

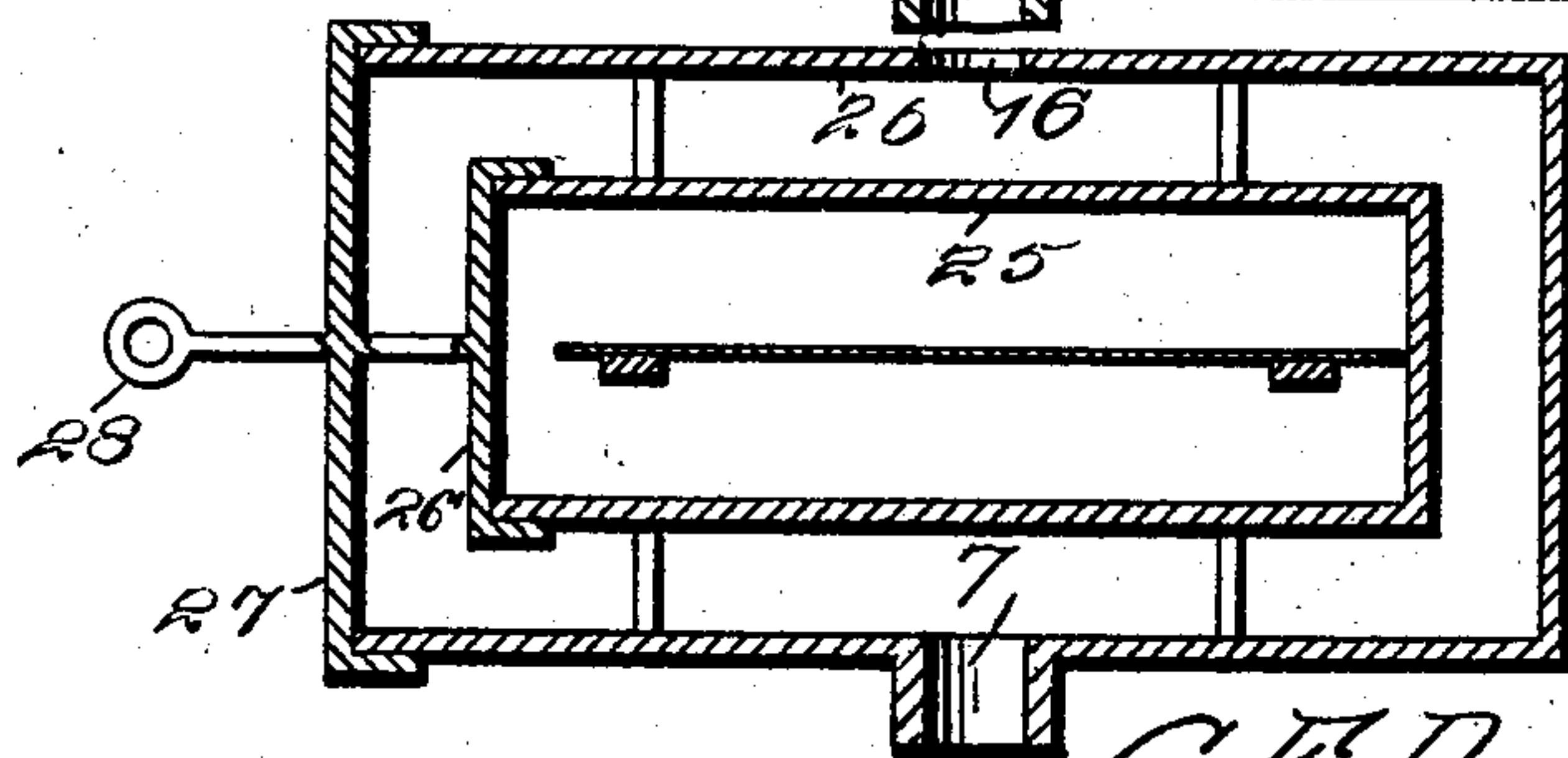
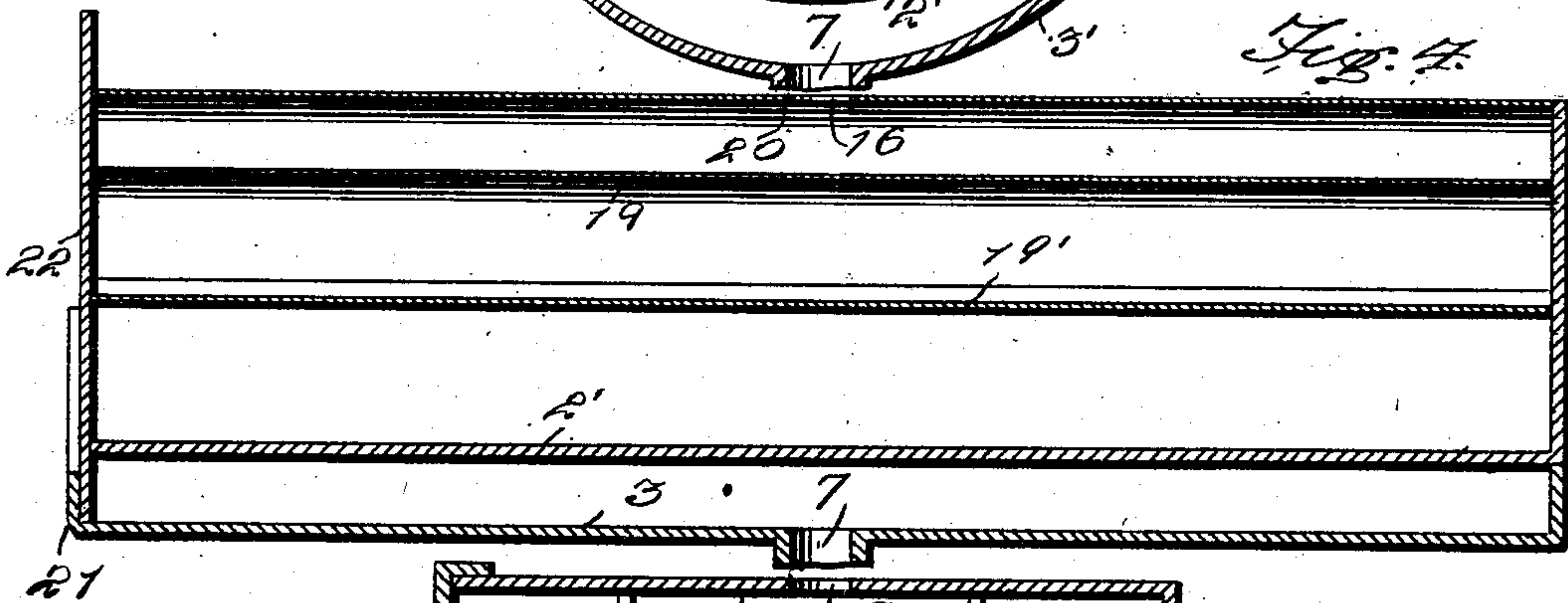
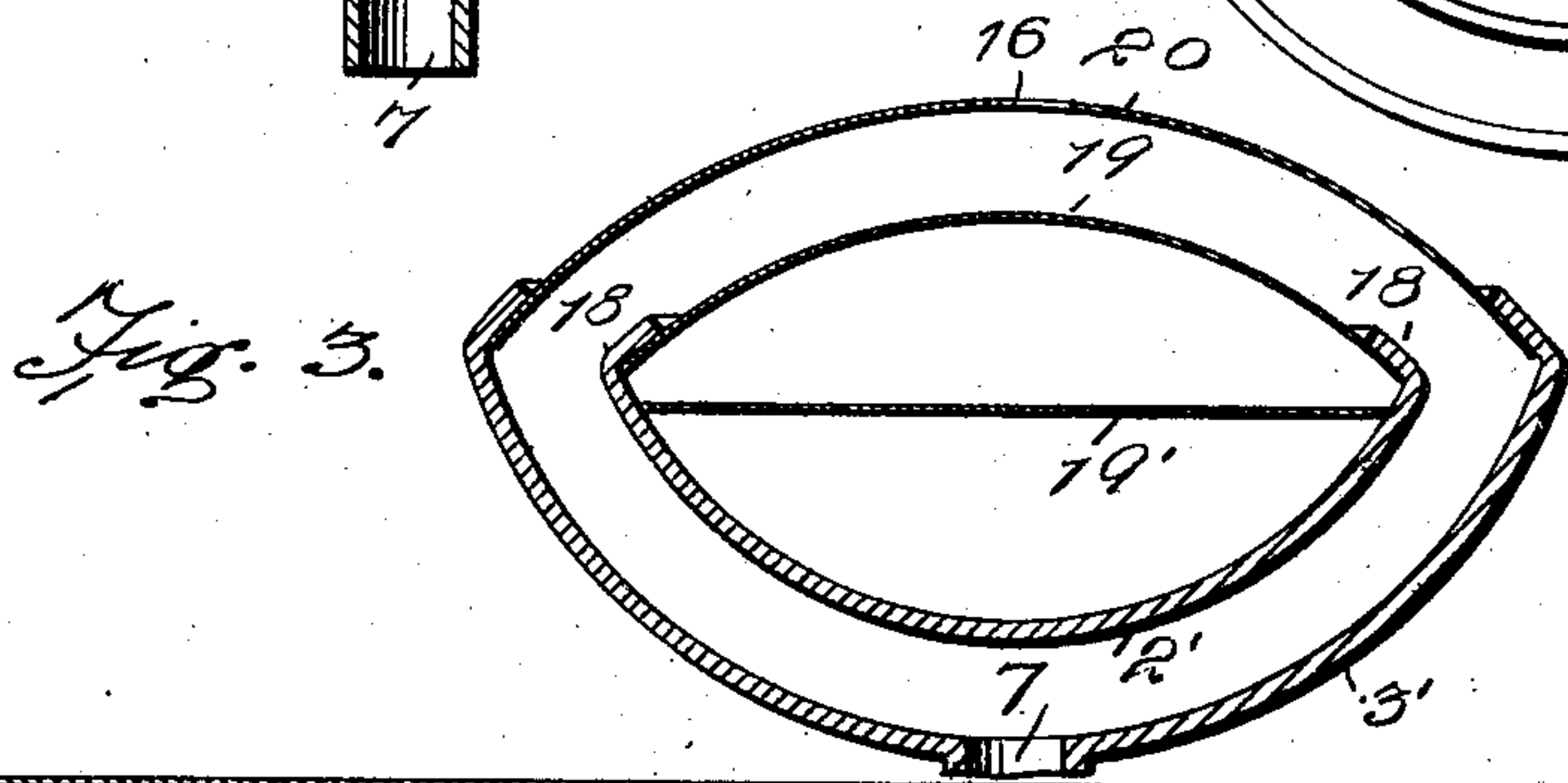
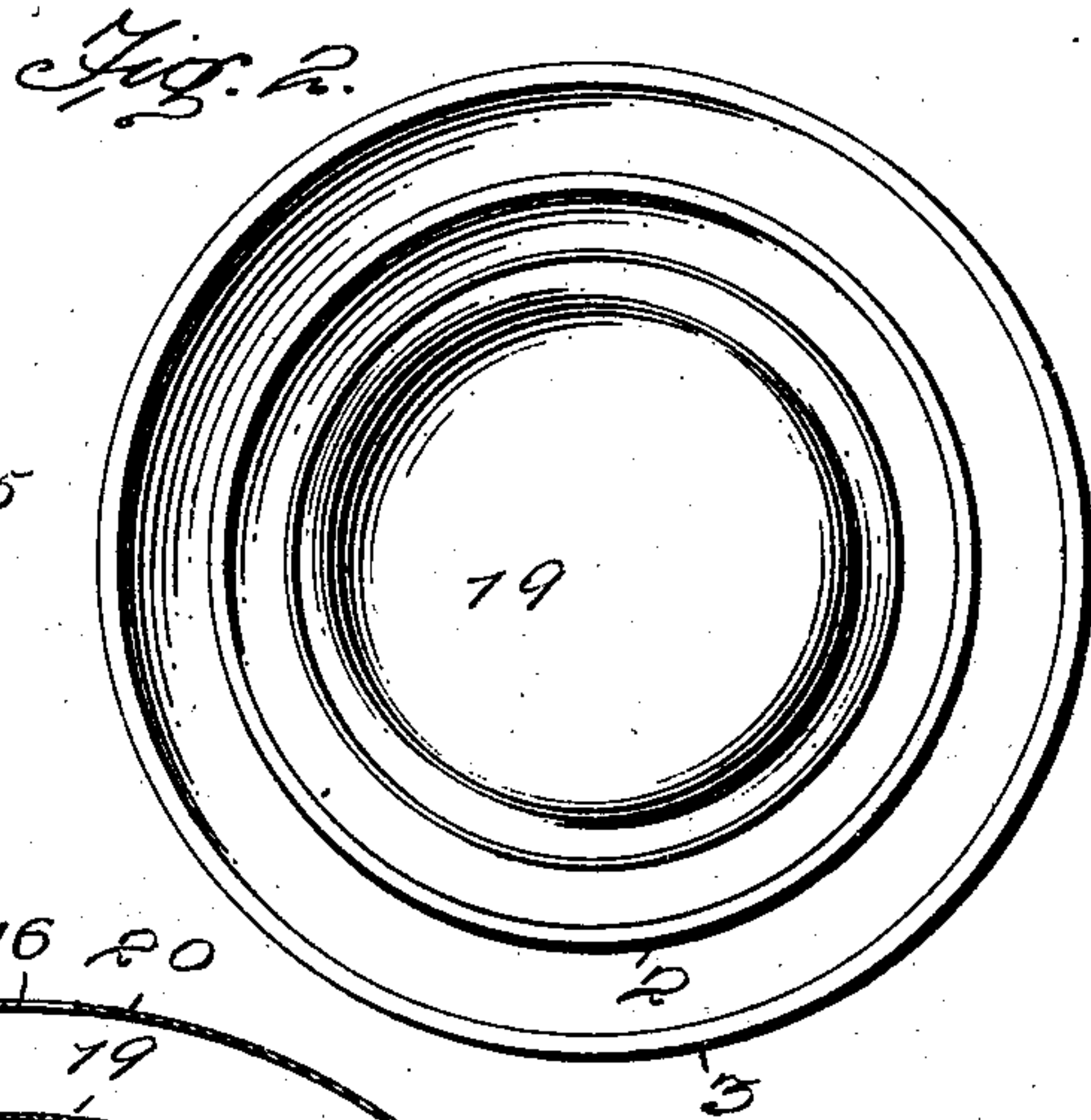
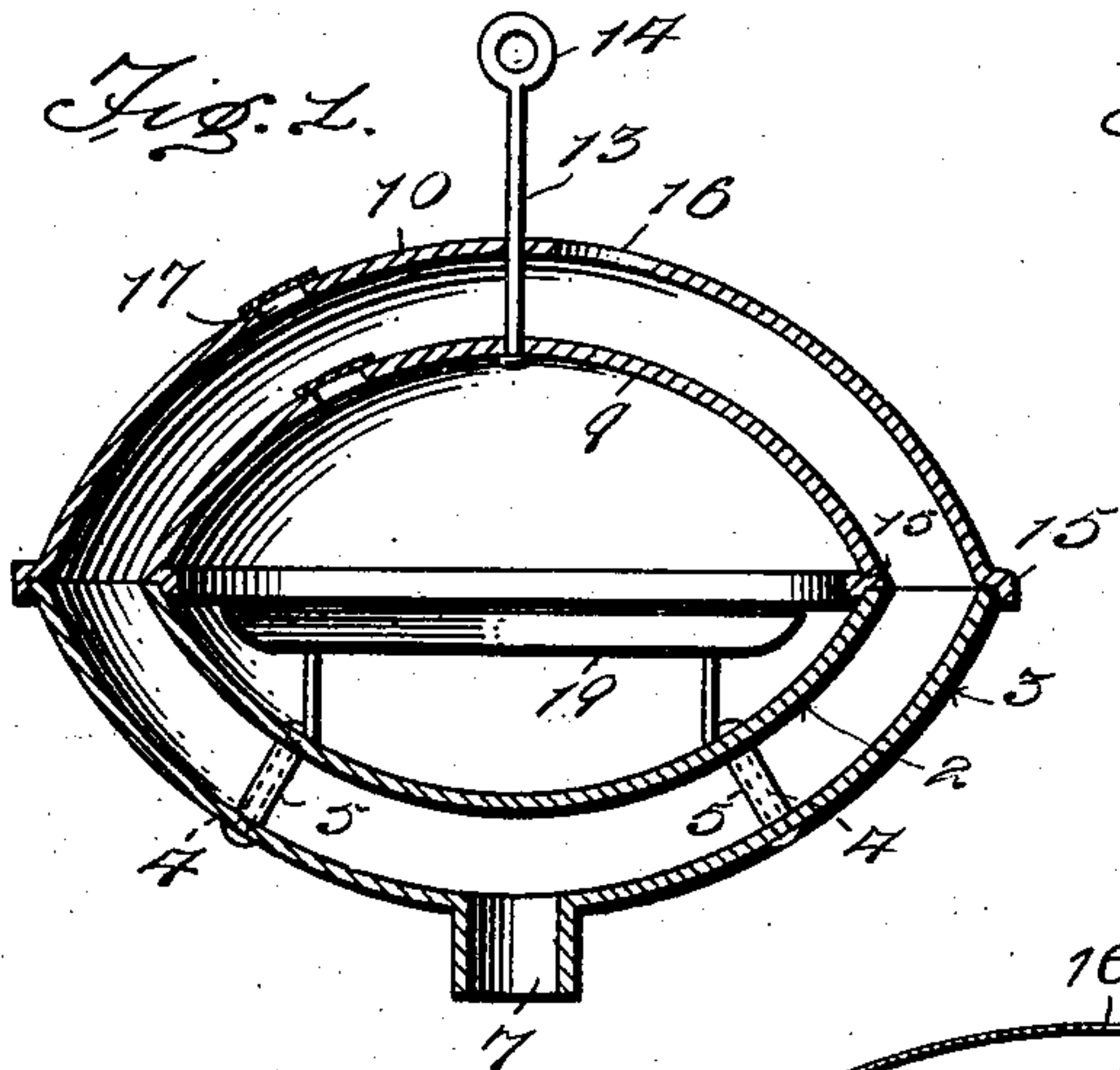
No. 724,826.

PATENTED APR. 7, 1903.

C. F. DWIGHT.  
GOLD ANNEALING APPARATUS.

APPLICATION FILED JULY 31, 1902.

NO MODEL.



Witnesses

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by

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# UNITED STATES PATENT OFFICE.

CHARLES F. DWIGHT, OF MARCUS, IOWA.

## GOLD-ANNEALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 724,826, dated April 7, 1903.

Application filed July 31, 1902. Serial No. 117,885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. DWIGHT, a citizen of the United States, residing at Marcus, in the county of Cherokee and State of Iowa, have invented a new and useful Gold-Annealing Apparatus, of which the following is a specification.

My invention relates to certain improvements in annealing apparatus, and has for its principal object to provide an improved form of annealing-oven intended principally for the use of dentists in annealing gold and gold compositions for the filling of teeth.

A further object of the invention is to provide a form of annealing-oven in which the sheet of gold will be subjected to practically the same temperature on both sides, and thus anneal more uniformly than is possible in the apparatus usually employed for this purpose, where the gold is placed on a heated plate and its upper surface exposed to the air.

With these and other objects in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a longitudinal sectional elevation of an annealing apparatus embodying the invention. Fig. 2 is a plan view of the same with the lid or cover removed. Fig. 3 is a view similar to Fig. 1, illustrating a slightly-modified construction of annealing-oven. Fig. 4 is a central longitudinal sectional elevation of the same. Fig. 5 is a sectional elevation illustrating a further modification.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the annealing of gold and gold compositions for dental purposes the usual practice consists in placing the gold on a heated plate, with the upper surface of the sheet exposed to the atmosphere. The heat is unevenly distributed, and the gold is not annealed as perfectly as it should be.

The present invention aims principally to provide a device of a simple and inexpensive nature for use by dentists and in which both sides of the sheet will be subjected to approximately the same temperature and the

annealing operation thus rendered more uniform.

In Figs. 1 and 2 of the drawings, 1 designates a semispherical shell, approximately bowl-shaped and provided with inner and outer walls 2 and 3, respectively. The walls are formed of metal and maintained in spaced relation by rivets or bolts 4, extending through and secured to both walls and surrounded between the walls by a spacing sleeve or collar 5. At the central portion of the outer wall 2 is a socket member 7, which may be connected to a burner or other device capable of supplying sufficient heat for the annealing operation. In most cases this socket would be so shaped as to be capable of attachment to the ordinary dental lamp. The upper portion or lid of the apparatus is of a shape substantially similar to the lower portion and comprises inner and outer walls 9 and 10, held in spaced relation by any suitable means, as by a central pin 13, provided with a ring or knob 14 for convenience in removing the cover from the lower portion of the oven. The lower edges of the cover portion are slightly flanged, as indicated at 15, in order that they may fit closely on the upper edges of the walls 2 and 3, and thus form a continuous flue for the products of combustion around the circular oven formed by the walls or casings 2 and 9. In the top of the outer section 10 of the cover is an outlet 16 for the products of combustion, and in the upper portion of both the inner and outer sections are alining openings 17, covered with mica or some other transparent material, through which the operator may observe the annealing process. In the upper portion of the lower or stationary section of the oven is a mica plate 19, on which the gold is placed and there subjected to heat from both sides. The operator is enabled to observe the process of annealing and may regulate the temperature by controlling the lamp or other burner by which the annealing-oven is carried.

In Figs. 3 and 4 is illustrated a slightly-modified construction of oven, in which the lower sections are formed of approximately rectangular sheets of metal bent into semicircular form, as indicated at 2' and 3'. The edges of the inner and outer walls are bent to



form flanges 18, in which are sprung mica sheets 19 and 20, the whole forming a continuous duct or flue for the passage of the products of combustion and giving the operator a clear view of the whole of the interior of the oven. One end of the oven is closed by the stationary wall, and at the opposite end the outer metallic sheet 3' is flanged, as indicated at 21, to form a guide for the reception and support of a vertically-movable door or closure 22. In this oven the gold is supported on a suitable annealing-plate 19', which may be readily removed, together with the gold, from position in the oven when the annealing operation is concluded.

Fig. 5 illustrates a still further embodiment of the invention. In this construction the inner and outer casings 25 and 26 are approximately rectangular in form and each is provided at one side with a door, the two doors 26' and 27 being firmly secured together and placed in position and removed by means of a handle or knob 28.

In all cases the gold is maintained in the interior of an oven having double walls, the latter serving as ducts or flues for the products of combustion and the gold being subjected to approximately the same temperature on both surfaces.

While the construction herein described, and illustrated in the accompanying drawings, is the preferred form of the device, it is obvious that various changes in the form, proportions, size, and minor details of structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim is—

1. A dental gold-annealer comprising a sectional oven having an inner support for the gold to be annealed, each section being pro-

vided with double walls forming a flue, the flues registering with each other when the sections are assembled to form a continuous passage for heated gases or products of combustion.

2. A dental gold-annealer comprising an inclosed oven having a relatively stationary section provided with a double wall forming a flue, and a removable door or lid also having a flue to connect with that of the stationary section when in closed position.

3. A dental gold-annealer comprising a lower section having two spaced walls to form a flue, means for holding the walls in spaced relation, a support for the gold to be annealed, and a removable cover having inner and outer walls held in spaced relation and adapted to engage the edges of the walls of the lower section to thereby form a continuous flue-space around the oven.

4. A dental gold-annealer comprising a lower section having double walls and provided with a socket for connection to a source of heat-supply, rivets or bolts connecting the double walls and surrounded by spacing sleeves or collars, a gold-supporting plate carried by the lower section, a removable upper section having spaced inner and outer walls adapted to engage the walls of the lower section to form a continuous flue-space, the outer wall of the upper section having a vent or escape-flue and both walls of the upper section having alining openings covered with transparent material.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES F. DWIGHT.

Witnesses:

JACOB ROHRER,  
G. H. STORM.