

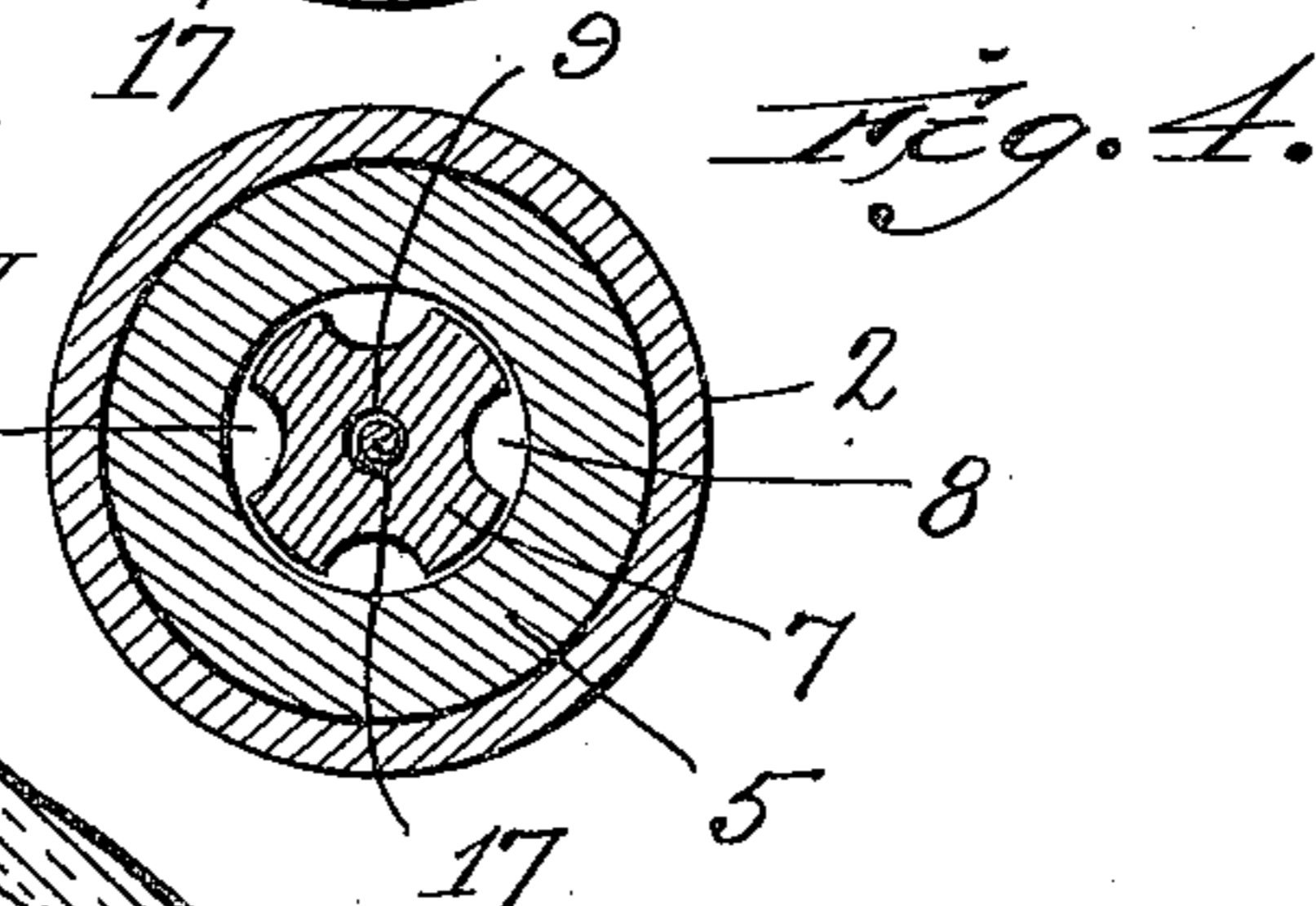
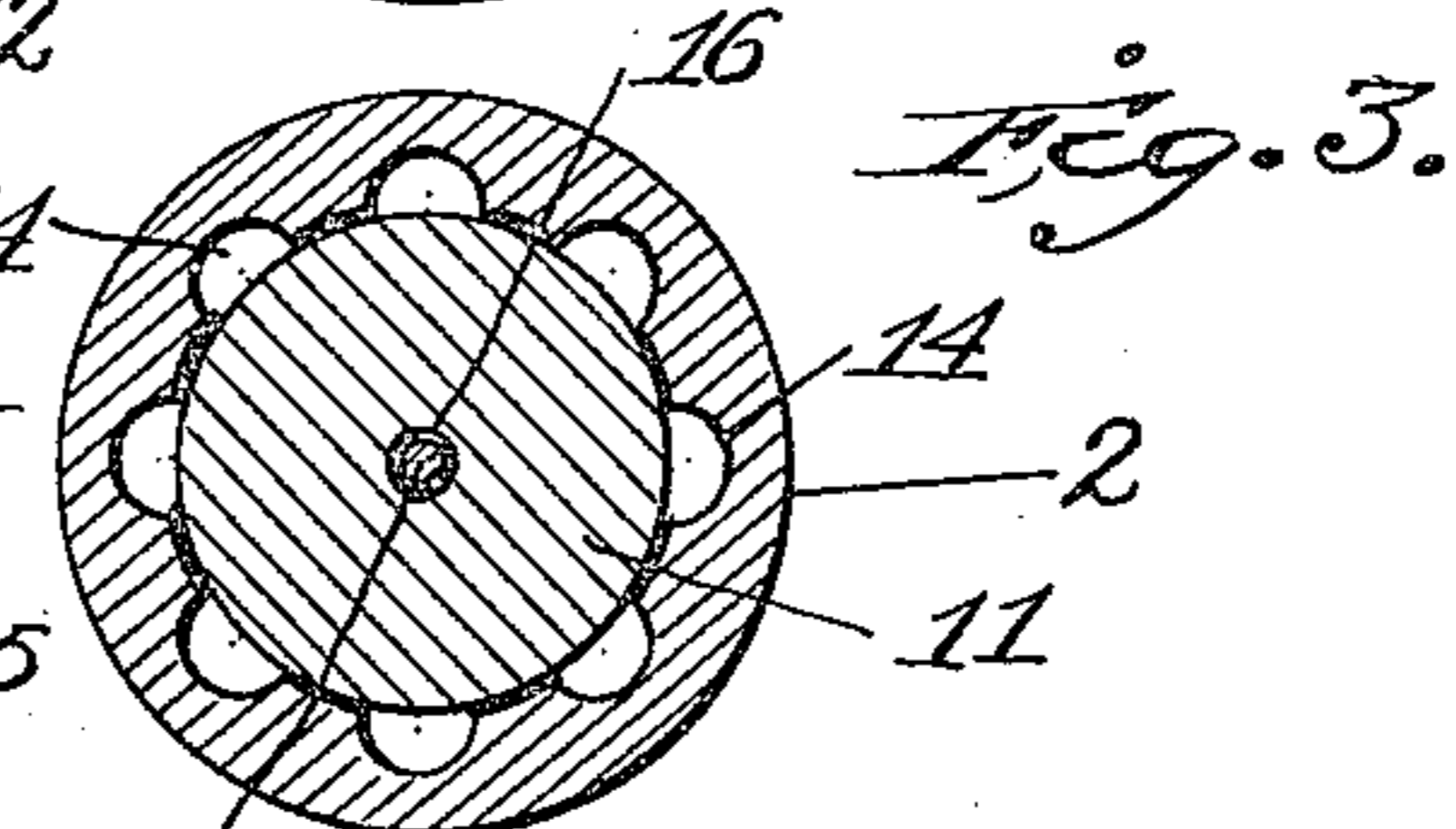
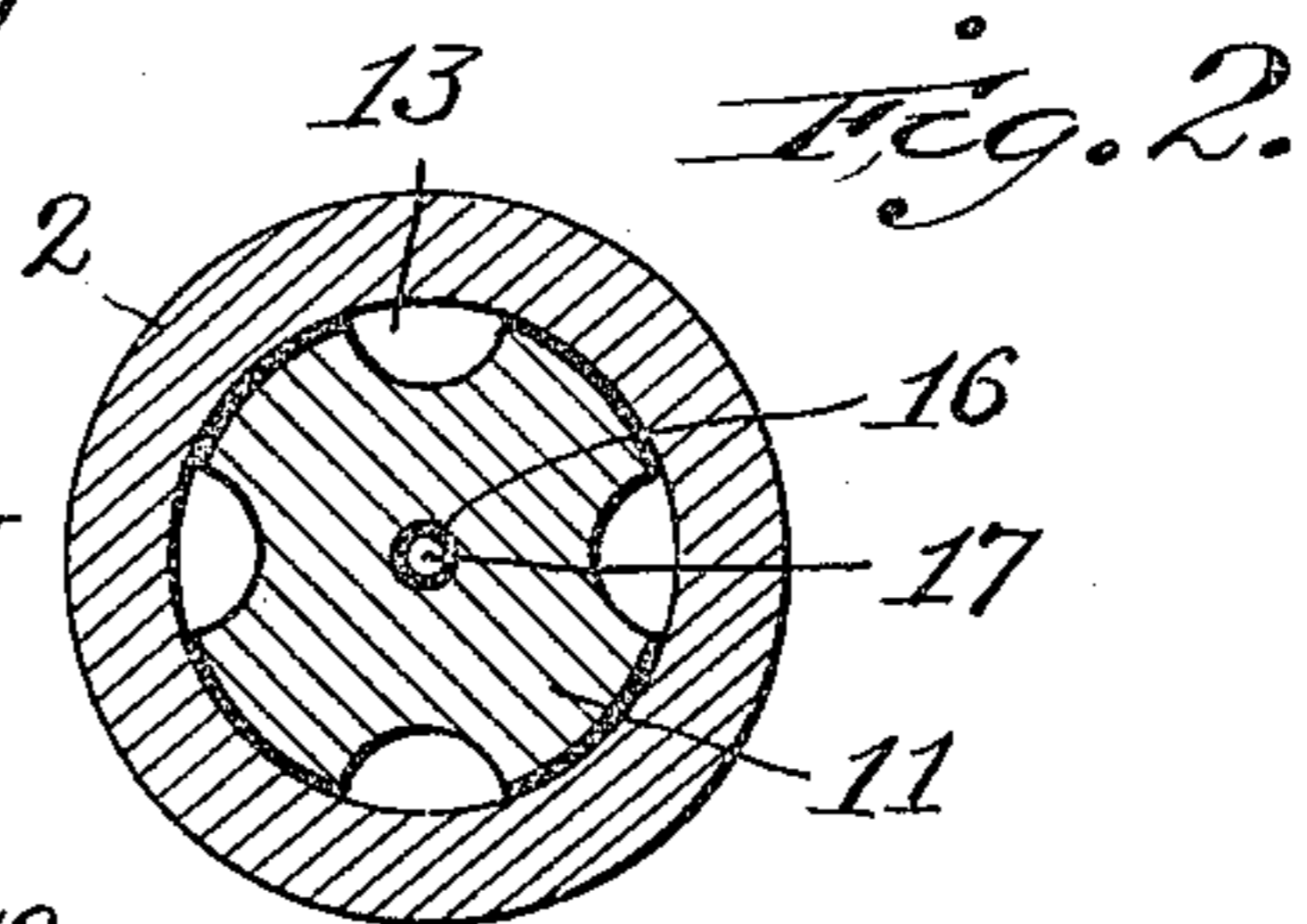
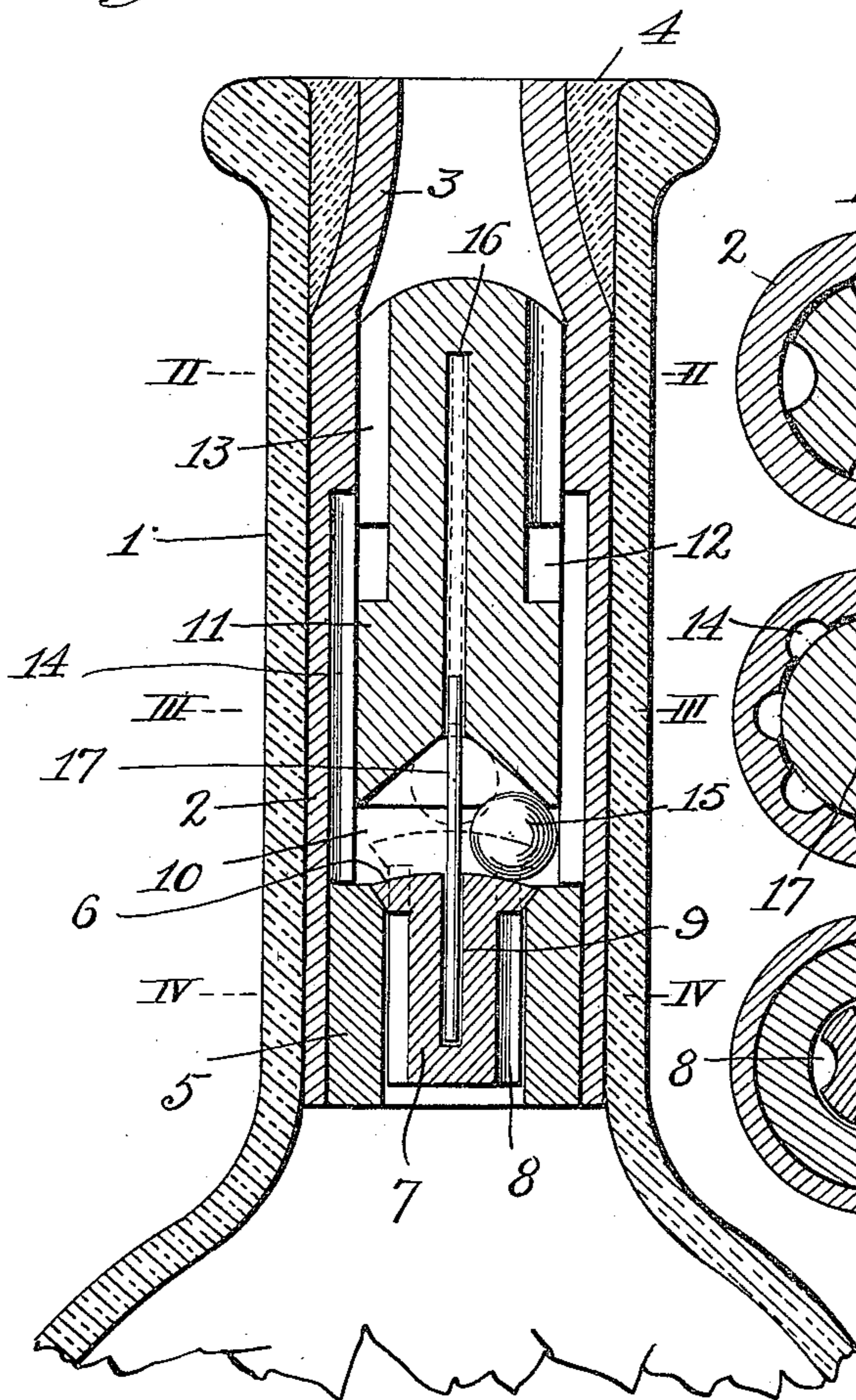
G. JACKSON.
BOTTLE VALVE.

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1,154,638.

Patented Sept. 28, 1915.

Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

GILBERT JACKSON, OF NEW YORK, N. Y.

BOTTLE-VALVE.

1,154,638.

Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed April 23, 1913, Serial No. 763,124. Renewed February 19, 1915. Serial No. 9,419.

To all whom it may concern:

Be it known that I, GILBERT JACKSON, a citizen of the United States, residing in the borough of Manhattan, city of New York, State of New York, have invented new and useful Improvements in Bottle-Valves, of which the following is a specification.

My invention relates to that class of bottle valves the primary object of which is to prevent the refilling of bottles after they have been once emptied, and designs certain improvements in the construction as will be hereinafter more definitely pointed out and claimed, reference being had to the accompanying drawing, in which:

Figure 1 is a central vertical sectional view of my improved device located in a bottle neck. Figs. 2, 3 and 4 are transverse sections taken on the lines II—II, III—III and IV—IV, respectively, of Fig. 1.

In the said drawing the reference numeral 1 denotes the neck of an ordinary bottle, such as a whisky bottle, in which is disposed a closely fitting casing 2 of any suitable material, such as glass, metal or the like, and which is contracted at its upper end at 3 to provide a space between it and the bottle neck 1 to receive any suitable sealing medium 4, such as glass cement.

In the enlarged lower end of said casing 2 is fixed a centrally apertured filling block 5, the same being formed at its upper end with a coned valve seat to receive the similarly shaped valve 6, which latter has its depending portion 7 provided with vertical external grooves 8 and a central orifice 9, as shown. Fixed in the jacket 2 above said sleeve and valve, and spaced therefrom to leave a chamber 10, is a plug 11, the same being circular in cross area at its lower end, as seen in Fig. 3, and being provided about midway of its length with an annular recess 12, with which communicate a plurality of vertical exterior grooves 13 extending to the top of said plug, as shown. The interior surface of the casing 2 is also grooved vertically at 14, said grooves extending between the chamber 10 and annular recess 12, so that there is formed, in conjunction with the grooves 13 in plug 11, a free passage for the liquid from chamber 10 to above the upper end of plug 11.

The upper face of valve 6 is slightly convexed, while the lower end of plug 11 is in the form of a cone, and disposed in said chamber 10 between said surfaces is a ball

15 snugly fitting therebetween, but free to move or roll annularly therein, said ball resting upon the top of valve 6. The aperture 9 in filling block, which is centrally disposed, registers with a similar central aperture 16 in the plug 11, and disposed loosely in the two is a freely movable rod 17, the same being of such a length that when the bottle is inverted it may slide into aperture 16 in plug 11 and be completely received thereby.

The operation of my improved construction is as follows: With the bottle in the position shown in Fig. 1, the ball 15 rests upon the valve 6, and, by reason of its immediate proximity to the cone-shaped lower end of plug 11, it cannot move vertically, nor can it move toward the center, because of rod 17, which rests with its lower end in aperture 9 in valve 6. Said ball thus acts as a stop to the opening of valve 6, and, while free to roll annularly in chamber 10, can have no other movement. But when the bottle is inverted the rod 17 at once slides longitudinally into the aperture 16 in plug 11, where it is completely received, thus leaving the ball 15 free to assume the dotted line position shown in Fig. 1 at the apex of the cone-shaped under surface of plug 11, which leaves the valve 6 free to move to the dotted line position shown in Fig. 1, so that the liquid in the bottle may flow through the external grooves 8 in the depending portion 7 of said valve into chamber 10, from whence it is free to discharge through grooves 14, annular recess 12 and grooves 13, as hereinafter described.

While I have shown my improved device as embodying a casing 2 adapted to be inserted and fixed in the ordinary bottle neck, I may dispense with the upper part of the bottle neck, and cement or otherwise fasten the casing 2 to a bottle having a short neck, leaving said casing to form the upper neck of the bottle.

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

1. The combination with a bottle neck, of an upwardly opening valve therein, a retainer normally resting on said valve to hold it in closed position, a plug disposed above said retainer and having its lower face cone shaped, and a centrally disposed rod freely shiftable vertically in apertures in said valve and plug and acting when in its lower-

most position to lock said retainer between said valve and said cone surface and when shifted to its uppermost position by the inversion of the bottle permitting said retainer
5 to seek the center of said cone surface to permit said valve to open.

2. The combination with a bottle neck, of an upwardly opening valve therein, a filling block providing a valve seat therefor, a plug
10 disposed above said filling block at a distance to leave a chamber therebetween and having its lower face cone-shaped, a ball in said chamber normally resting on said valve and fitting between the same and said cone
15 surface at substantially the edge of the latter, and a centrally disposed rod freely shift-

able vertically in apertures in said valve and plug and acting when in its lowermost position to lock said ball between said valve and said cone surface and when shifted to its
20 uppermost position by the inversion of the bottle permitting said ball to seek the center of said cone surface to permit said valve to open.

In testimony whereof, I have hereunto set
25 my hand in the presence of two subscribing witnesses.

GILBERT JACKSON.

Witnesses:

WILLIAM J. HALL,
JOHN F. MARTIN, Jr.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."