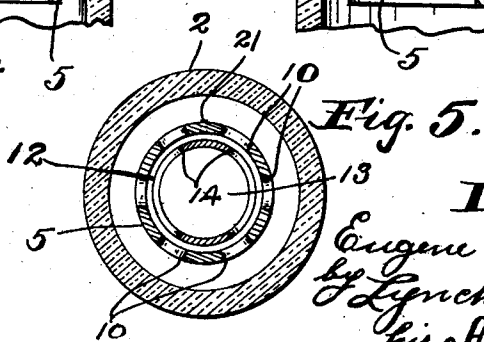
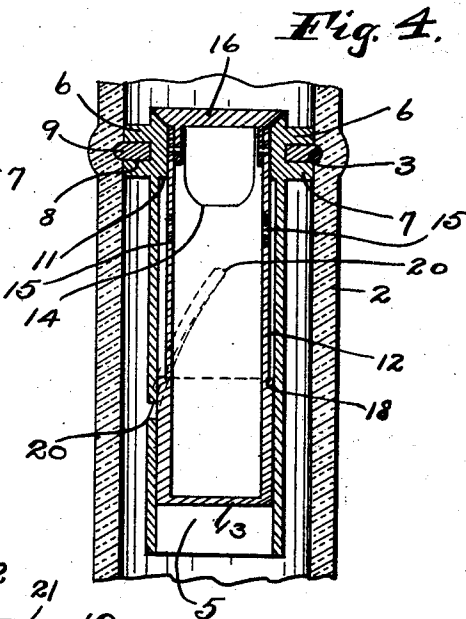
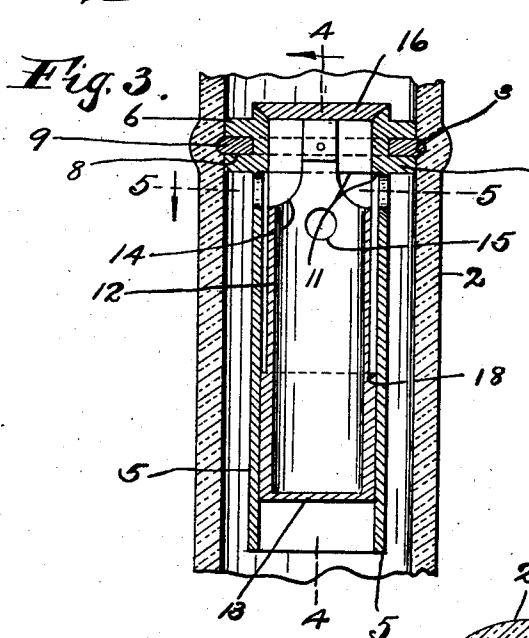
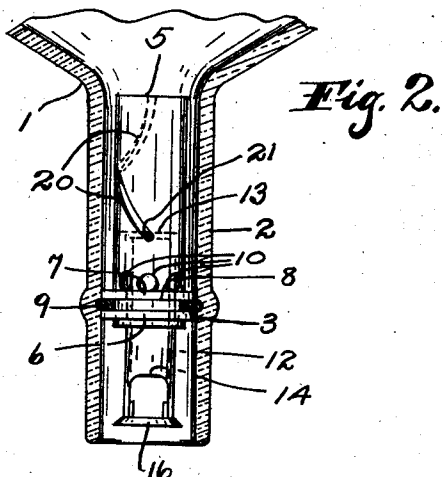
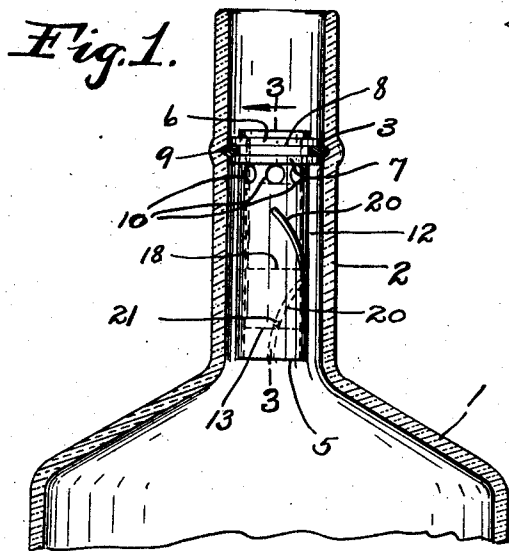


E. RÓTHMAN.
SELF MEASURING NON-REFILLABLE BOTTLE.
APPLICATION FILED JUNE 10, 1911.

1,022,877.

Patented Apr. 9, 1912.



Witnesses:
H. J. Pettina
N. L. McDowell

Inventor:
Eugene Róthman
by Lynch & Dorr
his Attorneys.

UNITED STATES PATENT OFFICE.

EUGENE RÓTHMAN, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM F. LICHTENFELD, OF CLEVELAND, OHIO.

SELF-MEASURING NON-REFILLABLE BOTTLE.

1,022,877.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed June 10, 1911. Serial No. 632,333.

To all whom it may concern:

Be it known that I, EUGENE RÓTHMAN, a subject of the Emperor of Austria-Hungary, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Self-Measuring Non-Refillable Bottles; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to new and useful improvements in self-measuring non-refillable bottles.

The object of this invention is to provide a combined stopper and measuring device adapted to be secured in the neck of a bottle which will effectually prevent the refilling of the bottle and which can also limit the quantity of fluid which can be poured from the bottle at any one time.

With these objects in view my invention consists in the features of construction and combination of parts described in the specification, pointed out in the claims and illustrated in the accompanying drawings.

In the accompanying drawings Figure 1 is a central vertical section of a portion of a bottle with my improvement applied thereto. Fig. 2 is a similar view showing the bottle inverted and the stop in its outer position. Fig. 3 is an enlarged section on line 3—3, Fig. 1. Fig. 4 is a section on line 4—4, Fig. 3. Fig. 5 is a section on line 5—5, Fig. 3.

Again referring to the drawings 1 represents a bottle of the usual construction having a neck portion 2. In the inner surface of the neck of the bottle is formed an annular groove 3. The stopper comprises a cylindrical member 5 which can be made any length desired, and in diameter the said cylindrical member is less than the diameter of the bore of the neck of the bottle so that when the said member is placed in the neck a space will be left between the said cylindrical member 5 and the neck of the bottle. At its upper end the said cylindrical member 5 is provided with two annular flanges, shown at 6 and 7, which fit snugly into the neck of the bottle and said flanges are spaced a short distance apart so that a cement receiving groove 8 is formed between them. The said groove 8 is adapted to reg-

ister with the groove 3 in the neck of the bottle when the member 5 is in position and both grooves are filled with cement, as shown at 9. At the upper end of the cylindrical member 3, just below the flange 7, are formed a series of openings 10. On the inner face of the member 5 near the upper end thereof is formed an annular shoulder 11. Within the cylindrical member 5 is arranged a second cylindrical member 12 which fits snugly within said outer cylinder 5 but is free to slide therein. This member is closed at its lower end, as shown at 13, and at the upper end thereof the sides are cut away forming comparatively large openings 14, and below the said openings are formed smaller openings 15. To the upper end of the said cylindrical member 12 is secured a stopper forming disk 16 having a beveled edge which fits into a beveled seat 17 formed at the top of the outer cylindrical member 5 so that when the said disk 16 is on said seat 17 the mouth of the said cylindrical member 5 is entirely closed. Near the lower end of the cylindrical member 12 is formed an annular shoulder 18, and when the said member is in its outer position the said shoulder 18 abuts against the shoulder 11 formed on the inner face of the cylindrical member 5 which limits the outward movement of the member 12. In the outer cylindrical member 5 is formed a spiral groove 20 and on the inner cylindrical member is mounted a small pin 21 which extends into the said groove, the object of which is to retard the outward movement of the inner cylindrical member when the bottle is tipped and the liquid is being poured therefrom.

In using a bottle provided with my improvement the liquid is first placed in the bottle and my improved stopper is then inserted into the neck of the bottle and is secured therein by means of cement. When it is desired to pour from the bottle the bottle is tipped and the liquid therein will flow down the neck of the bottle between the cylindrical members 5 and the wall of the neck and will then pass through the openings 10 and then through the openings 14 into the inner cylindrical member 12. As soon as this member is filled the weight of the liquid therein will cause the said inner member to move out in the outer cylindrical member thereby uncovering the openings 14 in the

end of the cylindrical member 12 and permitting the liquid which has entered the said inner cylindrical member to pour out through the neck of the bottle. Now, as the inner cylindrical member moves out the shoulder 18 thereon will come in contact with the stop forming shoulder 11 in the outer cylindrical member thereby limiting the outward movement of said inner member and at the same time the said inner cylindrical member will close the openings 10 in the outer cylindrical member thereby preventing any more liquid being poured from the bottle and in order to get any more liquid out of the bottle it is necessary to right the bottle and tip it a second time.

It will further be seen that the capacity of the inner cylindrical member can be changed as desired so that any quantity may be measured off at one time as desired. Also my improved stopper renders the bottle practically non-refillable, as the difficulty which would be experienced in refilling it and the length of time it would take to do the same would make it very unprofitable and would discourage any attempt to refill the bottle.

What I claim is,—

1. A combined stopper and measuring device for bottles comprising a cylindrical member provided with an exterior annular flange at its upper end adapted to fit snugly within the neck of a bottle so as to leave a space between the neck of the bottle and said cylindrical member, said member being provided with a series of openings at its upper end below said flange and with an annular shoulder on its inner face above said opening, a cylindrical member closed at its lower end arranged within said outer member so as to slide freely therein and

adapted when in its outer position to close the opening in said outer member, said inner cylindrical member being provided near its lower end with an exterior annular shoulder adapted to abut against the annular shoulder on the outer member when the inner member is in its outer position, said inner member being also provided with a series of openings near its upper end and a stopper forming disk secured on the upper end of said inner member and arranged to close the upper end of said outer cylindrical member.

2. A combined stopper and measuring device for bottles comprising a cylindrical member provided with an exterior annular flange at its upper end adapted to fit snugly within the neck of a bottle so as to leave a space between the neck of the bottle and said cylindrical member, said member being provided with a series of openings at its upper end below said flange, a cylindrical member closed at its lower end arranged within said outer member so as to slide freely therein, said inner cylindrical member being provided with a series of openings at its upper end, a stopper adapted to close the upper end of said outer member secured on the inner member, means for limiting the outward movement of said inner member in said outer member and means for retarding the movement of said inner member in said outer member when the bottle is tipped, for the purpose set forth.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

EUGENE RÓTHMAN.

Witnesses:

VICTOR C. LYNCH,
N. L. McDONNELL.