in securing the bushing in position.

I have illustrated in Fig. 6 still another modification of my invention, in which the insulating base 1 is held in position between the back plate 2 and the casing or shell 13 by engagement with the back plate and an annular shoulder 25 formed on the inclosing casing or shell. The back plate 2 and the casing or shell 13 are detachably secured together by means of the bayonet joint connection 26 as in the form illustrated in Fig.

1. As previously described, one or more projections 27 are formed in the flange of the back plate 2, which fit within recesses in the base 1 to prevent the parts from being rotated with respect to the back plate. By this construction, it will be noted that a two part inclosing casing is provided for the sockets, the members of the casing being detachably secured together by bayonet joints and the insulating base is secured in position between the two parts of the inclosing casing. By this arrangement the base is readily removable from position when the two members of the casing are separated and to provide for the ready removal of the base, the threaded lamp receiving shells 7, as illus-

trated in the other figures of the drawing, do not project through the apertures in the casing, but lie wholly within the casing whereby the casing may be removed without interference.

While I have described my invention with respect to the form which I have adopted for commercial purposes, it will be understood that I do not wish to be limited to the specific details more than as disclosed in the appended claims.

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

1. The combination with a suitable metallic back plate, of a base, a plurality of lamp-receiving shells and associated center contacts carried thereby, a casing having openings opposite said lamp-receiving shells to accommodate the passage of the lamp-bases, and a readily separable locking-connection between the periphery of said back plate and the periphery of said casing.

2. The combination with a suitable supporting plate, of an insulating base carried thereby, a plurality of lamp-receiving shells and associated contacts mounted upon said base, a casing having an opening opposite each of said lamp-receiving shells to accommodate the passage of the lamp-bases, and a readily separable locking-connection between said supporting plate and said casing.

3. In a plural lamp-holding device, the combination with a metallic back plate, of an insulating base secured thereto, a plurality of lamp-receiving shells and associated contacts mounted upon said base, binding terminals for said shells and contacts, and a casing having an opening opposite each of said lamp-receiving shells for the reception of a lamp, said casing being attached to said back plate independently of said insulating base and being made readily detachable therefrom to afford access to said binding terminals.

4. The combination with a suitable supporting plate provided with an annular flange, of an insulating base carried by said plate, a plurality of lamp-receiving shells and corresponding center contacts mounted upon said base, a casing having an opening opposite each of said shells to accommodate the passage of the lamp bases, a readily separable locking-connection between said casing and said annular flange on the supporting plate, and binding terminals for said shells and contacts located so as to be accessible when said casing is removed.

5. In a plural lamp socket, the combination with an insulating base, center contacts for the lamps carried thereby, an inclosing casing having a plurality of openings therein, a plurality of lamp receivers carried by said base, one opposite each opening in said casing and arranged wholly within said cas-

ing, an insulating lining for said casing, a back plate, and means for detachably securing said back plate to the casing.

6. In a plural lamp socket, the combination with a back plate, of an inclosing casing detachably secured to said plate and readily removable therefrom to reveal the interior of the socket, having apertures formed therein arranged to receive electric lamp bases, an insulating lining for the casing having the edges thereof extending through said apertures to insulate the lamp bases from said casing, and a plurality of lamp receivers and associated contacts disposed between said plate and said casing.

7. In a plural lamp socket, the combination with a suitable base, a plurality of lamp holders carried by said base, center contacts for the lamps, a cover or casing having openings therein, one opposite each of said lamp holders, and a lining for said casing having edges thereof extending through said openings.

8. In a plural lamp socket, the combination with an insulating base, center contacts for the lamps carried thereby, a casing or cover having a plurality of openings therein, a plurality of threaded lamp receivers carried by said base, one opposite each opening in the casing and arranged wholly within said cover, suitable insulating material arranged within the openings of the cover to insulate the lamp bases therefrom, a back plate, and means for detachably securing said casing to the back plate.

9. In a plural lamp socket, the combination with an insulating base, of center contacts carried thereby, an inclosing casing having a plurality of openings, a plurality of lamp receivers carried by said base, one opposite each opening in the casing and arranged wholly within the casing, a back plate, means for detachably connecting said casing with the back plate, means for supporting said base between said cover and back plate, and an insulating lining for said casing.

10. In a plural lamp socket, the combination with an insulating base, of a plurality of lamp receivers and associated contacts associated therewith, a two part removable inclosing casing for the socket having apertures formed therein registering with said lamp receivers, an insulating lining for said casing having an extended portion thereof disposed within said apertures, said base and its associated parts being clamped in position by the members of said casing.

11. In a plural lamp-holding device, the combination of a back plate, a base carried thereby, lamp-holders and associated contacts carried by said base, binding terminals

for said lamp holders and contacts, and a casing secured to said back plate and made readily detachable to afford access to said binding terminals.

12. In a plural lamp-holding device, the combination of a back plate, a base carried thereby, lamp-holders and associated contacts carried by said base, binding terminals for the attachment of wires, and a casing peripherally secured to said back plate and made readily detachable to afford access to said binding terminals.

13. In a plural lamp-holding device, the combination of a back plate, a base secured thereto, lamp-holding devices and associated contacts carried by said base, binding terminals for the attachment of leads, a casing having apertures registering with said lamp-holding devices, and readily detachable means for securing said casing to said back plate, said binding terminals being disclosed by the removal of said casing.

14. In a plural lamp socket, the combination with a metallic back plate, of a casing detachably and peripherally connected thereto, an insulating base suitably mounted between said casing and said back plate, said casing being removable independently of said insulating base, lamp-holding devices carried upon said insulating base, and binding posts between said base and said casing and made accessible by the detachment of said casing.

15. The combination with a supporting back plate, of an insulating base carried thereby, a casing removable independently of said base, lamp-receivers and associated contacts supported by said base within said casing, binding terminals normally covered by said casing and disclosed by the removal of said casing, said base being apertured for the passage of wires to said binding terminals, and means located at the edge of said casing for securing the same in place.

16. The combination with a supporting back plate, of a base secured thereto, a casing inclosing said base, lamp-receivers and associated contacts carried by said base, binding terminals for said contacts and lamp-receivers, and means operated by turning said casing for locking said casing in position, said lamp-receivers extending toward but stopping short of said casing so as to permit turning of said casing to lock or unlock the same.

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

REUBEN B. BENJAMIN.

Witnesses:

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E. A. OLSEN.