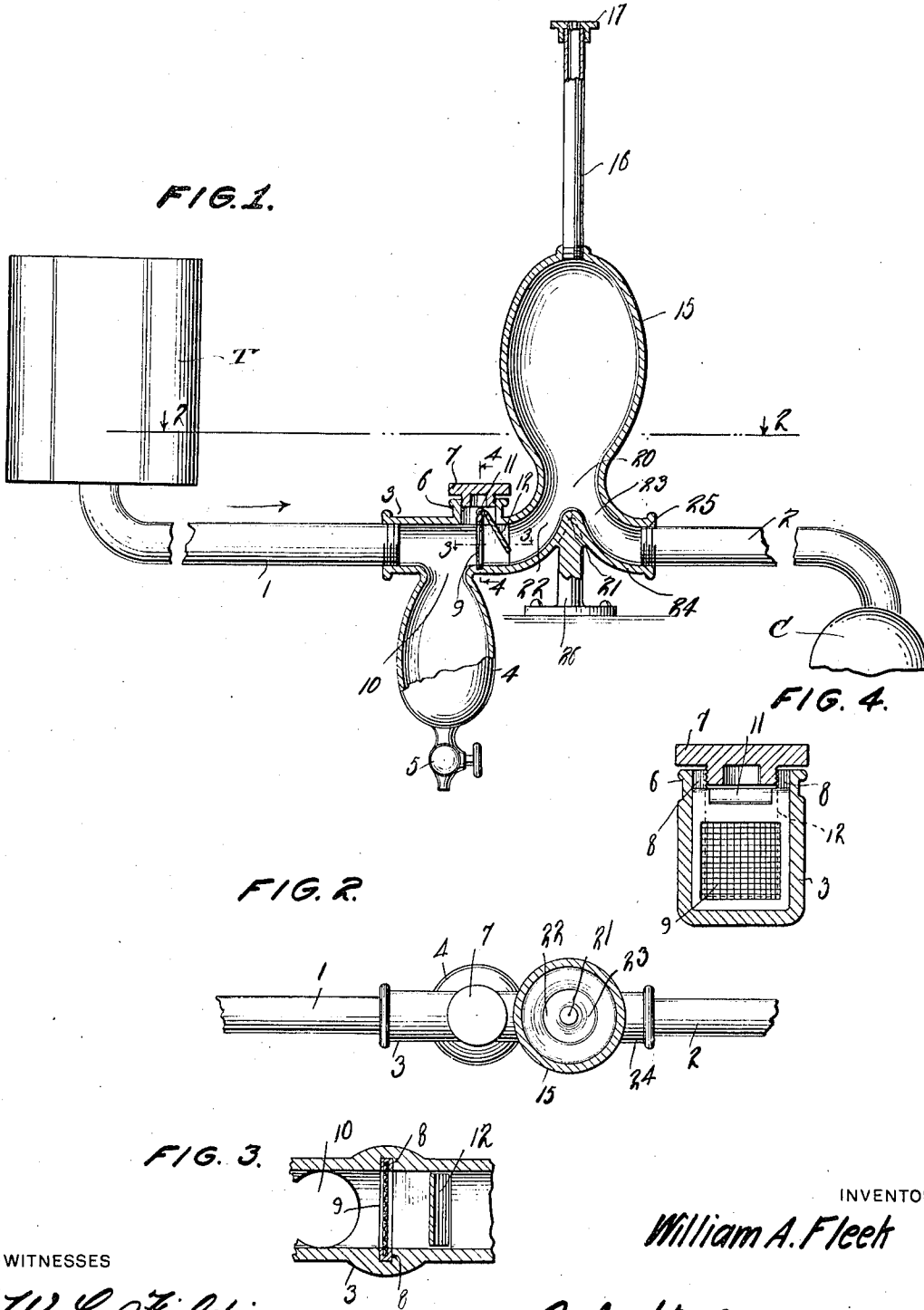


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GASOLINE REGULATOR.  
APPLICATION FILED APR. 1, 1918.

1,292,289.

Patented Jan. 21, 1919.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM A. FLEEK, OF DOUGLAS, TERRITORY OF ALASKA.

## GASOLENE-REGULATOR.

1,292,289.

Specification of Letters Patent.

Patented Jan. 21, 1919.

Application filed April 1, 1918. Serial No. 226,059.

*To all whom it may concern:*

Be it known that I, WILLIAM A. FLEEK, a citizen of the United States, residing at Douglas, in the Territory of Alaska, have  
5 invented certain new and useful Improvements in Gasolene-Regulators, of which the following is a specification.

This invention relates to liquid fuel supply; and more especially it is a regulator to be inserted between the tank and the carbureter of the engine on a motor boat or the like, whereby tossing of the boat in rough water will not interrupt or reduce the supply of fuel to the engine.

15 One feature of the invention is the provision of means whereby the valve and strainer can be withdrawn from the connection without uncoupling the parts; and another feature is the provision of a sediment  
20 tank adjacent the strainer and from which accumulation can be drawn from time to time.

Details of the preferred embodiment of my invention are set forth in the following  
25 specification and claims, and shown in the drawings, wherein:—

Figure 1 is a side elevation of this regulator, mostly in section,

Fig. 2 is a sectional view thereof on the  
30 line 2—2 of Fig. 1,

Figs. 3 and 4 are sectional details on the lines 3—3 and 4—4 of Fig. 1.

I have indicated the tank at T and the carbureter at C, the former at the left and the latter at the right of Fig. 1, and the gasolene or other liquid fuel is flowing in the direction indicated by the arrow. Assuming that the outfit is on a motor boat or the like, subject to tossing as in rough water,  
40 it has been found advisable to dispose the outlet from the tank at least six inches above the inlet to the carbureter when the flow is by gravity; but even then there will be occasions when the gasolene in the tank is low, that the fuel will run back from the carbureter so that the latter does not function properly. In order to avoid this contingency I dispose my improved regulator somewhere in the pipe line between the tank  
50 and the carbureter, and in the illustrated embodiment of my invention I give it the following construction:

Let 1 designate the inlet pipe, and 2 the outlet pipe from the regulator. The inlet  
55 pipe is connected at 3 with a casting whose

first element is a pendant bulb 4 having a draw-off cock 5 at its lower end, the obvious purpose being to permit sediment to accumulate within the bulb, from which it is withdrawn from time to time through the cock  
60 5. Next adjacent this element the upper side of the casting is formed with a boss 6 closed by a screw cap 7, and when the latter is removed the interior of the casting discloses side grooves or channels into which  
65 from above is slipped a screen 9, the same standing in a plane near the farther side of the throat or inlet 10 to the bulb 4. Obviously what particles are screened out of the liquid will fall through said throat and  
70 be trapped within the bulb, to be removed later in a manner already described. Hinged at 11 to the frame of the screen 9 is a flap valve 12 opening toward the right which is in the direction of the outlet pipe  
75 2 and closing toward the left and against said frame as will be described below. The construction is such that when the cap 7 is removed, the screen and flap valve may be  
80 bodily withdrawn from the casting as for inspection or repair, and yet when in place they form little or no impediment to the flow of liquid through its normal course as described.

The next element to the right, forming  
85 by preference an integral part of the casting, is an upstanding globe 15, preferably of about the shape and size shown and defining an auxiliary tank or chamber capable of holding perhaps a quart. An air vent pipe  
90 16 rises from the apex of this globe to a point above the highest level of the liquid within the tank (not shown) where it has a vent opening at 17, and the purpose of this detail is to prevent the liquid within the  
95 globe from becoming air bound. The throat 20 of the globe or chamber is of some considerable size, divided by a transverse ridge 21 into an inlet 22 adjacent the valve already described, and an outlet 23 leading into a  
100 branch 24 which has a coupling 25 for attachment of the outlet pipe 2. The ridge 21 may well be formed at the time the attachment is cast, and the whole may be supported at this time on a standard 26 which,  
105 with the couplings 3 and 25, and perhaps some support for the vent pipe 16, will hold all parts in their proper position, whether mounted on a motor boat or on a motor vehicle.

The parts being constructed as described and properly connected up, the action will be as follows:

When the tank is first filled, gasoline will flow along the inlet pipe 1, will fill the bulb 4, pass through the valve and rise within the globe 15 to a level equal with that within the tank, and will then flow through the outlet 23 and along the pipe 2 to the carbureter; and thus the level of the fluid fuel will stand so long as the boat or vehicle is fixed, or so long as it proceeds along an even course. When the engine is set in motion, draft on the carbureter will cause suction on the outlet pipe 2, and the gasoline will flow uninterrupted. Now let us assume that a motor boat meets with rough weather or a motor vehicle, or perhaps a "tank" equipped with this invention, passes over extremely rough ground. The immediate result is that the carbureter is not always six inches below the liquid level in the tank. When the tank is down and the carbureter is up, the tendency of course is for the liquid to flow backward through the system described. This tendency is resisted, however, by the fact that the flap valve falls closed, and the backward flow of the gasoline causes it simply to rise within the globe 15, the outlet and vent permitting. As this globe should be situated rather near the carbureter, the entire device will be low when the carbureter is low; and therefore it will serve as a check for the return of the gasoline to the tank at any time when the carbureter rises. The bulb 4 and cock 5 are used for the purpose of removing sediment from time to time. The functions and uses of the strainer and valve have been explained. Other details are not considered necessary.

What is claimed as new is:—

1. In a fluid fuel supply system of the type described, the combination with an inlet pipe adapted to be connected with the tank, and an outlet pipe adapted to be connected with the carbureter; of a casting connecting said pipes and having a boss at its top and upright grooves in its sides beneath said boss, a cap removably closing the latter, a frame insertible in said grooves through the boss when the cap is removed, and a flap valve carried by said frame and opening toward the carbureter.

2. In a fluid fuel supply system of the type described, the combination with an inlet pipe adapted to be connected with the tank, and an outlet pipe adapted to be connected with the carbureter; of a casting connecting said pipes and having a boss at its top and upright grooves in its sides beneath said boss, a cap removably closing the latter, a valve opening toward the carbureter and removably inserted through said boss into

said grooves, and means between the valve and the inlet pipe for trapping sediment.

3. In a gasoline regulator, the combination with a pipe line adapted to connect the tank with the carbureter; of a casting interposed within this line and having an upright ridge across its bottom, the casting being formed into a globe whose throat stands above said ridge, an upright air vent pipe leading from the top of said globe, and a check valve within the casting between the globe and its inlet end and opening toward the globe.

4. The herein described gasoline regulator comprising a casting adapted to be inserted in the pipe line between a tank and carbureter, the same having an inlet leg and an outlet leg, an upright transverse ridge across the bottom of the casting between said legs, said casting including a globe upstanding therefrom and having a throat disposed above the ridge with an inlet to the throat at one side of the ridge and an outlet from the globe at the other side of the ridge, and a check valve within the casting between the inlet end of the casting and the inlet to said throat, the check valve opening toward the throat, the whole for use substantially as described.

5. In a gasoline regulator, the combination with a casting adapted to be inserted in the pipe line between a tank and carbureter, the inlet leg of said casting having a pendant bulb with a draw-off cock at its bottom, and the body of the casting having an upstanding globe between said bulb and the outlet leg; of a strainer within the casting just beyond the throat to said bulb, and a check valve adjacent the strainer opening toward the globe, for the purpose set forth.

6. In a gasoline regulator, the combination with a casting adapted to be inserted in the pipe line between a tank and carbureter, the inlet leg of said casting having a pendant bulb with a draw-off cock at its bottom, and the body of the casting having an upstanding globe between said bulb and the outlet leg; of a boss on the upper side of the casting between the bulb and globe, the casting having internal upright side grooves opposite said boss, means for removably closing the latter, a strainer within a frame removably inserted in said grooves, and a flap valve hinged at its upper edge to said frame and opening toward the globe, the whole for use substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. FLEEK.

Witnesses:

JOHN F. HENSON,  
NORA A. MUSETH.