

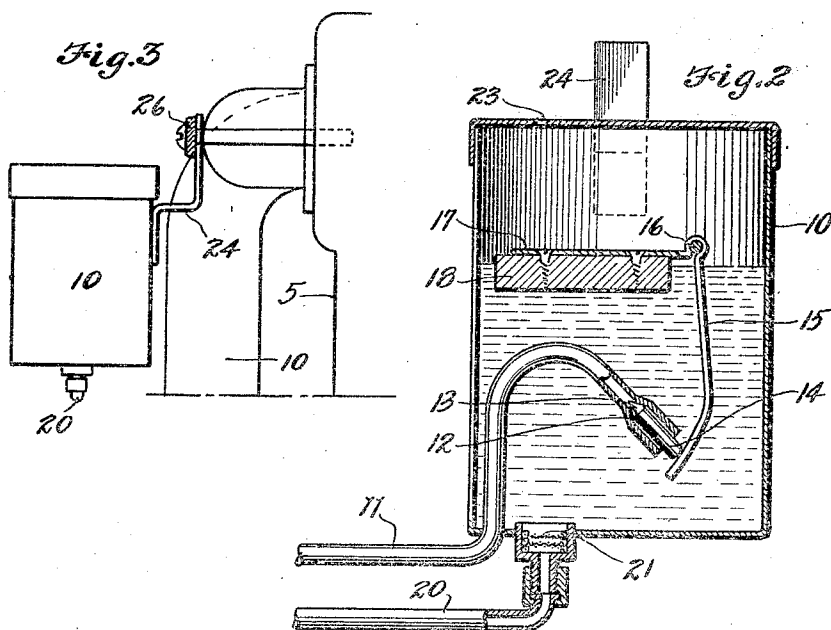
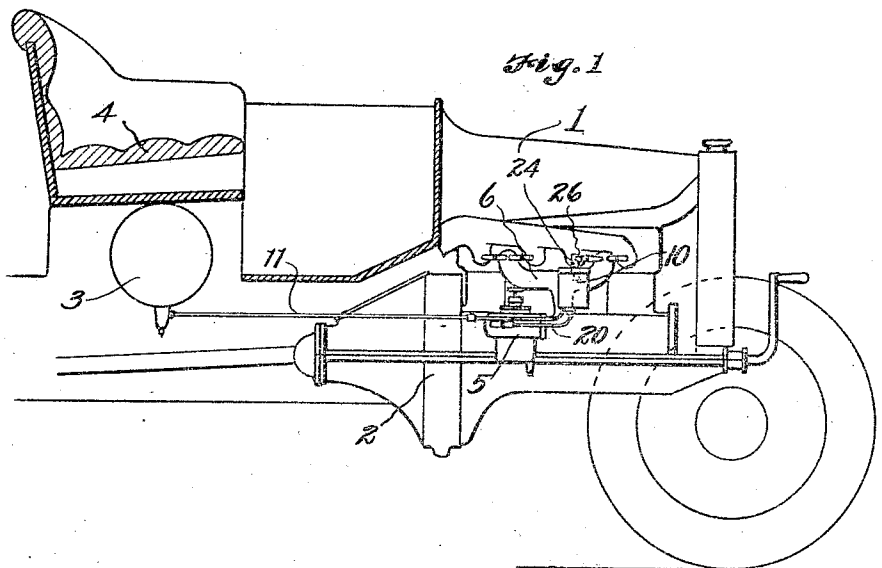
May 13, 1924.

1,493,902

W. C. SHILLITO

FUEL FEED AND STORAGE TANK FOR AUTOMOBILES

Filed June 16. 1921



Inventor
WILLIAM C. SHILLITZ

By Attorney
Richard J. Cook

UNITED STATES PATENT OFFICE.

WILLIAM C. SHILLITO, OF TACOMA, WASHINGTON.

FUEL FEED AND STORAGE TANK FOR AUTOMOBILES.

Application filed June 16, 1921. Serial No. 478,105.

To all whom it may concern:

Be it known that I, WILLIAM C. SHILLITO, a citizen of the United States, and a resident of the city of Tacoma, county of Pierce, State of Washington, have invented certain new and useful Improvements in Fuel Feed and Storage Tanks for Automobiles, of which the following is a specification.

This invention relates to improvements in fuel feed tanks for use in connection with the main fuel supply tanks of automobiles of that type wherein gravity is depended upon for the flow of fuel from the supply tank into the carbureter of the vehicle's engine.

It is the principal object of the invention to provide a fuel storage and feed tank adapted to be used in connection with the main supply tank for the purpose of maintaining a certain supply of fuel at such position with respect to the carbureter of the engine that this supply will be available should the supply from the main tank be temporarily discontinued as is the case when the vehicle is traveling up a grade that is sufficiently steep that the supply in the main tank is at a lower level than the carbureter.

A further object of the invention resides in the provision of a fuel feed tank of the above character, and in the manner of connecting it with the main fuel supply tank and the carbureter, and in a valve and float mechanism whereby the flow of fuel into the same is controlled.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Fig. 1 is a partial, sectional view of an automobile showing the main fuel supply tank, the engine and its carbureter and an auxiliary fuel feed tank connected therewith according to the present invention.

Fig. 2 is an enlarged, vertical section through a tank embodied by the present invention, showing the control valve and float mechanism whereby it is operated.

Fig. 3 is a side view of the feed tank, illustrating the manner in which it is supported, and its disposition relative to the intake manifold of the engine.

Referring more in detail to the several views of the drawings, wherein like refer-

ence numerals designate the same or like parts—

1 designates a portion of the body of a motor driven vehicle, equipped with an internal combustion engine 2 that is supplied with liquid fuel from a main storage tank 3, located, in the present instance, beneath the front seat 4 of the vehicle. The engine is equipped, in the usual manner, with a carbureter 5 which is connected with the cylinders of the engine by means of an intake manifold designated at 6.

In vehicles of the character illustrated, ordinarily the carbureter has a direct conduit connection with the main fuel supply tank and the fuel flows thereto by gravity, and in the event of the vehicle traveling up a long slope, which places the carbureter at a higher elevation than the supply tank, the small supply of fuel maintained within the carbureter will soon be used up and the engine will stop. In the present instance I have overcome this result by including in the fuel connection an auxiliary supply or feed tank 10 wherein a supply of fuel can be maintained and used in the event of the main supply being discontinued. This tank is preferably mounted adjacent the manifold 6 at a position forwardly of and above the carbureter, as shown in Figure 1, where the supply will be heated.

A supply conduit 11 leads from the tank 3, forwardly, and into the tank 10, entering the latter through its bottom wall and then extending upwardly therein and then being turned laterally and downwardly within the tank. Within the lower, open end of the conduit 11 is a conically formed valve seat 12 against which a similarly tapered end portion 13 of a slidably contained valve plug 14 is adapted to seat to check the flow of fuel from the tank 3 into the auxiliary tank 10.

The outer end of the plug 14 extends from the conduit 11 where it is engaged by the lower, inwardly curved end portion of a float arm 15 that is pivotally mounted upon a float supporting pin 16 that extends horizontally through the upper portion of the tank. Integral with the arm 15 and extending laterally from the same at one side of the pin 16 is an arm 17 to which a float block 18 is fixed.

From the base of the tank 10 a tube 20

leads into the carbureter in the same manner as does the usual feed pipe from the main tank, and where this latter tube enters the tank 10 it is equipped with one or more
5 screens as indicated at 21, for the purpose of preventing dust or dirt from entering the carbureter from the tank 10. The cover member of the tank is provided with a perforation 23 for the passage of air into and
10 from the tank as the fuel rises or falls within the same, and at one side the tank has a bracket 24 fixed thereto whereby it may be supported in any desirable manner, such as by extending the bracket beneath a clamp-
15 ing plate, as shown at 26, which is used for the purpose of holding the manifold in place.

Assuming that the auxiliary fuel feed tank is so constructed and is installed in the
20 system as described, it is apparent that fuel from the tank 3 will flow into the same through the conduit 11 and will cause the float block to be lifted to check this flow after a certain level has been reached. This
25 will operate to maintain a certain level of fuel within the tank.

Now should the vehicle follow up a long slope which will prevent flow through the

conduit 11 into the tank 10, the supply on hand in the latter tank will ordinarily be
30 sufficient to last until the vehicle again comes to level ground and the tank can be recharged.

Having thus described my invention, what I claim as new therein and desire to secure
35 by Letters-Patent is:

In fuel feeding means for automobile gas engines, a main fuel supply tank, a carbureter, a fuel storage tank supported at an elevation above the carbureter, a pipe line extending between the two tanks and entering
40 the bottom of the storage tank, the pipe line within the storage tank having an inverted goose neck, a valve seat at the outer end of the goose neck, a float controlled valve associated with the seat to prevent retrograde
45 flow of fuel, the upper end of the storage tank being vented to the atmosphere and an independent pipe line extending between the lower end of the storage tank and carbure-
50 ter for freely delivering fuel to the carbureter.

Signed at Seattle, Washington, this 9th day of June, 1921.

WILLIAM C. SHILLITO.