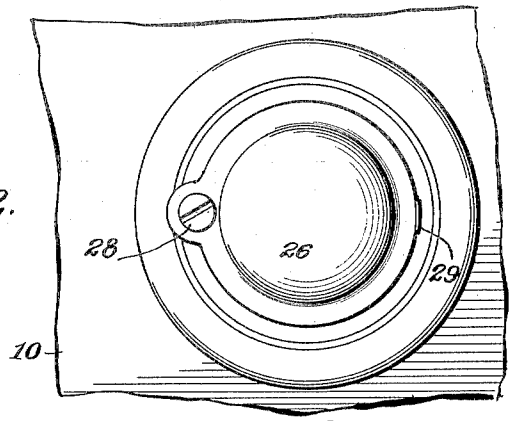
July 9, 1929. R. E. BATEMAN 1,719,960

FILLING VALVE FOR GASOLINE AND LIKE CONTAINERS

Filed Aug. 2, 1926

Fig. 2.



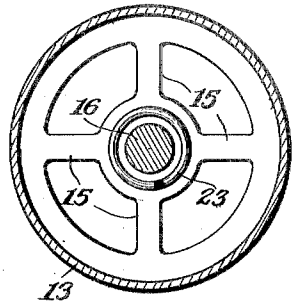


Fig. 3.

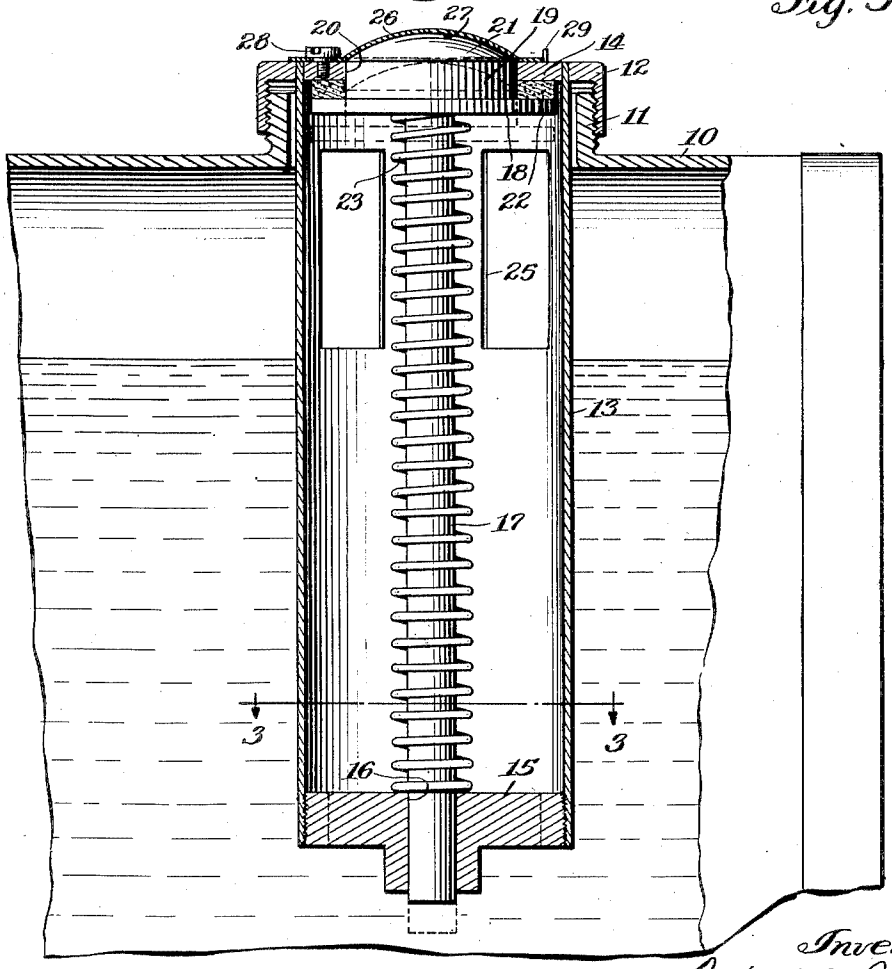


Fig. 1.

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UNITED STATES PATENT OFFICE.

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FILLING VALVE FOR GASOLINE AND LIKE CONTAINERS.

Application filed August 2, 1926. Serial No. 126,407.

This invention relates to a combined closure and filling valve for fuel tanks and other containers such as are used for automobile, tractors, aeroplanes, or other purposes.

One of the objects of the invention is to provide a closure or valve through which the tank may be filled and which will automatically close the filling opening after the removal of the filling nozzle.

Other objects of the invention will appear from the following description.

The invention is exemplified in the combination and arrangement of parts shown in the accompanying drawing and described in the following specification, and it is more particularly pointed out in the appended claims.

In the drawing—

Fig. 1 is a vertical sectional view through a fuel tank showing one form of the invention applied thereto;

Fig. 2 is a top plan view of the form of the invention shown in Fig. 1; and

Fig. 3 is a section on line 3—3 of Fig. 1.

The numeral 10 designates a tank such as the gasoline tank of an automobile or other conveyance, the tank being provided with the usual threaded flange 11 for receiving a screw cap 12. In the arrangements now commonly in use the cover cap is simply a closure for the filling opening and is unscrewed from the flange 11 when it is desired to fill the tank. This arrangement always occasions loss of time in screwing the cap outo and off the flange and frequently causes a great deal of trouble and vexation when the cap sticks or refuses to start on the threads or when it is not properly positioned and becomes loose or displaced. In the present invention it is unnecessary to remove the cap 12 to fill the tank but only requires insertion of the nozzle which automatically opens the valve and after the tank has been filled the removal of the nozzle permits the valve to be automatically closed.

The cap 12 has a central opening provided therein into which a sheet metal tube 13 is inserted. A ring 14 is placed within the tube 13 in registration with the top of the cap 12 and the ring, tube and cap are brazed or otherwise secured together. When the cap 12 is in place the tube 13 extends into the fuel tank 10 and is provided with a spider 15 at its lower end having a central guide opening 16 therein. A valve stem 17 is slidably mounted in the opening 16 and carries a valve plate 18 at its upper end having a boss 19 thereon which fits into the opening 20 in the ring 14. The upper face of the boss 19 may be rounded, as shown at 21, so as to project slightly above the top of the ring 14. A packing ring 22 surrounds the boss 19 and rests on the rim of the plate 18 in position to engage the under side of the ring 14. A spring 23 surrounds the valve stem 17 resting on the spider 19 and holds the packing ring 22 tightly against the under face of the ring 14, thus tightly closing the opening through the center of the ring 14. When it is desired to fill the tank it is only necessary to force the end of the nozzle downwardly on top of the boss 19 which compresses the spring 23 and opens the valve, permitting the nozzle to be projected into the tube 13 in position to discharge liquid into the tank. The liquid escapes from the tube 13 into the tank through the openings in the spider 15 and through openings 25 cut through the side walls of the tube 13. A cover cap 26 is secured in place above the boss 19, the cover cap being provided with a concave lower face 27 to fit the rounded top of the boss 19.

The cover cap 26 is pivotally held in place by a screw 28. A lug 29 may be provided by which the cover cap may be turned about the pivot screw 28 to expose the boss 19. Since the boss and cover cap are rounded it is apparent that lateral movement of the cap 26 will force the boss downwardly to the position shown in broken lines in Fig. 1 to permit displacement of the cover cap. When the cover cap is returned the action will be reversed and the boss 19 will be forced downwardly until the cap reaches its position over the opening 20 when the boss will be automatically sprung upwardly into the recess 27. This will locate the cap in its proper closed position and prevent accidental displacement thereof. The cap 26 may be omitted in some cases, but ordinarily it is best to provide the cap in order to prevent dust from collecting on top of the boss 19 which might otherwise be washed into the tank when the tank is filled.

To fill the tank it is only necessary to turn the cover cap 26 to one side and insert the nozzle into the opening 20. This will automatically depress the valve and permit the fuel to flow into the tank. After the tank has been filled the removal of the nozzle will permit the spring to return the valve automatically and when the cover cap is turned

back into place the opening will be securely closed.

I claim:—

1. The combination with a fuel tank having a filling opening therein, of a threaded cap for closing said opening, said cap having an opening therethrough, a tubular member secured to said cap and projecting inwardly through the opening in said tank when said cap is in place, a spider carried by said tubular member and having a guide opening therein, a valve stem slidably mounted in said guide opening, a plate carried by the outer end of said valve stem, packing interposed between said plate and the inner face of said cap, a boss projecting upwardly from said plate in position to enter the opening through said cap, and a spring surrounding said valve stem and holding said plate and packing in position to close the opening in said cap.

2. The combination with a fuel tank having a filling opening therein, of a valve for closing said opening, said valve being spring-held and having a rounded projecting portion, and a cover cap for said valve having a recess for receiving said projecting portion.

3. The combination with a fuel tank having a filling opening therein, of a screw cap for closing said opening, said screw cap having an opening therethrough, a spring-held inwardly opening valve for closing the opening in said screw cap, said valve having a rounded outwardly projecting contact portion, a dust cap for covering said valve, said cap having a recess for receiving said projecting portion, and a pivot for holding said dust cap in position.

4. The combination with a fuel tank, of a screw cap for closing said fuel tank, said screw cap having a filling opening therethrough, an outwardly pressed spring-held valve for closing said filling opening, said valve having a rounded outer face and being movable inwardly to permit the insertion of a filling nozzle by contact with said face, and a sheet metal dust cap having a recess in the under side thereof for receiving said contact face, said dust cap being pivoted to swing laterally away from the closed position and being held against accidental displacement by said rounded contact face disposed within said recess.

In testimony whereof I have signed my name to this specification on this 26th day of July, A. D. 1926.

RUPERT E. BATEMAN.