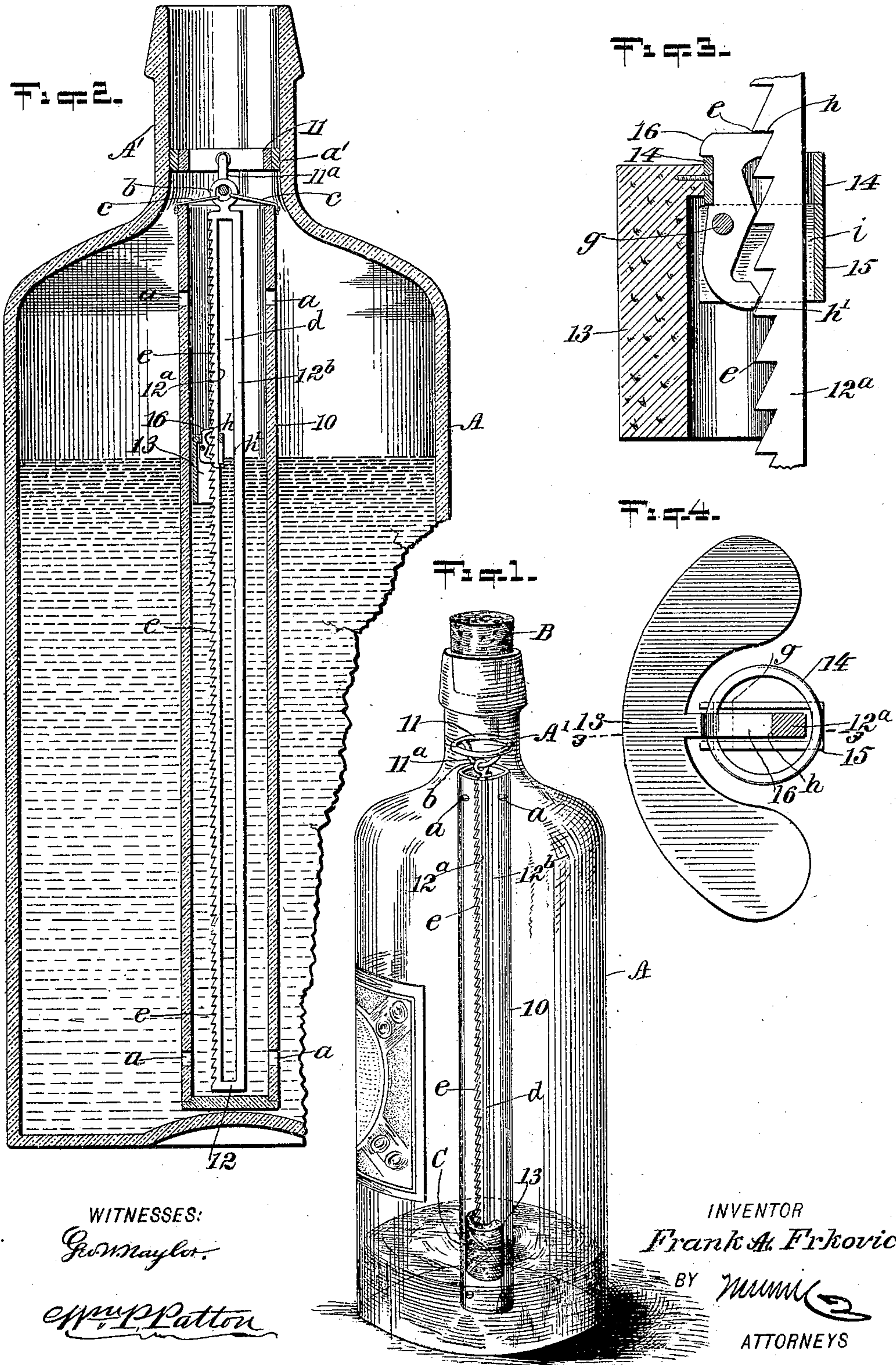


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F. A. FRKOVIC.
INDICATOR FOR BOTTLES.

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TWENTY-FIVE ONE-HUNDREDTHS TO JOSEPH H. HAWLEY, OF
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INDICATOR FOR BOTTLES.

No. 820,106.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed June 24, 1903. Renewed October 14, 1905. Serial No. 282,808.

To all whom it may concern:

Be it known that I, FRANK ANDRE FRKOVIC, a citizen of the United States, and a resident of Galveston, in the county of Galveston and State of Texas, have invented a new and Improved Indicator for Bottles, of which the following is a full, clear, and exact description.

This invention has for its object to provide novel simple means for plainly indicating when the original contents of a bottle have been removed and also to register the amount of liquid removed and that remaining in the bottle as the contents are from time to time partially decanted therefrom; and a further object is to provide means for displaying within the bottle a trade-mark or label which cannot be tampered with.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the invention as applied, showing the relative position of parts when the contents of the bottle are removed. Fig. 2 is an enlarged partly-sectional side view of the improvement and a longitudinal sectional view of a bottle shown broken away at one side and containing the novel indicator device. Fig. 3 is a vertical sectional view of details of the indicator mechanism substantially on the line 3-3 in Fig. 4, and Fig. 4 is a plan view of parts shown in Fig. 3.

The invention is designed for application to liquid packages, such as bottles, that may be of different dimensions and employed as receptacles for liquid merchandise of various kinds, the improvement when applied serving to expose an attempt to refill the bottle after its original contents have been partially or entirely removed.

In the bottle A through its neck A' a cylindrical glass casing 10 is inserted and held suspended, said casing being open at the upper end, closed at its lower end, and having openings a in its side wall near its upper and lower ends. A ring 11, preferably of glass, is closely fitted into the neck A' of the bottle

after an insertion of the cylindrical casing 10 therein and is held secured in said neck by cement a' or other means. From the ring 11 a holder-bar 12 is hung by means of the hanger-loop 11^a, that engages its looped depending portion within an eye b in the upper end of the holder-bar and its laterally-bent end portions with the body of the ring at opposite points.

As shown in Fig. 2, the casing 10 is hung from the ring-eye b by wire strands c, that engage said eye and extend outward to be secured upon the casing at its upper end in such a manner as will support the casing free to swing on its support and dispose the holder-bar nearly central in the casing. The holder-bar 12 is slotted longitudinally from points near each end, as indicated at d, providing two bars 12^a 12^b as equal members thereof, which are spaced apart in parallel planes by upper and lower transverse members, as is clearly shown in Fig. 2. The bar 12^a is provided on its outer edge with a series of teeth e, that are of the ratchet type and hook downward, providing a guide-bar for other details. Upon the guide-rod 12^a a float 13 is held to slide, said float comprising a block of cork or other available material having a curved outer side surface that may fit loosely upon the inner surface of the casing 10 when in service. The opposite side of the float 13 is deeply concaved to adapt it to receive details that serve to loosely connect the float with the guide-rod 12^a, upon which it is to slide.

The connecting device consists of the following parts and combinations of the same: A ring-like guard-piece 14 is secured upon the concaved side of a float 13, at the upper end thereof, so as to project laterally and be adapted to loosely encircle the guide-rod 12^a, as shown clearly in Figs. 3 and 4. A looped bracket-frame 15 is loosely mounted upon the guide-rod 12^a below and near the guard-ring 14, the spaced arms of which project toward the concave side of the float 13. Between the parallel spaced arms of the bracket-frame 15 a pawl 16 is secured by a rivet g, this pawl having two teeth h h', that project toward the teeth e on the guide-rod 12^a and are respectively formed laterally at the upper and lower ends of the pawl. The pawl-teeth h h' are so spaced apart that when the upper tooth h is engaged with the shoulder

on an opposite tooth *e* the tooth *h'* will rest upon the sloped edge of a ratchet-tooth *e* a suitable distance below the upper tooth, this positive engagement of the pawl-teeth with the teeth on the guide-rod occurring only when the float 13 is immersed in the liquid contents of the bottle A, the difference in specific gravity of the float causing it to be maintained in engagement with the ratchet-teeth, as is clearly indicated in the drawings.

It will be seen in Fig. 3 that a space *i* of sufficient width is provided between the smooth inner edge of the guide-rod 12^a and the guard-ring 14 and likewise between said edge of the guide-rod and the looped end of the bracket-frame 15 to permit the teeth *h h'* to slide down over the teeth *e* when the float 13 is unsupported by the liquid contents of the bottle A.

In arranging the indicating mechanism to serve as a means for the exposure of an attempt to defraud by refilling a bottle having the improvement the float, loosely mounted upon the guide-rod 21^a, is placed and held by suitable means at the upper end of the holder-bar 12, this adjustment of parts being effected before the bottle is filled with the liquid it is to hold as an original package. The bottle A after it is filled is sealed with any suitable cork B, and the float 13 will remain as it has been placed in engagement with the guide-rod 12^a until the bottle is uncorked and a portion of its contents removed. To more fully explain this, it will be seen that when a portion of the contents of the bottle is removed therefrom the float 13, that is adjacent to the guide-rod 12^a, will by its gravity descend and rest upon the surface of the liquid still remaining in the bottle A and casing 10, wherein it assumes the same level as that in the body of the bottle. In case the bottle is completely emptied the float will descend to the bottom of the bottle and remain there, as the pawl-teeth *h h'* will interlock with the teeth *e* and hold the float from rising, if liquid is again poured into the bottle, the same being true if but a portion of the contents has been decanted and an attempt is made to refill the bottle. The casing 10, that guards the float 13, must be removed before the float can be changed in position, so as to place it at the upper end of the casing, and as the ring 11 is fragile and is firmly secured in the bottle-neck A' it will be evident that the ring must be broken to get the indicating device out of the bottle, which will manifestly prevent a replacing of the latter and expose an attempt to refill the bot-

tle. A scale may be formed on the side of the holder-bar 12, which will indicate the amount of liquid removed from the bottle, and upon the float 13 a label C may be formed or secured that may represent a trade-mark, thus affording a guarantee of the genuine character of the original contents of the bottle.

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

1. An indicator for bottles, comprising a transparent cylindrical casing, a longitudinally-slotted holder-bar having downwardly-hooking teeth on one outer edge, a fragile ring secured in the bottle-neck, means to suspend the bar in the casing, and both hung pendent from the fragile ring, a float, a pawl carried by the float and engaging the teeth on the holder-bar, which permits the downward movement of the float in the casing but prevents its upward movement therein.

2. An indicator for bottles, comprising a transparent cylindrical casing, a glass ring cemented in the bottle-neck and from which the casing is hung, a longitudinally-slotted holder-bar, having teeth that hook downward and arranged on one outer edge of said bar, a float within the casing, and a pawl having two spaced teeth which engage the teeth of the holder-bar and carried by the float, whereby the float may descend in the casing when unsupported by liquid in the bottle, but is held from upward movement therein.

3. The combination with a bottle, a glass ring cemented in the neck of the bottle, a glass casing hung in the bottle pendent from the glass ring, and a longitudinally-slotted holder-bar hung in the casing from said ring and having downwardly-hooking teeth on one outer edge, of a kidney-shaped float, and a pawl-supporting means carried by the float, comprising a guard-ring, a slotted bracket-frame below the ring and a pawl secured between spaced members of the bracket-frame, said pawl having two spaced teeth that are adapted to engage with teeth on the holder-bar and slide down over said teeth, but interlock therewith to prevent an upward movement of the float in the casing.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK ANDRE FRKOVIC.

Witnesses:

WALTER GRESHAM,
J. H. HAWLEY.