Dec. 29, 1936. W. JAY 2,066,202

THEFT PREVENTING TANK FILLER TUBE

Filed July 19, 1933

Fig. 1

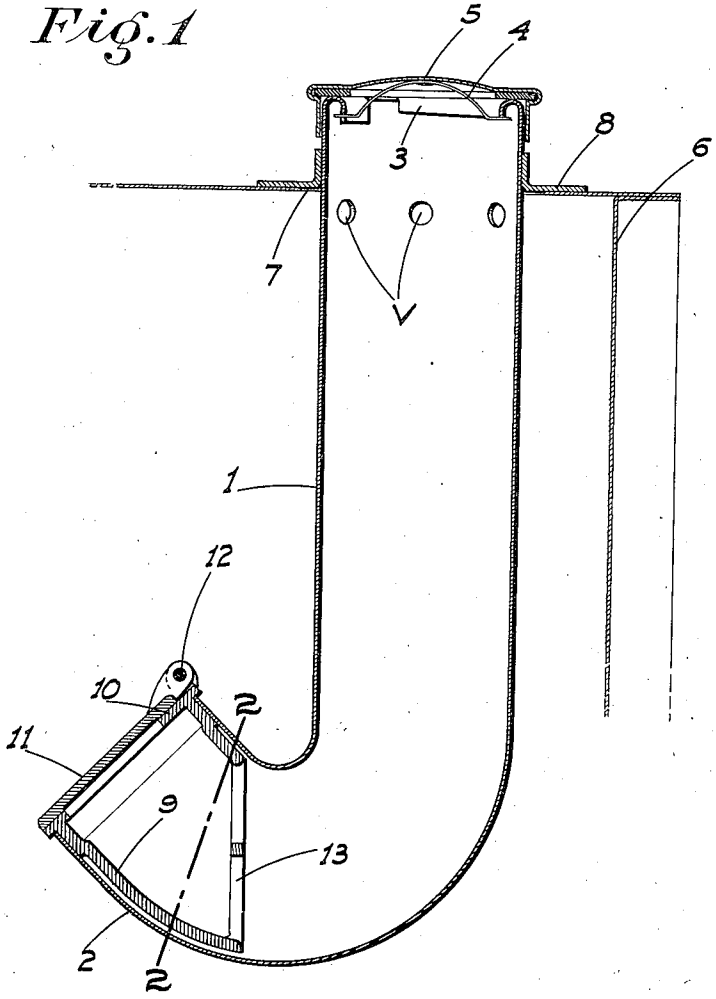
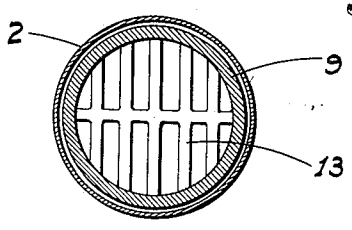


Fig. 2



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THEFT PREVENTING TANK FILLER TUBE

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3 Claims. (Cl. 220—86)

This invention relates to devices for preventing the theft of gasoline from the tanks of automobiles, which with the present tank equipment can be very easily done by siphoning the liquid from the tank. This form of petty thievery is widespread and its evils recognized and special forms of locking and relatively theft-proof caps have been devised for use on the filler tubes of tanks in place of the readily removable caps commonly used.

Such special caps however require the use of a key or the working of a combination to remove them and the owner must himself manipulate and remove the cap when desiring to fill the tank at a service station. This is sometimes inconvenient and delays filling operations and has discouraged the use of such locking caps.

The principal object of my invention is to avoid the above objectionable features by providing a theft-proof device for the purpose, incorporated with the filler tube, which uses the ordinary form of cap, offers no interference to the filling of the tank without having to manipulate any lock or the like, and yet prevents siphoning of the gasoline from the tank.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a sectional elevation of my improved filler tube as mounted in place in a tank.

Fig. 2 is a cross section on the line 2—2 of Fig 1.

Referring now more particularly to the characters of reference on the drawing, the numeral 1 denotes the main portion of the filler tube which is relatively long and formed at its lower end with an upwardly curved and relatively short elbow portion 2. The tube on its upper end may be provided with the common form of latch flange 3 adapted for releasable holding engagement with the spring latch 4 of the cap 5. The form of cap and the means to removably mount the same in place on the tube however forms no part of this invention.

The tube depends into the tank 6 through the usual top opening 7 therein, a collar 8 secured on the tube above the tank in surrounding relation to the opening, maintaining a sufficient portion of the tube projecting above the tank for engagement with the cap. The tube just below the top of the tank is provided with one or more air vents V of sufficient size to accommodate the flow of air displaced from the tank by the inflow of liquid from the hose nozzle.

Mounted in fixed relation with the lower elbow portion of the tube is a check valve and screening or obstruction unit. In the preferred construction of the device this unit is initially separate from the tube and is in the form of a tubular body member 9 mounted in place in said elbow by pressing the same therein from its upper end. On its outer end the member is formed with a flat seat 10 for sealing engagement with a flap valve 11 which opens upwardly or away from the member 9 and is hingedly mounted in connection with the latter along its upper edge, as shown at 12. The inner end of the member 9, which is somewhat close to the junction of the elbow with the straight portion of the tube, is provided with a grating 13 or similar passage obstructing means.

This construction enables the filler tube to be a plain relatively light sheet metal member while the valve and grating unit may be a light casting, machined on its valve seat and having the valve seated thereon before the member 9 is pressed into the tube. The elbow is disposed on the tube at such an angle thereto that the device may be projected into place through an opening 7 by initially inverting the tube and hooking the elbow through the opening. This allows the tube to be mounted in place after the manufacture of the tank is completed and avoids having to provide a very large hole in the tank for the reception of the device.

In operation to fill the tank it is only necessary to insert the delivery hose into the filler tube as usual. The pressure of the flow of liquid from the nozzle opens the valve and allows the liquid to freely enter the tank without any back pressure being set up such as would possibly cause the liquid to back up and flow over the upper end of the filler tube. As the tank becomes filled above the level of the valve the vents in the tube allow of the necessary relief of the air from the tank as such air is displaced by the entering liquid. When the flow of liquid ceases the valve closes of itself.

To siphon any liquid out of the tank other than the very small quantity remaining in the filler tube ahead of the valve, it would be necessary for a siphoning conduit such as a hose or bent metal tube, to be inserted to the bottom of the tube 1 and then around and up the elbow to press open the valve. This cannot be done how-

ever on account of the presence of the grating 13 which prevents the movement of such hose to the vicinity of the valve. Also the distance of the valve from the bottom of the straight portion of the tube and the position of the grating is such as to prevent a hooked piece of rigid wire for instance, inserted in the tube and with its hooked end projected through the grating, from being then manipulated to engage and hold the valve open.

While I have herein shown and described this device as being designed as factory equipment for a tank, it may be also made for application in connection with the standard short filler tubes with which tanks are normally provided.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A theft preventing tank filler tube comprising a tube member depending into the tank and formed at its lower end and on one side with an upwardly facing extension, an upwardly opening self-closing valve over the outer end of said extension and means in the extension ahead of the valve to prevent a siphoning conduit if inserted in the tube from contact with the valve to open the same without interfering with the flow of liquid into the tank.

2. A theft preventing tank filler tube comprising a tube member depending into the tank and formed at its lower end and on one side with a short upwardly facing extension, a tubular member pressed into the outer end of said extension, a valve seat formed on the outer end of said member, an upwardly opening flap valve to engage said seat hingedly mounted on the member, and a grating formed on and extending across said member below the valve and seat; said grating including bars the spacing of which is insufficient to permit of the insertion of a siphoning conduit between the bars while allowing a free flow of liquid into the tank.

3. An anti-syphoning device comprising a tubular member secured at one end in the filling opening of a fuel tank and having its other end disposed within the tank, a flap valve so hinged to the last named end of the tubular member as to close under the action of gravity and adapted to be opened by the flow of fuel through said tubular member into the tank, and baffle means arranged in said tubular member in advance of the valve, said baffle means being constructed to prevent tampering with the valve but permitting flow of fuel through said tubular member.

WEBB JAY.