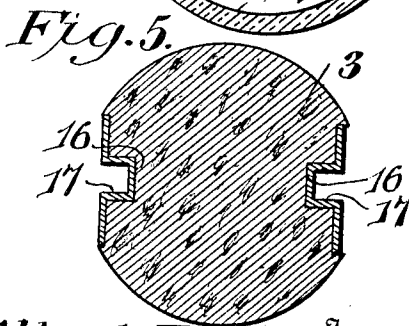
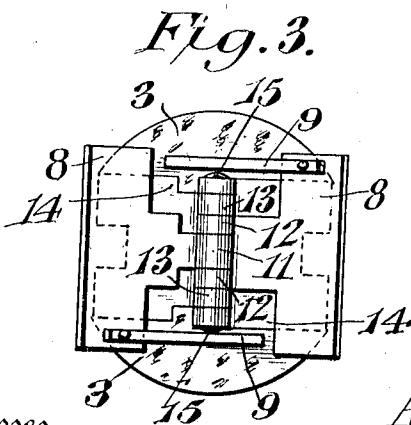
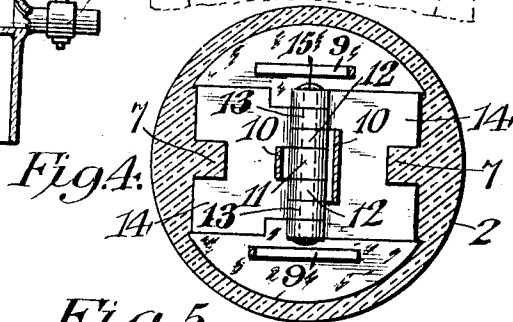
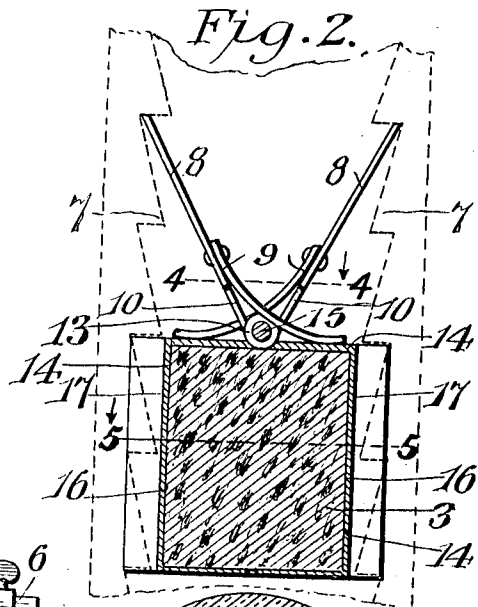
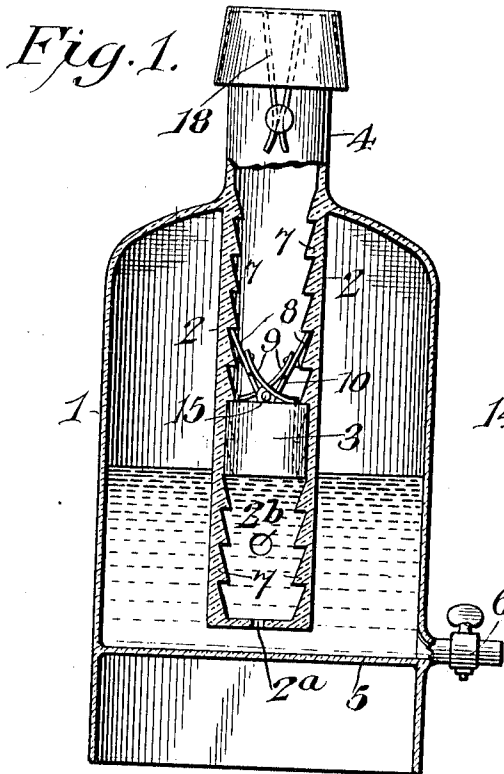


A. KLEIN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JULY 5, 1911.

1,019,659.

Patented Mar. 5, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT KLEIN, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

1,019,659.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed July 5, 1911. Serial No. 637,012.

To all whom it may concern:

Be it known that I, ALBERT KLEIN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

The invention relates to improvements in non-refillable bottles.

The object of the present invention is to improve the construction of non-refillable bottles, and to provide a simple, efficient and comparatively inexpensive device, designed to prevent the reuse of a bottle or other receptacle except by the manufacturer or owner of the same, and equipped with a floatable indicating device, adapted to remain at the surface of the liquid and to descend within the bottle or other receptacle as the contents are consumed, and capable of indicating if a liquid is surreptitiously introduced into the bottle.

A further object of the invention is to provide a bottle of this character, adapted to remain in an upright position while removing its contents until the indicator has reached the limit of its downward movement, and capable of reuse by a legitimate manufacturer or owner without destroying or replacing any of the parts.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a vertical sectional view of a non-refillable bottle, constructed in accordance with this invention. Fig. 2 is an enlarged vertical sectional view of the indicator, the guiding ratchet bars being illustrated in dotted lines. Fig. 3 is a plan view of the indicator. Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 2, the ratchet guides being shown in full lines. Fig. 5 is a horizontal sectional view on the line 5—5 of Fig. 3.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, 1 designates a bottle, but the improvements are applicable to various liquid containing receptacles, such as jugs, casks, barrels, and the like. The bottle is provided on its interior with a vertical tubular guide 2 receiving an indicating float 3 and depending from the top of the bottle at the junction of the body thereof and the neck 4 and terminating short of a false bottom 5, but the ratchet guide may be extended to the bottom of the bottle, if desired. The false bottom 5 is arranged a sufficient distance above the lower end of the bottle to permit a glass to be placed under a faucet 6, located at or about the plane of the false bottom, so that the entire contents of the bottle may be drawn off without tilting or inverting the bottle. This will enable the float to descend with the surface of the contents for accurately indicating the consumption of the same. The tubular guide is provided in its lower end wall with a perforation 2^a, and it has a perforation 2^b in one of its side walls above the plane of the bottom, as clearly shown in Fig. 1 of the drawing. When the indicating float reaches the lower portion of the tube, it will close the side perforation and be prevented from dropping to the extreme lower end of the tubular guide. The tubular guide, which is approximately the same diameter as the neck of the bottle, is provided at opposite sides with interior ratchet teeth 7, formed on vertical ribs and arranged in a vertical series and having inclined upper faces and provided at their lower ends with horizontal shoulders, and adapted to be engaged by upwardly diverging hinged locking members 8, connected to the top of the indicating float 3 and normally held spread by springs 9, and adapted to lock the float against upward movement and at the same time permit the float to descend as the contents of the bottle are consumed. The locking members 8, which are constructed of sheet metal, or other suitable material, consist of blades or wings and reduced portions or shanks 10. One of the shanks is provided with a centrally arranged eye 11, and the other shank is bifurcated to receive the same and is provided at opposite sides of the eye 11 with eyes 12. The eyes 11 and 12, which are arranged in alinement, also register with eyes 13 of a band 14, extending around the indi-

ating float and having its terminals arranged at the top thereof and provided with the said eyes 13. The eyes 11 and 12 of the locking members are connected with the
 5 eyes 13 by means of a transverse pintle 15.

The indicating float 3, which may be constructed of cork, as illustrated in the accompanying drawing, can also be made of hollow glass or consist of a hollow metallic
 10 body of aluminum, or other suitable material having sufficient buoyancy to float at the surface of the liquid or be supported by the same. The band, which passes around the indicating float, is designed to be constructed of silver, or other suitable metal
 15 not affected by the contents of the receptacle. The springs, which may be constructed of any suitable resilient material, are crossed, as clearly shown in Fig. 2, and they are secured at their upper ends to the
 20 locking members, and their lower ends bear against the upper face of the indicating float. When the locking members are arranged in a horizontal position prior to
 25 placing the indicating device within the bottle, the springs are straight and when the locking members are swung upwardly toward each other, the springs are flexed and
 30 tend to separate or urge the locking members outwardly. The locking members are maintained in engagement with the teeth of the tubular guide by the spring and prevent the
 35 indicating float from rising within the bottle, and will clearly indicate the fact if a liquid is surreptitiously introduced into the bottle through the faucet. The tubular
 40 guide is provided between the vertical ratchet ribs with smooth guiding portions for the cork or other float.

The indicating float is provided at opposite sides with vertical grooves 16 to receive the teeth, and the vertical side portions of the bands are provided between their ends
 45 with grooves 17, conforming to the configuration of the grooves of the float and forming metallic linings for the same to prevent the cork from being worn by the teeth of the guide. The upright side portions of the
 50 bands are extended laterally at each side of the grooves.

The neck of the bottle is designed to receive a stopper and to be sealed as indicated at 18 in Fig. 1 of the drawing. This seals
 55 the tubular guide and prevents access to the same, and the bottle cannot be opened without plainly indicating such fact, which will prevent the bottle from being surreptitiously refilled by any one. The bottle, or other
 60 receptacle is designed to be returned to the manufacturer or owner who upon receiving an empty receptacle may remove the stopper and seal and refill the bottle and reseal the same. The upper end of the indicating
 65 tube may be sealed in any other preferred manner, and when the device is applied to

barrels or other receptacle not having a neck, a suitable stopper or seal will be applied to the guide 2 for preventing access to the indicating float. When the stopper
 70 is removed from the neck of the bottle, the locking members may be readily disengaged from the teeth of the guide by a suitable tool, and may be held out of engagement while the float is withdrawn from the bottle
 75 prior to refilling the same. After the bottle is refilled, the indicating float is replaced and the bottle is then corked and sealed. In this manner the bottle may be legitimately refilled without destroying or replacing any
 80 portion of the mechanism, for preventing fraudulent refilling, other than the stopper and the seal.

The receptacle is designed to be made sufficiently transparent to clearly show the
 85 indicating device, and when the guide is tubular, it will, of course, be also transparent, so that the position of the indicating device may be readily seen.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A device of the class described including a receptacle having a neck adapted to receive an ordinary stopper and sealing
 95 means, a vertical guide tube formed integral with the receptacle and connected at the upper end to the lower end of the neck and forming a continuation of the same and having an outlet at the lower portion communicating with the interior of the receptacle, the tube and the neck being imperforate
 100 above the said outlet and the said tube being also provided with smooth guiding portions and having a longitudinal rib located between the guiding portions and provided with teeth shouldered at their
 105 lower ends, and a float slidable within the guide tube and provided with means for engaging the teeth of the said rib, the latter being removable through the neck when the stopper is withdrawn to permit the bottle to be refilled.

2. A device of the class described including a receptacle having a neck adapted to receive a stopper and sealing means, a vertical
 115 guide tube formed integral with the receptacle and connected at the upper end to the lower end of the neck and forming a continuation of the same and having an outlet at the lower portion communicating with the interior of the receptacle, said tube being
 120 also provided with smooth guiding portions and having longitudinal ribs located between the guiding portions and provided with teeth shouldered at their lower ends, and a float slidable within the guide tube along the smooth guiding portions thereof
 125 and provided with means for engaging the teeth of the ribs for normally locking the float against upward movement, said float

being removable through the neck of the receptacle when the stopper is withdrawn for refilling the said receptacle.

5 3. A device of the class described including a receptacle having an outlet and provided with an upright guide having opposite ratchet teeth, an indicating float slidable along the guide, upwardly diverging locking members hinged at their lower ends to
10 the float, and crossed springs secured at their upper ends to the locking members and bearing at their lower ends against the float and arranged to urge the locking members outwardly.

15 4. A device of the class described including a receptacle having an outlet and provided with an upright guide having ratchet teeth, an indicating float slidable along the guide, a band extending around the float and
20 provided at its terminals with eyes arranged at the top of the float, a locking member engaging the teeth of the guide, and a pintle pivoting the locking member to the band

and passing through the eyes thereof so as to connect the terminals of the same.

25 5. A device of the class described including a receptacle provided with a neck, a tubular guide of approximately the same diameter as the neck and depending from the lower ends of the same and forming a
30 continuation of the walls thereof and having a lower end wall spaced from the bottom of the receptacle and provided with an opening, an indicating float contained within the guide and slidable along the same, and
35 means for automatically locking the float against upward movement to cause the same to descend as the contents of the receptacle are consumed.

In testimony, that I claim the foregoing
40 as my own, I have hereto affixed my signature in the presence of two witnesses.

ALBERT KLEIN.

Witnesses:

OTTO GREENBERGER,
A. M. NEHRING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."