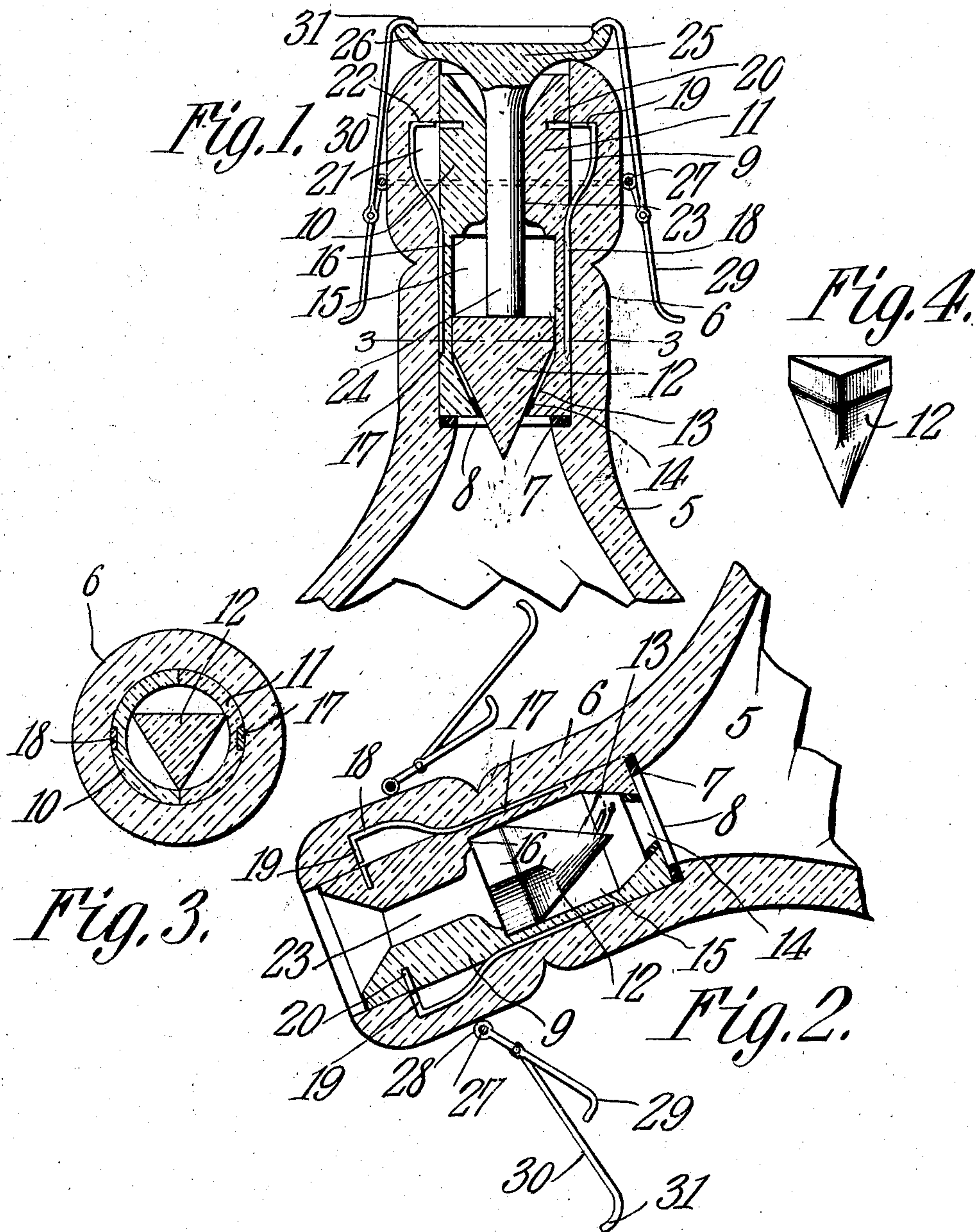


No. 881,801.

PATENTED MAR. 10, 1908.

A. HUBER.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED JULY 30, 1907.



Adolph Huber,

WITNESSES:

*E. J. Stewart*  
*W. H. Hester*

IN. ENTOR.

By *C. A. Snow & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

ADOLPH HUBER, OF MANNHEIM, GERMANY, ASSIGNOR TO JAMES SCHNEIDERWIND, OF OMAHA, NEBRASKA.

## NON-REFILLABLE BOTTLE.

No. 881,801.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed July 30, 1907. Serial No. 386,237.

*To all whom it may concern:*

Be it known that I, ADOLPH HUBER, a subject of the Emperor of Germany, residing at Mannheim, Germany, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

This invention relates to non-refillable bottles and similar liquid containing vessels and has for its object to provide a bottle which cannot be refilled without breaking or otherwise mutilating the same so that any attempt to fraudulently substitute an inferior grade of goods for that originally contained in the bottle will be readily detected.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of a non-refillable bottle constructed in accordance with my invention. Fig. 2 is a similar view showing the bottle in inverted position to permit the discharge of the contents of the same. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a perspective view of the valve detached.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved mechanism forming the subject matter of the present invention may be used in connection with bottles or other liquid containing vessels and by way of illustration is shown in connection with a bottle of the ordinary construction in which 5 designates the body of the bottle and 6 the neck.

The interior walls of the neck 5 are formed with an annular shoulder 7 for the reception of a packing strip or washer 8 which forms a seat for a valve receiving casing or housing, indicated as a whole at 9.

The casing or housing is preferably formed in two sections 10 and 11 so as to permit the introduction of the valve 12 and also to permit the same to be conveniently assembled and inserted in the neck of the bottle.

The lower walls of the sections 9 and 10 are inclined to form a seat 13 for the reception of the valve 12, there being a packing strip or washer 14 secured to the inclined face 13 so as to prevent the escape of liquid when the valve is in closed position.

The casing or housing 9 is provided with an interior chamber 15 defining an annular shoulder 16 which serves to limit the longitudinal movement of the valve when the bottle is in inverted position, as best shown in Fig. 2 of the drawings.

The valve 12 is substantially triangular in shape so as to permit the liquid to flow between the valve and the interior walls of the neck of the bottle when the valve is open, the walls of said valve at the reduced end thereof being curved or rounded to conform to the shape of the valve seat, as shown.

Seated in longitudinal grooves 17 formed in the exterior walls of the casing or housing 9 are flat springs 18 having their free ends curved outwardly and their terminals bent inwardly to form laterally extending arms 19 which engage correspondingly shaped recesses 20 formed in the exterior walls of the casing when the springs are contracted to permit the insertion of the casing within the neck of the bottle.

The interior wall of the neck 6 is formed with an annular groove 21 defining a shoulder 22 adapted to bear against the arms 19 when the springs register with the opening 21 so as to prevent withdrawal of the casing or housing.

Communicating with the recess 15 in the casing is a longitudinal opening or bore 23 in which is seated the stem or shank 24 of a retaining stopper 25, the latter being provided with an annular flange or rim 26 which is preferably disposed in alinement with the exterior walls of the neck, as shown. The lower end of the stem or shank 24 bears against the flat upper surface of the valve 12 so as to prevent accidental displacement of the same. As a means for locking the shank 24 in engagement with the valve there is provided an annular collar or retaining ring 27 to which are pivotally connected at 28 suitable operating levers 29.

Pivotally mounted on the intermediate portions of the operating levers 29 are gripping jaws 30 the terminals of which are bent to form hooks 31 which engage the peripheral edge 26 of the stopper 25 and serve to



lock the shank in engagement with the valve when the levers are pressed downwardly to the position shown in Fig. 1 of the drawings.

In assembling the several parts the liquid is first introduced into the bottle or vessel 5 after which the valve 12 is placed in the casing or housing and the spring 18 pressed inwardly until the arms 19 engage the recesses 20 after which the casing carrying the valve is introduced in the neck of the bottle.

When the arms 19 of the spring register with the recess or groove 21 in the neck of the bottle the arms will expand laterally and lock the casing against accidental displacement. The stopper is then placed in position with the end of the shank 24 engaging the valve 12 and the levers 29 pressed downwardly thus locking the valve to its seat and at the same time securing the stopper in position on the bottle.

In order to discharge the contents of the vessel the operating levers 29 are swung laterally and the terminal hooks 31 disengaged from the peripheral edge of the stopper 25, after which the latter is withdrawn from the neck of the bottle and said bottle inverted so as to cause the valve to assume the position shown in Fig. 2 of the drawings and in which position the contents of the bottle will flow through the valve seat and longitudinal bore 23 into the glass or other receptacle designed to receive the same. As soon as the bottle is placed in upright position the valve will automatically seat itself thus preventing an unauthorized person from refilling the bottle.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. A containing vessel having a neck, a casing seated in the neck and provided with a valve seat, a valve engaging the seat, a solid stem bearing against the valve and provided with a terminal head constituting a stopper, and means for locking the stem in engagement with the valve.

2. A containing vessel having a neck, a casing seated in the neck and provided with a conical shaped valve seat, a triangular shaped valve having its reduced end curved to conform to the shape of the valve seat and adapted to engage the same, a stopper having a solid shank the free end of which bears against the valve, and means engaging the stopper for locking the latter in contact with the valve.

3. A containing vessel having a neck, a casing engaging the walls of the neck and provided with a conical shaped valve seat, a substantially triangular valve having its reduced end curved to conform to the shape of the valve seat and adapted to engage the

same, a stopper having a solid shank for engagement with the valve and provided with an integral head adapted to bear against the vessel at the neck thereof, and locking levers pivotally mounted on the exterior walls of the neck and adapted to engage the head of the stopper for locking the shank in engagement with the valve.

4. A containing vessel having a neck, a casing disposed within the neck and having one end thereof provided with a longitudinal bore and its opposite end formed with a conical shaped seat, a substantially triangular valve and having its reduced end curved to conform to the valve seat and adapted to engage the same, a stopper having an enlarged head forming a closure for the neck and provided with a solid integral shank bearing against the valve, and means pivotally mounted on the exterior walls of the neck and engaging the head of the stopper for locking the latter in engagement with the valve.

5. A containing vessel having a neck provided with an interior shoulder, a casing bearing against said shoulder and having one end thereof formed with a longitudinal bore and its opposite end provided with a conical shaped seat, a substantially triangular shaped valve having its reduced end curved to conform to the curvature of the valve seat and adapted to engage the latter, a stopper having a shank passing through the bore and bearing against the valve, and locking levers pivotally mounted on the exterior walls of the neck for locking the stopper in engagement with the valve.

6. A containing vessel having a neck the interior walls of which are provided with an annular groove defining a stop shoulder, a casing seated in the neck and provided with a conical valve seat, a substantially triangular valve engaging the seat, and having its reduced end curved to conform to the shape of the valve seat, springs secured to the exterior walls of the casing and adapted to engage the stop shoulders for locking the casing against accidental displacement, a stopper forming a closure for the neck of the bottle and provided with a solid integral shank bearing against the valve, and a locking member for exerting a longitudinal pressure on the stopper for forcing the valve to its seat.

7. A containing vessel having a neck, a casing seated in the neck and provided with an intermediate chamber forming a stop shoulder, there being a longitudinal bore formed in one end of the casing and communicating with the chamber, and a conical valve seat formed in the opposite end of the casing and communicating with the body of the vessel, a substantially triangular valve having its reduced end curved to conform to the shape of the valve seat and adapted to



engage the latter, springs secured to the exterior walls of the casing and adapted to engage the interior walls of the neck of the bottle, a stopper having a solid integral shank extending through the bore of the casing for engagement with the valve, a collar surrounding the exterior walls of the neck, levers pivotally mounted on the collar, and locking members having terminal hooks adapted to engage the stopper for forcing the shank of the latter in engagement with the valve when the levers are moved to operative position.

8. A containing vessel having a neck the interior walls of which are provided with an annular shoulder, there being a groove formed in the neck of the vessel and spaced from the shoulder, a packing seated on the shoulder, a casing bearing against the packing and provided with a valve seat, a packing engaging the walls of the seat, locking members secured to the exterior walls of the

casing and provided with inwardly extending arms adapted to engage a groove formed in the walls of the neck for locking the casing against accidental displacement, there being recesses formed in the exterior walls of the casing for the reception of the arms, a substantially triangular valve having its reduced end conical shaped and adapted to engage the packing of the seat, a stopper forming a closure for the vessel and provided with a shank bearing against the valve, and means for exerting a longitudinal pressure on the stopper for locking the shank in engagement with the valve.

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

ADOLPH HUBER.

Witnesses:

A. LICHMANN —

JOS. H. LEUTE.