March 22, 1927. 1,621,486

J. R. BINGAMAN

LOCK VALVE FOR GASOLINE MOTOR SUPPLY TANKS

Filed May 15, 1926

Fig. 1.

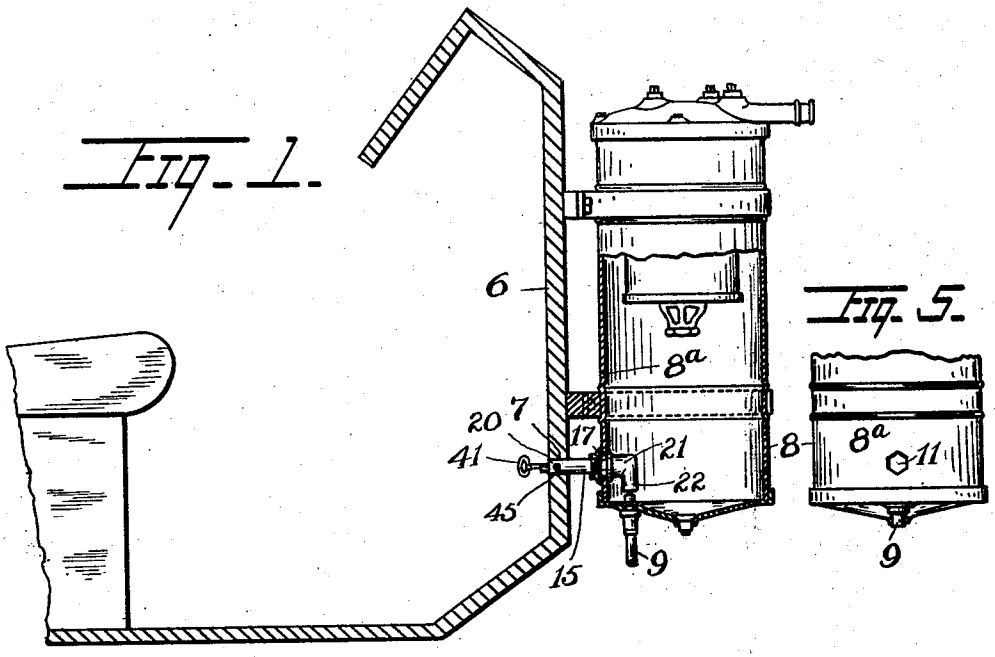


Fig. 5.

Fig. 4.

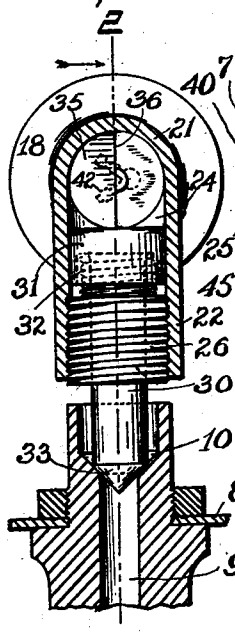


Fig. 2.

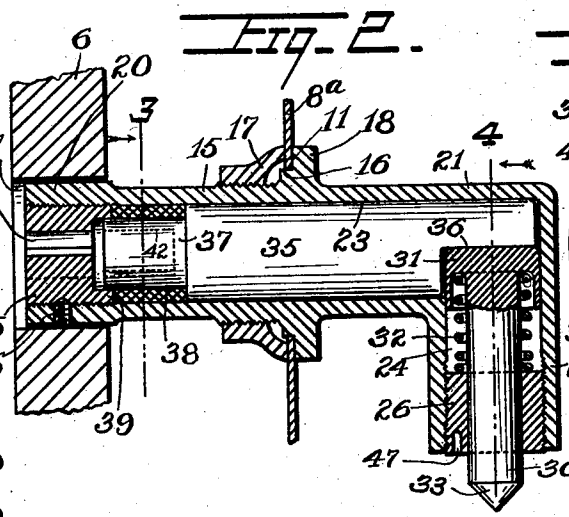
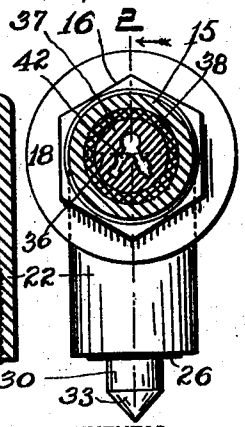


Fig. 3.



John R. Bingaman, INVENTOR.

BY W. A. D. Mason

ATTORNEYS

Patented Mar. 22, 1927. 1,621,486

UNITED STATES PATENT OFFICE.

JOHN R. BINGAMAN, OF WEST READING, PENNSYLVANIA.

LOCK VALVE FOR GASOLINE MOTOR-SUPPLY TANKS.

Application filed May 15, 1926. Serial No. 109,219.

My invention relates to a lock valve device for the gasoline supply of a motor, and more particularly it is adapted to lock the outlet pipe of a supply tank or a vacuum cup tank commonly employed to feed gasoline to the motor from a large main storage tank; my improved lock valve being of simple and economical construction and extending through and intermediately supported in a tank wall aperture with its key-actuated projecting outer end extending into a tank-supporting wall aperture to protect unauthorized tampering with the key-slotted closure for said end. My invention is fully described in connection with the accompanying drawings, and the novel features are set forth in the appended claims.

Fig. 1 is a diagrammatic view, partly in section, showing a preferred embodiment of my invention applied to a vacuum-cup tank carried on the dash-board of an automobile.

Fig. 2 is an enlarged view showing my lock device in longitudinal section, on the line 2 of Figs. 3 and 4, and indicating its intermediate support in a tank wall aperture and its projecting outer end extending into a protective dash-board aperture.

Fig. 3 is a cross sectional view on the line 3 of Fig. 2.

Fig. 4 is an opposite end cross-sectional view, on the line 4 of Fig. 2 but showing the valve in seated position closing the tank outlet.

Fig. 5 is a fragmentary view of the tank, indicating the polygonal aperture in the latter to non-rotatably support my improved lock device.

In the preferred construction shown in the drawings, 6 indicates the dash-board of an automobile, provided with an aperture 7 and carrying as usual, firmly secured thereto, a supply or vacuum-cup tank 8, which operates in well-known manner to supply gasoline from a main tank, not shown, through an outlet pipe 9, to the motor carbureter, not shown; such gasoline feed being commonly employed and no further description or showing being required. Outlet pipe 9, in my improved construction, is provided at its end within the tank 8, with a valve seat 10, and the tank wall 8^a has an aperture 11, preferably of polygonal outline as indicated for a purpose hereinafter described.

The preferred form of my improved lock device, shown more clearly in Figs. 2, 3, and 4, comprises an L-shaped structure, the main member 15 of which extends through the tank wall 8^a, and is provided with a bearing 16, intermediate its length and preferably polygonal as shown, so as to non-rotatably engage in wall aperture 11, in which position it is firmly held, either by solder, or, as shown, by rim-nut 17 clamping the tank wall 8^a against bearing flange 18; suitable cement or packing being interposed if required, to make a liquid tight joint, and the polygonal aperture 11 taking any torsional strains. The outwardly projecting end 20 of said member 15 extends into the dash-board aperture 7 as shown, and the inwardly projecting end 21 thereof has an L-extension 22, positioned to overhang the outlet pipe valve seat 10, when said member 15 is secured to the tank wall 8^a as described; and both said main member 15 and L-extension 22 are centrally bored longitudinally as shown to form a main chamber 23 and a communicating extension chamber 24 each closed by an end plug, 25 and 26 respectively, engaging the screw-threaded outer ends of their respective chambers.

Plug 26 is centrally bored to form a bearing for a longitudinally movable valve stem 30 having a head 31, a retracting spring 32 seating between said head and adjustably positioned plug, and a conical end 33 adapted to engage seat 10 when in lowered position so as to shut off the flow of gasoline from the tank 8, and stop the motor.

Within chamber 23 is rotatably mounted a rod 35, a hemispherical portion at one end thereof, as shown, being cut away to form a flat face 36 against which valve head 31 normally rests and which acts as a cam to project valve stem 30 when rod 35 is rotated, as indicated in Fig. 4. The opposite end of rod 35 has a reduced portion 37 forming an annular space for packing 38 which is suitably compressed by an annular flange 39 on the inner end of plug 25 to prevent leakage. Plug 25 is suitably apertured as indicated at 40 for passage therethrough of a key 41 and rod end 37 is slotted, as indicated at 42, to receive the key-bit, such slot as shown, being preferably V-shaped to prevent any ordinary key from operating the same.

Valve stem 30 can be operated only by rotating rod 35, and access to the latter, except by the specially shaped key provided, can be had only by removing plug 25. To

prevent unauthorized removal of said plug, means to retain the latter in set adjusted position is provided, such means, as indicated consisting of a screw 45 engaging a threaded opening in the end of the main extension 20, and normally being located within apertures 7, so that removal of the tank 8 is required before said screw 45 can be operated.

Plugs 25 and 26 may have spanner wrench holes 47, as indicated, to facilitate turning them to adjusted position; and instead of the V-shaped key-bit slot 42 indicated, variously positioned spanner-bit slots may be employed, each lock having such slots suitably located for its special key.

From the foregoing description it will be readily seen that my improved lock valve may determinedly control the opening or closing of outlet pipe 9 to supply or cut off gasoline flow to the motor carbureter; that it can be operated only by the key provided therefor, and cannot be tampered with without removal of the tank 8 from its fixed position,—such removal requiring time and tools, thus preventing theft of the machine. My lock is simple, effective, and theft proof; and due to the fact that the small storage of gasoline in the carbureter permits starting of the motor, leads to capture in the act of the would-be thief, as he may readily start the motor, but can travel but a short distance before the engine will stop for lack of gasoline, calling unwelcome attention to his unauthorized operation.

While I have indicated and described a preferred embodiment of my invention; I do not desire to be limited to such specific construction which may be readily modified within the spirit of my invention as defined in the following claims.

What I claim is:

1. In combination with a gasoline motor supply tank having a bottom outlet with an inner valve seat, and a tank-supporting wall having an aperture; an L-shaped lock valve device comprising a main portion extending through and non-rotatably supported intermediately in a polygonal shaped aperture in the tank wall with its outer end projected into said supporting wall aperture and its tank enclosed L-end overhanging said inner valve seat, a spring-retracted valve mounted in said L-end and adapted to said seat, a rotatably mounted member in said main portion having a valve-operating cam at one end and a key-way slot in the opposite end, a key slotted end closure for said main portion, means arranged in said main portion inwardly of the slotted enclosure preventing fluid passage between said main portion and said rotatably mounted member and a set screw for the end closure normally located within said supporting wall aperture.

2. In combination with a gasoline motor supply tank having a bottom outlet with an inner valve seat, and a tank-supporting wall having an aperture; an L-shaped lock valve device comprising a main portion extending through and non-rotatably supported intermediately in a polygonal shaped aperture in the tank wall with its outer end projected into said supporting wall aperture and its tank-enclosed L-end overhanging said inner valve seat, a spring-retracted valve mounted in said L-end and adapted to said seat, a rotatably mounted member in said main portion having an end cam-portion overhanging said valve and a key-way slotted reduced opposite end, a packing ring surrounding the latter, a key slotted end closure plug for said main portion having a packing compressing annular flange, and a plug retaining screw in said main portion end normally located within said supporting wall aperture.

In testimony whereof I affix my signature.

JOHN R. BINGAMAN.