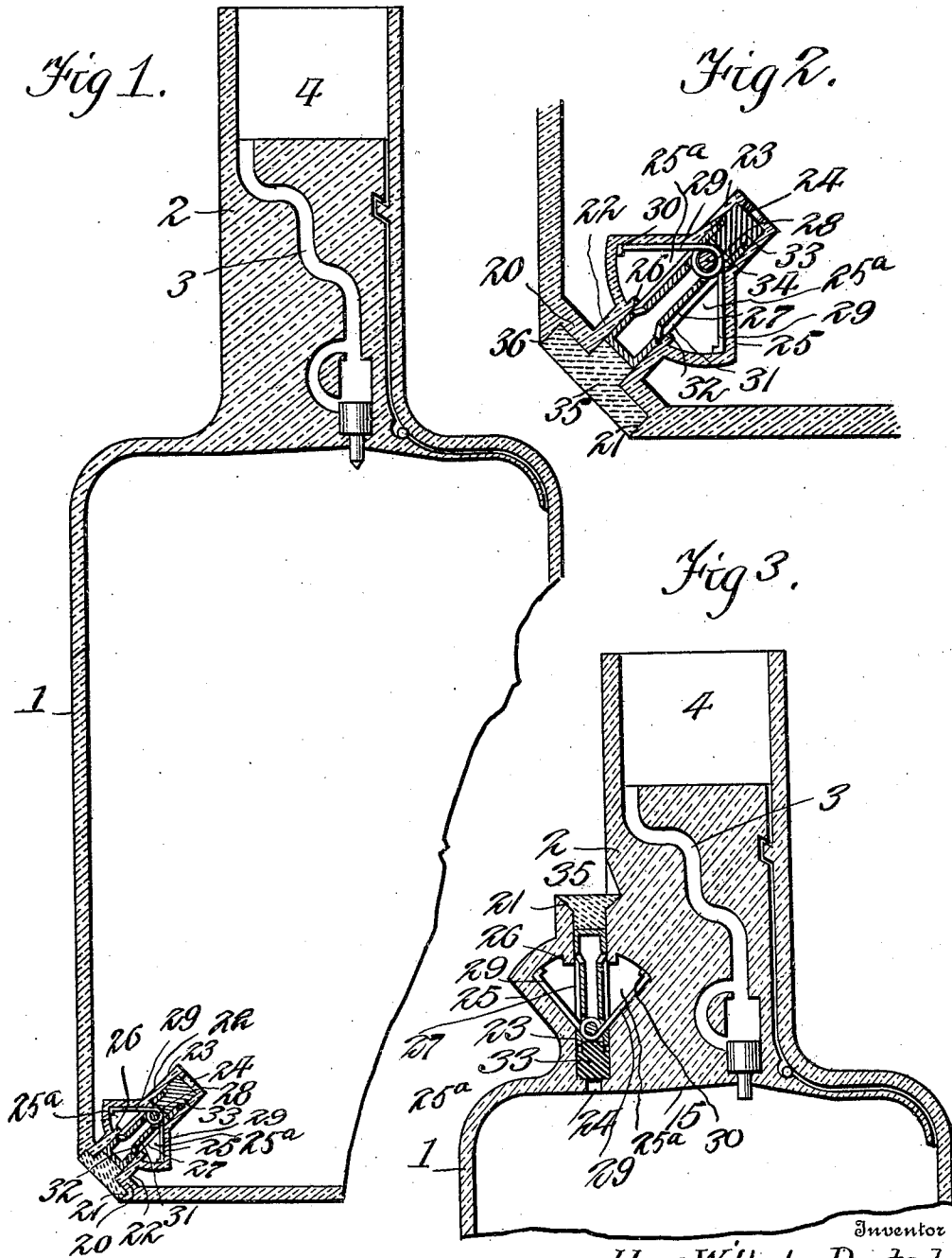


H. W. DEUTSCH.
NON-REFILLABLE BOTTLE.
APPLICATION FILED NOV. 3, 1908.

938,413.

Patented Oct. 26, 1909.



Witnesses

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HANS WILHELM DEUTSCH, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

Specification of Letters Patent.

Patented Oct. 26, 1909.

938,413.

Original application filed March 25, 1908, Serial No. 423,256. Divided and this application filed November 3, 1908. Serial No. 460,843.

To all whom it may concern:

Be it known that I, HANS WILHELM DEUTSCH, a subject of the Emperor of Austria-Hungary, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to certain new and useful improvements in bottles and analogous containers of the non-refillable type and of that character having a filling inlet and a discharge outlet independent of one another, and the present application is a division of my prior application No. 423,256, filed March 25, 1908, its particular object being to provide a novel construction of filling inlet and closure therefor, by which an effective permanent closing of said inlet may be effected after the bottle is filled.

In the accompanying drawing, illustrating the invention, Figure 1 is a central vertical section through a bottle, showing the filling inlet closed. Fig. 2 is a sectional view on an enlarged scale through the filling inlet and closing means therefor. Fig. 3 is a sectional view showing a modification in the arrangement of the filling means.

Referring to the drawing, 1 designates the body of the bottle, which may be of any preferred form and construction, and which is provided with a neck 2 having a discharge passage 3.

The bottle is designed to be initially filled through a filling opening in the bottom, neck or some other suitable portion thereof, which is afterward permanently closed by a locked closure. As shown in Figs. 1 and 2, the bottom of the bottle is provided adjacent one side with an inset or depressed portion 20 and an exterior cavity or recess 21. Extending inwardly from the wall 20 and registering with an opening therein is a filling tube, channel or passage 22, having a discharge portion 23 provided with an opening 24, the parts 22 and 23 being separated and connected by a substantially frusto-conical body 25, constituting an expanded part of the tube, the outer portion 22 of which latter is provided with a flange or projection 26 extending into said body. These parts are preferably formed integral with the body of the bottle, and in order to seal the same after the bottle has been filled

the following construction of closing means 55 is provided.

A stopper tube 27, acting as a locking device, is provided to fit within the tube 22 and project through the chamber 25 into the tube 23. This tube 27 has a pin or rivet 28 extending transversely therethrough and which is engaged and surrounded by the coiled central portion of a spring catch, said catch being formed of a piece of wire, the ends of which project through openings in the sides of said tube and provide a pair of locking arms 29 having inturned projections 30.

In the operation of inserting the locking device into the filling tube, the locking arms are bent or folded inwardly to lie in recesses 31 in the sides of the locking tube so as to admit of the introduction of said tube, the tube also being formed with openings 32 into which the projections 30 may extend. When the locking tube is fully inserted the spring arms on passing the flange or shoulder 26 spring out into flaring recesses 25^a in the otherwise solid conical portion 25, which act as a keeper therefor, and thus lock the said locking tube against withdrawal. The flange or projection 26 operates as a guard to prevent manipulation of said spring arms from without or any possibility of the arms being drawn backward to normal position and permitting withdrawal of the locking tube. Prior to the insertion of the locking device, a stopper 33, of cork, rubber or some other suitable elastic or resilient material, is applied to close the opening 24, and such stopper is formed with a reduced portion 34 to enter the inner end of the locking tube.

It will be understood that the elasticity of the stopper permits of the insertion of the locking tube to an extent to permit the free ends of the locking arm passing the flange or projection 26, after which the expansive action of the stopper, which is held slightly compressed by the locking device, serves to force the locking tube back to a sufficient extent to cause the openings 31 to be covered by the guard 26 so as to lock the parts securely in position.

It will accordingly be seen that the invention provides a bottle of simple construction which, after having been once filled, cannot be refilled without breaking the neck, or the frangible filling tube, thus giving warning

by visual evidence of the fact that the bottle has been tampered with.

The outer end of the filling tube and the recess 21 may be closed by a stopper or body of plastic material 35 which may be stamped or impressed with the seal of the party or firm filling the bottle or the name of the goods. This material may, of course, be removed without difficulty, but as the outer end of the locking tube is closed and as said tube is in the form of a hard metal capsule, it is apparent that such tube cannot be removed without breaking the frangible tube 22 and rendering the bottle useless. Moreover, the removal of even the plastic stopper 35 will lend suspicion that an attempt has been made to refill, while the breakage of the tube 22 will give proof positive of that fact.

In the modified construction shown in Fig. 3, the filling tube, channel or passage, is formed upon and as a part of the neck of the bottle or container, the construction and arrangement of the parts being otherwise the same.

It will be understood, of course, that the filling means may be arranged upon any suitable portion of the bottle and consists of a tube, channel or passage projecting or not into the bottle and communicating with the interior thereof in any suitable manner, while the discharging means may be located in the ordinary neck, as shown, or at any other suitable point.

Having thus fully described the invention, what is claimed as new is:—

1. A bottle or receptacle provided with a filling inlet and lateral recesses communicating therewith, a stopper for closing the inner end of said inlet, said stopper having a reduced outer end, a locking device adapted to be inserted within the inlet behind said stopper, said device comprising a tube closed at its outer end and open at its inner end to receive the reduced portion of the stopper, spring locking arms secured within said tube and projecting outward through openings therein to engage said recesses, and coacting projections upon the bottle and arms to prevent retraction of the latter.

2. A bottle or receptacle provided with a filling inlet having keeper recesses at the sides thereof, a stopper for closing the inner end of said inlet, a locking device adapted to be inserted within the inlet behind said stopper, said device being provided with spring locking arms adapted to move into said recesses, and guarding means for preventing retraction of said arms.

3. A bottle or receptacle having a filling inlet provided with intermediate lateral keeper recesses, a stopper for closing the inner end of the inlet, a locking device adapted to be inserted within the inlet be-

hind the stopper, spring locking arms carried by said locking device and adapted when the latter is inserted to spring into the keeper recesses, said arms being provided at their free ends with projections, and guarding means arranged to lie in the path of said projections to prevent retraction of said arms.

4. A bottle or receptacle having a filling inlet provided with intermediate lateral keeper recesses, a stopper for closing the inner end of the inlet, a locking member having side grooves and openings or recesses and adapted to be inserted in the inlet behind the stopper, spring arms on said member adapted to fold within said grooves and having projections at their free ends to take into said openings or recesses when the arms are so folded, said arms also being adapted to spring out into said keeper recesses and to lock said locking member from withdrawal when inserted into the inlet, and guarding means coacting with said projections to prevent retraction of said locking arms.

5. A bottle or receptacle having a filling inlet provided with intermediate expanded portions forming keeper recesses, guards arranged in line with said recesses, a resilient stopper for closing the inner end of the inlet, a locking device adapted to be inserted in the inlet behind the stopper, and spring arms upon said device adapted to fold within the surface of the sides thereof and to spring outward into the keeper recesses, said arms being provided at their free ends with interturned projections adapted to pass the guards by compression of the stopper when the locking device is inserted, the construction being such that when the inserting pressure on said device is removed the retraction of the stopper will move the device rearwardly to a slight extent to bring said projections into such position that the guards will lie in the plane of inward movement thereof to prevent retraction of said locking arms.

6. A bottle or receptacle having a filling inlet provided with intermediate lateral keeper recesses, a stopper for closing the inner end of the inlet, a locking device adapted to be inserted into the inlet behind the stopper, said device being provided with spring locking arms foldable within the surface thereof and adapted to snap into said keeper recesses, and coacting means upon the bottle and locking arms to prevent withdrawal of the latter from said recesses.

In testimony where I affix my signature in presence of two witnesses.

HANS WILHELM DEUTSCH.

Witnesses:

W. S. THOMPSON,
S. E. CLICKENER.