Dec. 13, 1938. G. LEVINE 2,140,018

FUEL RESERVOIR

Filed Jan. 25, 1937

Fig. 1.

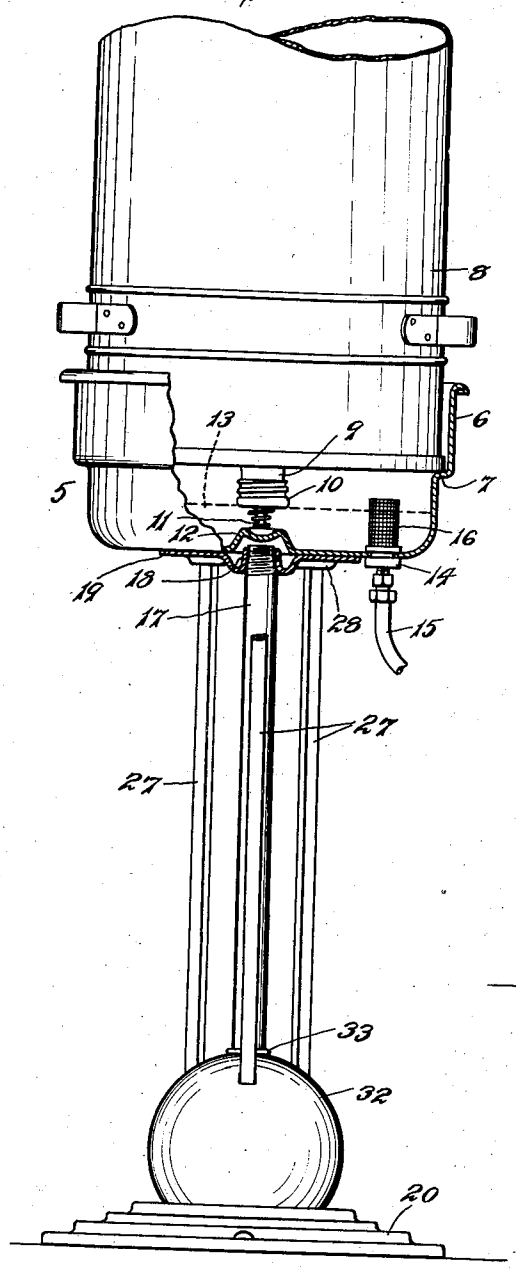


Fig. 2.

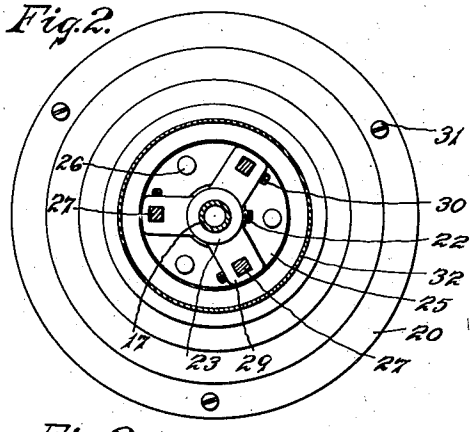
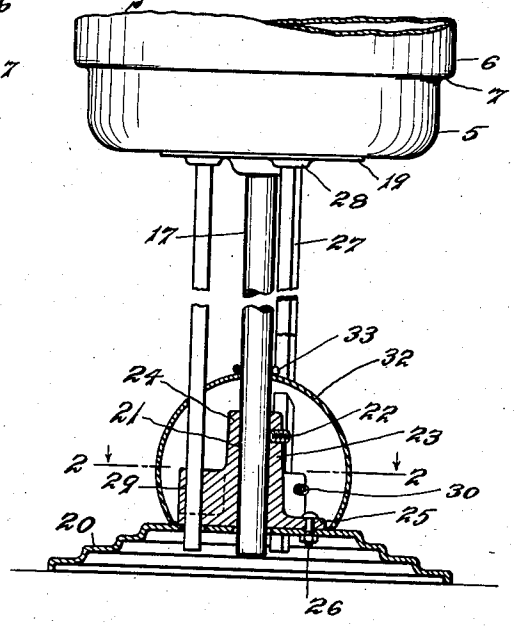


Fig. 3.



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FUEL RESERVOIR

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4 Claims. (Cl. 248—146)

My invention relates to fuel reservoirs such as commonly used in connection with oil burners where a supply of fuel at a constant level is required.

In general practice, the reservoirs for said burners usually comprise a reservoir in the form of a bowl which is mounted upon a pedestal comprising a single pipe. A fuel container is supported in an inverted position upon said bowl with the opening of said container spaced a suitable distance from the bottom of the bowl. It has been found that such pedestals cannot be properly supported in the manner heretofore used in common practice, as the single pipe is very apt to lean one way or the other and thus support the reservoir in a non-level position.

It is well known in the art, that reservoirs of this type are frequently troublesome as when the floor of a room is uneven, they cannot be installed so that the reservoir is level and, consequently, the fuel will not feed properly to the burner thus causing faulty operation thereof.

An object of my invention, therefore, is to provide means whereby a fuel reservoir may be leveled after it is installed regardless of whether or not the surface of which the base of said reservoir rests is level and also regardless of whether the connections between the single pipe of the pedestal and the bowl or base are accurate.

A further object of my invention is to provide a structure for supporting the pedestal of said reservoir, which is attractive, rigid, and economical to manufacture by way of the elimination of the necessity for accuracy in the said construction.

Further objects will be readily understood from the following specification and the drawing in which:—

Figure 1 is a view in side elevation of a complete fuel reservoir comprising my invention, parts thereof being shown in section.

Figure 2 is a plan view partly in section on line 2—2 of Figure 3.

Figure 3 is a fragmentary view, partly in section, illustrating the construction of the supporting pedestal.

As illustrated in the drawing, the numeral 5 denotes a reservoir which may be constructed of sheet or cast metal and which is provided with a surrounding wall 6 having a shoulder 7 on which rests a fuel container 8. The said container has a neck 9 to which is threaded a cap 10. A valve is contained within said cap and is closed by a spring actuated headed stem 11. When the said container is placed upon the reservoir, the head of the said valve stem will rest upon a boss 12 in the bottom of the reservoir, causing the said stem to open the valve and permit fuel to flow into said reservoir until it reaches the level of the opening in the cap 10, as indicated at 13, whereupon the fuel in the reservoir will shut off the air entering into the container and, thereby, cause a vacuum therein which will present further fuel from entering the reservoir until the fuel level therein is lowered and more air is permitted to enter into the container.

An outlet fitting 14 is provided in the bottom of the reservoir to which is connected a supply pipe 15 leading to a burner. A screen 16 surrounds the outlet fitting to a plane above the level of the fuel so as to prevent foreign matter in the fuel from entering into the supply pipe.

It will, therefore, be readily understood from the above description that unless the fuel level within the reservoir is properly located with relation to the outlet thereof, and the screen upon it, the proper passage of the fuel through the outlet cannot be assured.

In the embodiment of my invention, as illustrated in the drawing, the reservoir 5 is mounted upon a standard 17 which is threaded to a flange 18 that is formed on a disc 19. The said disc may be secured to the bottom of the reservoir by some suitable means such as spot-welding.

The said standard 17 is adjustably mounted upon the base 20, by being inserted in a vertical opening 21, and secured to said base by means of a set screw 22.

In the form illustrated, the base 20 is preferably constructed of sheet metal, in order to provide for a desired ornamental finish, such as plating, which can be more economically applied to a sheet metal surface than to cast iron. The said base may be cast in one piece, however, if desired.

When the base is made of sheet metal, as shown, I provide a casting in the form of a sub-base 23 having a vertical portion 24, in which the opening 21 is located, and a base portion 25 by means of which the said casting is secured upon the base 20 with screws 26.

In order to attain the objects of my invention, I also provide a plurality of leveling bars 27 which are suitably secured at their upper ends to bosses 28 in the plate 19 and adjustably secured in openings 29 in the sub-base 23 by means of set screws 30.

It will be clearly understood, therefore, that when it is desired to adjust my improved reser-

voir, the base **21** is first mounted in the desired position upon the floor by means of screws **31**. The reservoir is then raised, or lowered, on the said base to the desired height and the standard **17** is secured upon the base by tightening the screw **22**. At this time, it may be found that the reservoir is not level, for reasons which may be due either to the floor not being level or to some slight inaccuracy in the construction of the reservoir and base. The reservoir may then be leveled, however, by forcing it to the level position and tightening the screws **30** upon the leveling bars **27** whereby the said reservoir will be held in said position.

It will be clearly seen that, by the addition of the three leveling bars **27**, as illustrated, I have provided a means whereby the reservoir may be easily leveled after it has been secured in position for height by the adjustment of the standard **17** in the sub-base portion **23**.

Further, it has been found that a great deal of trouble has been experienced for the reason that when the adjusting screws are exposed, it is easy for children or other inexperienced persons to tamper with them and thereby disturb the adjustment of the reservoir.

In order to eliminate this difficulty, I provide a hood **32** having openings through which project the standard **17** and the leveling bars **27**. The said hood is, therefore, slidable in a vertical direction upon said standard and bars so that it may be lifted to permit access to the set screws for adjusting the reservoir when it is being installed. After the reservoir has been adjusted, however, the hood is lowered into position and thus acts as a guard against tampering. A retaining ring **33** is frictionally mounted upon the standard **17** and may be forced downwardly upon the hood to retain it in position.

It is also to be understood that, while I have shown a base which is constructed of sheet metal with a cast member mounted thereon for the purpose of providing for economical construction, the entire base may be constructed in one piece, by forming the same of cast metal, and that the modifications herein mentioned may be made without departing from the scope of my invention as set forth in the appended claims.

I claim:

1. For a reservoir of the character described, a base of inverted dish-shape construction, a sub-base having a lateral flange mounted on said base and secured thereto, the said sub-base having a central opening and a plurality of openings radially disposed with relation thereto, a plurality of bars secured to the bottom of said reservoir; said bars comprising a central post for supporting said reservoir; the said post extending through the said central opening in said sub-base and projecting through the top of said base, a separate bar extending through each of said radially disposed openings and also extending through the top of said base for leveling said reservoir, and means for adjustably securing each of said bars in the said sub-base.

2. In combination with a fuel container having a stem operated valve therein, a reservoir comprising a sheet metal receptacle adapted to support the said container in inverted position therein, a raised boss adapted to engage the stem of said valve and thereby open the same to permit liquid to flow therethrough into said receptacle, the said boss forming a recess in the bottom of said receptacle, a plate mounted to the said bottom and having a threaded opening therein co-axial with said recess, a supporting post threaded to said opening and permitted to extend therethrough into said recess, a base having a vertical opening therein to receive said post, a plurality of bars mounted to said plate and extending parallel to said post and through separate openings in said base, and means in said base for adjustably securing said bars to retain said receptacle in a level position.

3. A fuel reservoir of the character described comprising a receptacle having a recess in the bottom thereof, a plate secured to said bottom and having an opening therein co-axial with said recess, a threaded flange surrounding said opening and extending through said opening in the direction of said recess, a supporting post threaded to said flange and permitted to extend into said recess, a base having a central vertical opening for receiving said post in vertically adjustable position therein, a plurality of bars secured to said plate and extending parallel to said post and through separate openings in said base and spaced from said post, and means in said base for adjustably securing said bars thereto for adjusting said receptacle and retaining the same in a level position.

4. A fuel reservoir of the character described comprising a sheet metal receptacle having a recess in the bottom thereof, a sheet metal plate formed to provide a central depending boss with an opening therein and a vertical extending flange surrounding said opening and a plurality of depending bosses surrounding the said central boss; the said plate being secured to the bottom of said receptacle co-axial with the said recess therein, a vertical post threaded to said central opening and extending therethrough for supporting said receptacle, a base having a vertical extension with an opening therein in which said post is adjustably mounted for supporting said receptacle on said base, and a plurality of bars surrounding said post parallel thereto for leveling said receptacle and retaining the same in a level position; the said bars being connected to the surrounding bosses in said plate and adjustably secured in separate openings in said base.

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