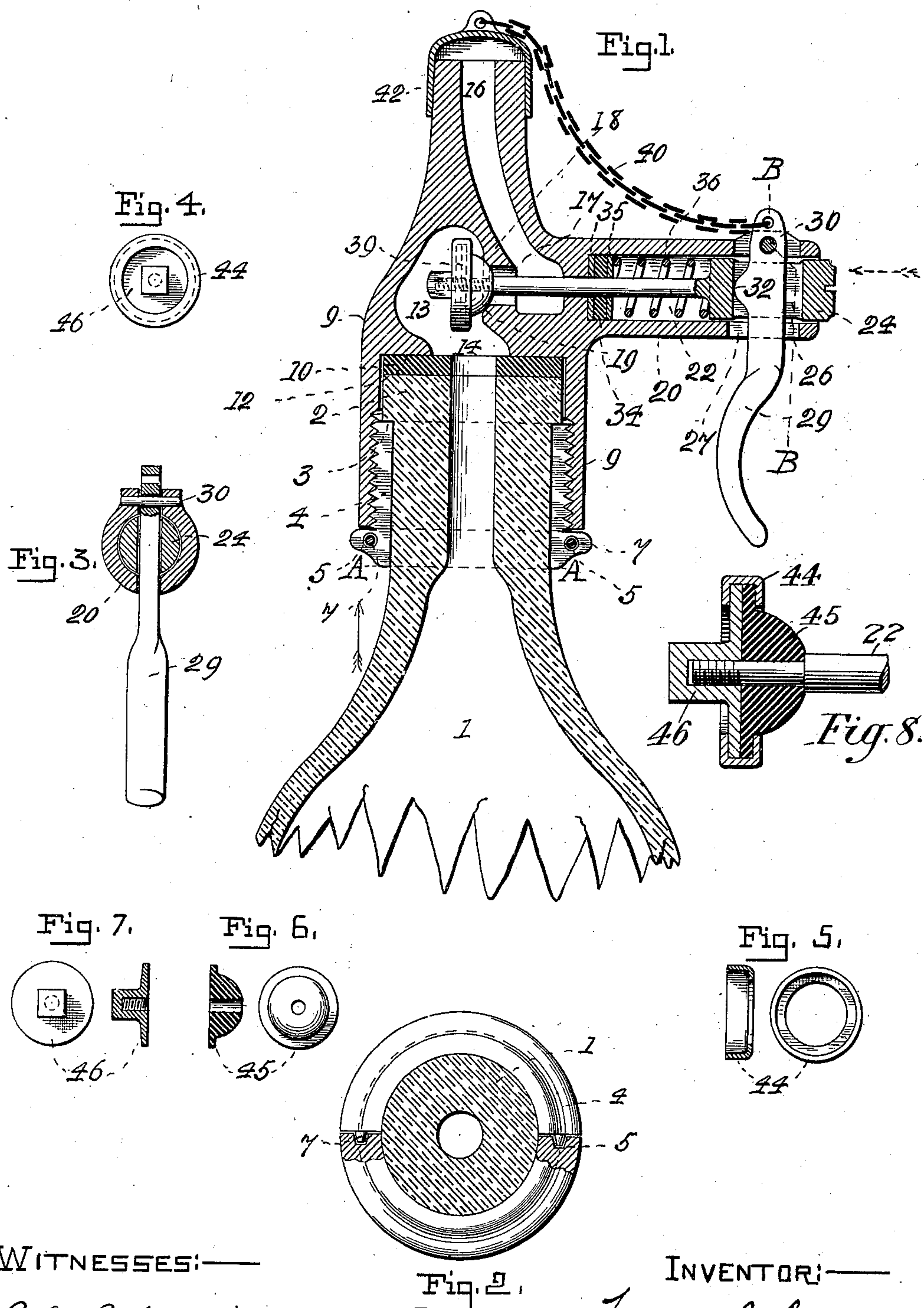


No. 754,126.

PATENTED MAR. 8, 1904.

F. B. CARY.
BOTTLE CLOSING DEVICE.
APPLICATION FILED FEB. 6, 1902.

NO MODEL.



WITNESSES:—

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UNITED STATES PATENT OFFICE.

FRANCIS B. CARY, OF BALTIMORE, MARYLAND.

BOTTLE-CLOSING DEVICE.

SPECIFICATION forming part of Letters Patent No. 754,126, dated March 8, 1904.

Application filed February 6, 1902. Serial No. 92,889. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS B. CARY, of the city of Baltimore, State of Maryland, have invented certain Improvements in Bottle-Closing Devices, of which the following is a specification.

This invention relates to certain improvements in that class of bottle-closing devices in which a spring-held valve operated by means of a hand-lever is employed; and it consists in certain details of construction of the same, as will be specifically pointed out in the claim.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a central vertical section of the upper part of a bottle, showing the application thereto of the improved closing device. Fig. 2 is a section of Fig. 1, taken on the dotted line A A and looking in the direction indicated by the arrow in full lines. Fig. 3 is a section of Fig. 1, taken on the dotted line B B and looking in the direction indicated by the dotted arrow. Figs. 4 to 7, inclusive, are details of the apparatus hereinafter described. Fig. 8 is a cross-sectional view of a valve the elements of which are shown in Figs. 5, 6, and 7.

Referring now to the drawings, 1 is a bottle having the head 2 and the shoulder 3.

4 represents an exteriorly-threaded collar in halves, which encircles the neck of the bottle immediately below the shoulder 3. To make the threads of the two sections of the collar register one with the other, one section is provided with the cavities 5 and the other with the pins 7, adapted to enter the said cavities, as shown particularly in Fig. 2.

9 is a shell, the lower part of which is interiorly threaded, screwed over the threaded collar 4, and a tight joint is effected by means of a compressible washer 10, interposed between the end of the bottle and an annular face 12, formed in the shell.

13 is a valve-chamber in the shell, having a passage 14 in communication with the interior of the bottle.

16 is an outlet-passage extending from near the annular face 12 to the nozzle or extreme

upper end of the shell 9, and 18 the partition separating the valve-chamber from the said outlet-passage, which partition is provided with the duct 17. At the inner end of the duct 17 is formed the valve-seat 19.

20 is a hollow cylindrical extension of the shell 9, with its longitudinal center in alignment with that of the duct 17. The inner portion of the extension is bored to receive the stem 22, to which a valve hereinafter described is secured, and the outer portion contains a cylindrical enlargement 24 of the stem 22. This enlargement is provided with a slot 26, and the cylindrical extension 20 with a similar one, 27, and through these is inserted the hand-lever 29, which is pivoted at 30 to the said extension, as shown in Fig. 3. A toe 32 on the lever 29 bears against the end of the slot 26 in the opening of the valve, as hereinafter described.

Within the extension 20 and placed around the stem 22 is the packing-washer 34 and the metallic washers 35, and between these and the enlargement 24 of the stem 22 is a coiled spring 36 to retain the valve 39, hereinbefore referred to, on its seat 19.

A chain 40 connects the lever 29 with a removable cap 42, which is used only to prevent the entrance of dust to the outlet-passage 16 in the nozzle when the bottle is not in use.

The valve 39 consists of a flanged annulus 44, an inner face view and a cross-section of which is shown in Fig. 5, in which is placed the flanged hemispherical plug 45, preferably of rubber. Fig. 6 shows a face and a cross-section of the rubber plug. The remaining element of the valve is the flanged nut 46, a rear view and a cross-section of which is shown in Fig. 7. After the rubber plug 45 is inserted in the annulus 44 and the flanged nut 46 added the flange of the annulus is drawn or turned over the flange of the nut to prevent its detachment.

By reference to Fig. 1 it will be seen that the end of the stem 22 is threaded and screwed through the rubber plug 45 into the retaining-nut 46. A rear view of the complete valve is shown in Fig. 4.

Supposing the bottle to be charged with some liquid under gaseous pressure and it is

desired to discharge it of its contents, the bottle is tilted and then the hand-lever 29 forced inward, when the valve is unseated and the liquid issues from the nozzle. When the bottle is not in use, the cap 42 is placed over the nozzle.

I claim as my invention—

A bottle-closing device which consists of a flanged hemispherical plug of some compressible material, a flanged nut the face of which is in contact with the flat surface of the plug,

an annulus which is placed over the hemispherical portion of the said plug with its flange turned over the edge of the nut, combined with a stem which is forced through the compressible plug and screwed into the nut, substantially as specified.

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Witnesses:

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