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OUTLET FOR GASOLENE RECEPTACLES.

APPLICATION FILED JULY 17, 1915.

1,182,716. Patented May 9, 1916.

FIG. 1.

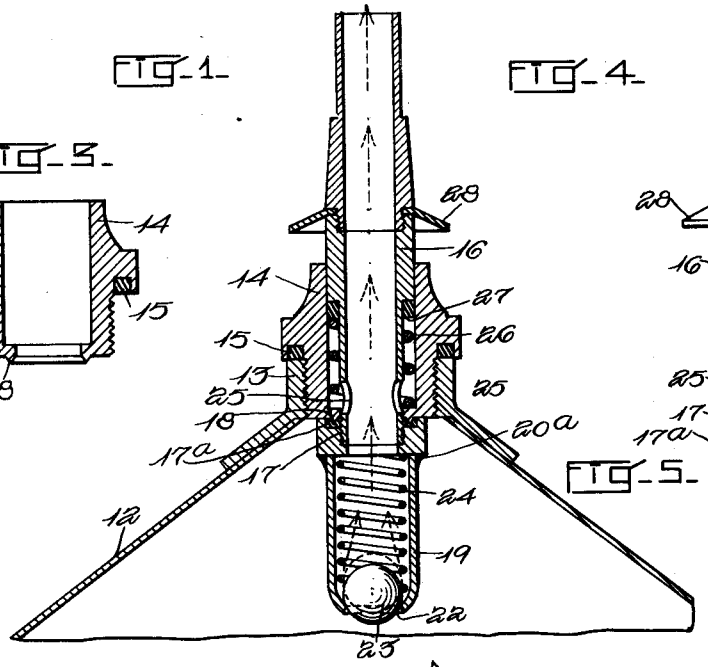


FIG. 5.

FIG. 4.

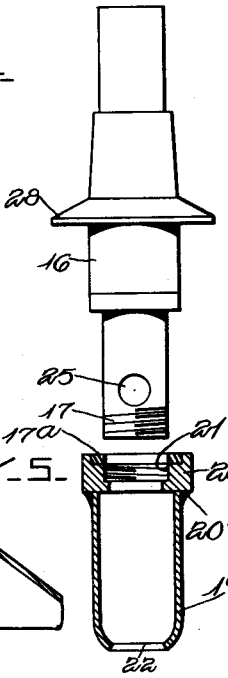
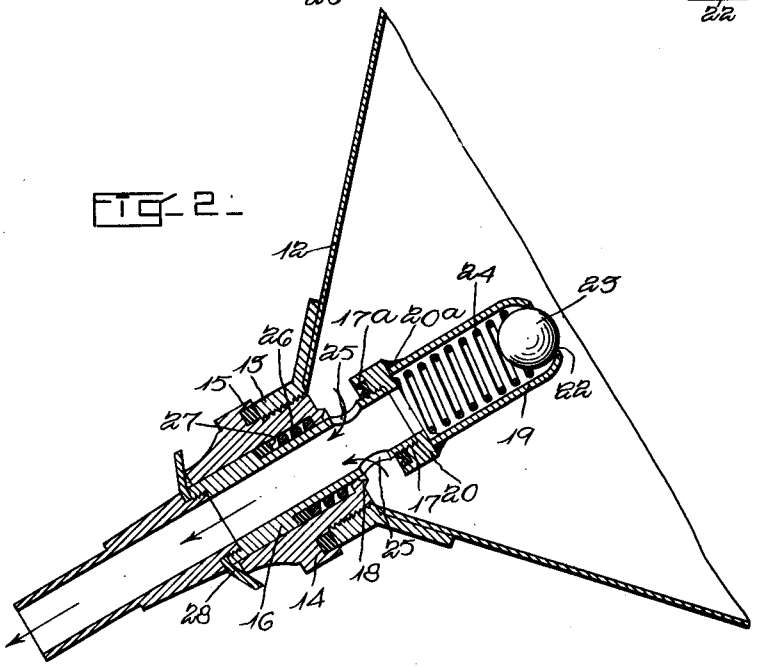


FIG. 2.



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OUTLET FOR GASOLENE-RECEPTACLES.

1,182,716. Specification of Letters Patent. Patented May 9, 1916.

Application filed July 17, 1915. Serial No. 40,432.

To all whom it may concern:

Be it known that I, WILLIAM A. SEXTON, a citizen of the United States, and resident of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Outlets for Gasolene-Receptacles, of which the following is a specification.

This invention relates to receptacles or cans intended to hold volatile combustible liquids, such as gasolene, and has for its object to provide for such a receptacle an outlet attachment which is normally closed to prevent flow of liquid from the receptacle and is provided with a safety valve also normally closed and adapted to be opened by pressure of gas in the receptacle, so that in case there is a dangerous accumulation of pressure in the receptacle, such pressure will be automatically relieved without bursting the receptacle, means being provided whereby communication may be established between the nozzle and the interior of the receptacle to permit the discharge of liquid from the latter.

The invention is primarily intended to prevent liability of an explosion of a gasolene receptacle or can in the event of fire adjacent to the can, the gas generated within the can finding a vent through the nozzle, so that the nozzle becomes a torch at the outer end of which the volatilized liquid is consumed without exploding the can and scattering its contents indefinitely. In other words, when a gasolene receptacle embodying my invention is exposed to fire in its neighborhood, its contents will be burned in the form of gas at the outer end of the nozzle without exploding the receptacle, instead of exploding the receptacle and scattering its burning contents.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification: Figure 1 represents a sectional view showing a portion of a gasolene can provided with an outlet embodying my invention, the can being in an upright position and the nozzle valve being closed; Fig. 2 represents a view similar to Fig. 1, showing the can tipped to a pouring position and the nozzle displaced to open its valve and permit the discharge of liquid from the can; Fig. 3 represents a sectional view of the bushing removed from the can and nozzle; Fig. 4 represents a side view of the body portion of the nozzle; Fig. 5 represents a sectional view of the inner end portion or extension of the nozzle.

The same reference characters indicate the same or similar parts in all the views.

In the drawings, 12 represents a portion of a portable can adapted to hold gasolene, the can being of such size that it is adapted to be tipped to pour its contents. The portion of the can here shown is the breast portion of a can, which may have a cylindrical body and a tapering breast. It will be understood, however, that the can may be of any suitable shape.

The can is provided with suitable means, such as an internally threaded sleeve 13, for detachably engaging a nozzle guide or bushing 14 which surrounds an orifice in the receptacle. As here shown, the sleeve 13 and bushing 14 are provided respectively with external and internal screw threads, whereby the bushing is detachably secured to the sleeve. The bushing is preferably provided with a compressible gasket 15 which is seated on the outer end of the sleeve 13 and forms a tight joint therewith.

The can is provided with a nozzle located partly within the can and provided with a normally closed safety valve adapted to be opened by pressure in the can to permit the escape of gas therefrom and with a liquid port adapted to communicate with the receptacle to permit the discharge of liquid, means being provided for automatically closing the liquid port to prevent the passage of liquid therethrough, said means being manually operable to open the liquid port and permit liquid to flow from the can through the nozzle.

In the embodiment of my invention here shown, the nozzle includes a tubular body portion 16 extending through and movable endwise in the guide or bushing 14 and provided at its inner end with an external screw thread 17, as indicated by Fig. 4. The nozzle also includes a tubular extension 19 having an enlarged end portion 20, which is internally screw-threaded at 21 to engage the screw thread 17, the extension 19 being therefore detachably connected with the body portion 16. The enlargement 20 is recessed to confine a gasket 17^a adapted to bear on an annular valve seat 18 formed on the inner end of the bushing 14, said enlargement and gasket constituting

a liquid valve. The extension 19 and its enlargement 20 are preferably formed in two parts, the body of the extension being a length of tubing united to the enlargement by means such as a solder joint 20^a. The inner end of the extension 19 is contracted and provided with a gas port 22.

23 represents a safety valve, preferably of spherical form, yieldingly seated on the interior of the contracted portion of the extension 19, by a spring 24. When the can is in an upright position, as indicated by Fig. 1, the lower side of the valve 23 is exposed to gas pressure within the can and is adapted to yield when said pressure overcomes the force of the spring 24, the yielding of the valve permitting gas to escape from the can through the nozzle, as indicated by dotted arrows in Fig. 1. The body portion of the nozzle is provided with liquid port or ports 25 located above the liquid valve when the can is upright.

26 represents a spring seated at its inner end on the bushing 14 and at its outer end on a shoulder 27 formed on the body portion of the nozzle. Said spring normally holds the liquid valve of the nozzle closed on the valve seat 18, so that said valve shuts off communication between the interior of the can and the nozzle through the ports 25. In other words, the liquid valve when closed closes the liquid ports 25. The nozzle is adapted to be manually displaced from the position in which it is normally held by the spring 26 to open the liquid valve and the ports 25 and permit the discharge of liquid from the can, as indicated by Fig. 2. The nozzle is preferably provided with a flange 28 constituting a finger rest, which enables the nozzle to be conveniently pushed inwardly to the position shown by Fig. 2.

It will now be seen that provision is made for conveniently opening the nozzle to permit the discharge of liquid from the can, and that the safety valve 23 remains closed unless the pressure within the can exceeds a predetermined amount, in which case the safety valve opens and permits the escape of gas through the nozzle, thus preventing an explosion of the can by an accumulation of gas therein.

The described construction is such that the parts are adapted to be conveniently assembled and to be self-retaining when assembled.

Having described my invention, I claim:

1. A liquid receptacle comprising a body having a nozzle guide and a fixed liquid-valve seat, and a spring-pressed outlet nozzle movable endwise in said guide and provided with a liquid valve located within the receptacle and normally closed on said seat, and with a normally closed safety valve adapted to be opened by pressure in the receptacle, to permit the escape of gas, and with a liquid port adapted to communicate with the receptacle to permit the discharge of liquid when the liquid valve is opened, said nozzle being manually movable to open the liquid valve.

2. A liquid receptacle having a bushing surrounding an orifice in the receptacle and provided with a valve seat within the receptacle, an outlet nozzle movable endwise in said bushing and provided with a gas port and a spring-closed gas valve at its inner end adapted to be opened by internal pressure, a liquid port between its ends, and a liquid valve between said ports, and a spring carried by said bushing and normally pressing the liquid valve against said valve seat to close the liquid port, the nozzle being manually movable to open the liquid valve and liquid port.

3. A liquid receptacle having a detachably secured bushing surrounding an orifice in the receptacle and provided with a valve seat at its inner end, an outlet nozzle movable endwise in said bushing and composed of a body portion having an external screw thread at one end and a liquid port above said screw thread, and an extension having an internally threaded enlargement and a washer, said enlargement and washer constituting a liquid valve, the extension being provided with a gas port and with a safety valve normally closing said port, and a spring carried by the bushing and normally holding the nozzle with its liquid valve closed on said seat and closing the liquid port, the nozzle being manually movable to open the liquid valve and liquid port.

In testimony whereof I have affixed my signature.

WILLIAM A. SEXTON.