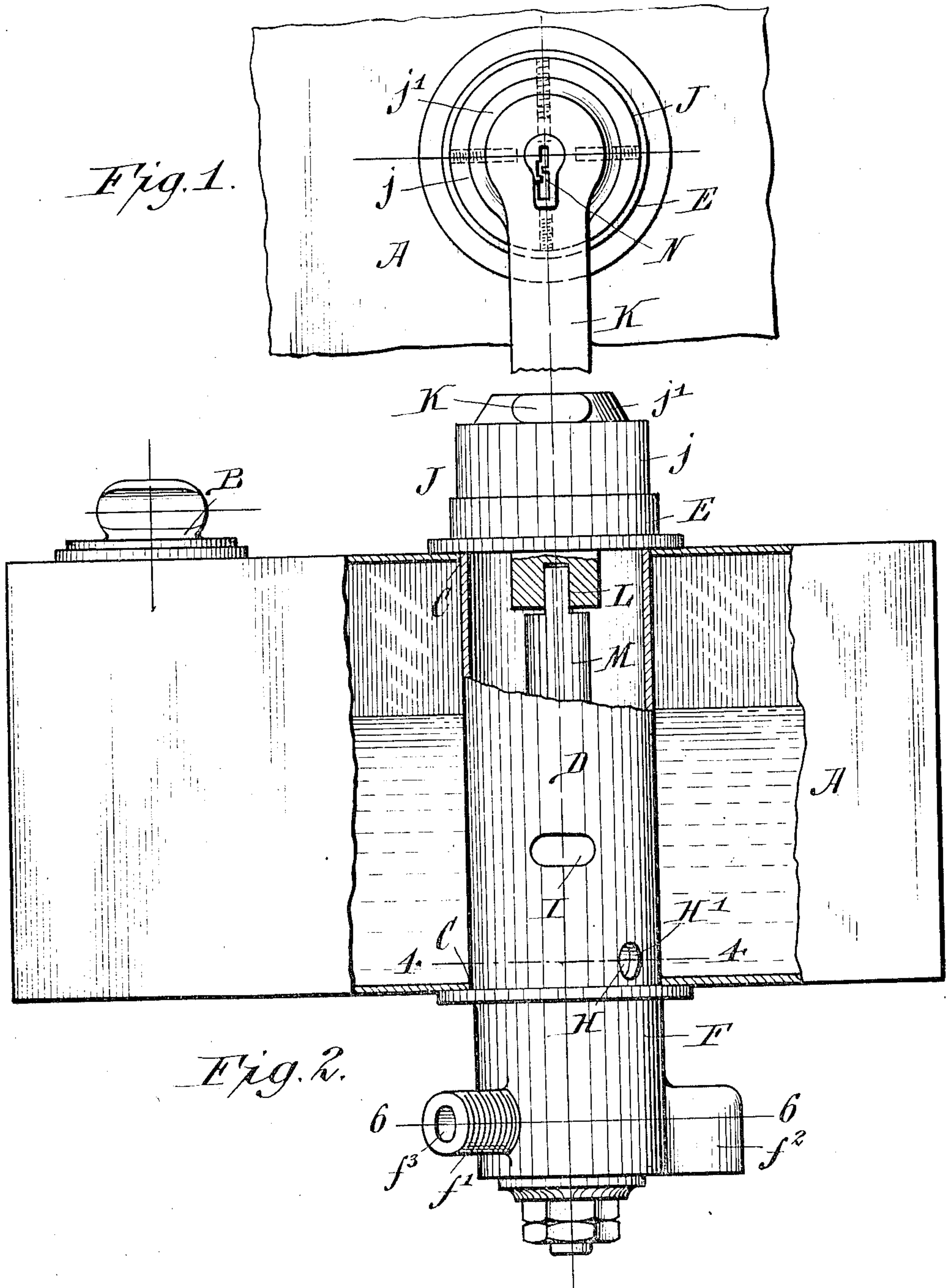


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 APPLICATION FILED FEB. 19, 1908.

Patented July 13, 1909.

2 SHEETS—SHEET 1.

927,621.



Witnesses:
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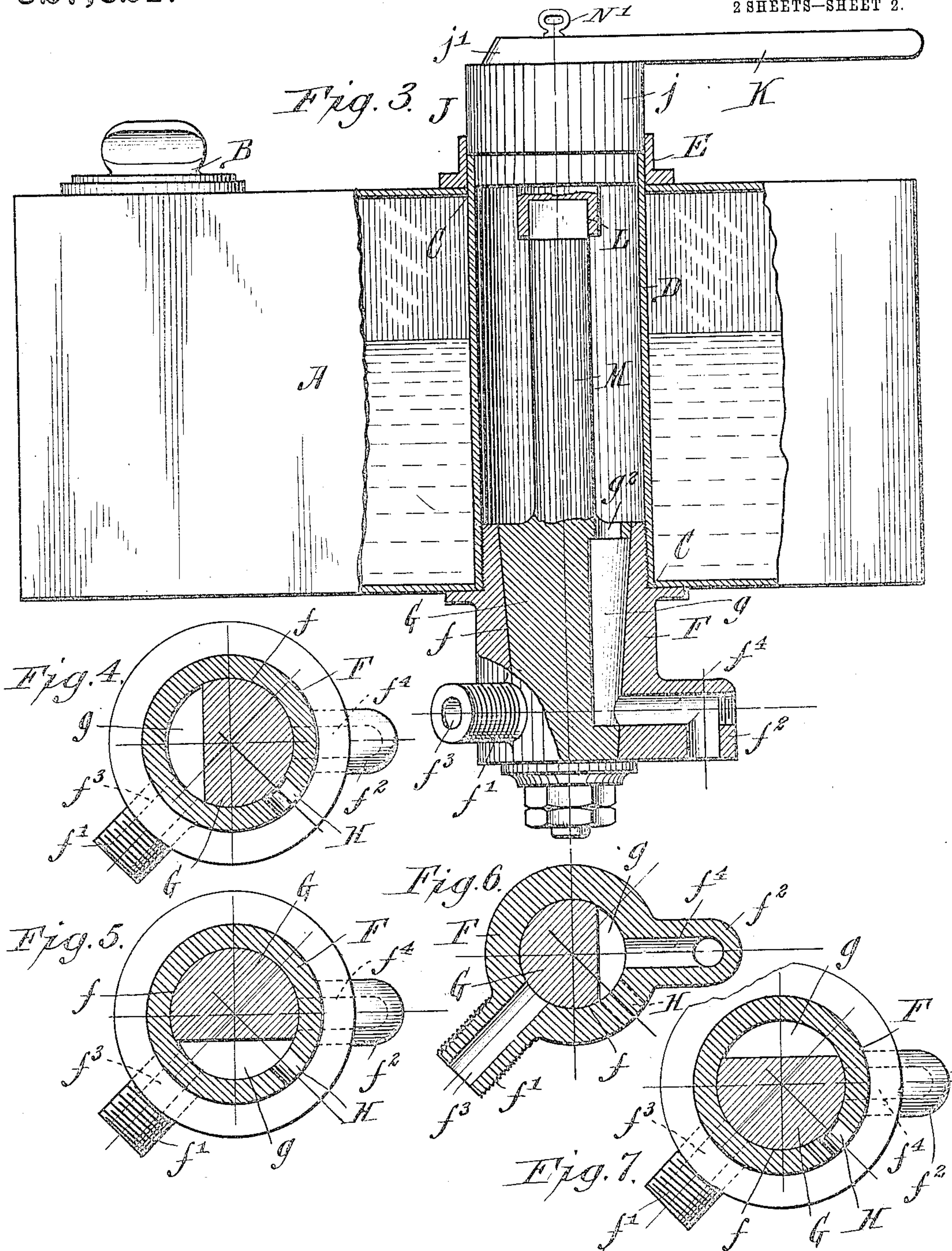
Joseph G. Williams, Inventor.
 By Emil Kuehark
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UNITED STATES PATENT OFFICE.

JOSEPH G. WILLIAMS, OF BUFFALO, NEW YORK.

LOCKING AND CONTROLLING DEVICE FOR LIQUID-RECEPTACLES.

No. 927,621.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed February 19, 1908. Serial No. 416,670.

To all whom it may concern:

Be it known that I, JOSEPH G. WILLIAMS, a citizen of the United States, and resident of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Locking and Controlling Devices for Liquid-Receptacles, as clearly set forth in the following specification.

My invention relates to a locking and controlling-device for liquid receptacles and more particularly to a device of this character for use on gasoline-tanks of automobiles.

The primary object of my invention is the production of a device wherein provision is made to lock the gasoline-tank of a automobile against feeding gasoline into the carbureter or to the carbureting or mixing-valve of an engine, as the case may be; the device being locked by means of a removable key of special design to be carried by the operator so that the feeding of gasoline to the engine in the form of an explosive-mixture cannot take place, thus preventing the automobile being driven away for any considerable distance by a person bent upon mischief or theft.

Another object of my invention is to so construct said device that it serves a plurality of purposes, viz:—to provide a gasoline reserve without dividing the gasoline-tank into two chambers; to feed the gasoline through a main supply opening until it reaches the bottom of said opening; to feed the gasoline through a reserve supply-opening after the main supply is consumed; to drain the gasoline from the tank; and to shut off the feeding of gasoline to the carbureter or to the mixing-valve of the engine, as the case may be.

A further object is, the production of a device of such character which is readily accessible, simple in construction, positive in action, and easy to manipulate, and in which the parts are easily disassembled for cleaning.

A further object is to combine a valve with a lock and connect the stem of the valve with a movable part of said lock, so that upon turning said movable part of the lock, the valve may be moved into any one of a plurality of positions whereby the gasoline may be shut-off, drained from the tank, or fed through the main supply-opening or the reserve-opening.

A further object is to provide means

whereby the feeding of gasoline ceases when the latter reaches the bottom of the main supply-opening, thus giving notice that the reserve supply has been reached.

With these and other object in view, the invention consists in the arrangement and combination of devices, and in the construction, arrangement and combination of parts to be hereinafter described and particularly pointed out in the subjoined claims.

In the drawings,—Figure 1 is a top plan view of that portion of a gasoline-tank immediately surrounding my improved locking and controlling-device. Fig. 2 is a sectional elevation of a gasoline tank equipped with my improved device, part of the latter being shown in section. Fig. 3 is a sectional elevation of the tank showing the device in longitudinal section. Figs. 4, 5, and 7, are cross-sections taken on line 4—4, Fig. 2; the sleeve and the bottom of the tank being omitted and the valve being shown in three of the four positions into which it is adapted to be moved. Fig. 6 is a cross-section taken on line 6—6, Fig. 2; the valve being shown in the fourth position into which it is adapted to be moved.

Referring now to the drawings in detail, like letters of reference refer to like parts in the several figures.

The reference letter A designates the gasoline-tank having a filling-opening in its top wall closed by a plug B.

The top and bottom walls of the gasoline-tank have alined openings C, into the lower of which the lower end of a sleeve D is soldered or otherwise secured and through the upper of which said sleeve projects and is surrounded by a flanged collar E riveted or otherwise affixed to the top wall of the tank, said collar rising above the upper end of the sleeve. Threaded into the lower end of said sleeve is a valve-casing F having a central tapering-bore f extending preferably from top to bottom and two lateral bosses f^1 , f^2 , having outlet-passages f^3 , f^4 , respectively. The boss f^1 is adapted for connection with a carbureter or a mixing-valve of an engine, while the passage in the boss f^2 serves as a drain through which the gasoline in the tank may be discharged. Revolvable in said valve-casing is a conical valve-plug G having a section cut-away between its ends, as at g , to form a chamber between the valve and the wall of the casing surrounding it. Said valve is so arranged that when it is

turned to bring the cut-away portion thereof in line with the outlet-passage f^3 , or the drain f^4 , said passage or drain will be in communication with the chamber; therefore, the latter must terminate at its lower end in a plane beneath the tops of said passage or drain. The valve plug is provided with an inlet-opening g^2 in the portion overhanging the chamber g , by means of which communication is maintained between said chamber and the interior of the sleeve D. Connecting the valve-chamber g with the interior of the gasoline-tank is a passage formed by registering openings H, H^1 in the valve-casing and the sleeve surrounding it, and the latter is further provided with an opening I located in a plane above the openings H, H^1 , whereby the interior of the tank is connected with the interior of the sleeve D at an elevated point.

Entering the collar E secured to the top of the tank and the upper end of the sleeve entering said collar is a lock J of common construction. This lock comprises a fixed member j secured within the collar E and a rotatable-member j^1 surrounded by said fixed member and normally locked against turning in the latter; said rotatable member having an exposed hand-lever K by means of which it can be conveniently turned and a socket L extending into the sleeve D and receiving the non-circular (preferably square) upper end of the valve-stem M extending upward from the valve-plug. Said rotatable member has a key-opening N into which a key N^1 is to be inserted to unlock the rotatable member of the lock from the fixed member thereof, so that upon grasping the lever K and swinging it in either direction, the valve-plug will be turned in its casing in a corresponding direction. Upon removing the key, the rotatable member of the casing is again locked against movement. As the lock employed herein is a common lock which can be purchased in the open market, I deem it unnecessary to describe the same in detail; the only new features in connection with said lock being the socket L and the hand-lever K which are clearly shown and their relation to the remaining parts of the lock made clear.

When provision is made for feeding gasoline from a main supply and a reserve-supply and for draining the gasoline-tank, I find in practice that, the outlet-passage f^3 and drain f^4 should be arranged at an angle of approximately 140 degrees to each other and the passage H at an angle of approximately 90 degrees with respect to the passage f^3 which is in connection with the carbureter or the mixing-valve of an engine. The opening I in the sleeve need have no particular relative position with respect to the passages H and f^3 or the drain f^4 ; it is only required that it be above the passage H

so that the gasoline is first fed through the opening I until it reaches the bottom of said opening, when the feeding of gasoline ceases. It is then necessary to unlock the locking-device and rotate it so as to cause the valve-plug to rotate and connect the passage H with the outlet f^3 , when the reserve portion of the gasoline is fed to the carbureter or the mixing-valve of an engine. When the flow of gasoline from the main supply ceases, notice is given that the tank needs replenishing, but a sufficient quantity, of course, remains in the reserve supply to run the engine for a period of time.

When the parts are in the positions shown in Figs. 1, 2, 3 and 6, in which all parts are in corresponding positions, the gasoline is being drained from the gasoline tank; the valve-plug being so adjusted that the outlet-passage or drain f^4 and the passage H connecting the lower end of the tank with the valve-chamber g , are open, thus assuring complete drainage of the tank.

By swinging the hand lever K to the right through an arc of 90 degrees, the valve-plug is moved to the position shown in Fig. 7. When in this position the passage H, the outlet or drain f^4 , and the outlet-passage f^3 connected with the carbureter, are closed. This is the position of the valve, when it is desired to lock the tank against feeding; in fact, when used on the gasoline-tank of an automobile, the entire engine is locked against actuation by internal explosive force. By swinging the hand-lever K in the same direction into a position at an angle of 90 degrees to that last-assumed, the valve-plug is swung into the position shown in Fig. 4, wherein the upper portion of the tank, only, is connected with the carbureter or engine through the outlet-passage f^3 . A further movement of the hand-lever K in the same direction through an arc of 90 degrees will cause the valve-plug to be moved into the position shown in Fig. 5, and when in this position, the lower portion of the gasoline-tank is connected with the carbureter or engine through the outlet-passage f^3 , thus feeding from the reserve supply.

Having thus described my invention, what I claim is,—

1. A fuel-feeding tank having two feed-openings and being provided with an outlet, a drain, and a single valve adjustable to four positions to connect either of said feed-openings with the outlet and simultaneously close said drain, to close said outlet and to open said drain while in communication with said feed-openings and to close both the outlet and the drain.

2. A fuel-feeding tank having two feed-openings and being provided with an outlet and a drain, a single valve adjustable to four positions to connect either of said feed-

openings with the outlet and simultaneously close said drain, to close said outlet and to open said drain while in communication with said feed-openings and to close both the outlet and the drain, and a locking-device for locking said valve into any of its four positions.

3. A fuel-feeding tank having alined openings in its top and bottom walls, a sleeve having its ends held in said openings and itself provided with an opening, a valve-casing having an outlet-opening and a drain and being secured to the lower end of said sleeve, a valve-plug in said valve-casing having a valve-stem extending upward in said sleeve and adapted to open either said outlet-opening or said drain, a locking-device at the upper end of said sleeve having a movable part thereof connected with said valve-stem, and a removable key for locking or unlocking said locking-device.

4. A fuel-feeding tank having alined openings in its top and bottom walls, a sleeve extending through said tank with its ends fitting said openings and being itself provided with an opening, a valve-casing threaded into one end of said sleeve and having an outlet-opening and a drain, a conical valve-plug in said casing cut-away on one side to provide a valve-chamber and an overhanging wall, said wall having an opening and said valve-chamber being adapted to register with said outlet-opening or said drain, a lock-device at the other end of said sleeve, means of connection between said lock-device and said valve-plug, and a removable key to lock and unlock said lock-device.

5. A fuel-feeding tank having a sleeve extending therethrough provided with two feed-openings arranged in different horizontal planes, a valve-casing threaded into the lower end of said sleeve and having an opening registering with the lower of said feed-openings and being also provided with

an outlet-passage, a conical valve-plug in said casing cut-away at one side to form a chamber and having an overhanging wall closing the top of said chamber and provided with an opening, a locking-device at the upper end of said sleeve comprising a fixed member and a movable member normally locked to said fixed member, an operative-connection between said movable member and the valve-plug, and a removable key to unlock the movable member of the locking-device from the fixed member thereof.

6. A fuel-feeding tank having a sleeve extending therethrough provided with two openings arranged in different horizontal planes, a valve casing threaded into the lower end of said sleeve and having an opening registering with the lower of said feed-openings, said valve-casing having also an outlet-passage and a drain, a valve-plug in said casing cut-away at one side to provide a chamber adapted to register with either said outlet-passage or said drain and having also an opening in the wall above said chamber to connect the latter with the interior of said sleeve, and a locking-device at the upper end of said sleeve operatively connected with said valve-plug and movable into four positions to cause said valve-plug to be moved into similar positions, whereby one or both of the feed-openings of the sleeve may be placed in communication with said outlet-passage or with said drain and whereby either or both the drain and outlet-passage may be closed, said locking-device serving to lock the valve-plug in each of its four positions.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

JOSEPH G. WILLIAMS.

Witnesses:

EMIL NEUHART,
HARRY D. RAPP.