

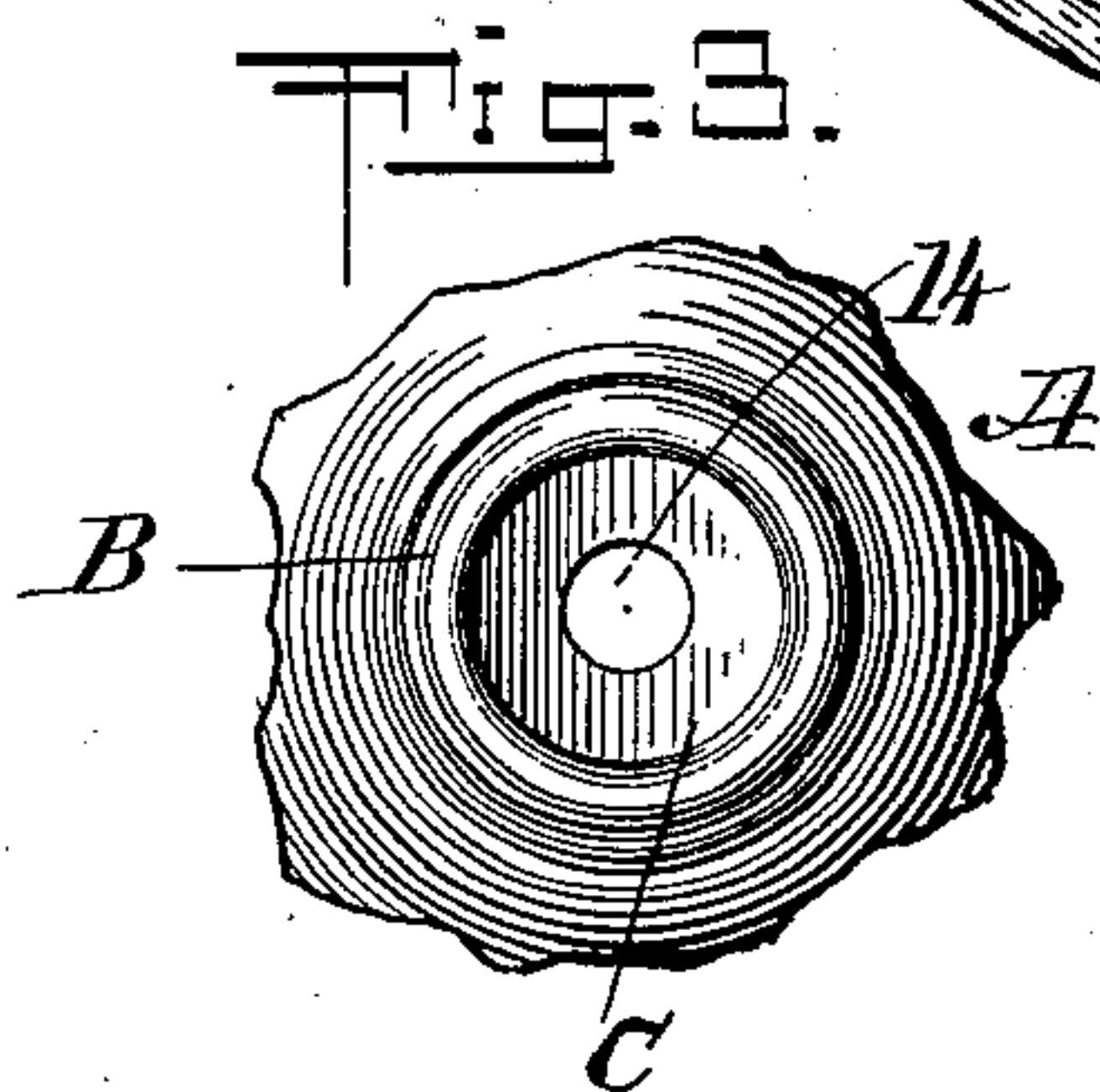
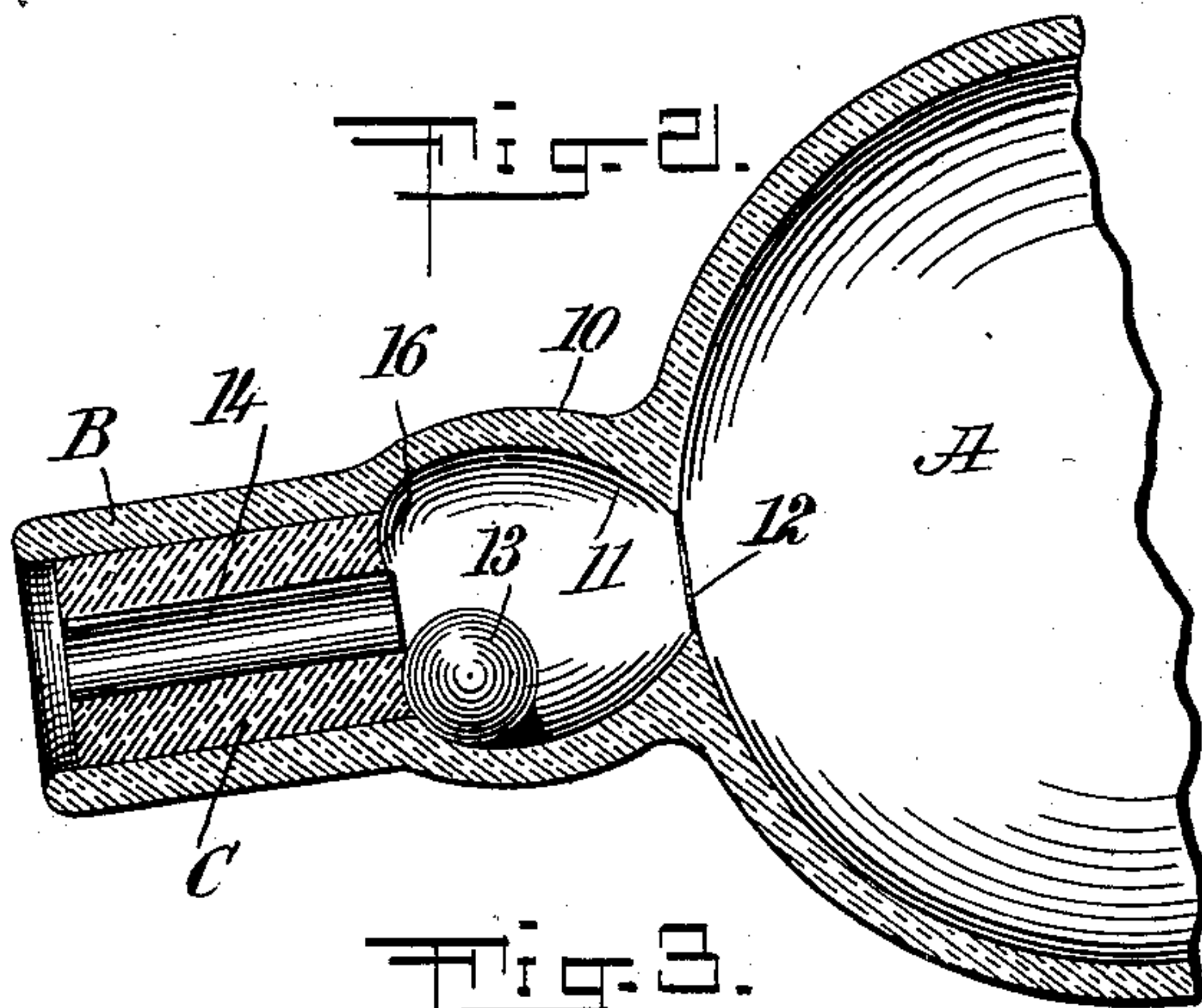
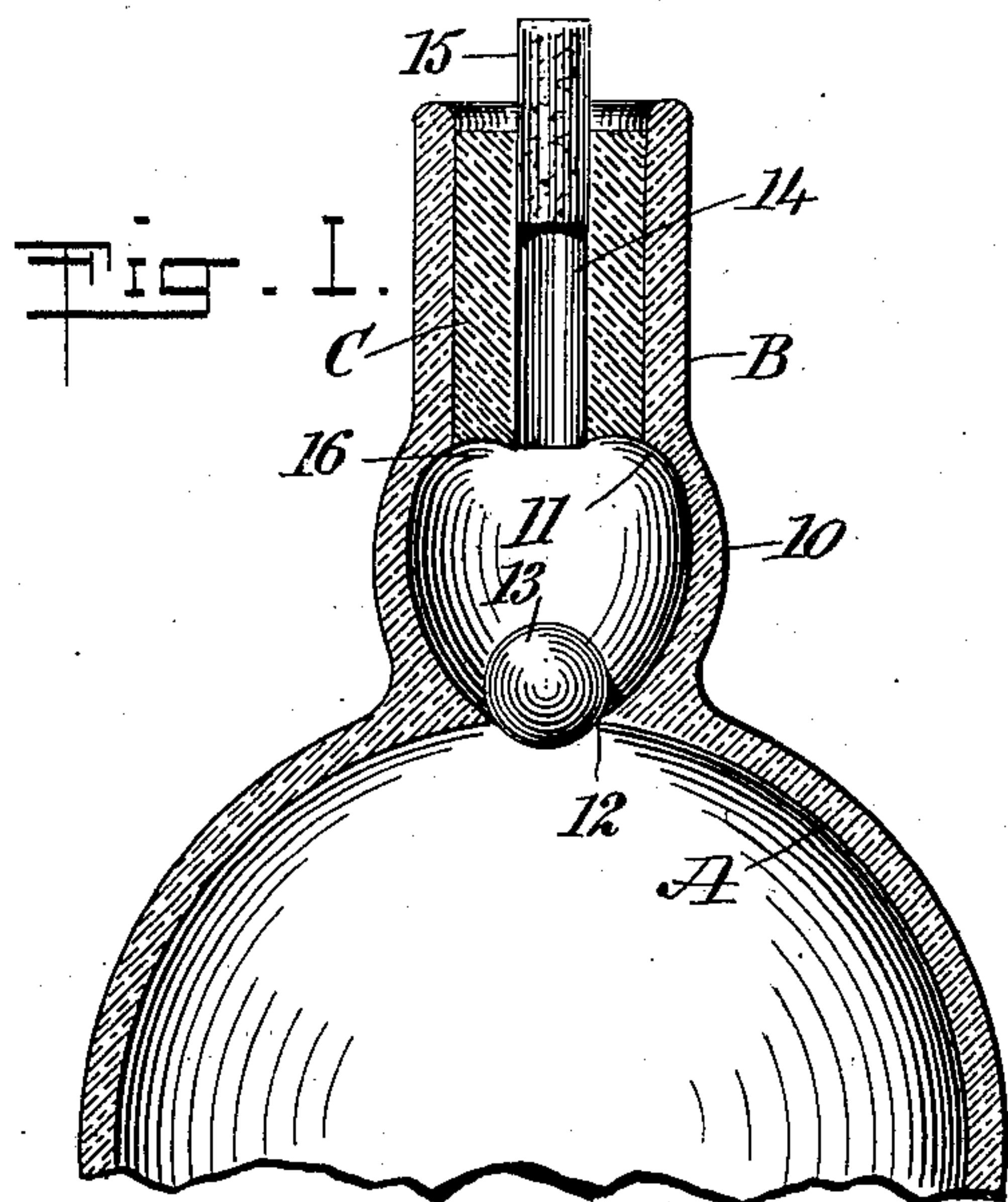
No. 744,556.

PATENTED NOV. 17, 1903.

M. M. KEARNEY.
NON-REFILLABLE BOTTLE.

APPLICATION FILED JULY 8, 1903.

NO MODEL.



WITNESSES:

WITNESSES:
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UNITED STATES PATENT OFFICE.

MICHAEL MOYLES KEARNEY, OF SCRANTON, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 744,556, dated November 17, 1903.

Application filed July 6, 1903. Serial No. 164,326. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL MOYLES KEARNEY, a citizen of the United States, and a resident of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Improvement in Non-Refillable Bottles, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide a construction of bottle—particularly a construction of the neck of a bottle; stopper, and valve—which will prevent the possibility of refilling the bottle after its original contents have been poured out.

A further purpose of the invention is to so construct the neck of the bottle, its stopper, and valve that the bottle may be presented complete at a minimum of cost and whereby the bottle in its entirety will be exceedingly simple and readily understandable by any person of ordinary intelligence.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through the neck of the bottle and a portion of the body and likewise a vertical section through the stopper in the bottle, showing the valve in side elevation and likewise the cork, the latter being only partially introduced into the stopper. Fig. 2 is a section similar to Fig. 1, the bottle being shown inclined and the cork removed to permit of the contents of the bottle being poured out; and Fig. 3 is a plan view of the neck of the bottle and adjacent portion of the body.

A represents the body of a bottle, which may be of any desired shape, and B the neck thereof, which is an integral portion of the body. The neck B is provided with an enlargement 10 between its central portion and the point where it connects with the body, and within the enlarged section 10 of the neck a chamber 11 is formed, practically heart-shaped, being contracted at its lower end. At the lower end portion of the chamber an opening 12 is produced in direct com-

munication with the body of the bottle; but this opening 12 is normally closed by a ball 13, which is seated at the bottom portion of the chamber 11, extending partially through the said opening 12, as is shown in Fig. 1.

In the upper straight portion of the neck B a stopper C is snugly fitted, and this stopper is secured in the neck in any suitable or approved manner. The said stopper may be made of any suitable or approved material; but usually it is constructed of glass, as is likewise the neck and body of the bottle, and when the stopper is constructed of glass it may be ground so as to make a perfect fit in the neck, or it may be cemented or cemented and ground. The stopper C is provided with a central bore or channel 14, which is in communication with the outside atmosphere at the top of the stopper and in communication with the central portion of the chamber 11 at the top of the latter.

After the bottle has been filled with liquid the ball 13 is placed in position in the chamber 11, and then the stopper C is fixed in place. Finally the upper portion of the bore of the stopper C is closed by a cork 15 and the top of the neck of the bottle may then be sealed with wax, or the usual capsule may be placed over the upper portion of the bottle, if desired. As long as the bottle remains upright, or practically so, the ball 13 will be seated at the bottom of the chamber 11, closing communication between said chamber and the body of the bottle; but when the cork 15 is withdrawn and the bottle is turned up, as is shown in Fig. 2, the ball 13 will roll along the wall of the chamber 11 to a point in engagement with the bottom of the stopper C, which bottom portion is more or less concaved, as is shown at 16 in Figs. 1 and 2. As the ball 13 takes the position in the chamber 11 shown in Fig. 2 the liquid will flow freely from the body of the bottle out through the passage 14 in the stopper C.

In the event an effort is made to refill the bottle any liquid that may be forced through the passage 14 in the stopper C will only cause the ball 13 to more firmly seat itself, and the passage 14 is so small that access cannot be readily gained to the ball 13 to hold it up from its seat and pour liquid into the bottle at the same time. Furthermore, the passage

14 is really so small that but little liquid could be introduced into the bottle even under pressure.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In non-refillable bottles, a body, a neck interiorly enlarged at its lower end to form a chamber, said chamber at its lower end being contracted and opening into the body of the bottle, a ball-valve within said chamber normally closing communication between the same and the body of the bottle, a stopper secured in the neck of the bottle above the chamber, the lower end of the stopper forming the top wall of said chamber, said stopper having an opening extending from top to bottom and being annularly concaved on its lower end around said opening said concavity uniting with the walls of the chamber to give the same a heart-shaped configuration, and a closure for temporarily closing the upper portion of said passage in the stopper.

2. In non-refillable bottles, a body, a neck having an enlarged interior recess at its lower portion forming a chamber, a ball-valve with-

in said chamber, a stopper secured in the neck of the bottle above said chamber and provided with a central opening extending from top to bottom, and means for temporarily closing the upper portion of said passage, said internal chamber having an opening leading into the body of the bottle and adapted to receive and seat a portion of the circumference of the ball when the bottle is in an upright position, said stopper being provided on its lower end with an annular recess extending from the central opening in the stopper to the outer periphery thereof and there merging into the walls of the recess in the bottle-neck, said annular recess being of a curvature to be fitted by the circumference of the ball to form a seat for said ball when the neck of the bottle is tilted downwardly.

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

MICHAEL MOYLES KEARNEY.

Witnesses:

M. J. MCANDREW,
DAVID LANDAU.