I. E. SEXTON.

CAN FOR GASOLENE, &c.

APPLICATION FILED SEPT. 30, 1915.

1,203,797. Patented Nov. 7, 1916.

FIG. 1.

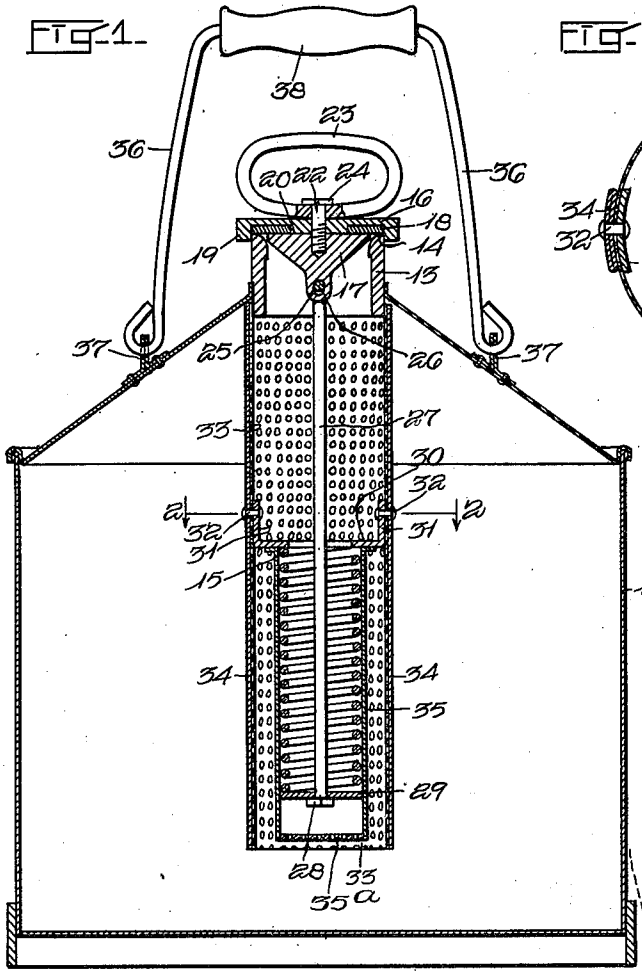


FIG. 2.

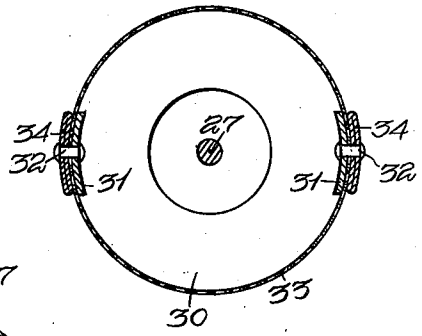
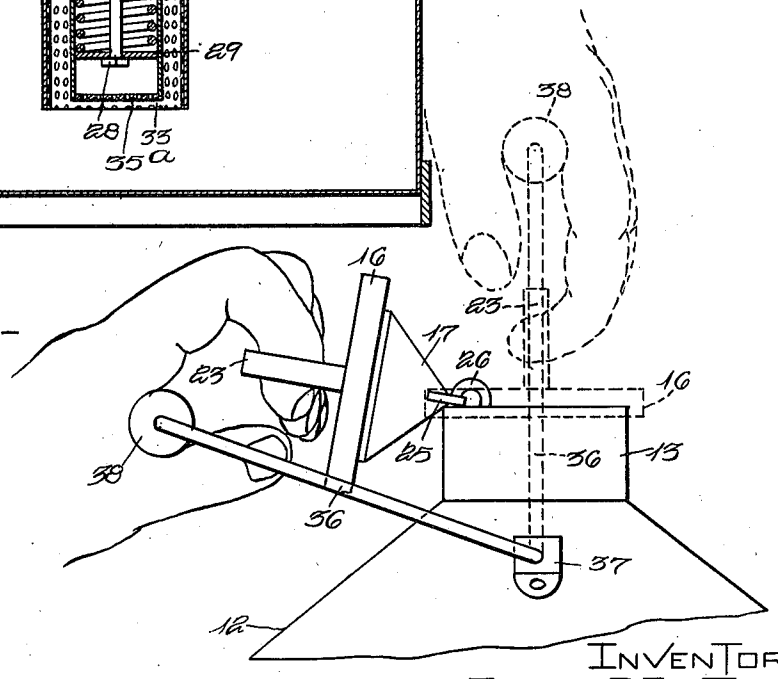


FIG. 3.



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CAN FOR GASOLENE, &c.

1,203,797. Specification of Letters Patent. Patented Nov. 7, 1916.

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To all whom it may concern:

Be it known that I, ISAAC E. SEXTON, a citizen of the United States, and resident of West Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Cans for Gasolene, &c., of which the following is a specification.

This invention relates to a can for storing volatile liquids such as gasolene, the can being provided with a neck through which it may be filled and emptied, said neck having a valve seat and the can being provided with a valve yieldingly held by spring pressure on said seat.

The invention has for its object to enable the valve to be easily displaced, to permit emptying and filling of the can, against the pressure of a relatively strong spring which normally holds the valve seated and prevents leakage of gas and liquid under ordinary conditions, the valve being at the same time adapted to yield and act as a safety valve in case of high pressure within the can.

The invention also has for its object to enable the valve to be accurately guided to its seat when released from a displaced position.

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 vertical sectional view of a can embodying my invention; Fig. 2 represents a section on line 2—2 of Fig. 1; Fig. 3 represents a side view of a portion of the can illustrating the operation of manually displacing the valve.

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

In the drawings, 12 represents a can, which may be of any suitable form and construction, the can being usually made of sheet metal.

13 represents the neck through which the can is filled and emptied, said neck being preferably a relatively thick metal tube suitably secured to the breast of the can and projecting above the same, the upper end of the neck forming an annular valve seat 14. The neck is normally closed by a valve held upon the valve seat by a spring 15 located within the can, the valve being preferably composed of a rigid body, which includes a cap-shaped rigid outer member 16 and a tapering or conical rigid inner member 17. Between the members 16 and 17 is clamped an annular flat-sided gasket 18 of compressible material such as leather. The cap member 16 is provided with a marginal downwardly projecting flange 19 which surrounds the gasket 18 and with a downwardly projecting boss 20 which occupies the central opening of the gasket. The base of the tapering or conical inner member is seated on the boss 20 and bears on the under side of the gasket 18, the gasket being clamped between said members. The diameter of said base is less than that of the gasket, so that the marginal portion of the gasket is exposed at its under side and bears on the valve seat 14, as indicated by Fig. 1. The two members of the valve body are connected by a bolt 22, the inner end portion of which is screw-threaded and engaged with a tapped orifice in the inner member 17. Said bolt is utilized to secure to the valve body a handle 23, which is preferably elliptical, as shown by Fig. 1, and provided in its lower portion with an orifice, the wall of which loosely surrounds the bolt 22.

The handle is held loosely against the valve body by the head 24 of the bolt, and is therefore swiveled to turn on a vertical center, so that its major axis may be turned to a position parallel with the handle 38 hereinafter described, without turning the valve, and therefore without turning or twisting the spring 15 and varying the tension of the latter.

On the inner end or apex of the inner member 17 is formed an ear 25 which is perforated to receive a hook 26 on a rod 27.

Said rod extends downwardly into the can and is provided at its lower end with a head 28 supporting a disk or washer 29 on which the lower end of the spring 15 bears. The upper end of the spring bears on a fixed annular abutment 30, which is a ring provided with ears 31 connected by rivets 32 with a foraminous safety tube 33 rigidly attached by solder or otherwise at its upper end to the neck 13 and extending therefrom practically to the bottom of the can. The tube 33 is preferably reinforced by longitudinal strips 34 soldered thereto, the strips being located at opposite sides of the tube and receiving the rivets 32, as indicated by Fig. 2.

The head 28 and disk or washer 29 constitute a spring support located within the

tube 33. The rod 27 is laterally unobstructed above said support, the annular abutment 30 being of much larger diameter than the rod, so that the rod may be freely tipped laterally in any direction to bring its upper end against one side of the neck 13, as shown by Fig. 3.

The spring 15 is confined laterally by a tubular guide 35, the upper end of which is soldered to the fixed abutment 30. The handle 23 is formed to be engaged by the fingers of one hand of the operator, so that the valve may be lifted from its seat against the force of the spring 15. The said handle and the valve body including the inner member 17 constitute a lever adapted to be fulcrumed on the valve seat 14 when the valve is displaced laterally after being lifted from its seat, as indicated by Fig. 3. The operator is therefore enabled to utilize the valve as a spring compressing lever, by first slightly lifting the valve by a direct upward pull, and then tipping the valve to one side of the neck while the inner member 17 bears on the valve seat, which acts as a fulcrum. The described connection between the handle 23 and the valve body prevents the handle from tipping relatively to the valve body, so that the said lever cannot buckle, but is practically rigid from the ear 25 to the outer portion of the handle 23 when the lever is manipulated as shown by Fig. 3. The muscular force required, to displace the valve and hold it displaced so that the neck is practically unobstructed, is therefore reduced to the minimum. The conical inner member 17 being rigid is not indented by contact with the seat 14, and is adapted to slide on said seat with the minimum of frictional resistance and wear.

I prefer to provide the can with a bail 36 hinged to ears 37 on the breast of the can, and provided with a handle 38. The form and arrangement of the bail and its handle are such that the handle 38 may be located directly over the valve handle 23, as shown by Fig. 1, and by dotted lines in Fig. 3, so that the palm of the operator's hand may bear on the handle 38 while the fingers, partially straightened, engage the valve handle as indicated by dotted lines. The valve may now be lifted from its seat by inward flexure of the fingers, and the bail and valve may then be swung to the full line position shown by Fig. 3, the valve being displaced and the spring 15 held in a compressed condition. When the handle 23 is released the spring closes the valve, the tapering inner member 17 coöperating with the valve seat in accurately locating the washer 18 on the valve seat. When the valve and bail are held displaced, as shown by full lines in Fig. 3, by one hand of the operator, the other hand may be used to tip the can to a pouring position.

The bail 36 and its handle 38 when held as shown by dotted lines (Fig. 3) enable the operator to hold the can down upon a floor while lifting the valve from its seat. When the partially lifted valve is moved sidewise to cause the inner member to bear on the valve seat, and while it is being moved to the full line position (Fig. 3), the downward pressure of the inner member against the valve seat continues to hold down the can. It will be seen therefore that provision is made for preventing the can from being lifted with the valve. In other words, provision is made for holding down the can while the valve is being lifted and displaced against the force of the spring. A spring sufficiently powerful to normally maintain a gas and liquid-tight pressure of the valve against its seat may therefore be employed, without rendering the lifting and displacement of the valve difficult and inconvenient. The lower end of the tubular guide 35 is preferably provided with a foraminous head or cap 35ª. Owing to the fact that the spring 15 is located wholly above the lower end of the tube 33, the length of the spring is limited only by the length of the tube, so the tube may extend to or nearly to the bottom of the can.

Having described my invention, I claim:

1. A can having a neck provided with a valve seat, a valve comprising a body composed of a rigid cap-shaped outer member, a rigid tapering inner member and a compressible annular gasket interposed between said members, a bolt connecting said members and causing them to clamp the gasket, a handle projecting outwardly from said body and adapted to turn on said bolt, the latter preventing the handle from tipping relatively to the body, and a spring connected with the valve and adapted to yieldingly hold the gasket on the valve seat, the handle and valve body constituting a practically rigid lever adapted to be fulcrumed on the valve seat to open the valve.

2. In combination, a can having a neck provided with a valve seat, a valve formed to close on said seat, a handle secured to the valve and projecting outwardly therefrom, a spring connected with the valve and adapted to yieldingly seat the same, the valve being provided at its inner side with a tapering member adapted to be fulcrumed on said seat and to slide thereon when the valve is displaced laterally, and a bail hinged to the can and having a handle spaced from the valve handle to permit the manual opening and lateral displacement of the valve by one hand of the operator, the bail constituting a means for holding down the can when the valve is being opened.

3. In combination, a can having a neck provided with a valve seat, a valve formed to close on said seat and composed of a rigid

body comprising a cap-shaped rigid outer member, and a tapering rigid inner member adapted to be fulcrumed on said seat and to slide thereon and a compressible gasket clamped between said members, a handle for said valve, means securing the handle to the valve body and having provisions for permitting the handle to turn on an axis perpendicular to the cap member and preventing the handle from tipping relatively thereto, a spring connected with the valve and adapted to yieldingly seat the same, and a bail hinged to the can and having a handle arranged to coöperate with the valve handle in manually opening and laterally displacing the valve, the said valve body and valve handle constituting a practically rigid lever, and the valve handle being adapted to turn independently to a position parallel with the bail handle.

4. A can having a neck provided with a valve seat, a foraminous tube extending downwardly into the can from said neck, a fixed annular spring abutment between the ends of said tube, a valve formed to close on said seat, and provided with a tapering inner member adapted to be fulcrumed on said seat and to slide thereon, a rod jointed to the valve, extending downwardly therefrom through said abutment and provided at its lower end with a spring support located within the tube, and a spring interposed between said support and abutment, the rod being laterally unobstructed between its spring support and the valve, so that it is free to tip laterally in any direction, and the tube being utilized as a container for the spring.

5. A can having a neck provided with a valve seat, a foraminous tube extending downwardly into the can from said neck, a fixed annular spring abutment between the ends of said tube, a valve formed to close on said seat, and provided with a tapering inner member adapted to be fulcrumed on said seat and to slide thereon, a rod jointed to the valve, extending downwardly therefrom through said abutment and provided at its lower end with a spring support located within the tube, a spring interposed between said support and abutment, the rod being laterally unobstructed between its spring support and the valve, so that it is free to tip laterally in any direction, and the tube being utilized as a container for the spring, and a tubular spring guide attached to the annular abutment and preventing lateral deflection of the spring.

In testimony whereof I have affixed by signature.

ISAAC E. SEXTON.