

No. 861,941.

PATENTED JULY 30, 1907.

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

3 SHEETS—SHEET 1.

Fig. 1.

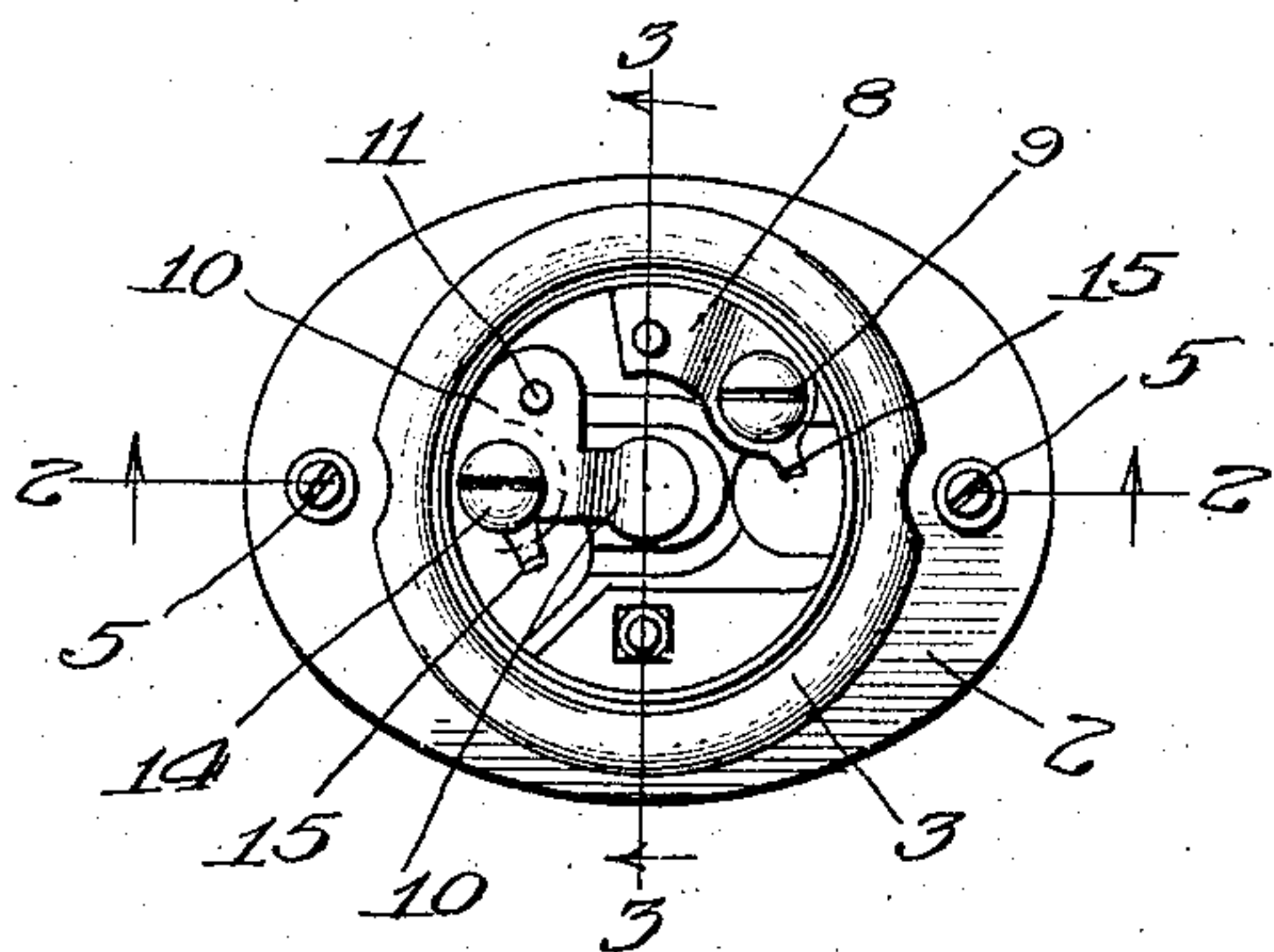


Fig. 4.

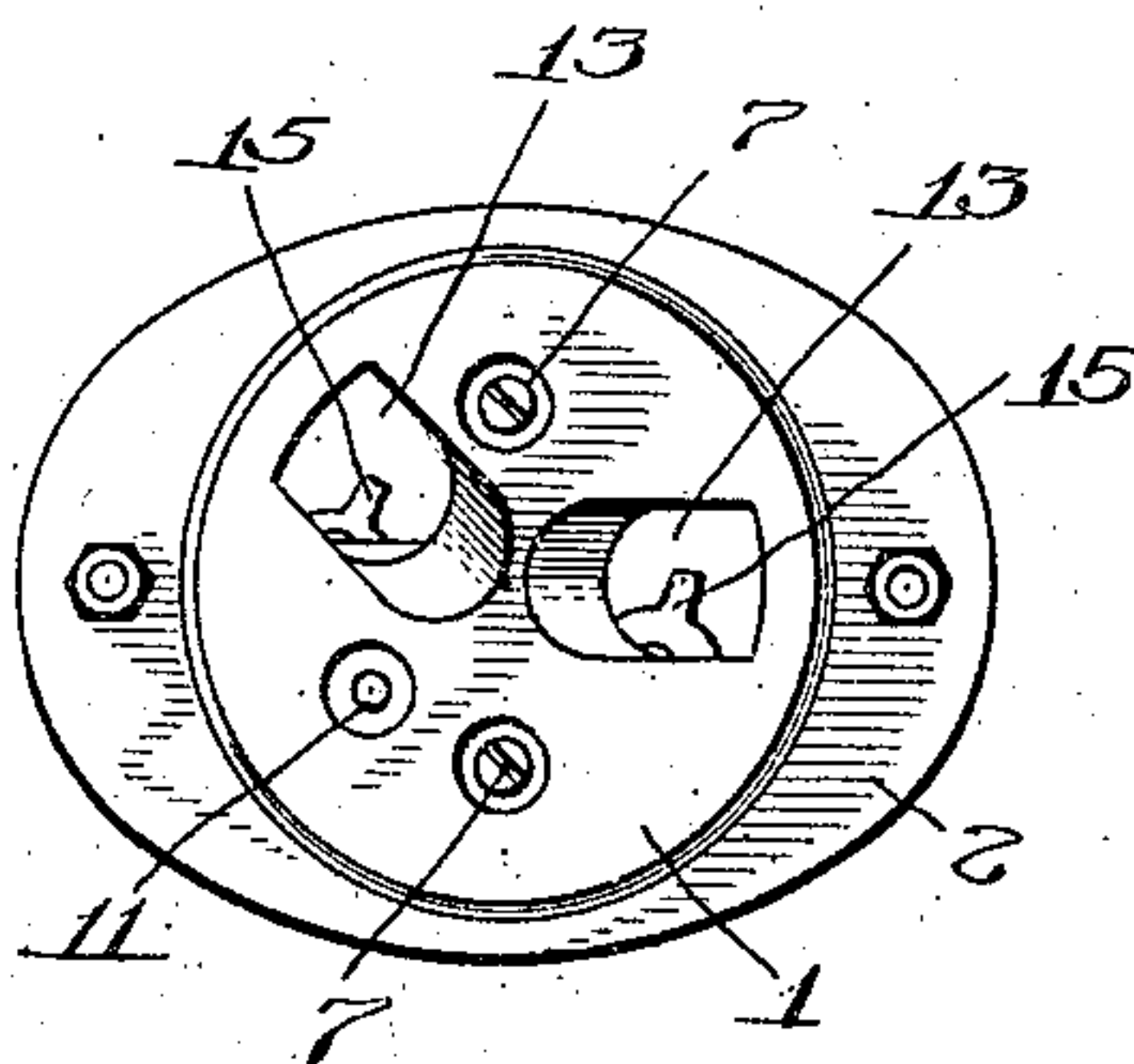


Fig. 2.

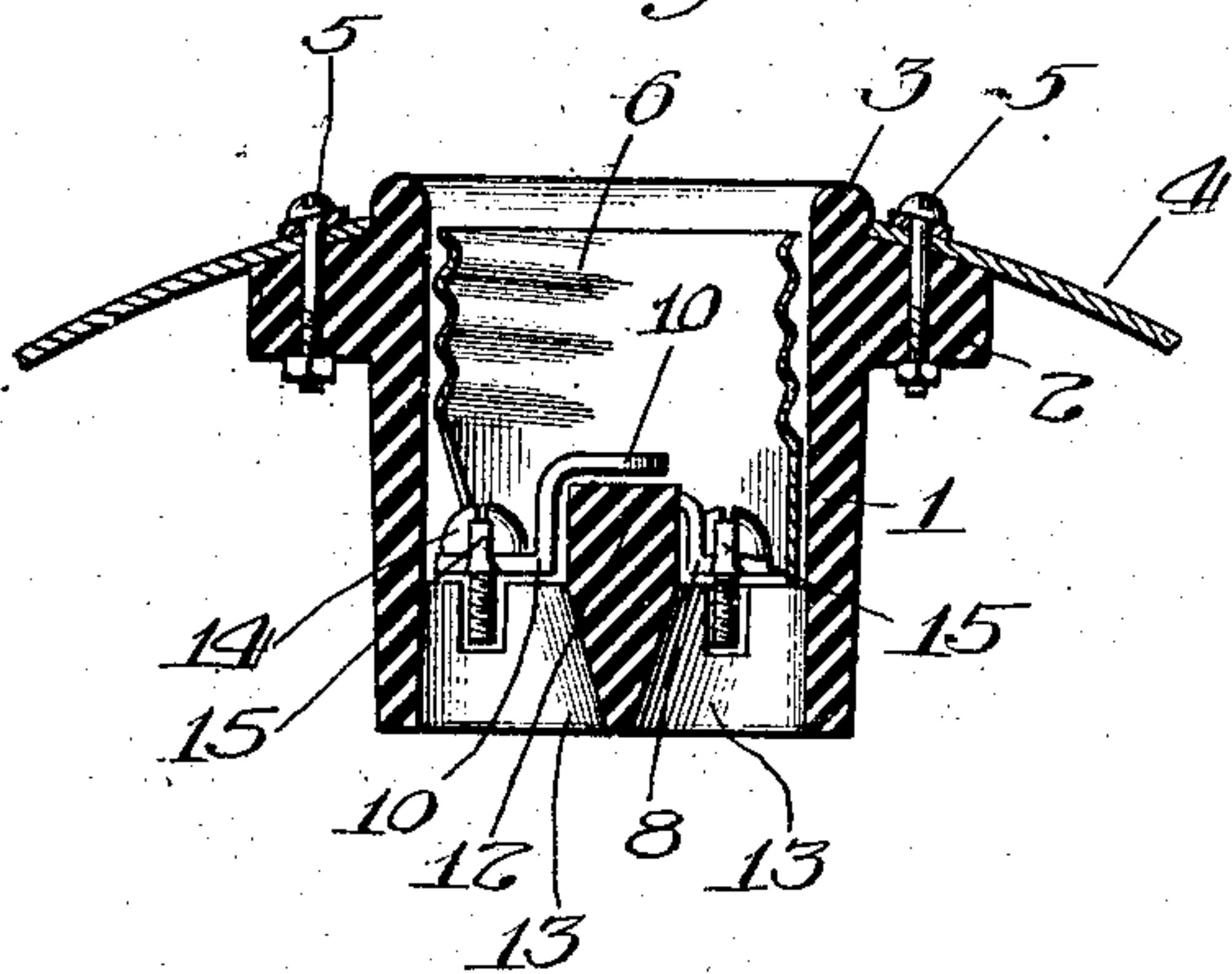
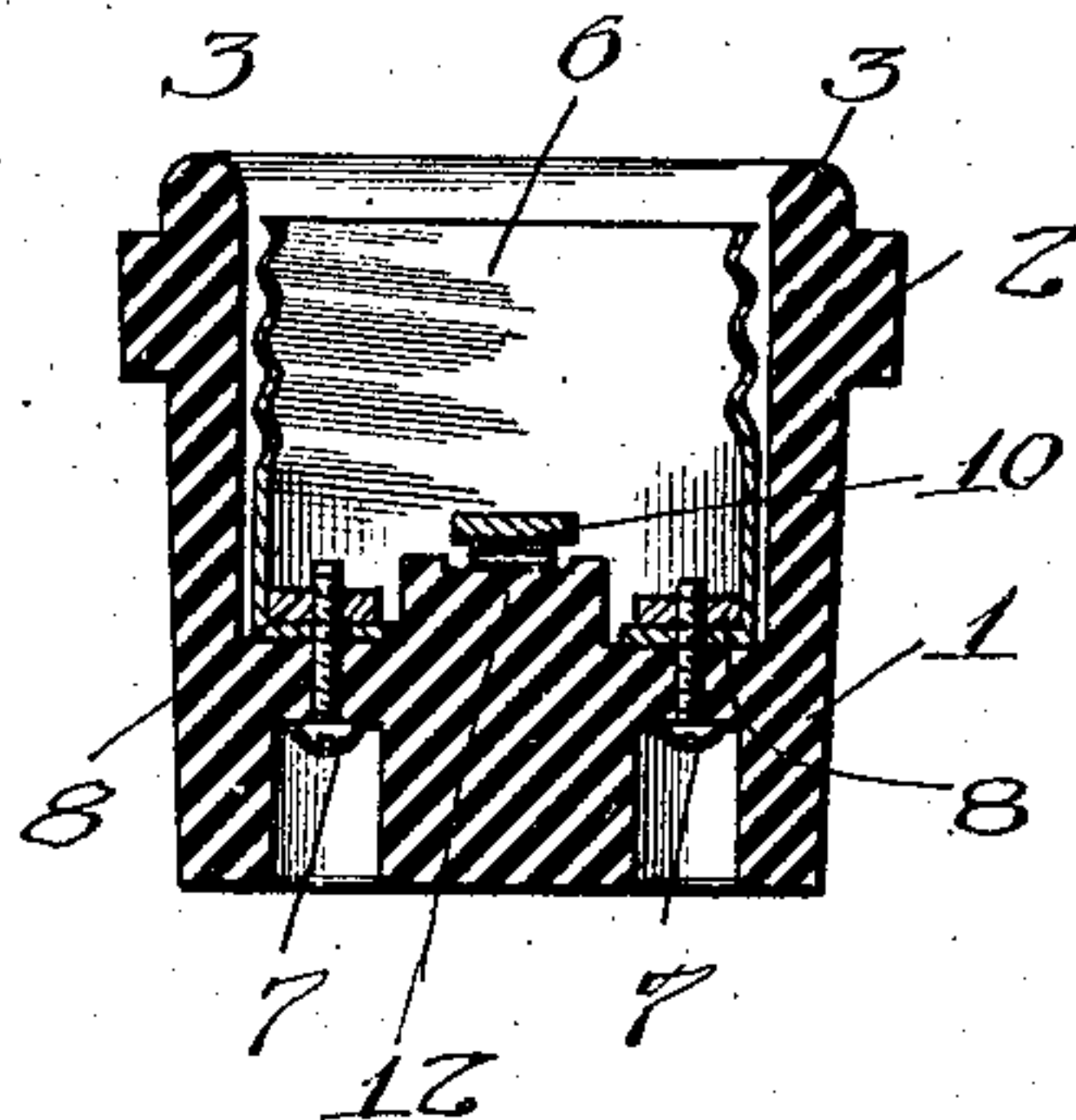


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 5.

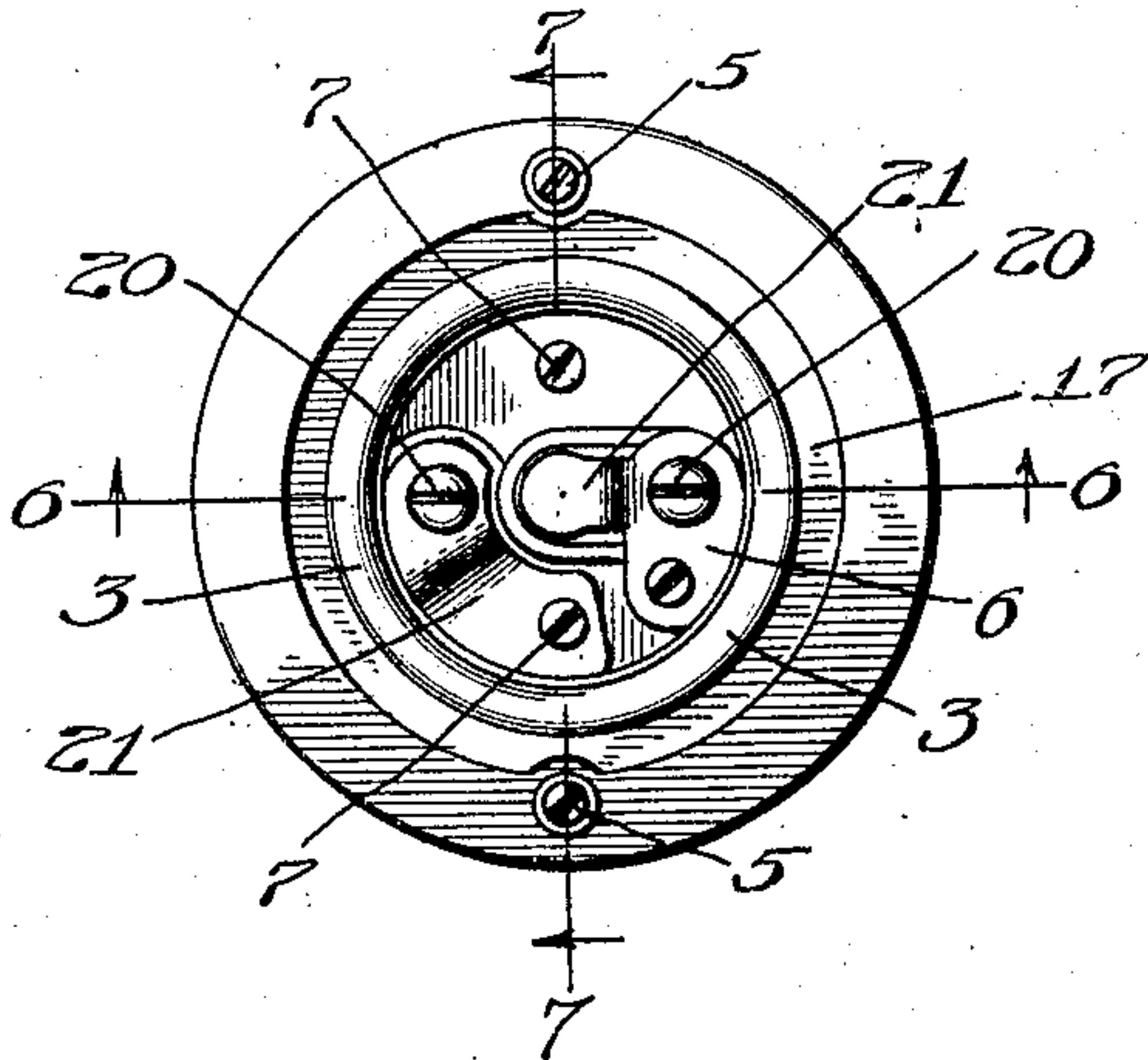


Fig. 8.

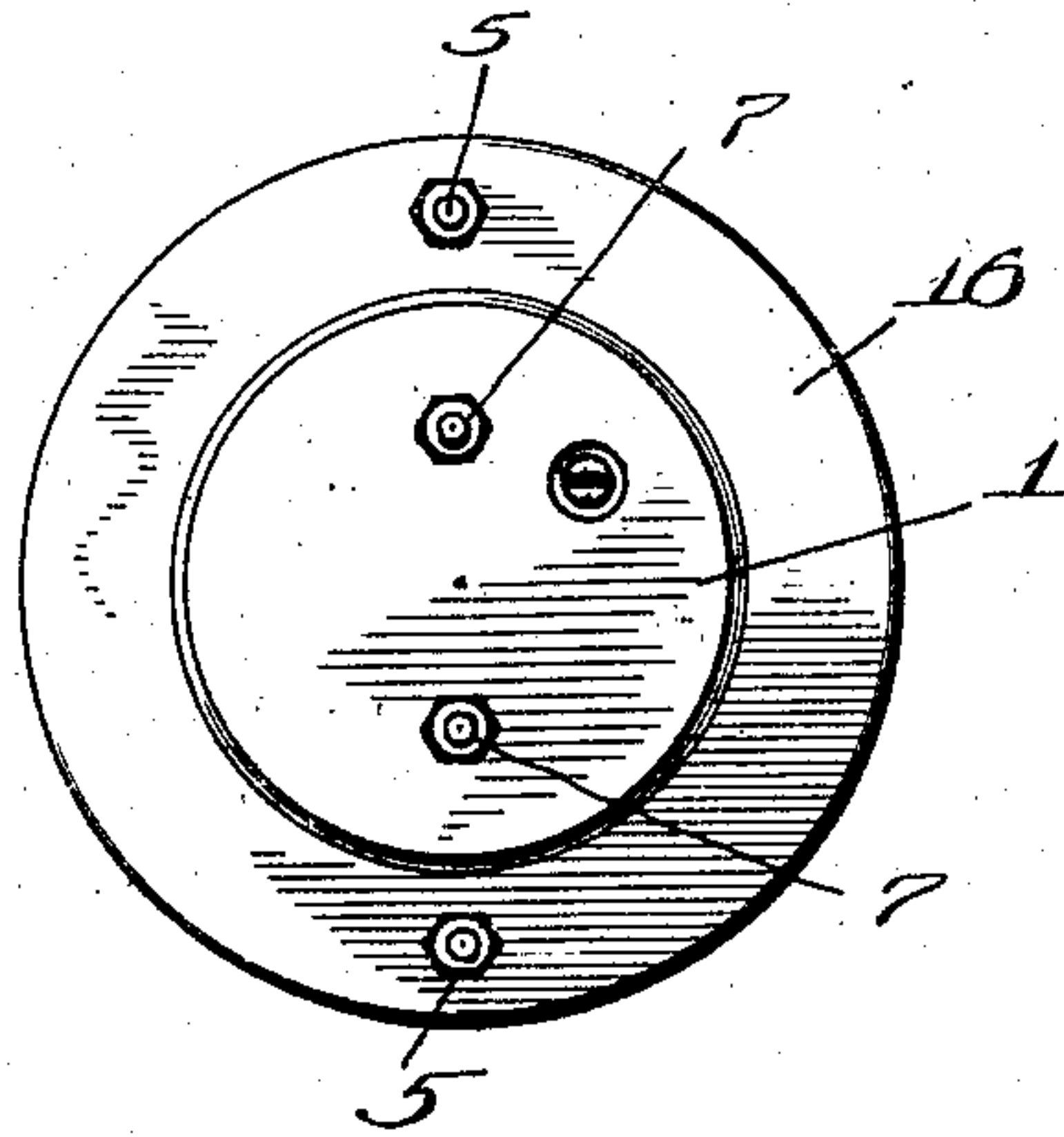


Fig. 6.

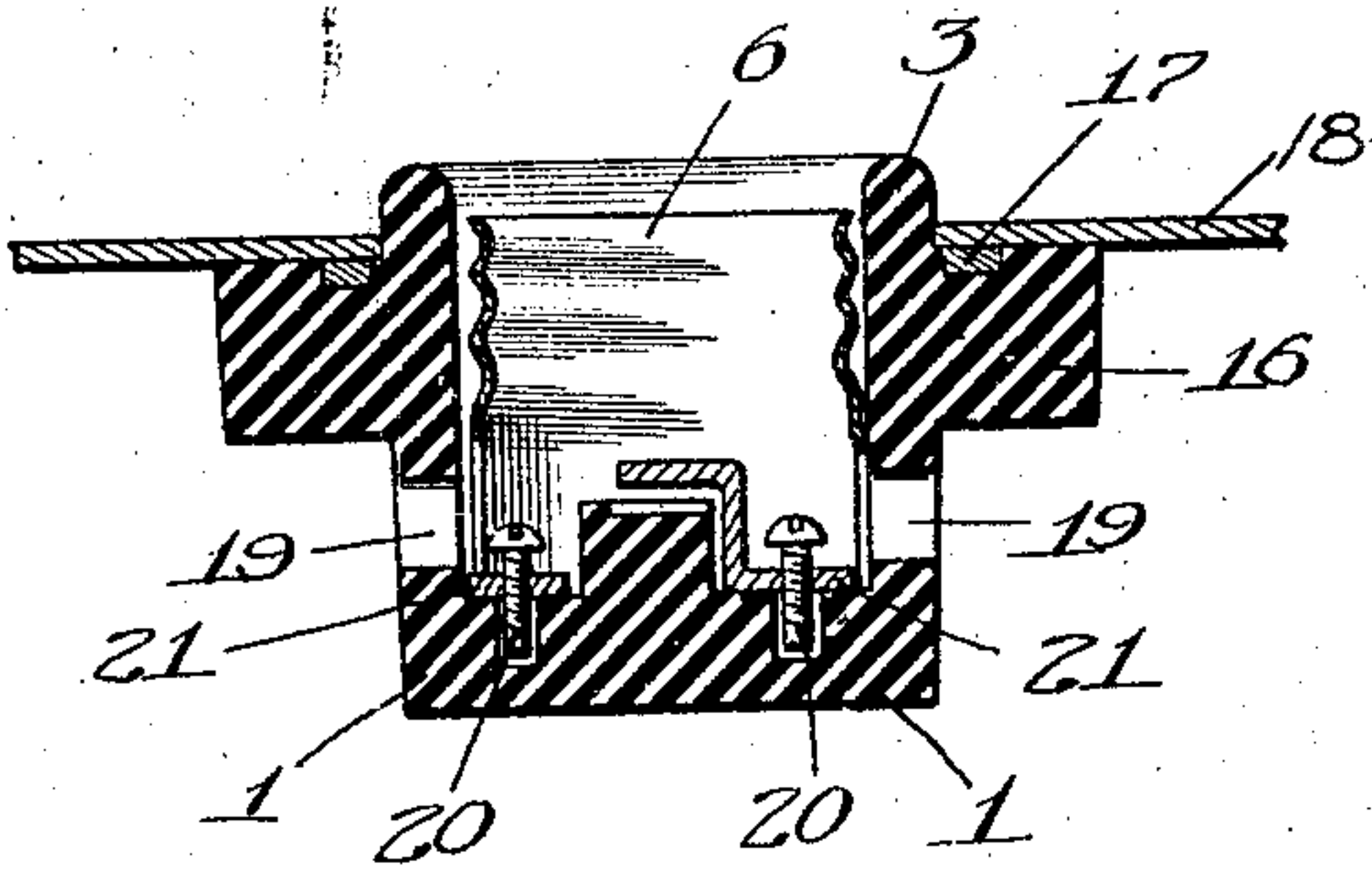


Fig. 7.

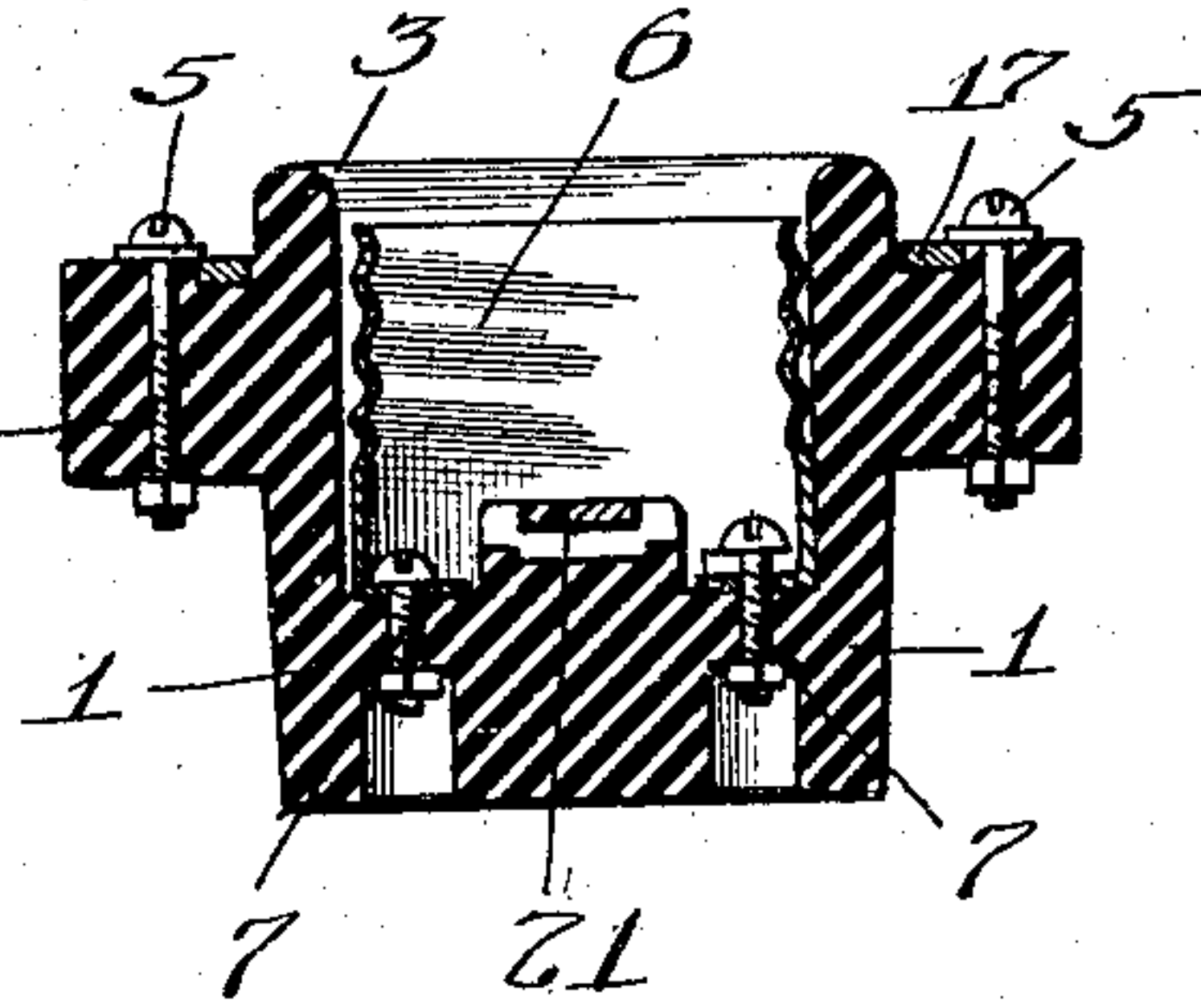


Fig. 9.

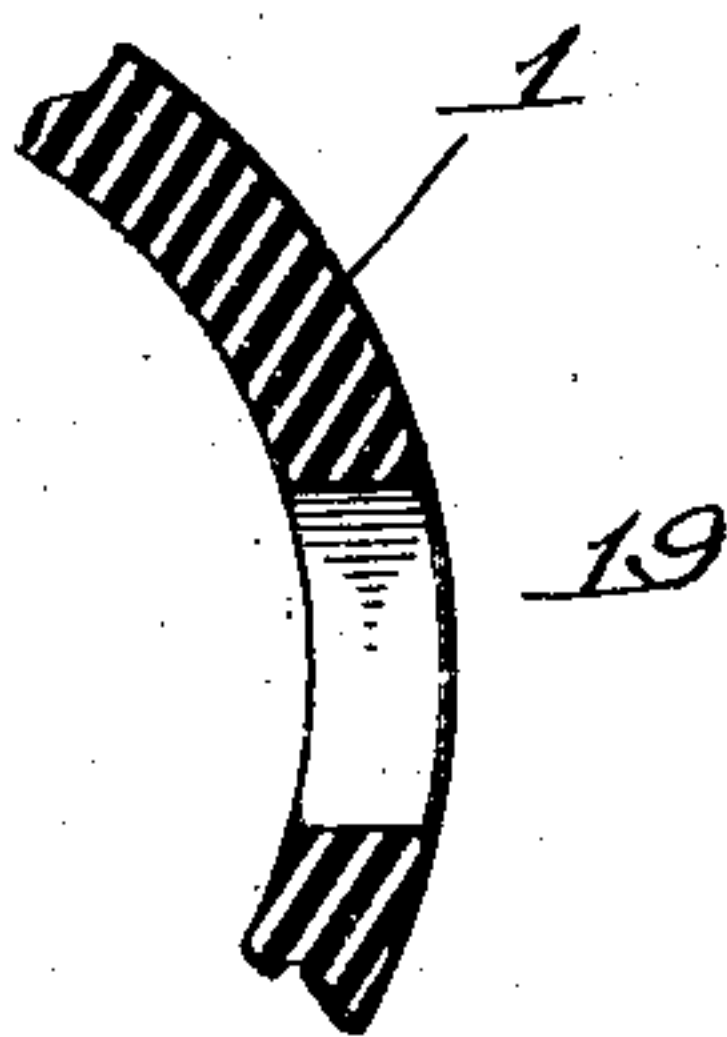
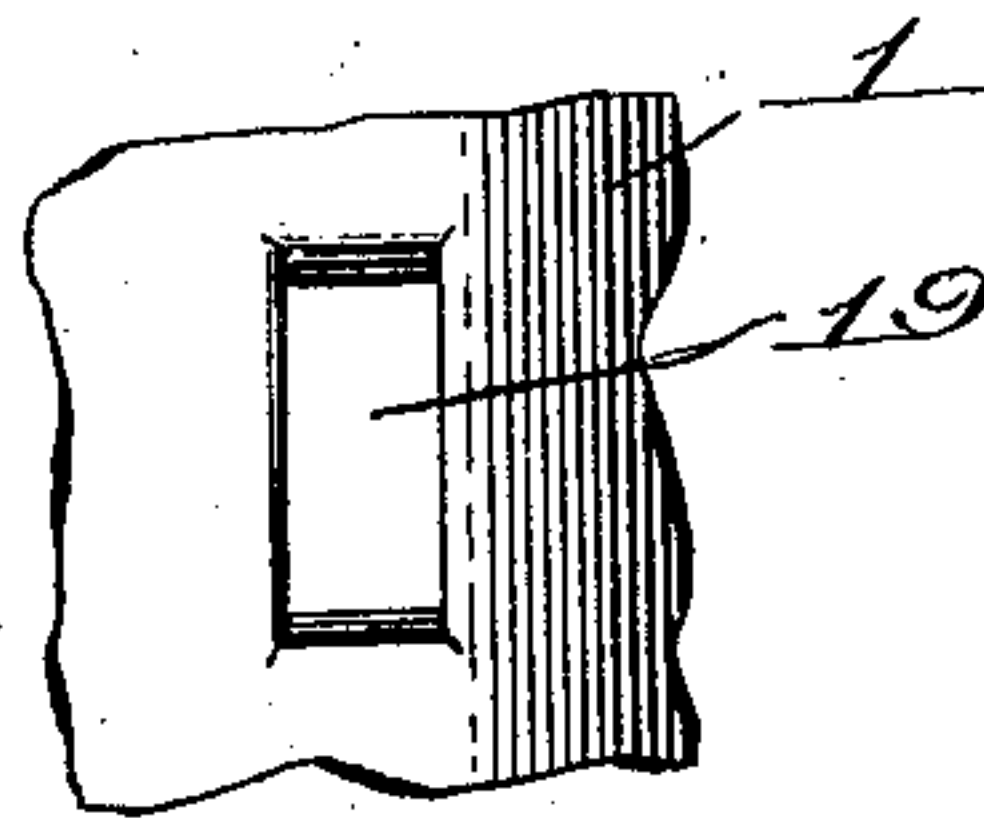


Fig. 10.



Witnesses:

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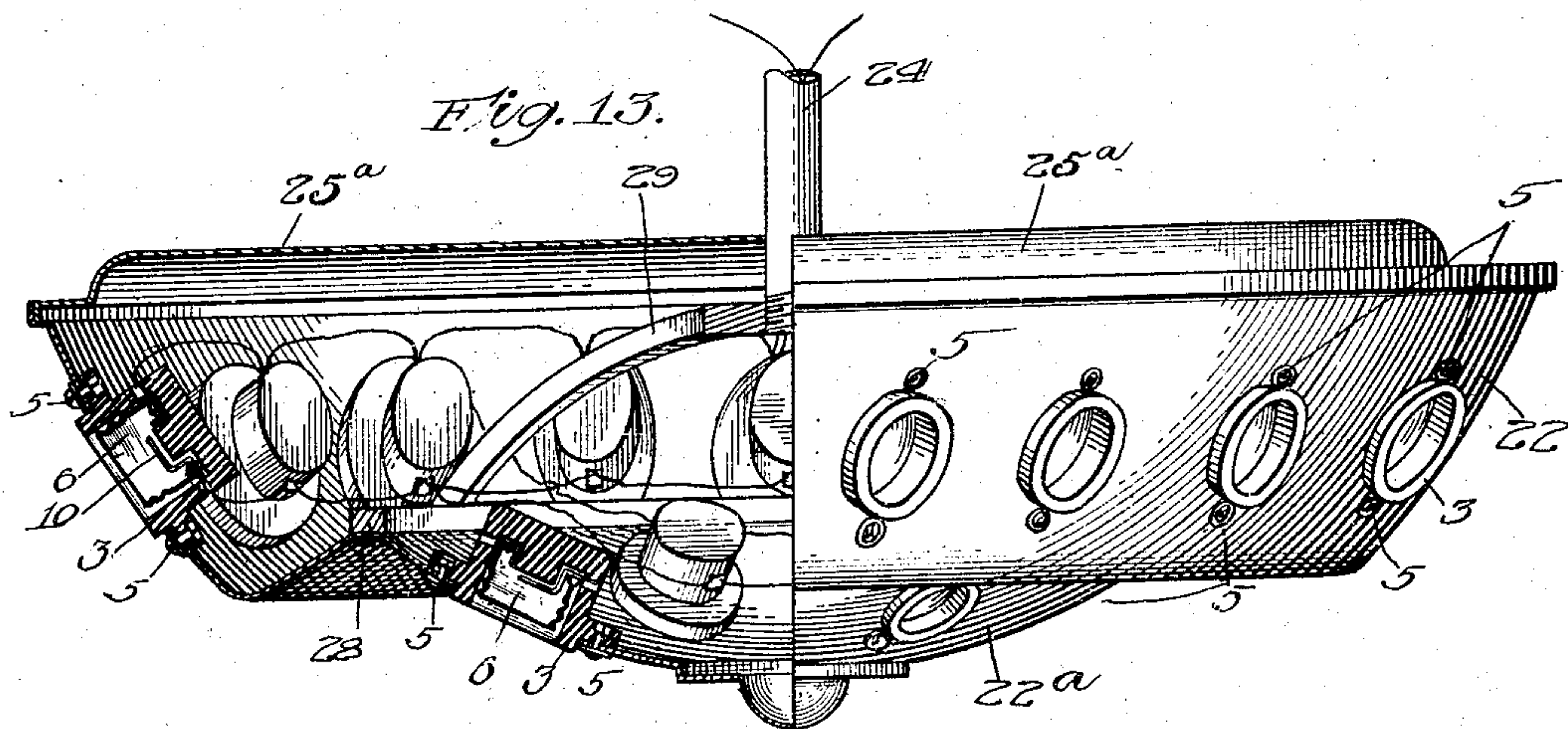
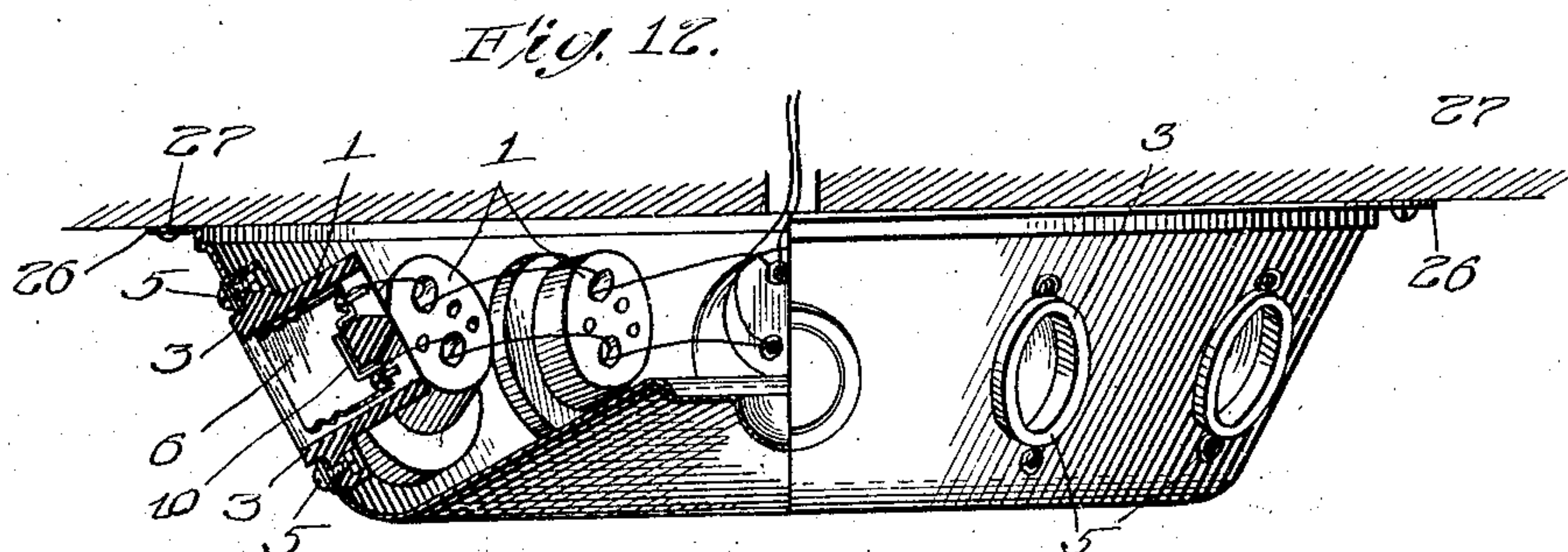
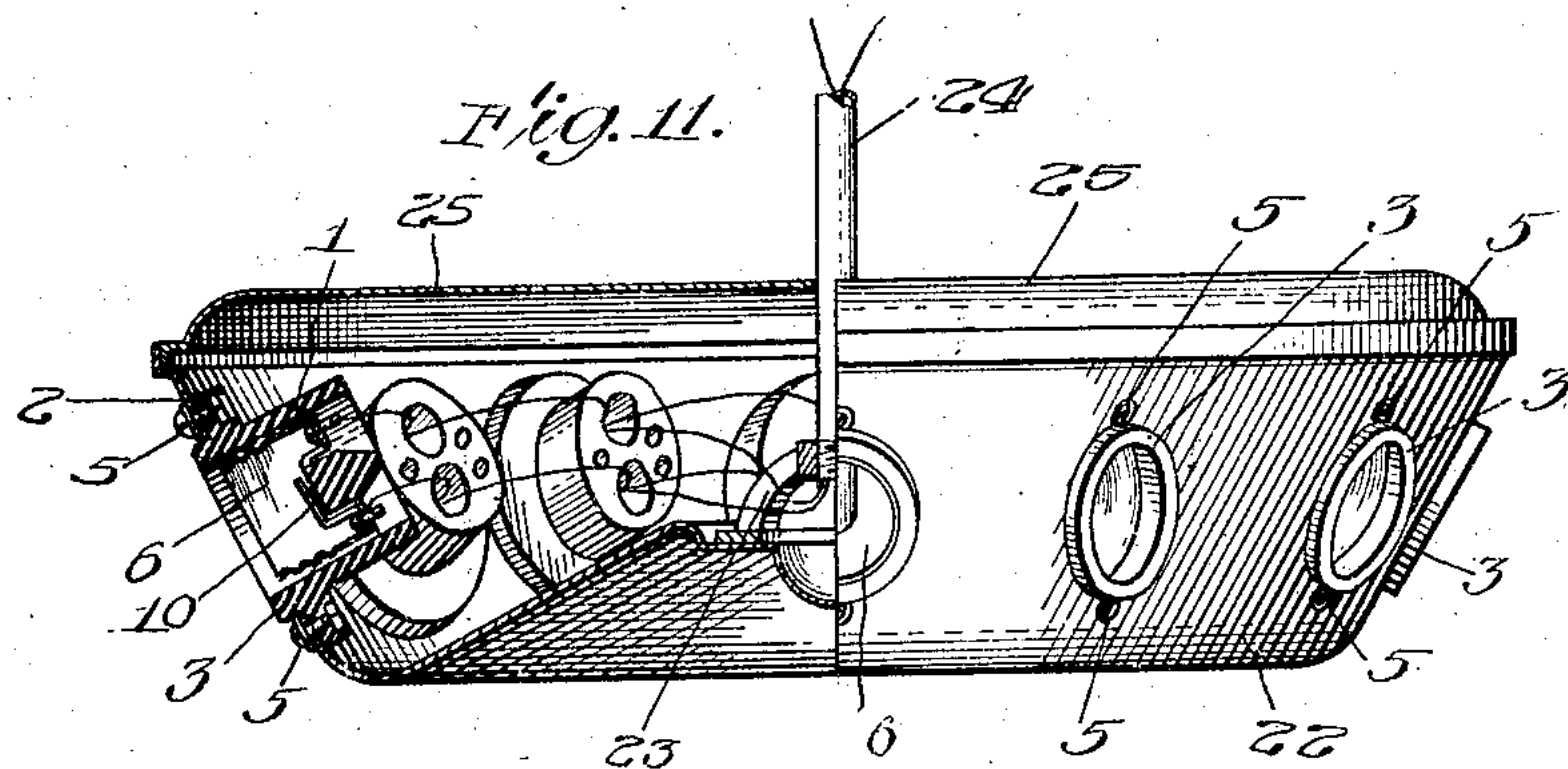
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3 SHEETS—SHEET 3.



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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.

ELECTRIC-LAMP SOCKET.

No. 861,941.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed July 14, 1904. Serial No. 216,582.

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 Electric-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 electric lamp sockets.

10 One of the objects of my invention is to provide a lamp socket that will be of simple construction and efficient in use, and that will readily permit a large number of said sockets to be assembled and connected in circuit upon a common support.

15 The other objects and special features of my invention will more fully appear from the accompanying description of the drawings filed herewith, in which like reference characters indicate like parts in the several figures.

20 Referring to the drawings, Figure 1 is a front plan view of my invention; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; Fig. 4 is a rear plan view of my invention; Fig. 5 is a front plan view of another form of my invention; Fig. 6 is a sectional view on the line 6—6 of Fig. 5; Fig. 7 is a sectional view on the line 7—7 of Fig. 5; Fig. 8 is a rear plan view of my invention; Figs. 9 and 10 are detail views of the openings for the leading-in wires; Fig. 11 is a partial sectional view of a cluster embodying my invention; Fig. 12 is a partial sectional view of my invention adapted for use with another form of cluster; and, Fig. 13 is a partial sectional view of another form of cluster embodying my invention.

35 Referring to Figs. 1 to 4, inclusive, a cylindrical insulating base 1, is provided with a flange 2, which is preferably elliptical in form, and has a small annular projection 3 formed thereon. The flange 2 is arranged to be secured to a suitable supporting plate 4 by the screws 5, 5. This supporting plate 4 may be of any desired form or material, metal, however, being preferable, and the annular projection 3 serves to insulate the socket contacts therefrom. A receptacle is formed in the base 1, in which is disposed a lamp receiving shell 6, which is held in position by the screws or bolts 7, 7, extending through the base 1, or in any other suitable manner. One of the screws 7, also secures in position the contact plate 8 which carries a binding screw 9 for securing a leading-in wire thereto. A portion of the lamp receiving shell 6 is cut away as shown in Fig. 2, to accommodate the contact plate 10, secured in position within said shell by a screw or bolt 11 passing through the base 1, or in any other suitable manner. The free end of the center contact plate 10 is preferably

disposed upon an extended portion 12 of the base 1, whereby the lamp contacts are insulated from each other. The center contact plate 10 also carries a second binding screw 14 for making connection with a leading-in wire. Formed in the rear wall of the cylindrical portion of the insulating base 1 are apertures 13, 13, through which the leading-in wires are adapted to enter. Formed upon the contact plates 8 and 10 are small projections or fingers 15, 15, preferably bent toward the front of the socket, as shown in Figs. 1 and 2, and adapted to engage the leading-in wires, when said wires are inserted through the apertures 13, 13, from the rear of the socket. The walls of the apertures are preferably beveled rearwardly to guide the leading-in wires to the projecting fingers 15, 15. In wiring my improved socket, the wires may be inserted from the rear and looped over the projecting fingers 15, 15, and the binding screws 9 and 14 may then be screwed home upon the wires to secure the wires to the plates 8 and 10.

Referring to Figs. 5 to 10, inclusive, an annular flange 16 is formed upon the base 1, having an annular recess or groove formed therein adapted to receive a gasket or washer 17 of rubber or other suitable material which forms a water tight connection between the supporting plate to which the socket is secured and the annular flange 16. Formed in the sides of the cylindrical portion of the base 1 are apertures 19, 19, through which the leading-in wires are adapted to pass for making connection with the binding posts 20, 20, carried by the contact plates 21, 21 disposed within the bottom of the lamp receiving shell 6. The apertures 19, 19 have flaring walls as shown in Figs. 9 and 10, adapted to guide the leading-in wires to their respective binding posts. It will be understood that any desired number of sockets may be mounted upon a continuous support, and that said sockets may be arranged thereon in any desired manner.

90 In Figs. 11 to 13, inclusive, I have illustrated electric lamp clusters embodying my invention. In Fig. 11 an outer casing 22 is provided, preferably formed from a single piece of metal and having an annular diagonal side wall, provided with a plurality of apertures with which the annular flanges 3 of the insulating bases 1, register. The bases are preferably held in position therein by the screws 5, 5, or in any other suitable manner. Centrally disposed upon the casing 22 and suitably secured thereto, is a support 23, having a screw threaded aperture therein in which is screwed the end of a pipe or conduit 24 for supporting the cluster in position. A casing or cover 25, preferably formed from a single sheet of metal, and having a centrally disposed aperture formed therein to accommodate the supporting pipe 24, is adapted to rest upon the casing 22. In

Fig. 12 I have shown another form of cluster embodying my invention in which the casing or supporting plate has an annular flange 26 formed integral therewith, by which the casing is mounted directly upon the ceiling or other suitable support by means of screws 27.

In the modification of my invention shown in Fig. 13, the outer casing or supporting plate 22^a is provided with two diagonally disposed annular faces, each of said faces having a plurality of apertures formed therein, arranged to receive the small annular flanges 3 carried by the insulating bases 1, held in position upon the plate 22 by means of the screws 5, 5. The outer casing 22 is preferably secured to the conduit or support 24, by means of a metal ring 28, secured to said casing by means of screws (not shown), or in any other suitable manner, and having arms 29 preferably formed integrally therewith and converging radially to form a central plate which is provided with a screw-threaded aperture for receiving the end of the supporting pipe or conduit 24. A one piece metal cap or cover 25^a is adapted to rest upon the plate or casing 22^a.

I have illustrated my invention with particular reference to the forms of cluster above described, but I wish it to be understood that my invention is applicable to many different forms of cluster, and is adapted for use where a large number of single sockets are mounted upon a common supporting plate or base of any desired form, and while I have described my invention with particular reference to the details of construction of the sockets shown herein, I am aware that other forms of sockets may be adopted without departing from the spirit of my invention, and I do not wish to limit myself to said details of construction further than is defined in the appended claims.

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

1. In a lamp socket, the combination with a one-piece insulating base having a lamp receiving receptacle formed therein and carrying suitable lamp contacts and having a transversely extending attaching flange of comparatively narrow cross-section at the forward end thereof, of binding posts in the bottom of said lamp receptacle, the screws of which are accessible from the front of the socket, said insulating base having passages extending through the walls thereof in the rear of said attaching flange for the entrance of the leading-in wires.

2. In a lamp socket, the combination with a one-piece insulating base having a lamp receiving receptacle formed therein and carrying suitable lamp contacts and having a transversely extending attaching flange of comparatively narrow cross-section at the forward end thereof, of binding posts in the bottom of said lamp receptacle, the screws of which are accessible from the front of the socket, said insulating base having passages extending through the

walls thereof in the rear of said attaching flange for the entrance of the leading-in wires, and an annular lip or ridge extending forwardly from said attaching flange.

3. In a lamp socket, the combination with a suitable support, of a lamp receptacle comprising a one-piece insulating base having a lamp receiving receptacle formed therein and carrying suitable lamp contacts and having a transversely extending attaching flange of comparatively narrow cross-section at the forward end thereof, binding posts in the bottom of said lamp receptacle, the screws of which are accessible from the front of the socket, said insulating base having passages extending through the walls thereof in the rear of said attaching flange for the entrance of the leading-in wires, an annular lip or ridge extending forwardly from said attaching flange, and an annular recess in the attaching flange exterior to said annular lip or ridge for the reception of a gasket which forms a tight joint between the support and the attaching flange.

4. In a lamp cluster, the combination with a casing having a plurality of concentrically arranged lamp openings, of a central support secured to the bottom of said casing, and a plurality of one-piece insulating bases secured to the inner face of said casing registering with the respective lamp openings, said insulating bases carrying lamp receiving receptacles and associated contacts, and binding screws for engagement with the leading-in conductors.

5. In a lamp socket, the combination with an insulating base having a lamp receiving recess formed therein and a flange formed near the front on the outer walls thereof, of lamp supporting means arranged within said recess, contact plates arranged in the bottom of said recess having projecting fingers over which the leading-in wires may be looped, and binding screws accessible from the front of the socket carried by said contact plates, said base having openings in the rear thereof to permit the leading-in wires to engage the projecting fingers upon the contact plates.

6. In a cluster for electric lamps, the combination with a suitable casing having two annular diagonally disposed faces formed therein, and a plurality of apertures formed in said faces, of insulating lamp sockets arranged within said casing opposite said apertures.

7. In a cluster for electric lamps, the combination with a suitable casing having annular diagonally disposed faces formed therein, and a plurality of apertures formed in said faces, of insulating lamp sockets arranged within said casing opposite said apertures, and means secured to said casing between the diagonal faces for supporting the same.

8. In a cluster for electric lamps, the combination with an inclosing casing or cover, having annular diagonally disposed faces formed therein and a plurality of apertures formed in said faces, of insulating lamp sockets arranged within said casing opposite said openings, a suitable supporting plate secured to the bottom of said casing between the diagonal faces thereof, radially converging arms secured to said plate and a suitable support connected with said arms for securing the cluster in position.

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

REUBEN B. BENJAMIN.

Witnesses:

C. B. CAMP,
E. A. OLSEN.