No. 710,139. Patented Sept. 30, 1902.

H. BREUNIG & H. J. WALDEYER.

NON-REFILLABLE BOTTLE.

(Application filed Feb. 26, 1902.)

(No Model.)

Fig. 1.

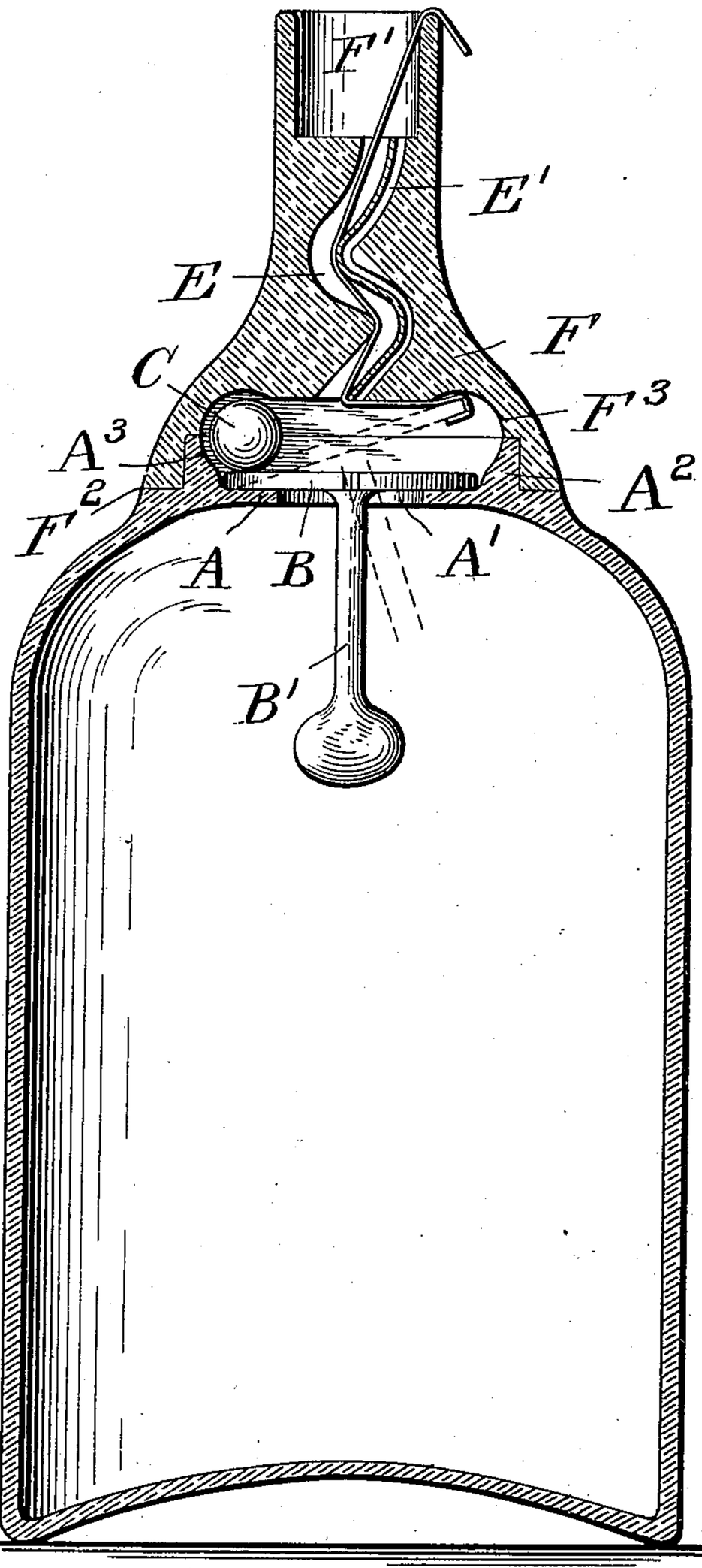
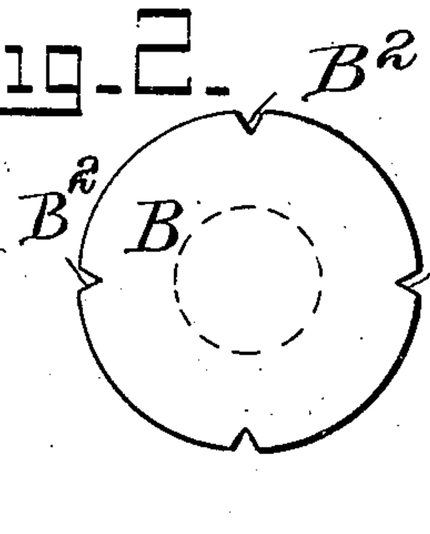


Fig. 2.



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UNITED STATES PATENT OFFICE.

HERMAN BREUNIG AND HENRY J. WALDEYER, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 710,139, dated September 30, 1902.

Application filed February 26, 1902. Serial No. 95,770. (No model.)

To all whom it may concern:

Be it known that we, HERMAN BREUNIG and HENRY J. WALDEYER, citizens of the United States, residing at the city of New York, county and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

Our improvement relates particularly to devices adapted to be placed in the neck or outlet of a bottle or like receptacle to prevent the diluting of liquid contained therein or the refilling of said receptacle by an inferior or counterfeit article; and the objects of our improvements are, among others, to furnish a device of this kind of simple and inexpensive construction which will effectively prevent the said dilution or refilling and which will hold the neck of the bottle normally closed, and thus prevent evaporation or accidental spilling of the contents. It is illustrated in the accompanying drawings referred to herein, and in which—

Figure I is a vertical section of the bottle, showing our improvements. Fig. II is a plan of the disk B.

The bottle is provided at the lower end of the neck with a diaphragm A, having a central opening A′. Upon this diaphragm the disk B is seated, having an inwardly-extending arm B′, enlarged at its inner end, which acts as a weight to maintain the disk in contact with the diaphragm A. The collar A^2 projects vertically from the diaphragm A and is substantially of the same diameter as the disk B. Upon the disk B the marble C is placed, a runway being provided therefor by the annular grooves A^3 of the collar A^2 and F^3 of the neck F. The channels E and E′ are preferably of undulating form, so as to prevent the insertion of a wire therethrough. The channel E is adapted to serve as an outlet for the liquid, while E′ admits the entrance of air to take the place of the liquid displaced. In the upper end of the neck the ordinary channel F′ is provided for the reception of a cork.

The disk B is provided with indentations B^2, which permit the liquid to escape more easily when the valve is open. In the manufacture of this device the disk B is first placed upon the diaphragm A and the marble C located in the groove A^3 of the collar. A wire is then passed around one of the edges of the disk and through the channel E of the neck. The neck is then placed upon the body of the bottle, with the annular sleeve F^2 fitting snugly over the collar, and the two parts sweated or otherwise joined. After the bottle has been filled the wire is then withdrawn, and the bottle, with its contents, is then ready for use.

It will be seen that in order to remove the contents of the bottle it must be inverted until the weighted end of the arm B is thrown in a direction opposite to the point where the marble C is located. This will cause the disk to tilt and open the valve to allow the liquid to flow therethrough. The marble C will pass by gravity to the lowest point in the channel, and thus always act as a fulcrum, upon which the disk turns.

What we claim is—

1. In a device of the character described, the combination of a diaphragm near the neck of the bottle, a disk seated thereon, a portion of said neck overhanging the disk, an arm projecting through the said diaphragm and a weight on the end of said arm, an annular groove in said neck and a ball within said groove, the diameter of which is greater than the distance from the disk to the overhanging portion of the neck.

2. In a device of the character described, the combination of a diaphragm in the upper part of the bottle, a central opening in said diaphragm, a neck joined to said bottle above the diaphragm, a disk seated on said diaphragm, notches in the vertical edge of said disk, an arm extending from the center of said disk through said opening, a weight on the inner end of said arm, and a ball between the upper surface of said disk and the neck.

Signed at the city of New York this 21st day of February, 1902.

HERMAN BREUNIG.
HENRY J. WALDEYER.

Witnesses:
S. J. COX,
HERMAN MEYER.