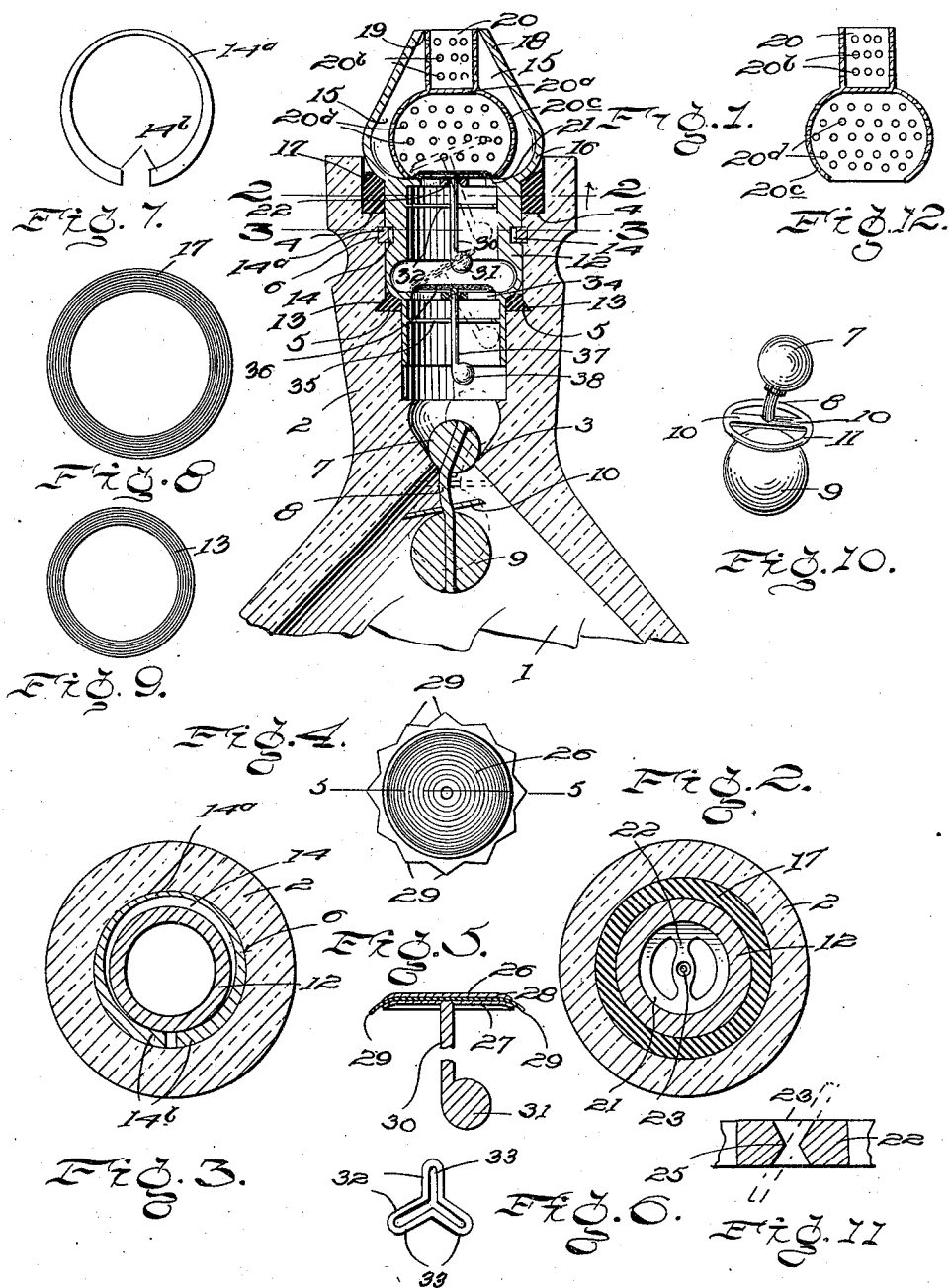


J. BUKTENICA.
NON-REFILLABLE BOTTLE OR JAR.
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Patented Aug. 29, 1911.



WITNESSES
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UNITED STATES PATENT OFFICE.

JOSEPH BUKTENICA, OF CHICAGO, ILLINOIS.

NON-REFILLABLE BOTTLE OR JAR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH BUKTENICA, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Non-Refillable Bottles or Jars, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to non-refillable bottles and the principal object of the same is to provide a novel arrangement of valves which will automatically open to permit the contents of the bottle to be freely removed, but will automatically close if an attempt is made to refill the bottle.

Another object of the invention is to provide novel means for preventing wires or other articles being used to hold the valves open, to permit fraudulent refilling of the bottle.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:

Figure 1 is a fragmentary vertical sectional view of a bottle the neck of which is provided with means for preventing the bottle being refilled. Fig. 2 is a transverse sectional view taken on the line 2—2, Fig. 1. Fig. 3 is a similar view taken on the line 3—3, Fig. 4. Fig. 4 is a top plan view of one of the valves forming a part of this invention. Fig. 5 is a sectional view taken on the line 5—5, Fig. 4. Fig. 6, is a plan view of one of the valve stem guides. Fig. 7 is a plan view of a locking ring for holding the shell or casing within the neck of the bottle. Figs. 8 and 9 are detail plan views of gaskets used in connection with this invention. Fig. 10 is a detail perspective view of a valve for controlling the communication between the body of the bottle and the neck. Fig. 11 is a detail vertical sectional view of one of the valve seats in the shell or casing. Fig. 12 is a detail sectional view of a cage in the outlet end of the bottle for preventing the bottle being refilled by using implements.

Referring to the accompanying drawings by numerals, it will be seen that the improved bottle comprises a body 1 provided

with a neck 2 the base of which is contracted to provide a valve seat 3 at the junction of the neck and body. The neck 2 is provided with an internal annular gasket seat 4 adjacent its outlet end and with a similar seat 5 at an intermediate point which is provided with a beveled inner wall. An annular groove 6 is formed within the neck 2 below the gasket seat 4.

A valve 7, preferably a ball, is provided for controlling the outlet through valve seat 3. Said valve is provided with a pendent stem 8 that projects into body 1 and carries a weight 9 that normally holds valve 7 to its seat 3. Arms 10 project laterally from stem 8 and carry a ring 11 which contacts with the shouldered portion of body 1 when liquid is being poured and thereby prevents the weight 9 from closing the communication between the body 1 and the neck 2.

A shell or casing 12 is fitted in neck 2 and rests upon a gasket 13 in seat 5. Said shell is provided with an external groove 14 that extends entirely around the shell and is in alinement with the groove 6 of the neck 2. A resilient ring 14^a preferably split and provided with thickened end portions 14^b is seated in groove 6 and the said thickened portions 14^b extend into shell groove 14 and thereby lock said shell within the neck 2. A head 15 is provided for shell 12 the rounded base portion 16 of which rests on the beveled portion of a gasket 17 in seat 4. As will be obvious, the gaskets 13 and 17 are compressed by the shell when said shell is forced into operative position in the neck 2, and seal the joints between the neck and shell liquid-tight. The head 15 is provided with a tapered outer end 18 that is provided through which the contents of the bottle is poured.

A discharge tube 20 depends from the outlet opening 19 and is provided with a closed bottom 20^a. Said tube 20 is provided with a plurality of perforations 20^b. An enlarged and preferably rounded chamber 20^c depends from tube 20 and its open bottom rests on a valve seat or flange 21 (to be described). Chamber 20^c is provided with a plurality of perforations 20^d. The said inwardly projecting annular flange or valve seat 21 is carried by the body of the shell 12 at its junction with head 15, said flange being centrally spaced by a bar 22 provided with a central opening 23. Said

opening tapers from each end toward the center thereof to provide an annular ledge 25.

A disk valve is seated on flange 21 and bar 22, said valve being preferably formed of upper and lower concaved plates 26 and 27 and an interposed disk of rubber or other flexible material 28. The periphery of the flexible disk 28 projects beyond the plates 26 and 27 and is scalloped, as indicated at 29 so that it can be readily flattened on the flange 21 when the valve is in a sealing position. Said valve has a stem 30 projecting through the opening 23 of bar 22 and its lower end is provided with a weight 31. Stem 30 is smaller in diameter than opening 23 and rocks on the ledge 25 when the valve is open, as indicated by dotted lines in Fig. 1 of the accompanying drawings. Bars 32, (see Fig. 6) preferably integral, radiate toward the center of the body of shell 12 below flange 21, each bar being provided with a longitudinal guide slot 33 which communicate at their inner ends. Stem 30 passes through said bars 32 at the junction of their slots 33 and when swung from a central position incidental to the operation of pouring liquid from the bottle, moves in one of said slots.

The lower portion of the body of the shell 12 is provided with a valve seat 34 and guide bars 35 for a disk valve 36 and its stem 37 that is provided with a weight 38. Said seat, bars, valve and weighted stem are precisely the same in construction and operation to the similar parts of the invention just described.

It will be seen from the foregoing that when the bottle is tilted to discharge its contents, valve 7 and the two disk valves will automatically open, the disk valves being guided to the dotted line positions indicated in Fig. 1 by the slotted bars 32 and 37. And if an attempt is made to refill the bottle, the said valves will be forced to their seats by the pressure of the incoming liquid, thereby sealing the bottle. The bottle may be sealed by means of a plug or stopper inserted in the tube 20^a. When the bottle is tilted to discharge its contents the valves are unseated as indicated by dotted lines in

Fig. 1, so that the liquid can flow through the shell 12 and into chamber 20^a, and escape from said chamber through the perforations 20^c into the head 15. From said head 15, the liquid enters tube 20^a through the perforations 20^c from which it can be readily poured.

It will be clear that by means of the closed bottom tube 20^a and the chamber 20^c access cannot be had to the valve from the exterior of the bottle so that it will be impossible to use a tool or implement to hold the valves open.

What I claim is:—

1. A non-refillable bottle comprising a body provided with a neck, a valve seat being formed at the junction of said neck and body, a valve in said neck and provided with a weight for normally holding the valve to said seat, a shell in said neck and provided with spaced valve seats, a discharge head for said shell, a closed bottom perforated tube in said head, an enlarged perforated chamber in said head and depending from the closed bottom of said tube, said chamber having an open base that surrounds the outer valve seat of said shell, valves for the seats in said shell, pendent stems carried by said valves, and guiding bars carried by the shell and engaging said stems.

2. A non-refillable bottle comprising a body provided with a neck, a valve at the junction of said neck and body, a shell in said neck, means for fastening said shell to said neck, upper and intermediate valve seats in said shell, radiating guide bars extending across said shell below said seats, said bars being longitudinally slotted and the slots thereof meeting at the junctions of said bars, valves for said seats having weighted stems that project through and are slidable in the slots of said bars, and a discharge head for said shell.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOSEPH BUKTENICA.

Witnesses:

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H. JOSEPH DOYLE.