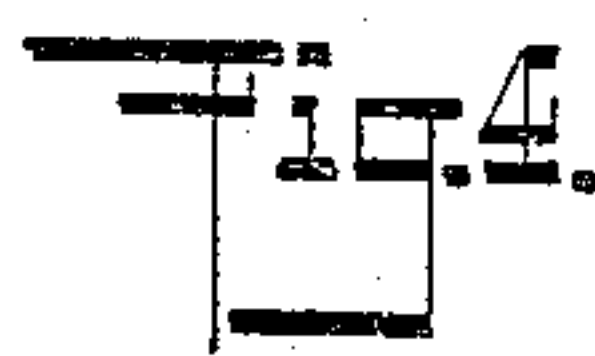
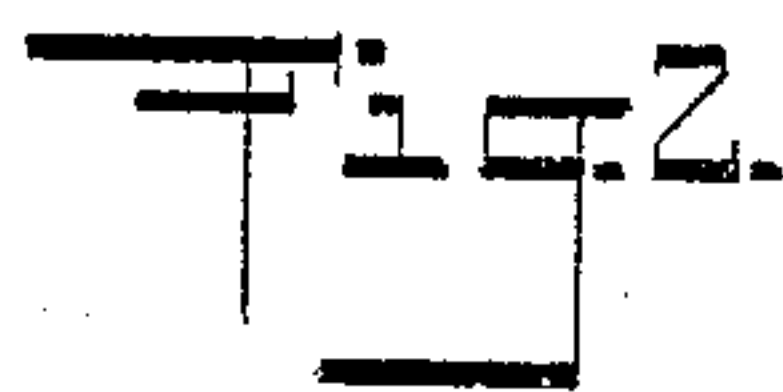
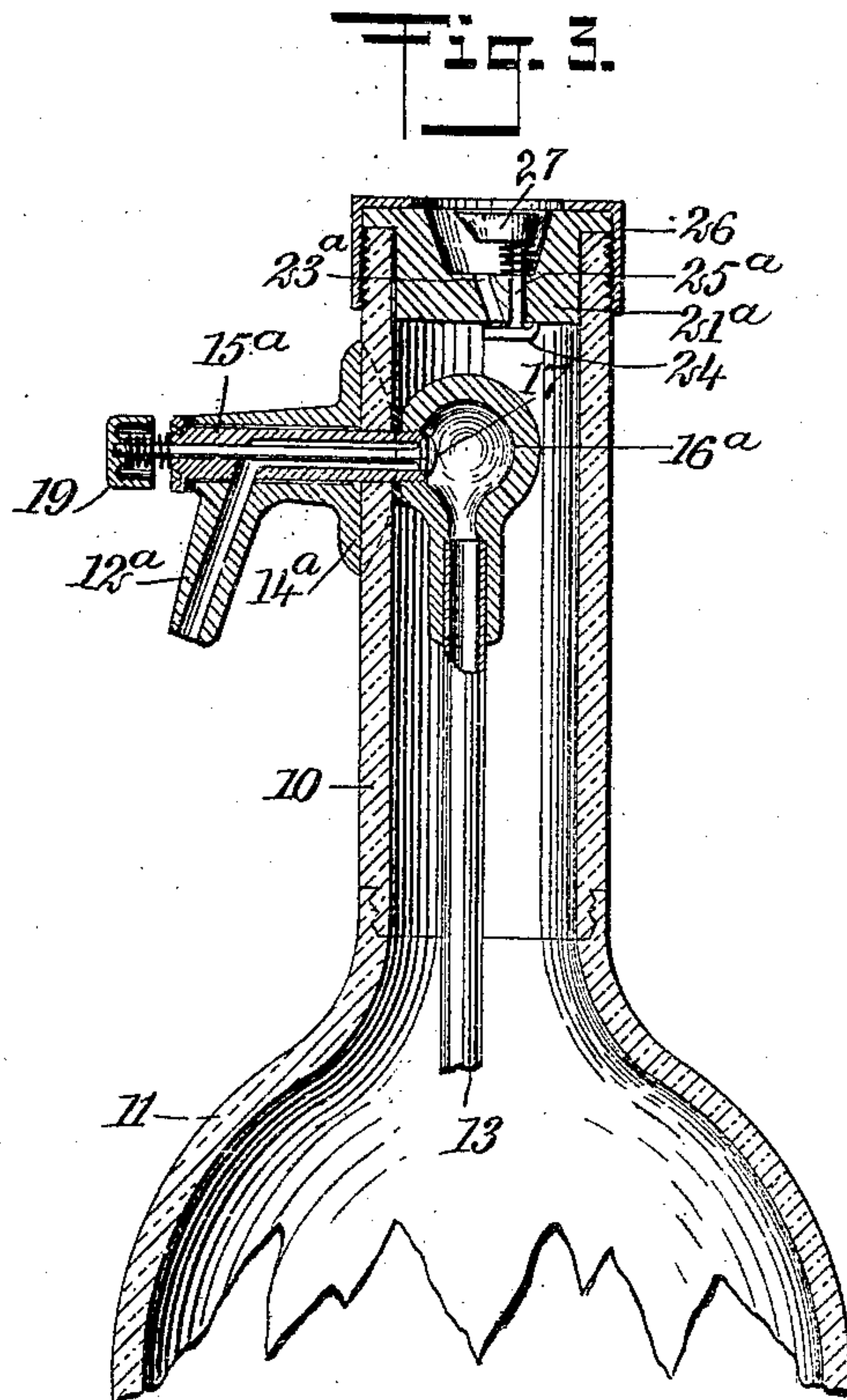
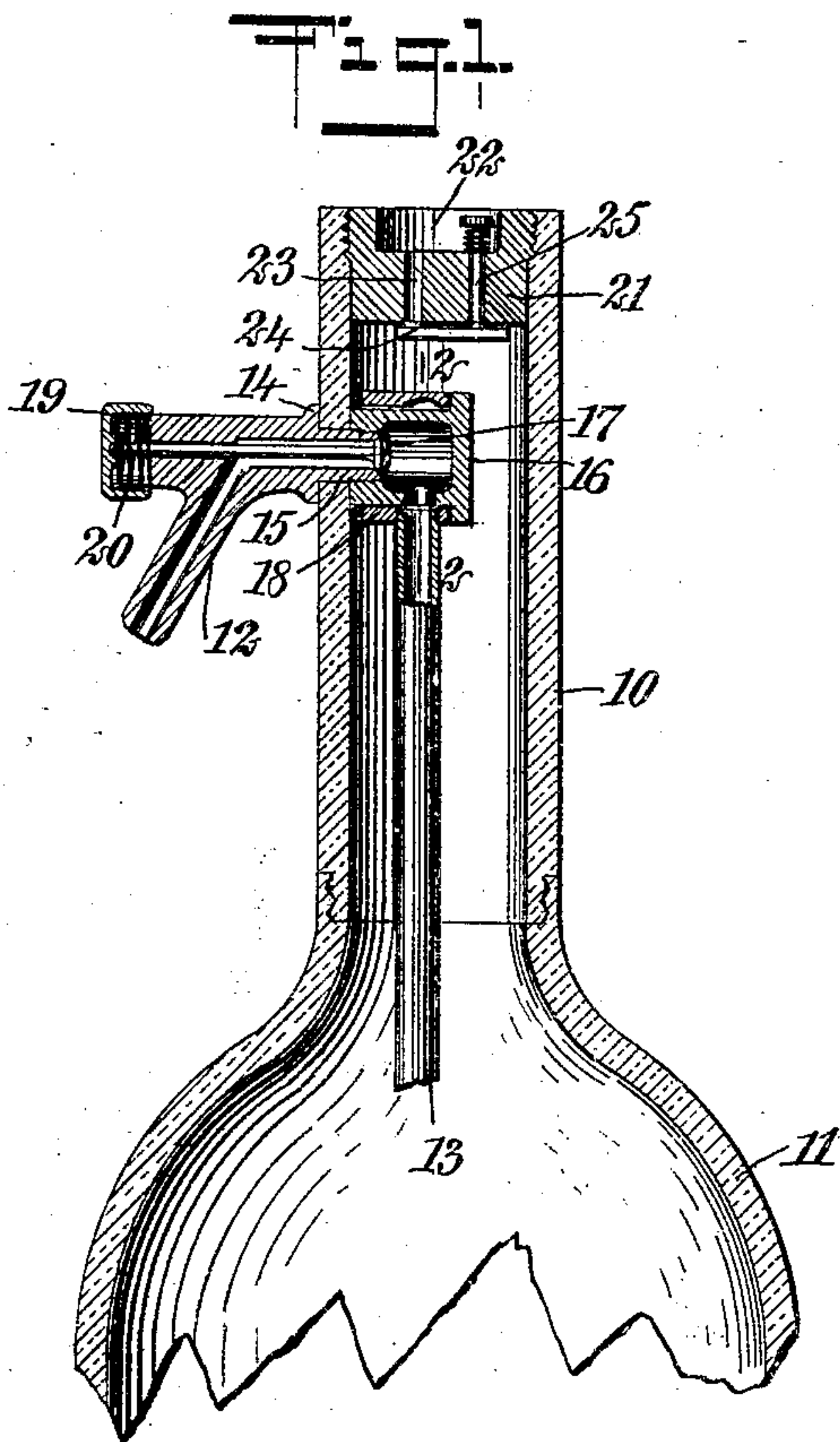


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BOTTLE.

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908,163.

Patented Dec. 29, 1908.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK SONNENFELD AND RUBIN FISHER, OF NEW YORK, N. Y.

BOTTLE.

No. 908,163.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed March 14, 1908. Serial No. 421,000.

To all whom it may concern:

Be it known that we, FRANK SONNENFELD, a subject of the King of Hungary, and RUBIN FISHER, a citizen of the United States, and both residents of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Bottle, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in bottles, and more particularly to that type of bottle used for dispensing liquids under pressure, as, for instance, vichy, seltzer, and other carbonated or aerated liquids.

One object of our invention is to provide a bottle having a valve-controlled discharge nozzle carried by the neck of the bottle and communicating within the neck with a tube extending to substantially the bottom of the bottle. In combination with this form of discharge mechanism, we employ a stopper having a valve-controlled passage there-through, the means for operating the valve being below the top of the stopper, so that it cannot be operated accidentally. This valve-controlled passage permits of the withdrawal after the bottle is inverted, of that portion of the contents of the bottle which is not forced out through the first-mentioned discharge passage by the pressure of the gas.

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, and in which—

Figure 1 is a central longitudinal section through a portion of a bottle constructed in accordance with our invention; Fig. 2 is a vertical section on the line 2—2 of Fig. 1; Fig. 3 is a central longitudinal section through a somewhat modified form of bottle; and Fig. 4 is a face view at the discharge nozzle and on an enlarged scale.

The features of our improvement relate to the neck of the bottle, and the mechanism carried by the neck of the bottle for discharging the contents from the interior thereof. The neck 10 of the bottle may be integral with the body portion 11, if desired, or may be detachable therefrom, as indicated in the drawings. The neck of the bottle intermediate its ends, carries a discharge nozzle or spout 12, which is provided with a suitable valve and connections to the tube 13 within the body. As shown in Fig. 1, the said discharge nozzle is provided with a shoulder 14,

engaging with the outer surface of the bottle neck and with a threaded tubular portion 15 extending to the interior of the bottle.

Within the bottle neck, a hollow head 16 is screwed thereto, and within this head and at the inner end of the tubular portion 15, is located a controlling valve 17. The head 16 is cylindrical in cross section and is provided with a flange at its innermost end, which serves for the retention of a collar 18 encircling the head and resiliently mounted thereon. The collar is held between the flange of the head and a suitable packing, so as to form a substantially air-tight joint with the head, and the head is provided with a passage in the lower side thereof leading outwardly toward the collar. The tube 13 is carried by the collar and the collar is freely rotatable on the head.

In assembling the parts, the tubular portion 15 is extended through the aperture in the side of the bottle neck and the head and collar are placed in position. By rotating the head, the discharge nozzle is rigidly secured in place, and as the tube 13 and collar 18 are unattached to the head, the latter may be freely rotated to lock it to the discharge nozzle, and, at the same time, to force the end of the collar against the packing. The valve stem of the valve 17 extends outward through the nozzle, and is provided with a cap or push button 19 at its outer end and a suitable spring 20 normally holding the valve to its seat.

Firmly secured within the bottle neck, adjacent the mechanism above described, we provide a stopper 21 having a recess or chamber 22 in its outer surface and having a passage 23 extending therethrough. At the inner end of the passage is a valve 24 for controlling the passage, said valve being carried by a valve stem 25 extending through the stopper and terminating within the recess or chamber 22. At the outer end of the valve stem, there is provided a suitable head or cap for facilitating the operation of the valve, and a spring for normally holding the valve to its seat. After the discharge nozzle and its connecting parts are secured in place, the stopper 21 is screwed in place, the screw threads being preferably covered with a cement or glue, which positively prevents the stopper from being removed. The discharge mechanism cannot be removed, as should a person rotate the nozzle from the exterior of the

bottle, the head 16 will turn with the nozzle and the nozzle will not be loosened. The only way the nozzle can be removed, is by holding the head 16 against rotation by the insertion of a tool through the mouth of the bottle, but the mouth of the bottle is closed by the non-removable stopper 21.

In using the device, the liquid is dispensed through the nozzle 12 upon opening the valve 17. When all of the liquid which can be drawn off by its own power, has been permitted to escape, there will normally still remain a small quantity of liquid in the bottom of the bottle. To withdraw this last portion of the liquid, the bottle is inverted and by means of the finger or by any suitable tool, the valve stem 25 is forced inward and the passage 23 opened.

Slight changes may be made from the construction shown in Figs. 1 and 2. For instance, as shown in Figs. 3 and 4, the stopper 21^a may have a flange resting on the outer end of the bottle mouth and have a collar 26 engaging with the outer surface of this flange and threaded to the exterior or cemented to the outer surface of the bottle. The valve stem 25^a may have the head 27 at the outer end thereof, so formed as to deflect outwardly any liquid which may escape through the inclined passage 23^a. The discharge nozzle 12^a is provided with a base flange 14^a, engaging with the curved surface of the bottle neck, so that the nozzle cannot be rotated, and a tube 15^a is extended through the nozzle and threaded to the head 16^a within the bottle neck. The inner end of the tube 15^a serves as a valve seat for the valve 17, while the outer end of the tube is provided with recesses into which a suitable tool may be inserted for rotating the tube and screwing it into the head. The cap 19 at the end of the valve stem normally lies adjacent the outer end of the tube and prevents the tube from being rotated save

by a person possessing the particular form of operating key or tool.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A bottle provided with a stopper having a discharge passage terminating in a recess or chamber at the outer end thereof, a valve for controlling said passage, a valve stem for said valve, and a head for said valve stem within said chamber or recess and presenting a beveled or inclined surface for deflecting the liquid issuing through said discharge passage when said head is depressed to open the valve.

2. A bottle having a discharge nozzle carried by the neck thereof and extending through the wall of said neck, a head within said bottle neck and secured to the inner end of said nozzle, a valve within said head for controlling the flow of fluid through said nozzle, a tube connected to said head and extending downwardly within the bottle, and a stopper for closing the mouth of the bottle.

3. A bottle having a discharge nozzle carried by the neck thereof and extending through the wall of said neck, a head within said bottle neck and secured to the inner end of said nozzle, a valve within said head for controlling the flow of fluid through said nozzle, a tube connected to said head and extending downwardly within the bottle, and a non-removable stopper closing the mouth of the bottle and having a valve-controlled passage therethrough.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANK SONNENFELD.
RUBIN FISHER.

Witnesses:

C. W. FAIRBANK,
EVERARD B. MARSHALL.