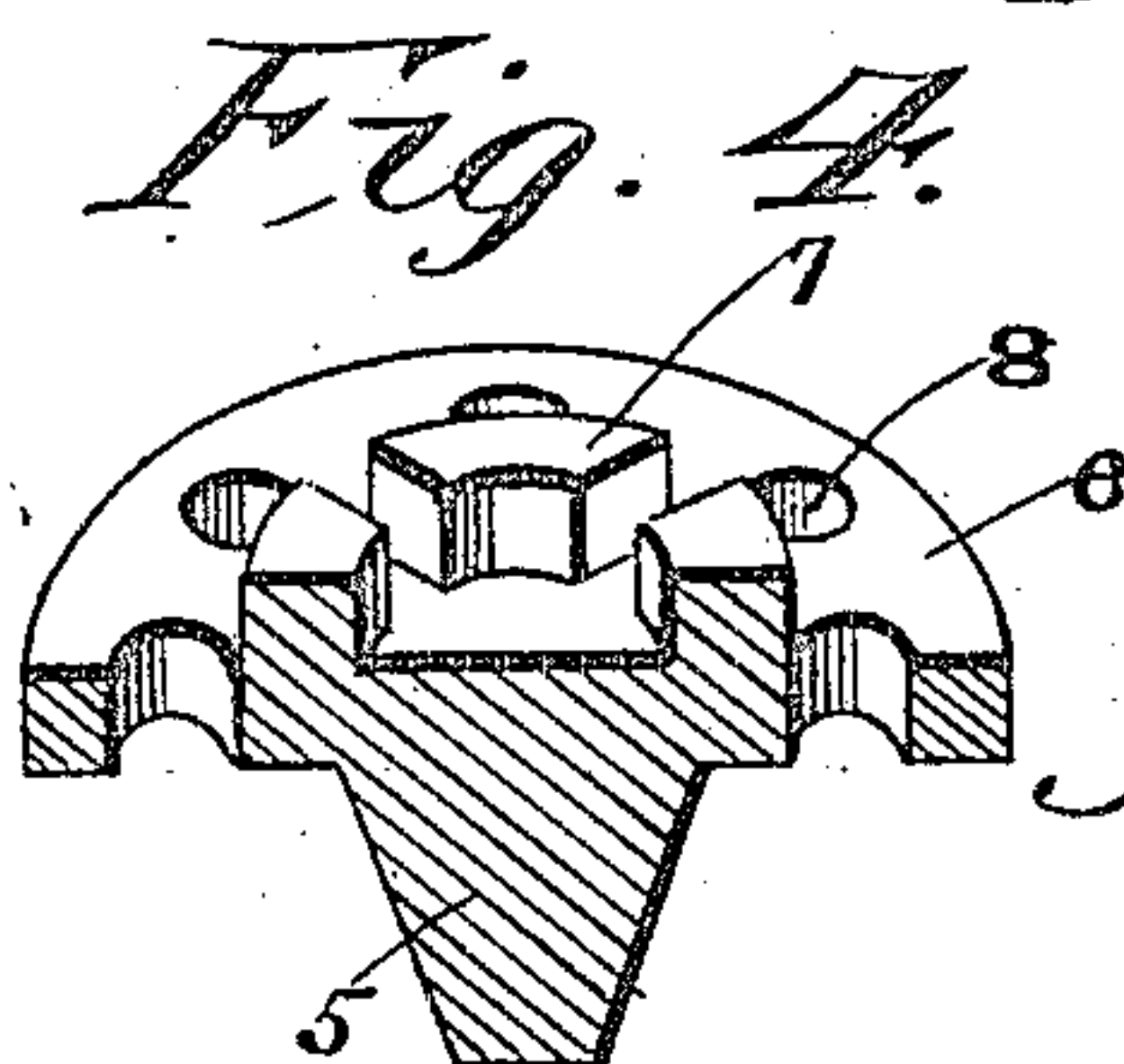
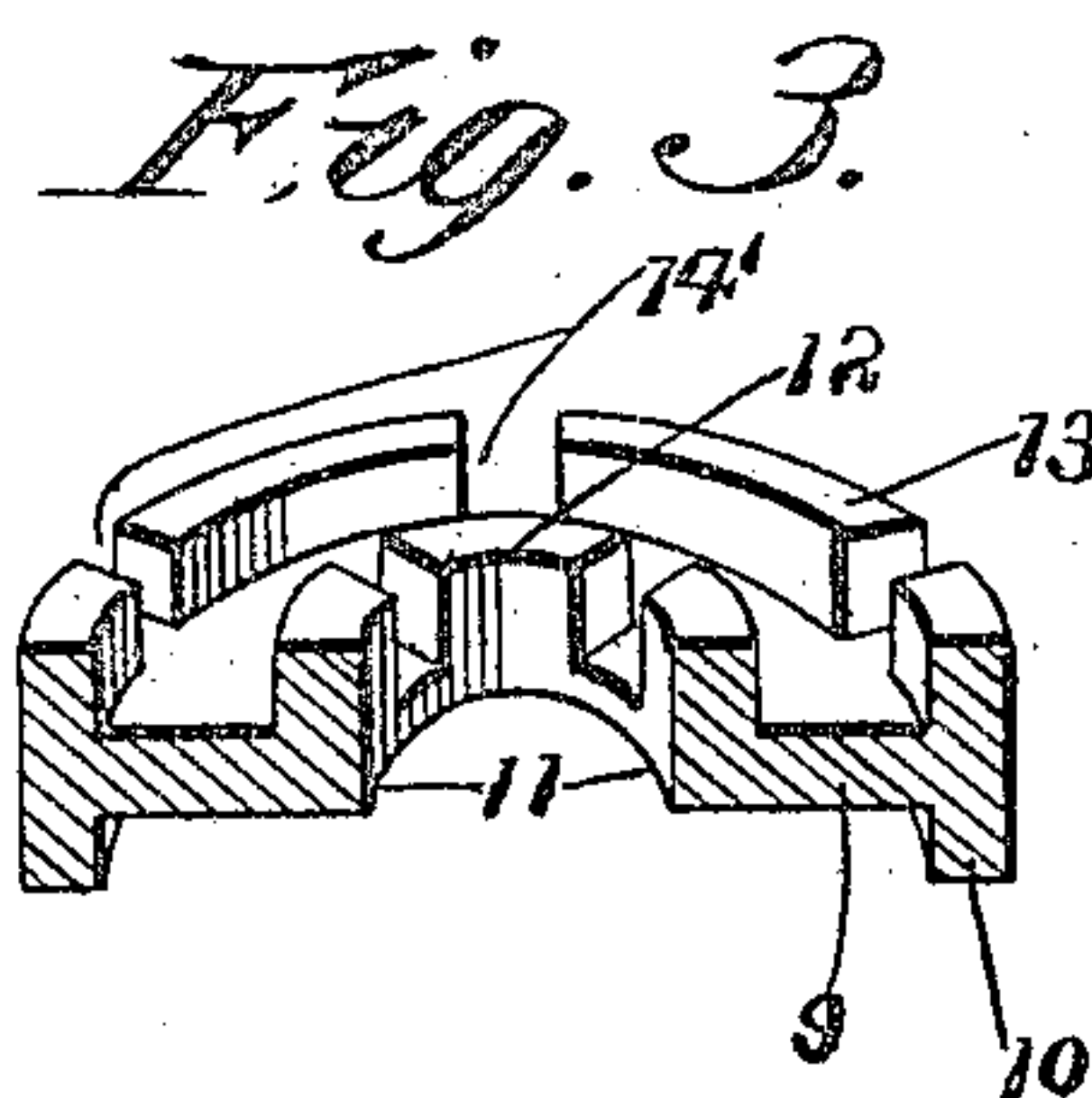
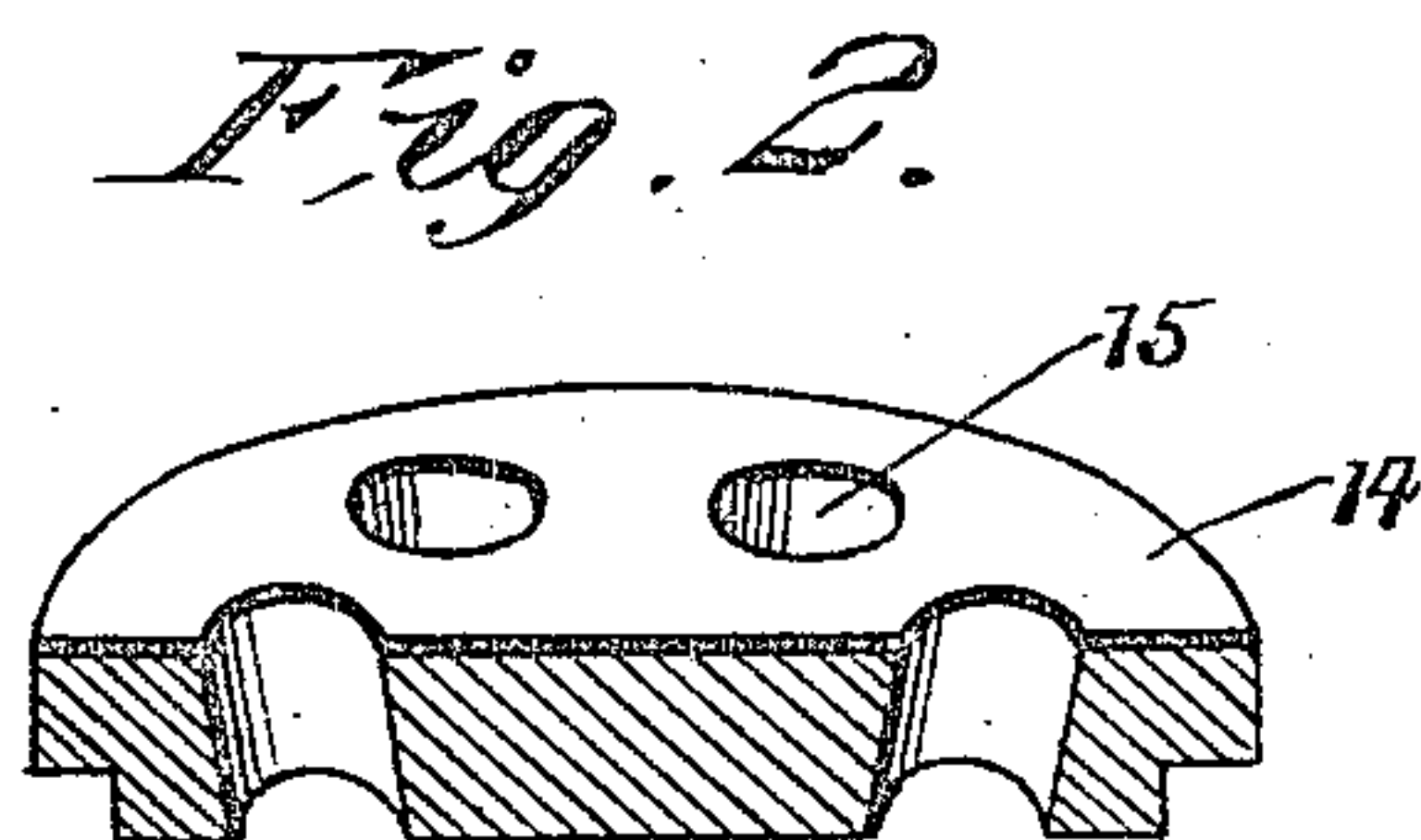
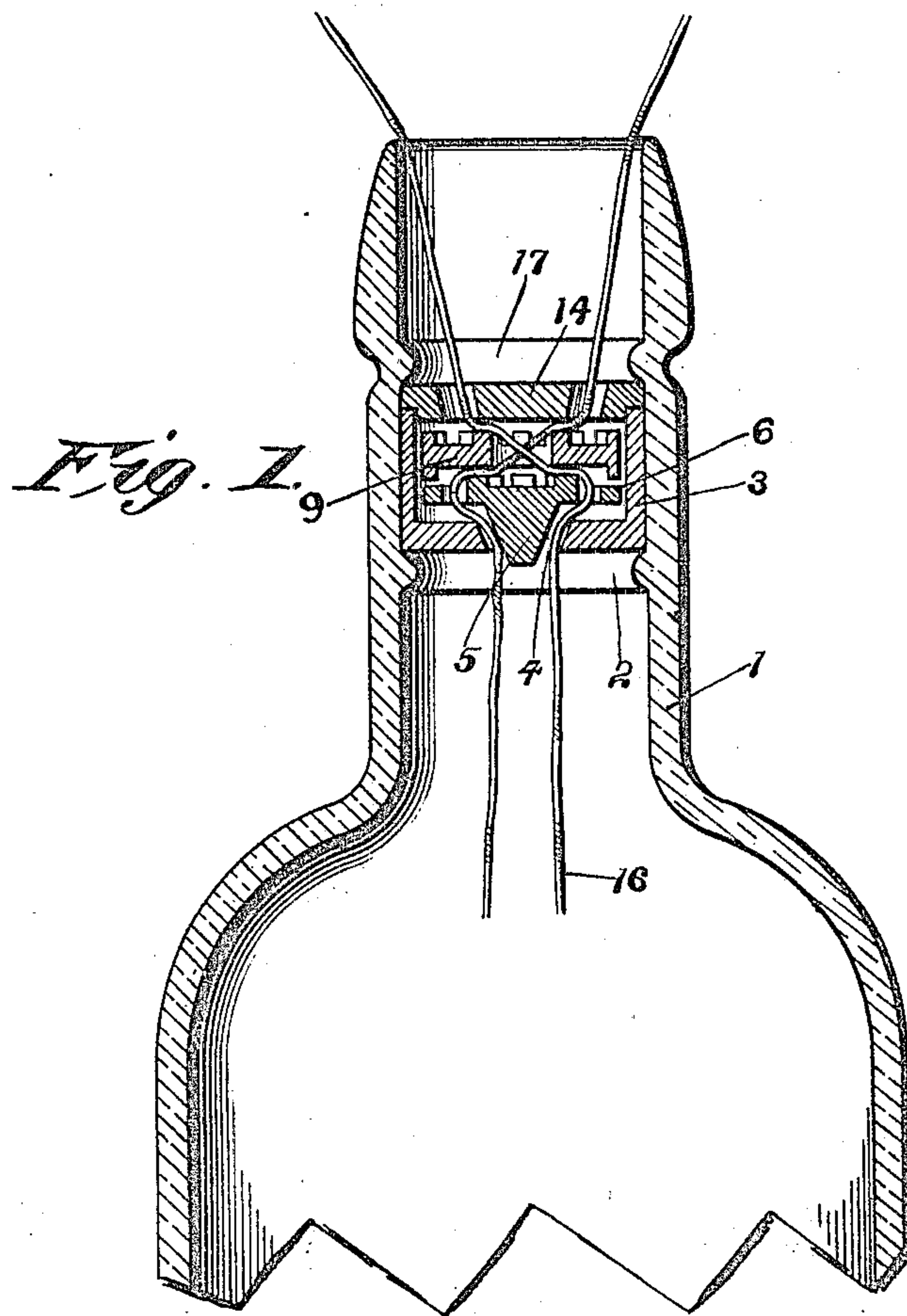


No. 831,622.

PATENTED SEPT. 25, 1906.

J. R. MULLIN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 16, 1906.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN R. MULLIN, OF ROME, NEW YORK, ASSIGNOR OF ONE-HALF TO
EUGENE G. GILBERT, OF ROME, NEW YORK.

NON-REFILLABLE BOTTLE.

No. 831,622.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed January 16, 1906. Serial No. 296,286.

To all whom it may concern:

Be it known that I, JOHN R. MULLIN, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to non-refillable bottles; and its object is to provide a seal of novel construction which can be readily inserted and held within a bottle-neck and which will effectually prevent the refilling of the bottle subsequent to the removal of its initial contents.

The invention also consists of a seal which is formed entirely of a non-corrodible material and which does not necessitate the use of springs or like devices to insure its operation.

The invention consists of a cup-like body having an opening therein which constitutes a seat for a valve depending from a perforated disk. Lugs extend from this disk and valve and normally support a guard-disk having a central passage therethrough. Likewise surrounded by lugs and disposed upon the body and above the guard-disk is an apertured cap. Both the body and cap are adapted to be inserted into a bottle-neck and to be retained therein by beads, which may be blown therein or formed by contracting the bottle-neck.

The invention also consists of the further novel features of construction and combination of parts, the preferred form whereof will be hereinafter made clearly apparent.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a vertical section through a portion of a bottle having my improved seal therein and showing the positions of the parts when the body is ready to be first filled. Fig. 2 is a sectional perspective view of the cap; and Figs. 3 and 4 are similar views of the guard disk and valve, respectively.

Referring to the figures by numerals of reference, 1 is a bottle-neck having a bead 2 therein, which constitutes a stop for the seal used in the neck. This seal consists of a cylindrical body portion 3, which is open at its upper end and has an opening 4 at its lower

end, the walls of said opening constituting a seat for a cone-like valve 5, depending from and integral with the center of disk 6. This disk is loosely mounted within the body 1 and has a series of lugs 7 arranged in a circle about the center thereof and a series of openings 8, also formed within the disk between these lugs and the periphery. Disposed within the body 3, above disk 6, is a guard-disk 9, having an annular flange 10 extending from its periphery and normally resting on disk 6. Extending upward from the central opening 11 within disk 9 is a series of lugs 12, and an annular flange 13 extends from the periphery of disk 9 and is cut away at intervals, as shown at 14'. Disposed upon the open end of the body 3 and extending slightly therethrough is a cap 14, having openings 15

Bottles having my improved seal are adapted to be placed upon the market in condition for one filling only. The seal is arranged to permit this by first running a cord 16 through oppositely-disposed openings 15 in cap 14 and then diagonally through the central opening 11 in disk 9. The cord is then threaded through opposite openings 8 in disk 6 and then under the valve 5 between it and its seat. The entire seal is then inserted into a bottle-neck, after which said neck is contracted above the seal to provide an interior bead 17, which acts as a retainer and prevents the seal from being removed except by first breaking the bottle.

In order to fill the bottle, the cord 16 is drawn upward to raise the seal 5 from the seat, and liquid can then be poured into the neck and will pursue a tortuous passage from openings 15 around flange 13 and between lugs 12 and the opening 11 and then between the lugs 7 to openings 8, and thence through the opening 4. After the bottle has been filled in this manner the cord 16 is withdrawn, and valve 5 will therefore be seated by gravity and the bottle will be protected from refilling. A cork or other closure can then be inserted in the neck above the seal. When it is desired to remove the contents, this cork is removed and the bottle inclined or inverted sufficiently to cause the valve 5 to leave its seat, whereupon the liquid contents will flow outward through the tortuous passage by which it entered. The refilling of the bottle, however, will be prevented by the valve, be-

cause said valve is deprived of the cord support originally provided for it and cannot be therefore held suspended above its seat.

What I claim is—

- 5 1. A seal for bottles comprising a body having a valve-seat at one end, a valve normally disposed by gravity upon the seat, said valve depending from and integral with an apertured disk having lugs extending there-
10 from, a guard-disk disposed within the body and extending over the valve-disk, said guard-disk having a central aperture and a series of extensions about the aperture, and
15 an apertured cap upon the body and extending over the guard-disk, said guard and valve disks being movably mounted within the body.
2. The combination with a bottle having a stop within the neck thereof; of a seal within

the neck and abutting against said stop, said 20 seal comprising a body having a valve-opening in one end, a valve normally seated within the opening and integral with an apertured disk, said disk having projections thereon, a guard disk extending over the valve-disk and 25 having a central opening surrounded by projections, said disks being movably mounted within the body, an apertured cap upon the body and extending over the disks, and an interior bead within the neck, and overlap- 30 ping and retaining the cap and body.

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

JOHN R. MULLIN.

Witnesses:

EUGENE G. GILBERT,
ALBERT J. O'CONNOR.