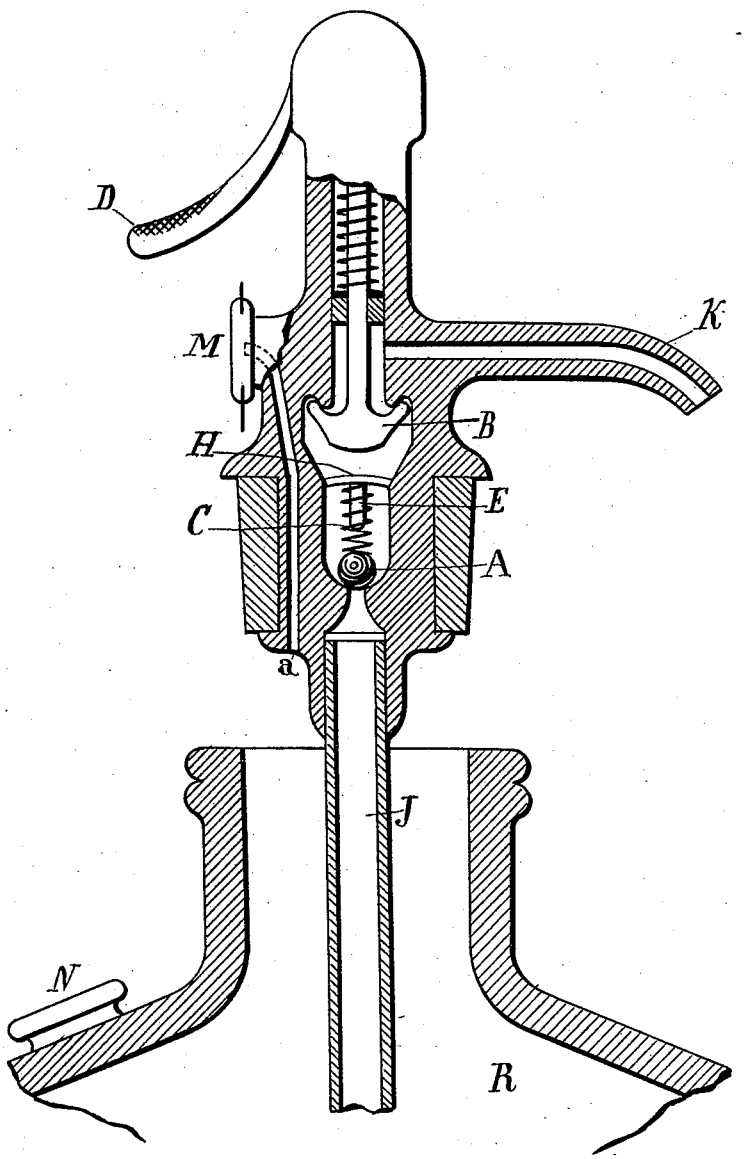
(No Model.)

R. PERSONNE DE SENNEVOY.

SAFETY CLOSING DEVICE FOR BOTTLES.

No. 523,153. Patented July 17, 1894.



Witnesses:
J. J. Rocket Jr.
O. Block

Inventor:
R. Personne de Sennevoy,
By H. H. de Vos.
Attorney.

UNITED STATES PATENT OFFICE.

ROBERT PERSONNE DE SENNEVOY, OF PARIS, FRANCE.

SAFETY CLOSING DEVICE FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 523,153, dated July 17, 1894.

Application filed June 16, 1893. Serial No. 477,874. (No model.) Patented in England March 16, 1893, No. 5,695.

To all whom it may concern:

Be it known that I, ROBERT PERSONNE DE SENNEVOY, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Safety Closing Devices for Bottles and Receptacles, (for which I have obtained Letters Patent of Great Britain, No. 5,695, of March 16, 1893,) of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a liquid receptacle so constructed and arranged, that when once filled by the wholesaler with the proper liquid, and the filling openings properly sealed, retail dealers may draw therefrom small quantities of the inclosed liquid at a time, without being able to introduce any other or different liquid into such receptacle, without tampering with the seals thereof, and to that end my invention consists of the construction shown and described in the following specification, of which the accompanying drawing forms a part, wherein the figure shown is a view of my said invention, in central vertical section thereof, as the same appears when about to be inserted in the neck of a bottle or other suitable receptacle.

Referring to the drawing:—the reference letter B, designates a valve of any desired form, preferably of the well known construction shown, which normally closes the passage leading from the interior of the receptacle to the spout K, so as to prevent the escape therethrough of the liquid in the receptacle R, but which may be opened by pressing upon the lever D, in the well known manner. This portion of the apparatus I do not claim as new, but immediately below the valve B, and also located in the passage, a conduit leading from the interior of said receptacle R, I have placed a valve A, which opens outward away from the receptacle, but which is kept normally closed in any preferred manner, preferably by means of a spring C, which serves to keep the ball which preferably forms such valve A, against its seat, which spring C, is preferably held in place by a guiding rod E, fastened to a bridge H, secured within the valve passage in any desired manner. The spring C, is of barely sufficient strength to prevent the valve A, from being opened by its own weight when the receptacle is reversed or violently shaken, but is made so weak that the normal pressure maintained within the receptacle will open the same whenever the valve B, is opened. Immediately below the valve A, is preferably located a tube J, of ordinary form, which extends nearly to the bottom of the receptacle, through which the liquid in the receptacle is forced by the pressure therein, in the manner usual with siphon receptacles of ordinary form.

To enable compressed air or other gases to be introduced into the receptacle after the same has been filled with the required liquid, my improved stopper is provided with a small channel or conduit running from M, outside the receptacle, to the point *a*, within the same, and this channel communicates with an opening in the knob M, which is preferably screw-threaded in order to receive the threaded end of the air-pump pipe, or that of the filling device.

The operation of the device is as follows: The stopper being first placed in the neck of the bottle or receptacle R is pressed firmly into the same so as to form an air-tight joint therewith. The receptacle is then filled with the desired liquid through the channel or conduit leading from M to *a*, and pressure is preferably produced within such receptacle sufficient to cause the liquid to be forced upward and out of the spout K, when the valve B is opened, either by having the liquid under pressure when placed therein, or by afterward attaching an air-pump to the point M, and pumping air therein, after which the same is disconnected from the filling device or air-pump, as the case may be, and the orifice at M, is then closed by a suitable seal.

When it is desired to draw the liquid from the receptacle, this is done by pressing down upon the lever D, which will depress the valve B, away from the seat thereof, when the pressure within the receptacle will lift the valve A, from its seat, and the liquid will flow out by way of the pipe J, past the valves A and B, into and out of the spout K. As soon as the quantity desired has been drawn away, the lever D, is released from pressure, and the valve B, then closes by being pressed up

by the spring above it and by the pressure of the liquid in the receptacle, and the instant that the pressure in the space between the valves A and B, becomes the same as that in the receptacle, the valve A, will be forced by the spring C, against its seat, so as to close the outlet from the pipe J. If at any time when the receptacle is wholly or partially empty any attempt is made to refill the receptacle by way of the spout K, the pressure of the liquid sought to be introduced only serves to force the valve A, more firmly into its seat, and it will be found utterly impossible to refill such receptacle in that manner.

The device, instead of being made in the form of a stopper, may be formed integral with or attached to the receptacle, and in such case, the passage from M to *a*, is preferably omitted, and an opening N, similar in form to that at M, is formed in the wall of the receptacle, as shown, through which the same may be filled, and the compressed gases introduced, and which is afterward sealed in the same manner.

If desired, the apparatus may of course be applied to receptacles of any shape or dimensions, and the conduit provided with the two described valves, the outer of which only is accessible to the operator, may be placed in any suitable part of the receptacle, and in some cases, as when the spout K, is located below the bottom of the receptacle, the pipe J, may be omitted.

The various valves may be of any desired form of construction, although I prefer to use the ones shown; but inasmuch as many changes, in the construction, combination and arrangement of the various parts of my improved safety closing device for bottles and receptacles, may be made without departing from the scope of my invention, I do not limit myself to the exact form of construction shown; but,

Having now particularly described my said invention, its construction and operation, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a liquid receptacle, of a stopper therefor having a passage or conduit through which the liquid may be drawn off, a valve provided with means for actuating the same, located in the passage and normally closing the same, a second valve located in such passage between the first valve and the interior of the receptacle and opening toward the first valve and adapted to be actuated only by the pressure of the fluids within the receptacle, and a second passage or conduit, adapted to be closed at the outer end by a suitable seal, in communication with the interior of the receptacle, substantially as shown and described.

2. The combination with a liquid receptacle, of a stopper for the same provided with a suitable passage or conduit in communication with the interior of the receptacle and having means for securely closing the outer end thereof by means of a suitable seal, and also with a second passage or conduit provided with two valves normally closing the same, the one nearest the interior of the receptacle being adapted to be actuated only by the pressure of the fluids within the receptacle, substantially as shown and described.

3. The combination, with a liquid receptacle, of a stopper therefor having a passage or conduit through which the liquid may be drawn off, a valve provided with means for actuating the same located in the passage and normally closing the same and opening inward toward the receptacle, a ball-valve located in such passage between the first valve and the receptacle and opening toward the first valve, and a spring C, normally pressing the ball-valve to its seat, substantially as shown and described.

4. A stopper for liquid receptacles, having a passage or conduit M—*a*, adapted to be sealed at the outer end thereof, a second passage or conduit having a normally closed valve B adapted to be actuated by a lever D, located therein and a second valve actuated only by the pressure of the fluids in the receptacle, located in said second passage or conduit between the receptacle and the first valve, substantially as shown and described.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 17th day of February, 1893.

ROBERT PERSONNE DE SENNEVOY.

Witnesses:
E. LENERGES,
ROBT. M. HOOPER.