

W. ASBURY.
CONTAINER.

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908,193.

Patented Dec. 29, 1908.

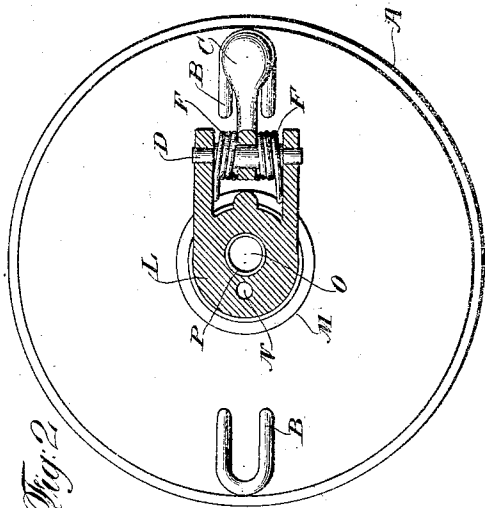


Fig. 2

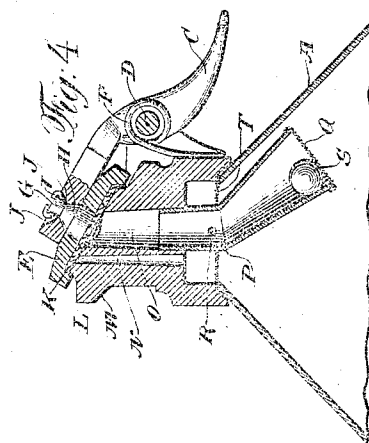


Fig. 4

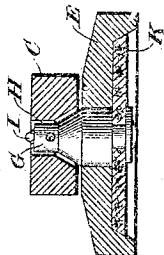


Fig. 3

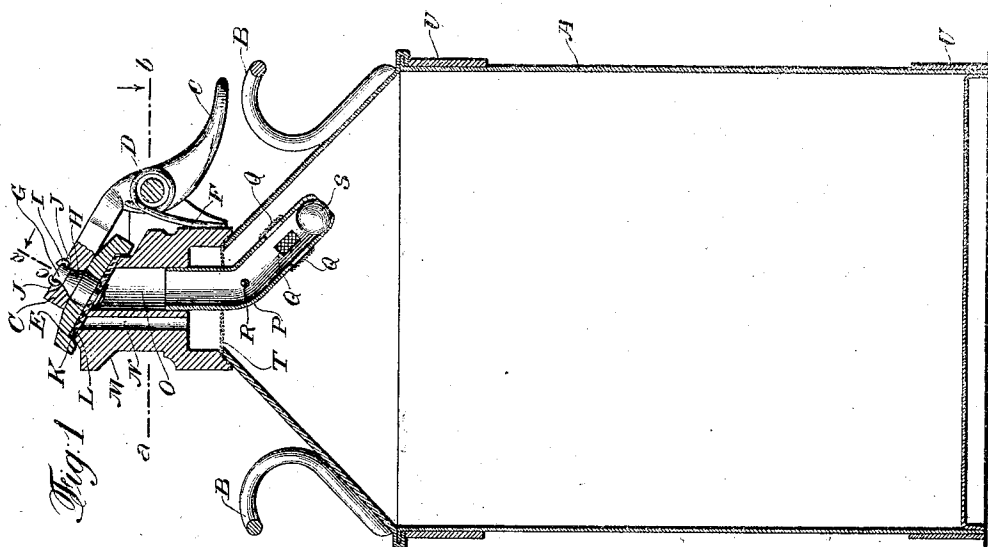


Fig. 1

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UNITED STATES PATENT OFFICE.

WILLIAM ASBURY, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN SAFETY APPLIANCE COMPANY, A CORPORATION OF MAINE.

CONTAINER.

No. 908.193.

Specification of Letters Patent.

Patented Dec. 29, 1908.

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To all whom it may concern:

Be it known that I, WILLIAM ASBURY, a subject of the King of Great Britain and Ireland, residing in the city, county, and State of New York, have invented a new and useful Improvement in Containers, of which the following is a specification.

This invention relates to improvements in containers and more particularly in containers for gasolene, benzin, ether or other volatile or inflammable liquids, and has for its object a container which can be filled quickly and emptied slowly and which can be used for such liquids safely and without fear of explosion.

The invention is illustrated in the accompanying drawings which form part of this specification.

Figure 1 is an elevation, mostly in vertical section, of a container made in accordance with this invention. Fig. 2 is a plan view of the container shown in Fig. 1, with the section above the line *a b* of Fig. 1 removed. Fig. 3 is a view of a vertical section, made as indicated by the line *c d*, of the valve *E* and connected parts at the top of the container shown in Fig. 1. Fig. 4 is an elevation, mostly in vertical section, of a modified form of the upper part of the container shown in Fig. 1. The two arrows shown in Fig. 1 indicate respectively the directions of the views shown in Figs. 2 and 3.

A is the body of the container which may be of any suitable and convenient size and form, and which may be made of any suitable material, such as sheet metal.

B B are devices, secured to the container, which may be conveniently grasped by two of the fingers of the hand when the container is to be handled and also when pressure is to be exerted by a third finger upon the lever *C*, which is pivoted in any suitable manner, as upon pivot *D*, in order to raise from its seat the valve *E*.

F F are springs which press downwardly upon the lever *C* and thus keep the valve *E* in place upon its seat until a stronger counter-pressure is exerted either upon that end of the lever *C* to which the valve *E* is not connected, or upon the valve by gas within the container, and the valve is thereby raised from its seat.

G is a part or device by which the valve *E* is suspended from or connected with the

lever *C*. The part *G* passes through an opening *H* in the lever *C* and, preferably, the part *G* should not quite fill the opening *H*, as clearly shown in Fig. 3, so that the valve *E*, which is attached to the part *G*, is somewhat loosely suspended, by reason of which loose suspension or connection the valve *E* is a self-seating valve which will invariably, under pressure of the springs *F F*, so adjust itself to its seat as to sit closely and evenly at all points thereon.

I is any suitable device, such as a wire passing through the top of the part *G* and extending somewhat loosely into slots *J J* on opposite sides of the opening *H*, whereby the self-seating valve *E* is permitted to turn in either direction for a short distance but is prevented from turning in either direction for any great distance, and whereby the part *G* is held within the opening *H* or suspended from the lever *C*.

K is a washer, composed of cork or other flexible or suitable material, forming part of the valve *E* and making a tight connection between the valve *E* and its valve-seat *L*.

M is a piece of suitable material, such as metal, upon the upper part of which is the valve-seat *L*. The part *M* is preferably in the form of a neck and joined to the body of the container and is provided with two openings or channels *N* and *O*. The opening *O* serves as an inlet conduit when fluids are poured into the container and the opening *N* serves as an outlet conduit when fluids are poured out of the container. The inlet, opening or channel *O* curves or bends, at a suitable angle to the perpendicular, at some point as at *P*, and the lower end of the opening *O* may, as shown in Fig. 4, be provided with gauze *Q*, of wire or other suitable material, extending across and over the opening and secured in any suitable manner, or, as shown in Fig. 1, the sides of the inlet, opening or channel *O* may be provided with one or more perforations over and across which the gauze *Q* is placed and secured in suitable manner. In the opening *O* is a stop *R*, which may consist of a pin extending from side to side across the opening *O* and, preferably, penetrating the sides thereof, in order to avoid dependence upon solder or the like, which dependence should, preferably, be avoided whenever possible in a container for inflammable or volatile liquids, except for reinforcing seams, etc. Below the stop or

pin R, in the opening or channel O, is a movable body or ball S, which, when the container is upright, rests normally at the lower end of the opening or channel O, being held within the opening or channel by the gauze Q, as shown in Fig. 4, or by the bending inward, at the lower end, of the sides of the opening or channel O, as shown in Fig. 1, or by any other suitable means. When the container is tilted to one side, as it would be in pouring liquid out of the container, the ball S travels, by gravity, in the opening or channel O until it comes in contact with the pin R, by which its progress is arrested. The diameter of the ball S is approximately the diameter of the opening or channel O, sufficient space intervening, however, between the surface of the ball S and the sides of the opening or channel O to permit the ball to travel in the opening or channel and to permit air to leak or pass through. Extending over the opening or channel N, and, preferably, surrounding the sides of the opening or channel O and extending across an upper part of the container, where the piece M is joined to the body of the container, is gauze T, of wire or other suitable material. Preferably the container should, for protection, be provided with bands of metal or other suitable devices or means U at the bottom and at other points where the container is subject to contact with other objects and to wear.

Preferably, the inlet O should be larger or of greater diameter than the outlet N, the object being to provide an inlet by which the container can be filled quickly and an outlet by which the container can be emptied slowly.

When liquid is poured into the container through the inlet O, the container ordinarily stands upright and, as above stated, the ball S rests normally at the lower end of the inlet, opening or channel O, as shown in Figs. 1 and 4. In Fig. 1 the ball S closes the lower end of the inlet O, but in Fig. 4 it does not. The entering liquid passes from the inlet O, through the perforations and the gauze Q, as shown in Fig. 1, or through gauze Q at the lower end of the inlet O, as shown in Fig. 4, into the body of the container. Thus the inlet-conduit O is provided at its lower part with an outlet which is open when the movable body or ball S is in its normal position of rest. While the liquid is being poured into the container through the inlet O, the valve E is, of course, raised from its seat L, as by means of the lever C, and the opening or channel N serves as a vent for the escape of air or gas from within the container.

When liquid is being poured out of the container, the container is tilted to one side, and, as above stated, the body or ball S travels by gravity in the opening or channel O until it comes in contact with the stop or

pin R. In this position the ball S prevents the passage of the liquid out of the container through the opening or channel O and the liquid flows out of the container through the opening or channel N. As above explained, the body or ball S is of such size or diameter that sufficient space intervenes between the surface thereof and the sides of the opening or channel O to permit air to leak or pass through it, and while the liquid is passing out of the container through the opening or channel N air leaks or passes into the container through the space between the body or ball S and the sides of the opening or channel O. During the operation of pouring liquid out of the container there may, of course, be some leakage of fluid from the container through the space intervening between the body or ball S, in position against the pin R, and the sides of the opening or channel O, but such leakage is small and if the inlet O is larger than the outlet N, the container can be filled quickly and emptied slowly, as above stated.

In the event of the accumulation of gas within a container made in accordance with this invention, the pressure of the gas will raise the valve E from its seat L, whereby the gas will be permitted to escape until the gas pressure becomes low enough to permit the valve E to resume its normal position upon its seat L. The body or ball S, however, will not be raised by gas pressure from its normal position at the lower end of the opening or channel O, so that the passage of gas through the gauze Q and through the opening or channel O will not be prevented by body or ball S.

Obviously the self-seating valve E, resting in its normal position upon its seat L, will prevent leakage of fluid from out of the container, though the container be turned upside down or in any other position.

What I claim is;—

1. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein and a separate outlet-conduit for liquids leading from the upper part of the container, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

2. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a stop within the inlet-conduit and a separate outlet-conduit for liquids leading from the upper part of the container, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

3. In a container for liquids, the combination of an inlet-conduit for liquids, gauze extending across the opening of the inlet-conduit, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein and a separate outlet-conduit for liquids leading from the upper part of the container, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

4. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids leading from the upper part of the container and gauze extending across the opening of the outlet-conduit, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

5. In a container for liquids, the combination of an inlet-conduit for liquids, gauze extending across the opening of the inlet-conduit, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a stop within the inlet-conduit, a separate outlet-conduit for liquids leading from the upper part of the container and gauze extending across the opening of the outlet-conduit, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

6. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids and a valve extending across the openings of the inlet and outlet-conduits, substantially as described.

7. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids and a loosely suspended valve extending across the openings of the inlet and outlet-conduits, substantially as described.

8. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein and a separate outlet-conduit for liquids leading from the upper part of the container, the inlet-conduit being provided at its lower part with an outlet which is open when the

movable body is in its normal position of rest and the opening of the inlet-conduit being larger than the opening of the outlet-conduit, substantially as described.

9. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids and a valve extending across the openings of the inlet and outlet-conduits, the inlet-conduit being provided with a perforation for the passage of gas from the body of the container above the movable body when the latter is in its normal position of rest, substantially as described.

10. In a container for liquids, a piece of suitable material forming a neck joined to the body of the container and provided with an inlet-conduit for liquids, with a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, and with a separate outlet-conduit for liquids, the inlet-conduit being provided at its lower part with an outlet which is open when the movable body is in its normal position of rest, substantially as described.

11. In a container for liquids, a piece of suitable material joined to the body of the container and provided with an inlet-conduit for liquids, with a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, and with a separate outlet-conduit, in combination with a valve extending across the openings of the inlet and outlet-conduits, substantially as described.

12. In a container for liquids, the combination of an inlet-conduit for liquids, provided with a part inclined to the perpendicular, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids and a valve extending across the openings of the inlet and outlet-conduits, substantially as described.

13. In a container for liquids, the combination of an inlet-conduit for liquids, a body of size approximately sufficient to close the inlet-conduit and movable by gravity therein, a separate outlet-conduit for liquids and a valve extending across the openings of the inlet and outlet conduits, the opening of the inlet-conduit being larger than the opening of the outlet-conduit, substantially as described.

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