

No. 725,419.

PATENTED APR. 14, 1903.

H. DE ROCCO.
BOTTLE.

APPLICATION FILED OCT. 17, 1902.

NO MODEL.

Fig. 1

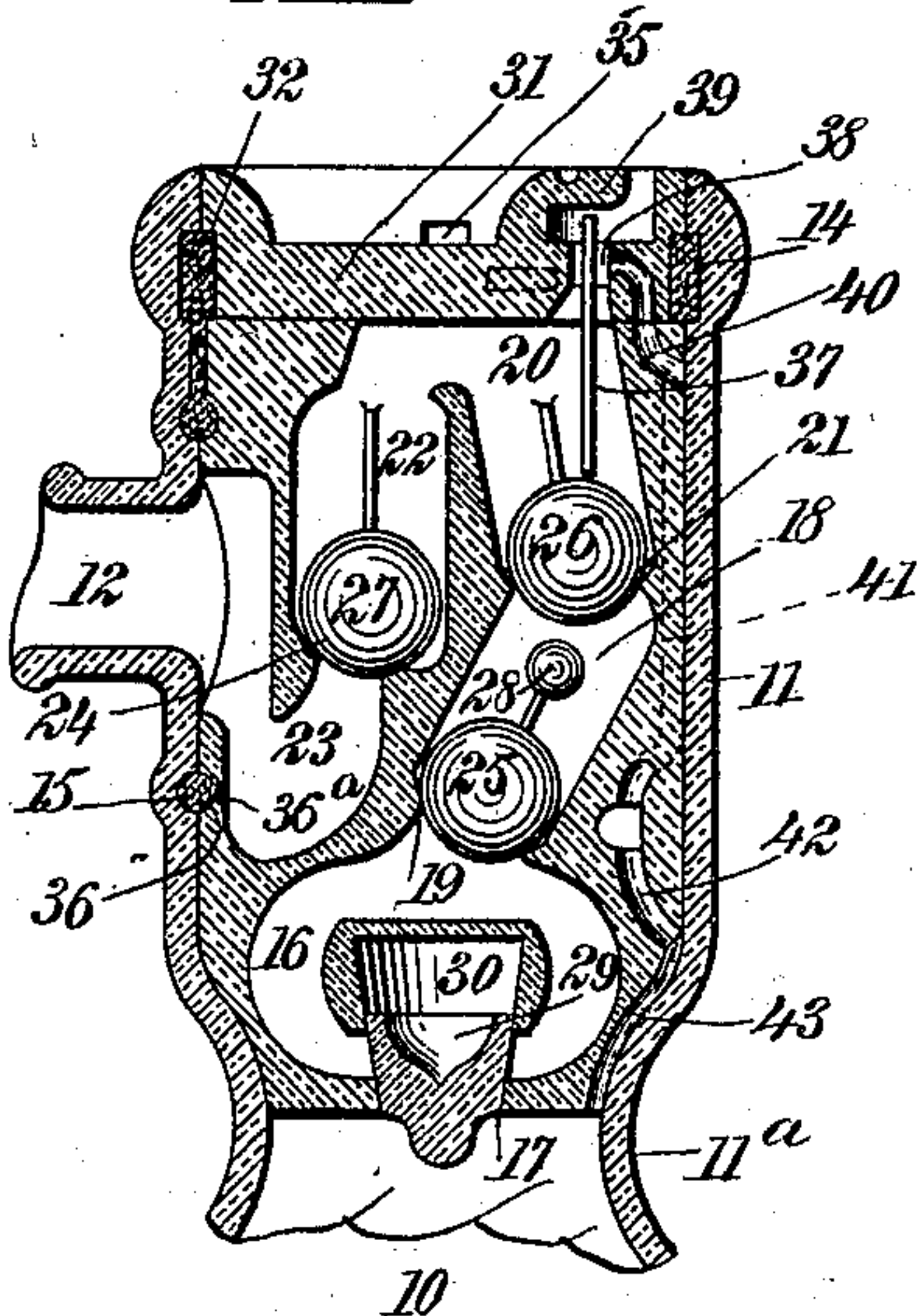


Fig. 2

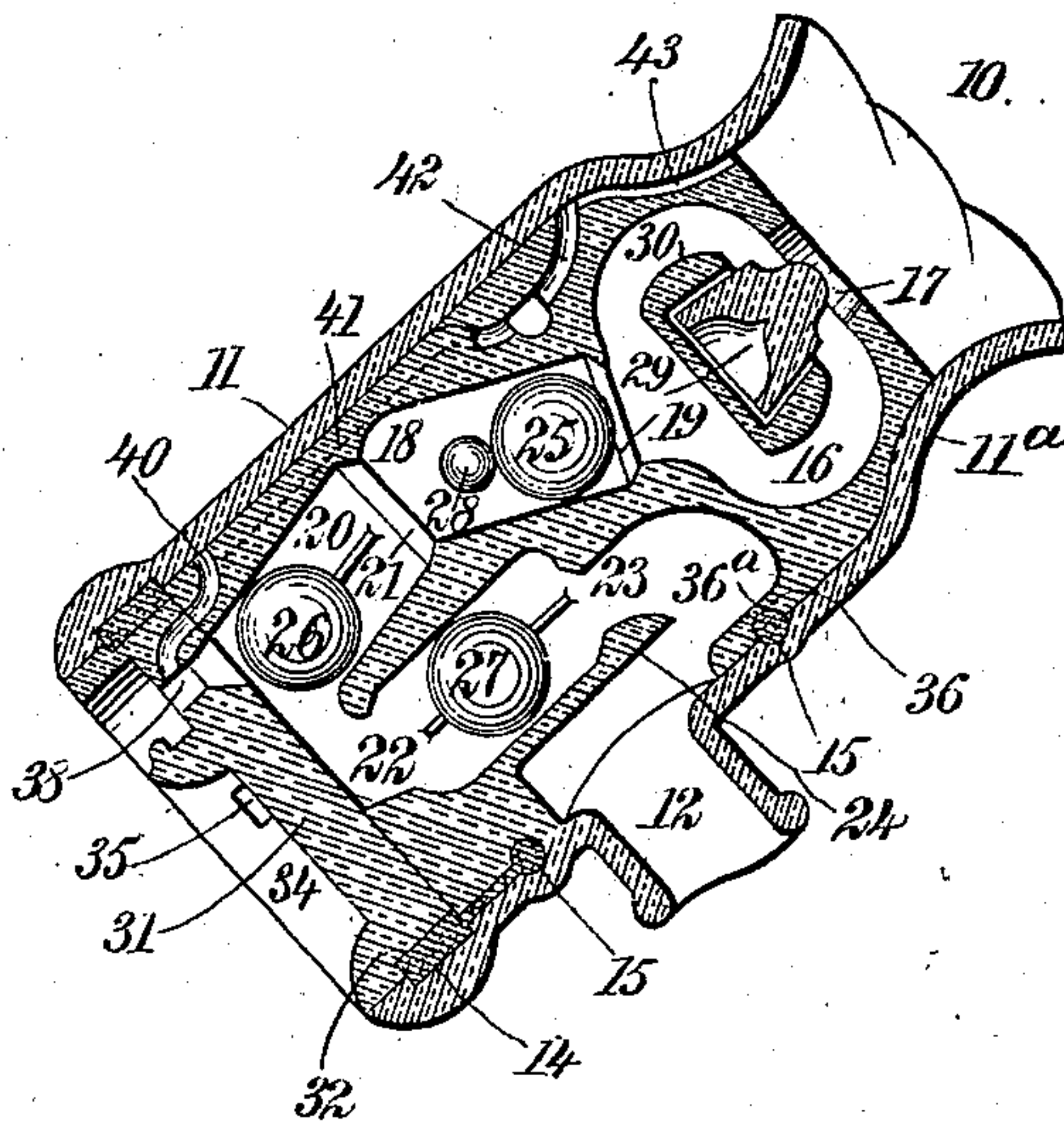


Fig. 3

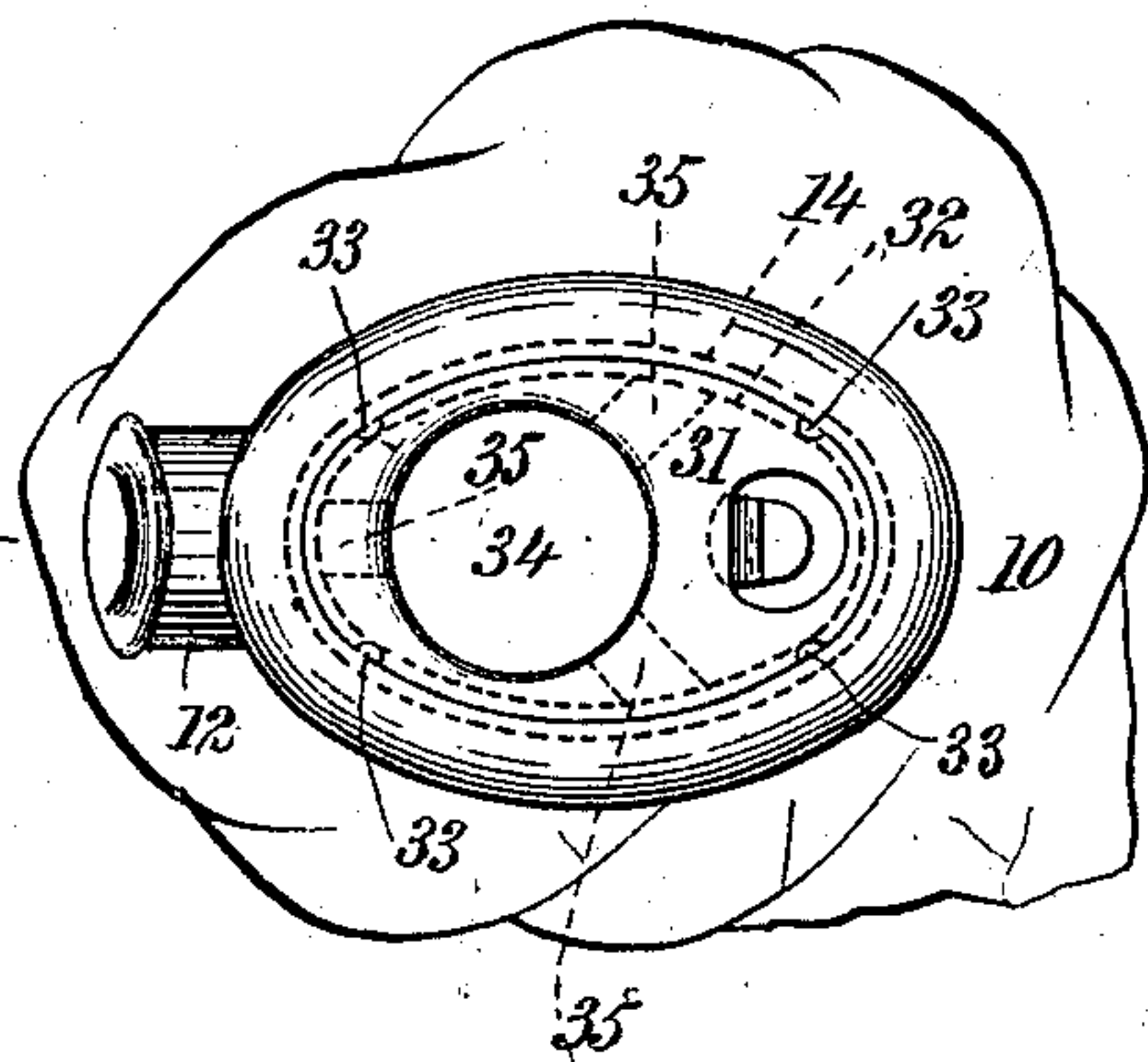
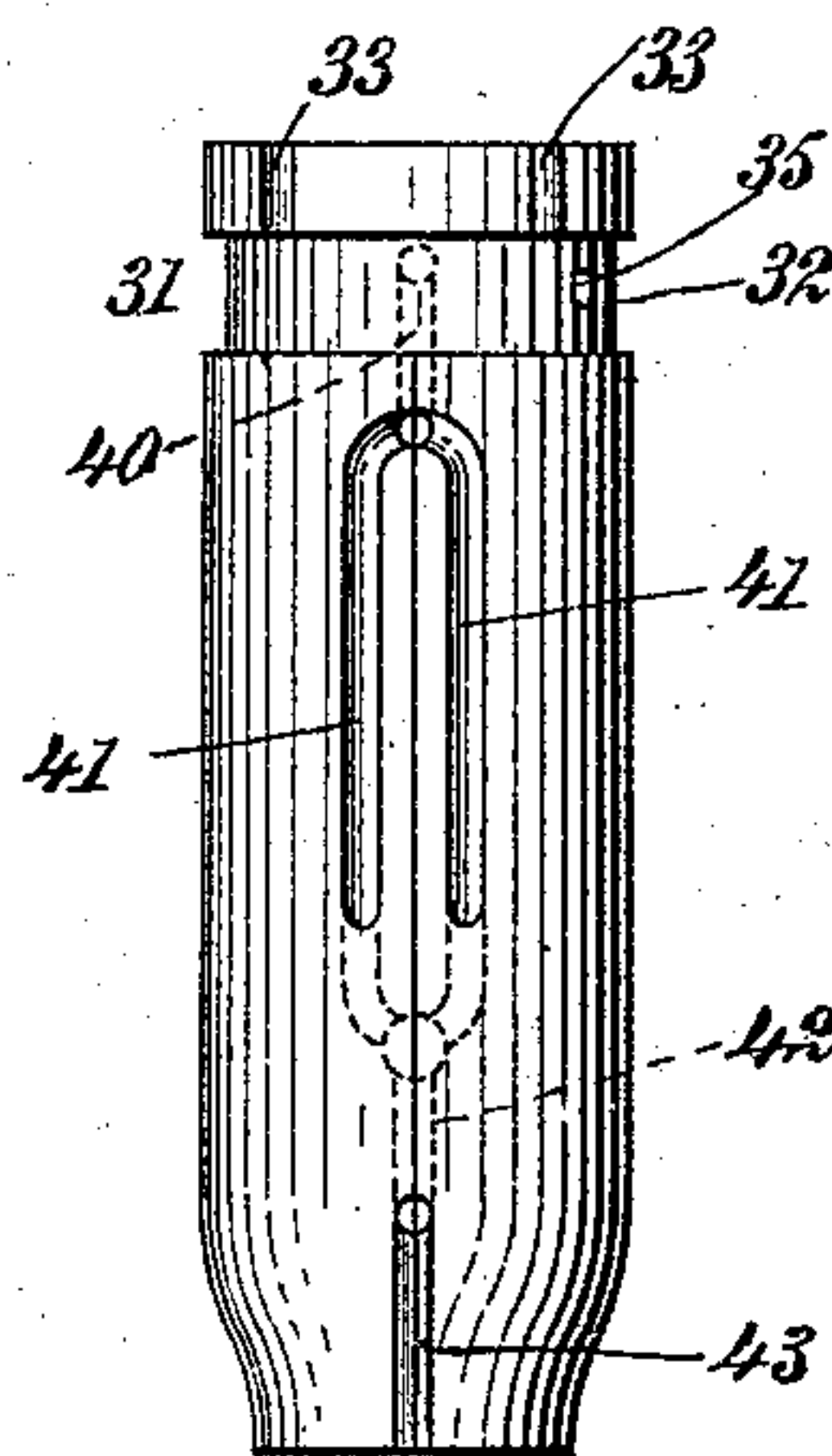


Fig. 4



WITNESSES:

J. S. Propoy
Isaac B. Owens.

INVENTOR

Hector De Rocco

BY *Wm. M. M.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HECTOR DE ROCCO, OF BUENOS AIRES, ARGENTINA.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 725,419, dated April 14, 1903.

Application filed October 17, 1902. Serial No. 127,635. (No model.)

To all whom it may concern:

Be it known that I, HECTOR DE ROCCO, a citizen of Argentina, and a resident of Buenos Aires, Argentina, have invented new and useful Improvements in Bottles, of which the following is a full, clear, and exact description.

The object of this invention is to construct a bottle with certain novel valve devices rendering it impracticable to refill the bottle after its original contents have been extracted. To this end I employ a sectional plug in which a tortuous passage is formed, this passage constituting the outlet for the liquid, and in such passage are placed a number of valves which open outward, so that the liquid may be withdrawn, but which will seat to prevent any liquid from being introduced. This plug is held in place by a cap which is fastened by a cement of any desired sort in the extreme mouth of the bottle and holds the plug in place. The invention lies in the novel construction of these parts, as will be fully described hereinafter.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

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 views.

Figure 1 is a sectional view showing the neck of the bottle in an upright position. Fig. 2 is a similar view except that the bottle is shown inverted and the parts in the position which they assume when the liquid is being poured out. Fig. 3 is a plan view particularly illustrating the cap and its position with respect to the neck of the bottle; and Fig. 4 is an exterior elevation of the plug, showing particularly the grooves or crevices therein, which match with crevices in the neck of the bottle and facilitate sealing the plug.

10 indicates the body of the bottle, and 11 the neck, which has a contracted lower portion 11^a and is open at its extremity or mouth for the entire internal diameter of the neck. The neck is also constructed with a spout 12 at its side, which opens transversely of the

neck, standing horizontally when the bottle is in upright position. The neck is further provided with an annular internal groove 14 near its mouth, this groove communicating with a circular groove 15, which encircles the spout 12.

The plug is formed of glass or analogous material and is made in two sections, so as to facilitate forming the internal passages or valve-seats. In this description, however, it will be hereinafter regarded as a single structure. Within the plug is formed at its lower portion a chamber 16, having a valve-seat 17 at its lower end, this valve-seat communicating with the interior of the bottle. The chamber 16 communicates with a chamber 18, having a valve-seat 19 at its lower portion, and this chamber 18 in turn communicates with a chamber 20, having a valve-seat 21 at its lower portion. The chamber 20 opens at the top of the plug, as also opens the chamber 22, which passes downward and communicates with a return-bent passage 23, this passage 23 leading to the spout 12. The passage 22 has a valve-seat 24 in its lower end, and in said passages 18, 20, and 22 are located, respectively, the spherical valves 25, 26, and 27, these valves respectively coacting with the seats 19, 21, and 24, and said valves opening outward to allow the exit of the liquid, but closing on their seats to prevent the admission of liquid.

28 indicates a spur which is formed in the passage 18 to limit the upward movement of the valve 25. With the valve-seat 17 a frusto-conical plug-like valve 29 coacts, this valve being carried in a socket-piece 30, as shown.

31 indicates a cap which is fitted snugly in the neck of the bottle over the plug and formed with an annular groove 32, around its periphery, matching with the groove 14. The cap is also formed with a number (preferably four) of vertical branches 33 of said groove 32, these branches extending upward and opening at the top of the cap. The cap has an indentation 34 in its top, forming a basin, and from this basin a passage 35 leads to the groove 32, so that cement in a plastic form may be poured into the indentation 34 and

will flow from this indentation to the groove 32 by way of the passage 35. The plug has a circular groove 36 formed in its surface, this groove registering exactly with the groove 15 of the neck of the bottle and both of said grooves communicating with the grooves 14 and 32, so that the said plastic cement will pass from the grooves 14 and 32 into the grooves 15 and 36, thus not only sealing the cap, but sealing the plug, and after the cement hardens it is clear that neither of these parts may be withdrawn without fracturing the bottle.

37 indicates a bar which is placed loosely in the chamber 20 above the valve 26 and which serves while in place to hold this valve seated and prevent the liquid from being withdrawn from the bottle. Of course when the bottle is to be used the bar 37 is to be removed. The cap has a passage 38 therein, and into this passage the upper end of the bar 37 is projected. Over the passage 38 extends a lip 39, which lies over the bar 37 and prevents its withdrawal while said lip is intact. The cap is constructed of glass or its equivalent material, and the lip is weakened at the point of its juncture with the cap, so that by introducing a suitable instrument under the lip it may be broken off and then the bar 37 may be removed, thus releasing the valve 26. Communicating with the passage 38 is a passage 40, which runs into the outer side of the plug and there takes the form of a groove, (indicated at 41,) this groove running down the side of the plug and into a passage 42, which after running through a part of the plug returns to the outer surface of the plug, as shown.

Now in assembling the parts after the bottle has been filled with the liquid the plug is introduced, the bar 37 is placed on the valve 26, and the cap is then placed on the plug, so as to hold the bar in place and also to complete the closure of the bottle. This plastic cement is then run into the several grooves provided for its reception, and thus the plug and cap are immovably placed in position. An ordinary cork or other stopper is then placed in the spout 12 and the closure of the bottle is complete. To withdraw the contents of the bottle, a suitable instrument should be inserted under the lip 39 and this lip fractured. Then the bar 37 may be removed. Fig. 2 does not show the bar, it being assumed that it has been taken out of the bottle. Then the cork from the spout 12 should be withdrawn, and it is clear that by inverting the bottle the liquid will pass the several valves and out by way of the spout 12. The liquid having been once withdrawn it will be quite impracticable to refill the bottle, since the numerous valves provided will seat and prevent the liquid from passing.

Various changes in the form and details of my invention may be resorted to at will with-

out departing from the spirit of my invention. Hence I consider myself entitled to all forms of the invention as may lie within the intent of my claims.

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

1. A non-refillable bottle, comprising the combination with the neck of the bottle, of a plug, a valve therein, a bar removably placed on the valve to hold it seated, and a cap secured over the plug and having a frangible lip bearing against the bar, for the purpose specified.

2. In a non-refillable bottle, the combination with the neck and the valve devices therein, of a cap secured in the end of the neck and having a dished upper surface with a passage leading therefrom to the periphery of the cap, and a groove formed in said periphery of the cap, the neck of the bottle having a groove matching with said groove in the periphery of the cap, for the purpose specified.

3. In a non-refillable bottle, the combination with the neck thereof having an annular internal groove near its outer end and also having a groove communicating with the first-named groove and extending downward in the neck of the bottle, of a plug located in the neck of the bottle and having a groove matching with the second-named groove in the neck of the bottle, said plug having a passage therein, a valve commanding said passage, and a cap located over the plug, said cap having an annular groove registering with the first-named groove of the neck of the bottle, and the cap also having a passage leading to said groove therein.

4. A non-refillable bottle, comprising the combination with the neck of a bottle having a lateral spout, of a plug placed in the neck and having a tortuous passage leading to said lateral spout, a valve commanding said passage, and a cap fastened in the mouth of the bottle over the plug.

5. In a non-refillable bottle, the combination with the neck of the bottle having the lateral spout leading therefrom, of a plug placed in the neck of the bottle, said plug having a passage extending from its lower end upward to the top of the plug and a second passage extending from the top of the plug downward and laterally to the said spout, a cap placed over the plug in the neck of the bottle, and valves located in said passages to prevent the inlet of the liquid.

6. In a non-refillable bottle, the combination with the neck of the bottle having the lateral spout leading therefrom, of a plug placed in the neck of the bottle, said plug having a passage extending from its lower end upward to the top of the plug and a second passage extending from the top of the plug downward and laterally to the said spout,

a cap placed over the plug in the neck of the bottle, and valves located in said passages to prevent the inlet of the liquid, said valves including a plug-like valve seating at the
5 lowermost extremity of the first-named passage in the plug.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

HECTOR DE ROCCO.

Witnesses:

R. DALHAGE,

A. E. MELLIS.