Sept. 26, 1939. W. C. COLEMAN 2,174,054

FUEL SUPPLY APPARATUS

Filed April 25, 1938 3 Sheets-Sheet 1

Fig. 1.

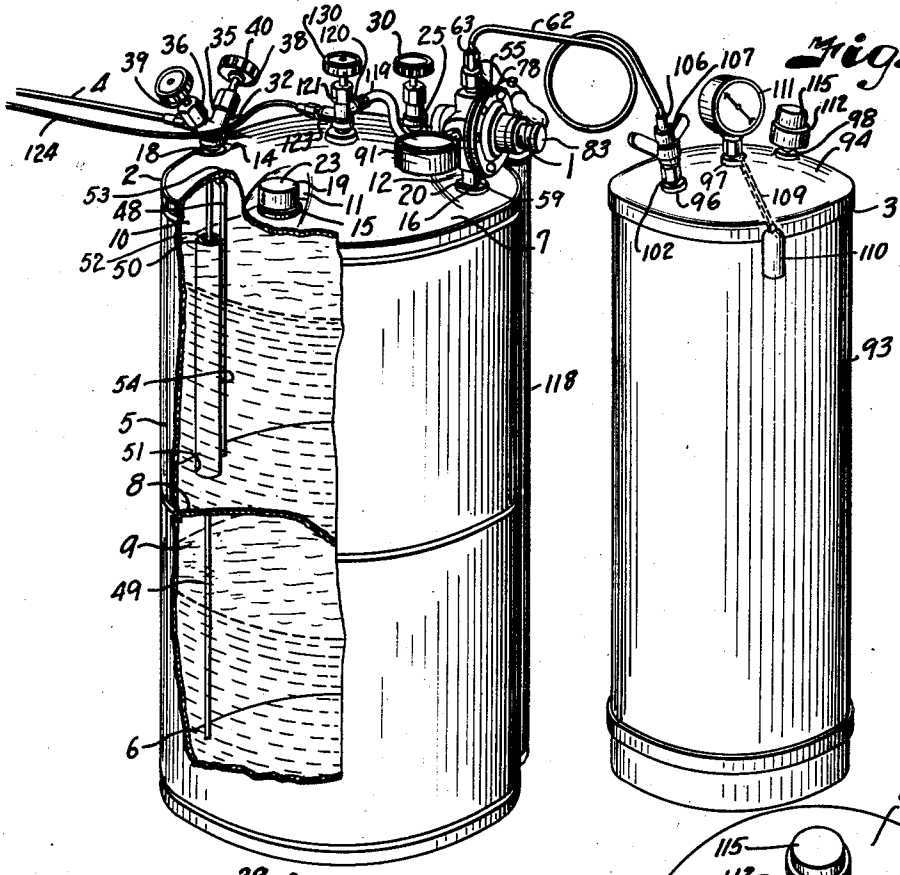
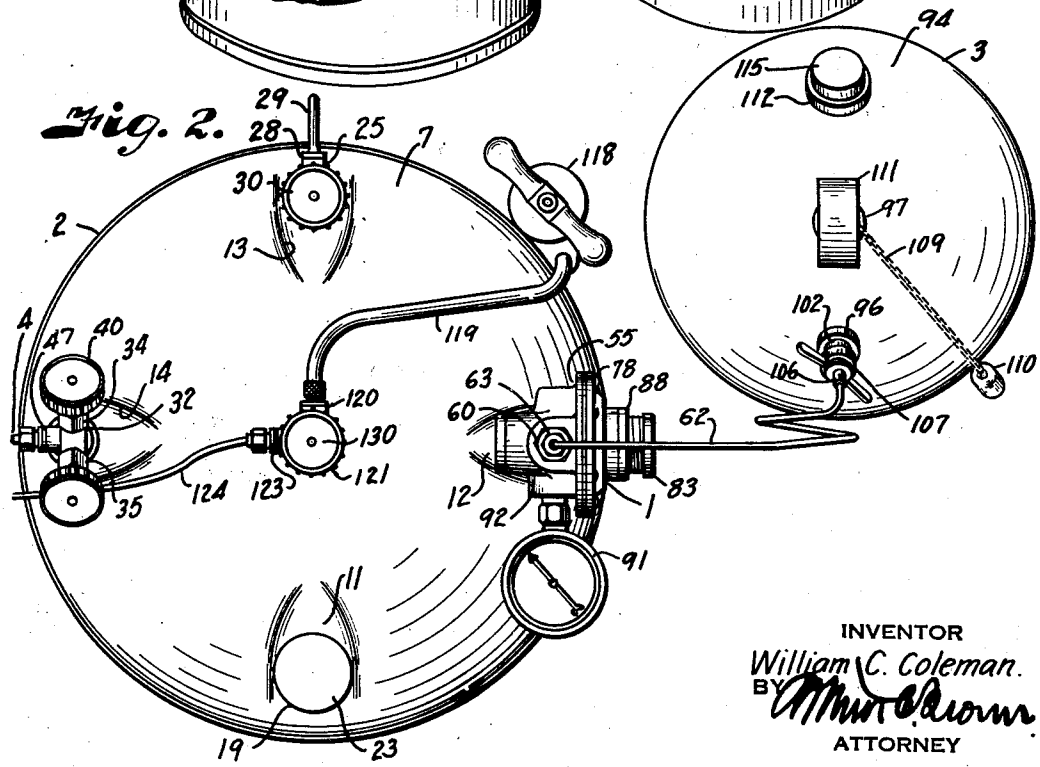


Fig. 2.



INVENTOR
William C. Coleman.
BY
ATTORNEY

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FUEL SUPPLY APPARATUS

Filed April 25, 1938 3 Sheets-Sheet 2

Fig. 3.

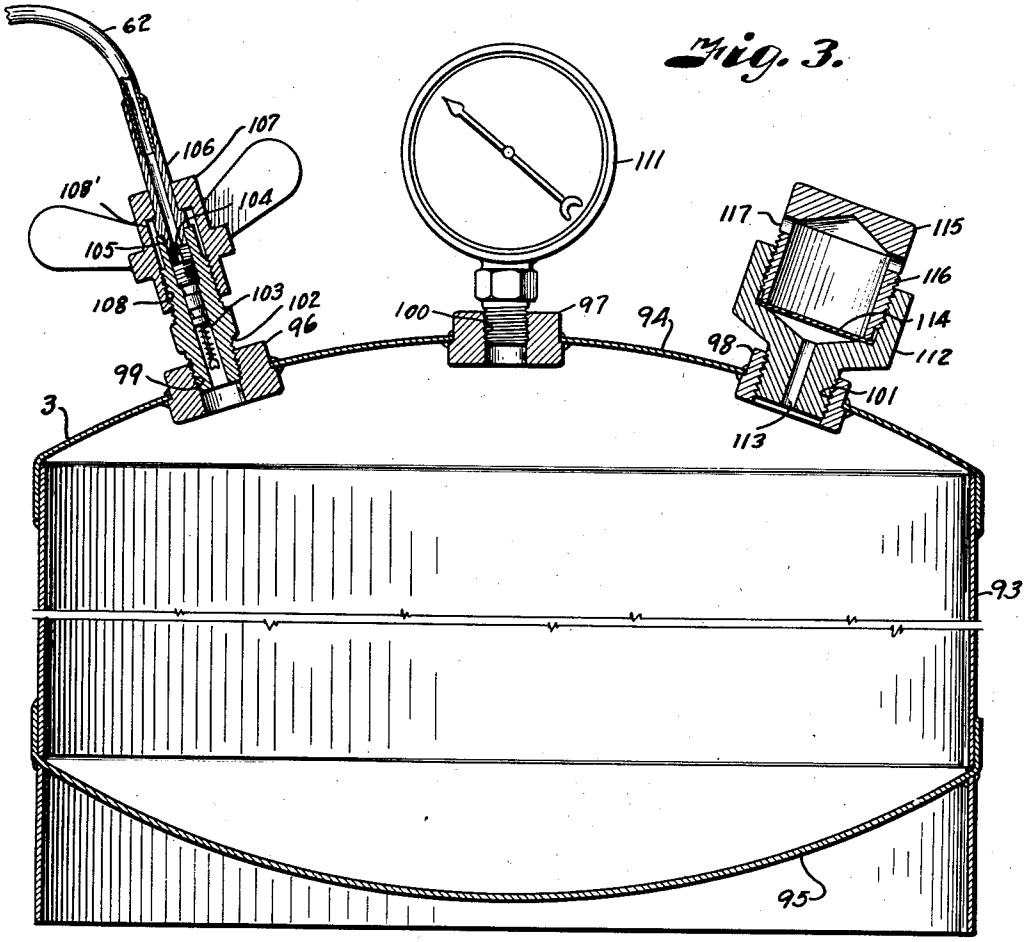


Fig. 4.

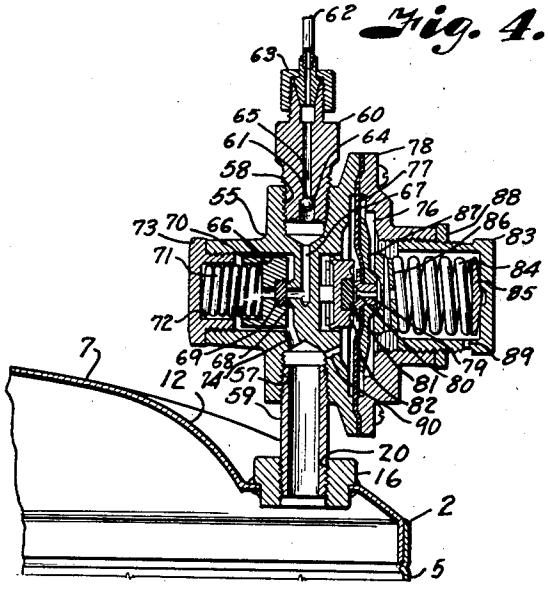
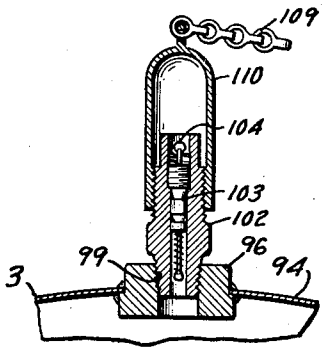


Fig. 5.



INVENTOR

William C. Coleman.

BY

ATTORNEY

Sept. 26, 1939. W. C. COLEMAN 2,174,054

FUEL SUPPLY APPARATUS

Filed April 25, 1938 3 Sheets-Sheet 3

Fig. 6.

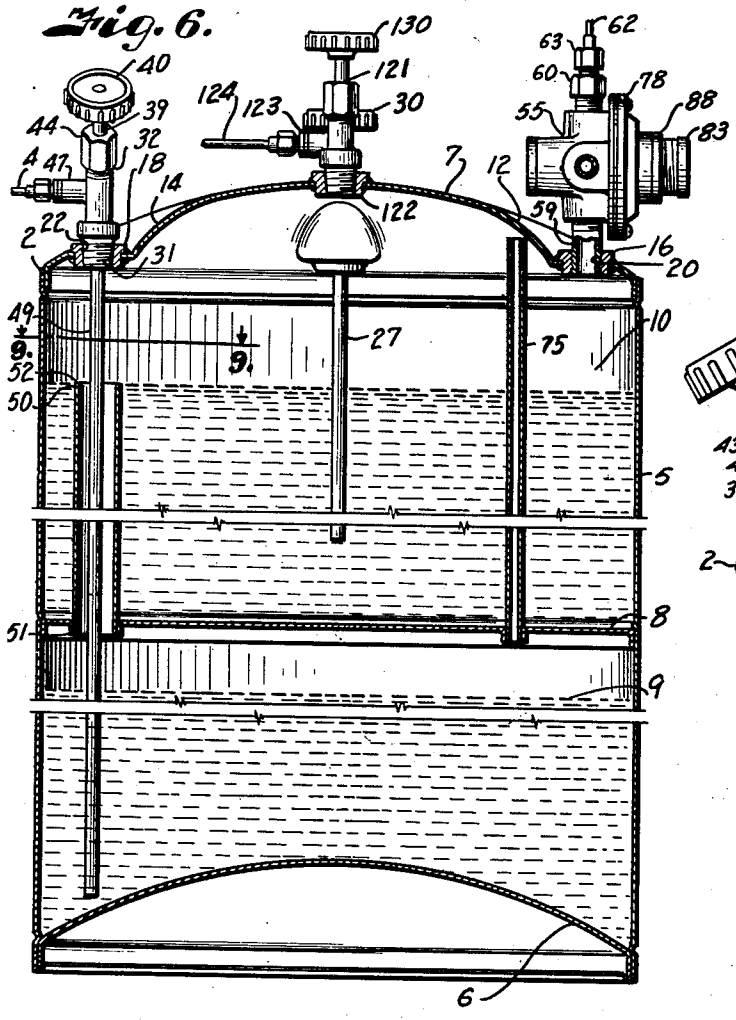


Fig. 8.

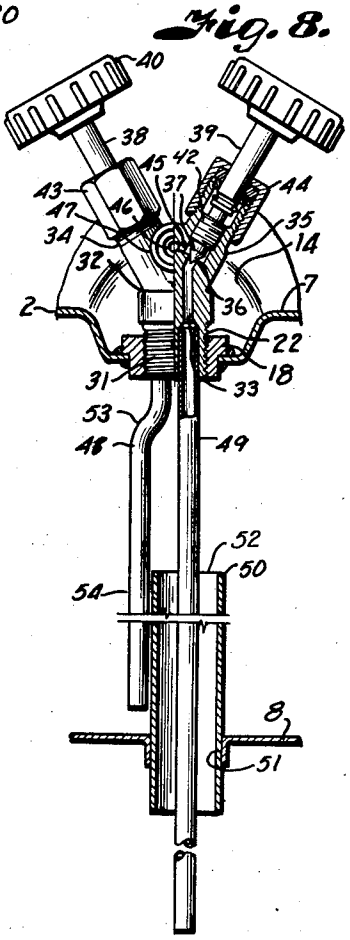


Fig. 7.

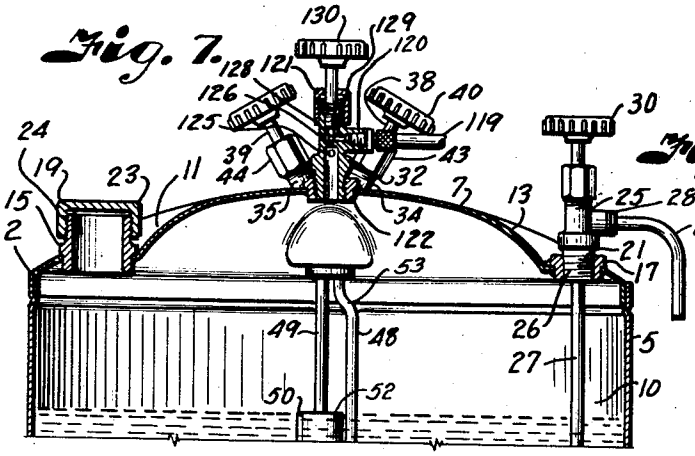
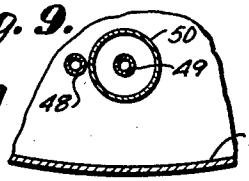


Fig. 9.



INVENTOR

William C. Coleman.

BY Wilmer C. Brown

ATTORNEY

Patented Sept. 26, 1939

2,174,054

UNITED STATES PATENT OFFICE

2,174,054

FUEL SUPPLY APPARATUS

William C. Coleman, Wichita, Kans., assignor to The Coleman Lamp and Stove Company, Wichita, Kans., a corporation of Kansas

Application April 25, 1938, Serial No. 204,209

11 Claims. (Cl. 158—50.1)

This invention relates to fuel supply apparatus particularly adapted for furnishing a low cost fuel to a home or other place where ordinary gas fuels are not available for use in cook stoves, heaters and similar home appliances that are common to the city dweller, but which have not been used extensively in suburban and rural districts because of extremely high cost of bottled gas, danger in handling a gaseous fluid, failure of supply, and other reasons.

The principal object of the invention, therefore, is to provide a safe and efficient unit for storing and supplying a readily available liquid hydrocarbon, such as gasoline, that is located outside of the walls of the home and connected by a fuel line with the respective gas burning appliances.

It is also an important object of the invention to provide the storage unit with a portable air container for supplying compressed air necessary in propelling the liquid hydrocarbon from its container through the fuel line to the respective appliances and for initially atomizing the liquid upon starting one of the appliances.

Other important objects of the invention are to provide an air container that is readily charged with compressed air at any gasoline filling station so as to avoid the inconvenience of manually pumping a pressure medium into the fuel storage container; to provide for readily connecting and disconnecting the air container from the fuel container without the loss of air pressure so that the fuel supply unit continues to function upon disconnection of the air container for charging purposes; to provide a pressure regulating valve for reducing the high air container pressures to a low pressure suitable in moving the liquid fuel from the storage container to the gas using appliances; to provide the air container with an inlet fitting that is readily connected with a standard automobile tire filling valve; to provide the air container with a pressure relief device in case excessive pressures be admitted therein; and to provide the air container with a pressure gauge for indicating the amount of pressure carried therein and for indicating when it is necessary to remove the container for charging.

Other important objects of the invention are to provide a fuel supply unit with a fuel storage container constructed to retain isolated reserve and service fuel supplies so as to avoid running out of fuel; to provide a fuel container that is constructed for freshening the reserve supply of fuel incidental to replenishing the service supply of fuel; to provide the fuel container with a simple and efficient valving system for selectively connecting the respective fuel supplies with the flow line leading to the respective gas appliances; to provide a container construction equipped with a minimum number of connections and fittings through which loss of air or fuel is likely to occur; to provide a fuel container construction which facilitates of assembly and connection of the fuel line with the reserve and service fuel supplies; to provide the fuel container with a pressure gauge for indicating the amount of pressure carried therein; and to provide the fuel container with an auxiliary outlet line for filling small appliances, such as lanterns, lamps, portable stoves, and the like.

In accomplishing these and other objects of the invention, as hereinafter pointed out, I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a fuel supply unit embodying the features of the present invention.

Fig. 2 is a plan view of the unit illustrated in Fig. 1.

Fig. 3 is an enlarged vertical section through the ends of the air container, particularly illustrating the air inlet and outlet connection, the air pressure gauge, and safety device for relieving excessive pressure.

Fig. 4 is a detail section through the pressure reducing valve and a portion of the fuel container.

Fig. 5 is a detail section through the air filling connection of the air container after it has been disconnected from the fuel container and is covered by a protective cap while the air container is being transported to and from the place of charging.

Fig. 6 is a vertical central section through the fuel container showing the reserve and service storage compartments therein.

Fig. 7 is a similar section through the upper portion of the fuel container, taken at right angles to the section illustrated in Fig. 6.

Fig. 8 is a detail view, partly in section, of the flow lines leading from the storage and reserve compartments and the valve for selectively connecting the respective lines with the flow line leading to the respective appliances supplied by the unit.

Fig. 9 is a detail section through the fuel container on the line 9—9 of Fig. 6.

Referring more in detail to the drawings:

1 designates a liquid fuel supply unit embody-

ing the features of the present invention and which includes a liquid fuel storage container 2 and a compressed air container 3 for admitting air under pressure into the container 2 for displacing the fuel therefrom and delivering it through a flow line 4 leading to one or more gas burning appliances (not shown), usually located at a higher level.

The unit 1 is adapted to be located exteriorly of the home and is ordinarily enclosed in a suitable housing (not shown) that is provided with a hinged and locked cover to prevent tampering by unauthorized persons. The liquid fuel storage container 2 is constructed of sheet metal and includes a cylindrical wall 5 closed at the lower end by an inset, inwardly crowned head 6, and at the upper end by an outwardly crowned head 7, the heads being welded to the wall 5 to provide air and liquid-tight joints. The container 2 is divided at a point substantially midway of its height by a transverse partition 8 to form a lower fuel service supply compartment 9 and an upper reserve fuel supply compartment 10 so that after the fuel has been exhausted from the lower compartment 9 the gas burning appliances may be supplied from the reserve compartment while a new supply of fuel is being obtained for the service compartment, thereby avoiding the inconvenience of running out of fuel.

The head 7 has the peripheral portion thereof recessed at spaced points, as at 11, 12, 13 and 14, to mount bushings 15, 16, 17 and 18 for respectively providing a fill opening 19, an air inlet opening 20, an auxiliary fuel outlet opening 21 and a main fuel outlet 22. The fill opening 19 opens directly into the upper or reserve storage compartment and is closed by a cap 23 threaded upon an externally threaded neck 24 screwed into the bushing 15 so as to retain an air pressure and exclude dust, dirt and the like from entering the container. The opening 21 is closed by a valve 25 having a shank 26 threaded into the bushing and provided with a depending pipe 27 terminating slightly above the bottom of the reserve compartment. The valve 25 also includes a laterally extending branch 28 to which is connected an outwardly and downwardly extending spout 29 for use in filling small portable fuel burning appliances, such as lamps, lanterns, and the like. When the valve 25 is opened by turning the hand wheel 30, the air pressure carried in the tank displaces the liquid through the pipe 27 and spout 29 into the vessel being filled. This feature eliminates the necessity of keeping an open supply of inflammable liquid for filling such appliances as it permits filling thereof from the closed supply within the container without interference with feed through the line 4 to the main appliances.

The bushing forming the opening 22 is internally threaded to mount the neck 31 of a valve 32, having spaced, vertical channels 33 leading to diverging branches 34 and 35 having valve seats 36 that are adapted to be selectively closed by needle points 37 on valve stems 38 and 39. The stems are rotated by hand wheels and have threaded portions 42 threadedly engaged within the bores of the branches so that when the stems are rotated the needle points are moved to and from seating engagement with the respective seats. Leakage around the stems is prevented by packing nuts 43 and 44 as in conventional valve construction. The valved ends of the channels 33 respectively connect through ports 45 with a laterally extending port 46 provided in a branch connection 47 of the valve and which is connected with the flow line 4 previously mentioned. The lower ends of the channels 33 are counterbored to receive tubes 48 and 49 respectively.

The tube 49 extends downwardly through a stand pipe 50 that is located in axial alignment with the opening 26 and has its lower end sealed within an opening 51 in the partition, the upper end 52 extending to the maximum level of the liquid to be carried in the reserve compartment, as shown in Fig. 6. The lower end of the tube 49 terminates slightly above the bottom of the service compartment so that it is in position to drain substantially all of the fuel from the compartment when an air pressure is admitted thereto. The other tube 48 is provided with an offset 53 so that the depending end 54 thereof extends downwardly along the outer side of the stand pipe 50 to terminate slightly above the partition 8. The tubes are thus placed close enough together, however, so that they will readily pass through the opening 22 of the bushing 15.

Air is admitted to the container by way of the opening 20 in the bushing 17, through a pressure regulator 55, which is best illustrated in Fig. 4. The pressure regulator includes a housing having oppositely directed internally threaded sockets 57 and 58. Threaded into the socket 57 is a nipple 59 having its opposite end threaded into the bushing 17 to support the regulator in fixed position on the fuel container. A fitting 60 having a check valve 61 is threaded into the other socket and connected with an air inlet line 62 by means of a union 63. The check valve 61 engages a seat 64 that is formed within the fitting to close a port 65 connecting the air inlet line 62 with the pressure regulator.

Extending laterally, intermediate the sockets 57 and 58, is a piston chamber 66, and formed in the inner end thereof is a port 67 connected through the check valve fitting with the air inlet line 62 and which has a seat 68 closed by a seating disk 69 that is carried in the end face of a piston 70. The piston 70 is slidably mounted in the cylinder and normally retained in seat engaging position by a coil spring 71, having one end seated within a recess 72 of the piston and its opposite end seated within a nut 73 closing the outer end of the piston chamber. The piston chamber communicates with the nipple 59 through a port 74 so that when the piston 70 is unseated air flows from the line 62 past the check 61 and through the port 67, seat 68, port 74 and nipple 59 into the fuel container to act upon the bodies of fuel contained therein and to effect delivery thereof through one or the other of the tubes 48 or 49 depending upon which of the valves 34 or 35 is open, the air pressure being conveyed from the upper chamber to the lower chamber through a tube 75.

Located on the side opposite from the piston chamber is a diaphragm chamber 76 containing a flexible diaphragm disk 77 having its periphery clamped to the body portion of the regulator by a cap plate 78. The diaphragm 77 carries a relief valve seat 79 that is provided with a relief port 80 which is normally closed by a relief seat disk 81 carried upon a head 82, having engagement with the piston 70 through a fork 56. Adjustably threaded into the plate 78 is a spring retainer 83 housing a coil spring 84 having one end bearing against a pivot 85 within the retainer and its opposite end bearing against a pivot disk 86 which pivotally engages a diaphragm head 87 on the diaphragm. The action

of the spring 84 is adjusted by screwing the spring retainer into and out of the cap plate after which it is retained by a lock nut 88. The spring retainer 83 has a port 89 through which air is vented to atmosphere upon unseating of the relief valve seat. The inner side of the diaphragm is acted upon by pressure from within the fluid container by way of a port 90 which connects the diaphragm chamber with the nipple 59.

The pressure regulator is further provided with a pressure gauge 91 having the stem thereof threaded into a lateral boss 92 which is provided with a port (not shown), connected with the diaphragm chamber to register the amount of pressure carried within the fuel container.

The air container 3 comprises a cylindrical shell 93, having an outwardly crowned head 94 and an outwardly crowned bottom 95 that are formed of metal of sufficient strength to withstand pressure of a quantity of air necessary to supply the fuel container for the period required to empty one of the compartments. The head 94 is provided with bushings 96, 97 and 98, having internally threaded ports 99, 100 and 101 for mounting fittings, as now to be described.

Threaded into the bushing 96 is a "Schrader" air valve 102 having a conventional valve core 103 provided with a valve actuating stem 104 that is adapted to be engaged by a reduced neck 105 on a collared tube 106 which is connected to the terminal end of the air line 62. Rotatably retained on the tube is a wing nut 107, having an internally threaded socket 108 engaging over the valve fitting 102 and arranged to clamp the collared portion 108' of the tube against the open end of the valve fitting, in which position the valve stem is engaged to move the valve in "open" position so that the air in the container is delivered through the line 62 to the pressure reducing valve. Fixed to the container by a flexible connection, such as a chain 109, is a cap 110 that is adapted to be screwed over the "Schrader" valve fitting when the air container is to be disconnected from the fuel supply tank for filling purposes.

The bushing 97 carries a pressure gauge 111 for registering the amount of pressure carried within the container. The other bushing 98 carries a cup-shaped fitting 112 having an axial port 113 communicating with the tank wherethrough pressure on the tank is caused to act upon a frangible diaphragm 114, the frangible diaphragm 114 being retained in seated position within the cup-shaped fitting by a hollow plug 115 having a skirt 116 threaded within the cup-shaped fitting to clamp the periphery of the diaphragm in sealed engagement with the cup. The skirt of the plug is provided with radial openings 117 through which pressure exhausts to atmosphere upon bursting of the diaphragm should safe working pressures be exceeded within the air container.

In case air should become exhausted from the air container either by direct actuation of the diaphragm 114 or by depletion through use of the apparatus, I provide the fuel container with a manually operated air pump 118, fixed to the side thereof and having a connection 119 leading to an inlet branch 120 of a valve fitting 121. The valve fitting 121 is threaded within a bushing 122 located in the center of the head 7 and also has a branch 123 for connecting an air line 124 leading to the fuel burning appliance so that air from the container may be used for initially atomizing the fuel for starting purposes. The air line 124 is always in communication with the interior of the tank through a port 125, however, the pump line 119 is normally separated from the tank by a diaphragm 126 having a port 128 normally closed by a needle valve 129 that is screwed into the valve body and actuated by a hand wheel 130, similar to the other valves previously described.

In assembling the apparatus, the pressure regulator carrying the air line is screwed into the bushing 17 and the spring 84 is set to maintain the desired working pressure within the fuel container. In applying the valve fitting 32 the tubes 48 and 49 are passed through the opening 31 so that the tube 49 enters the open end of the stand pipe and the tube 48 passes downwardly on the outside thereof, as shown in Fig. 8. In this position the fitting may be readily screwed within the bushing, the tube 49 rotating within the stand pipe and the tube 48 revolving around the stand pipe while the fitting is tightened. When thus applied the terminal end of the tube 49 is located near the bottom of the lower compartment and the tube 48 near the bottom of the upper compartment.

The air container is charged to the desired pressure as indicated by the gauge 111. This is accomplished by disconnecting the cap 110 and connecting a standard automotive hose fitting, such as used in any filling station for supplying air to tires.

At the time of filling the air container a supply of fuel is obtained and poured through the filler opening 19 into the upper or reserve storage compartment. When this compartment is filled to the stand pipe the fuel begins to overflow therethrough into the lower compartment. After filling, the filler cap 23 is replaced and the valve 37 is opened to establish communication between the lower compartment and the fuel delivery line 4, the valve 34 which communicates the upper compartment with the line being closed. The air container is then connected with the air line 62 by connecting the wing nut 107 with the "Schrader" valve fitting 102. When the nut is tightened the reduced end 105 engages the stem of the valve to effect opening of the valve so that the air in the tank passes through the valve, through the line 62, check valve fitting 60 and port 67. Since there is no pressure within the fuel container, the spring 84 preponderates over the spring 71 to cause unseating of the piston valve. The air is thus free to flow through the port 67, into the piston chamber and from the piston chamber through the port 74 to the nipple 59 and into the upper compartment of the container where it flows through the air tube 75 into the lower container to establish pressure on the surface of the liquid in the reserve supply to move it through the tube 49, ports 33 and 45 into the line 4 leading to the various gas appliances.

As soon as the air pressure within the fuel container reaches the set value, pressure builds up on the inside of the diaphragm chamber through the port 70 to act against the diaphragm, which moves against action of the spring 84, so that the spring 71 becomes effective in closing the port 67. However, as the air expands in the tank with displacement of the fuel therefrom, the pressure drops to allow entrance of additional air from the air container to maintain a balanced air pressure in the fuel container so that the fuel is supplied at constant pressure to the gas burning appliances.

Should the piston valve fail to seat, excessive pressure would build up in the fuel container, however, this pressure acts upon the inner sur-

face of the diaphragm to force the diaphragm seat away from the seating disk on the head 82, thereby relieving the pressure through the ports 79 and 89 to atmosphere before the pressure can accumulate fast enough to be dangerous. Air under pressure is also supplied to the fuel burning appliances through the pipe 124 to effect atomization of the fuel in initially starting the burners.

When the service supply compartment is emptied, the valve 37 is closed and the valve 34 opened so that fuel from the reserve compartment is passed to the line 4 through the tube 48. The user of the equipment will therefore make available another supply of fuel which is readily obtained at grocery stores, gasoline service stations, and the like. When it becomes necessary to recharge the air container it is disconnected by unscrewing the wing nut 107. The air pressure, however, will be retained in the fuel container since the piston valve remains seated to close the port 67. Loss of air pressure is also guarded against by the check valve 61 which seats in case of failure of the piston valve. After removal of the wing nut the protective cap 110 is screwed on the "Schrader" fitting. The air tank is then taken to a filling station and charged with air through the usual tire service fittings to a pressure as indicated by the gauge 111. Should the service station carry higher line pressures than is safe for the container 3, and should the operator fail to notice the air guage, the safety disk 114 will blow out before the danger point is reached within the container. It will then be necessary to insert a new diaphragm before again using the container. This is readily effected by unscrewing the plug 115, applying a new diaphragm and replacing the plug.

During the time that the air container is disconnected, there is usually ample air pressure within the fuel container to continue supply of fuel to the burners, however, should there be a delay in return of the air container enough air may be supplied to the fuel container by means of the pump 118. When the new fuel supply is received the cap 23 is removed so that the fuel may be poured into the reserve compartment. Pouring in of the new fuel mixes the old with the new so as to keep the reserve in fresh condition. Upon filling of the reserve compartment, the fuel overflows by way of the stand pipe into the lower compartment. The filler cap is then replaced and the air container is connected with the fuel container to reestablish pressure therein. The valve 34 is then closed and the valve 37 opened to again connect the service supply compartment with the line 4 and to reserve the fuel in the upper compartment until such a time that the fuel in the lower compartment has been consumed.

It is apparent that with a fuel container constructed as described, the reserve fuel will never become sour or stale by chemical deterioration. This is important because gasolines of today, prepared by the cracking process, deteriorates rapidly and no fuel over thirty days old should be used in a retort burner, therefore the capacity of the respective fuel compartments is designed so that the fuel will be used within this period. However, the fuel compartments are of adequate capacity to avoid the inconvenience of frequent fillings. The fresh fuel is always flowed into the reserve compartment and then overflows into the main compartment to agitate the older fuel and carry it into the service compartment to keep the reserve fuel fresh.

Superimposed relation of the reserve and storage compartments is essential to fulfill the requirements of the National Board of Fire Underwriters as it limits delivery of the maximum amount less than the total amount of the container. At the present time six gallons is the maximum amount to be delivered at one time, even if both feed valves should be left open. In this case the feed is entirely from the reserve for the reason that weight of the liquid column in the pipe 48 is less than that in the pipe 49. As soon as the reserve supply is depleted air will start blowing through the feed lines, thus air-sealing the pipe 49 to prevent flow from the service compartment. Before the flow can be re-established it is necessary to close the valve 38 to prevent escape of the air. The air is then effective in forcing fuel through the outlet pipe 49.

Attention is directed to the fact that with the valve arrangement as described, it is not necessary to transfer the fuel from one compartment to the other when the service compartment is empty. When it becomes necessary to clean the fuel container, the fuel is readily emptied from both compartments by uncoupling the container and inverting it so that the fuel discharges through the inlet opening upon removal of the closure cap.

While the fuel container is provided with an air pump that is securely mounted on the side thereof, it is for use only in the event that the ordinary air supply has become exhausted. With correct operation of the system this pump will never be used, since the air container is of sufficient capacity and strength to contain the required amount of air necessary between the intervals of fuel filling.

What I claim and desire to secure by Letters Patent is:

1. In a fuel supply apparatus, a liquid fuel container having reserve and service supply compartments respectively provided with fuel outlets, valve means selectively closing and opening said outlets whereby fuel is drawn from the service supply and then from the reserve supply when the service supply is depleted, a pressure medium container, conducting means connecting the containers, a duct connecting said compartments whereby both compartments are in constant communication with each other and the pressures therein are equalized, and a pressure reducing valve connected with the conducting means for supplying a pressure medium to said fuel container at a substantially constant uniform pressure during successive emptying of the respective compartments as set by said selective valve means.

2. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment, said stand pipe having its upper end terminating below the top of the reserve fuel supply compartment for limiting maximum liquid level in the reserve compartment, a pipe arranged in the container and having constant communication between said air spaces in the respective compartments whereby pressures in said compartments are constantly equalized, means for supplying air under pressure to said air spaces, fuel discharge pipes extending into the respective compartments, a fitting connectingly supporting said discharge pipes in the fuel container and having an outlet connection, and independent valve means controlling flow

through the respective discharge pipes to said outlet connection.

3. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and having its upper end terminating below the top of the reserve compartment for limiting maximum liquid level in the reserve compartment, a fill fitting connected in the top of the upper compartment to fill the lower by overflow through the stand pipe, a pipe connecting air spaces in the respective compartments whereby air pressure in both compartments is kept in constant equalization, and means for selectively moving fuel from said compartments.

4. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment for limiting maximum liquid level in the reserve compartment, a fill fitting connected with the upper compartment, a pipe connecting air spaces in the respective compartments, means for supplying air under pressure to said air spaces, a fuel discharge pipe extending through said stand pipe of the reserve compartment and to the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, a fitting connectingly supporting said discharge pipes and adapted to be threaded into the fuel container in alignment with the stand pipe whereby the first named discharge pipe rotates in the stand pipe and the second named discharge pipe revolves around the stand pipe when the fitting is threaded into the container, an outlet connection for the fitting, and valves controlling flow through the respective discharge pipes to said outlet connection.

5. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and having its upper end spaced below the top of the reserve compartment for maintaining a predetermined maximum liquid level in the reserve compartment, a pipe connecting air spaces in the respective compartments, means for supplying air under pressure to said air spaces, separate fuel discharge pipes extending into the respective compartments, a discharge pipe extending into one of the compartments for drawing fuel from said compartment independently of said other discharge pipes, and valves controlling flow through the respective discharge pipes.

6. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment for maintaining a predetermined maximum liquid level in the reserve compartment, a pipe connecting air spaces in the respective compartments, means for supplying air under pressure to said air spaces, a fuel discharge pipe extending through said stand pipe to the reserve compartment and to the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, a fitting connectingly supporting said discharge pipes and adapted to be threaded into the fuel container in alignment with the stand pipe whereby the first named discharge pipe rotates in the stand pipe and the second named discharge pipe revolves around the stand pipe when the fitting is threaded into the container, an outlet connection for the fitting, a third discharge pipe extending into one of the compartments for drawing fuel from said compartment independently of said other discharge pipes, and valves controlling flow through the respective discharge pipes.

7. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment for limiting the maximum liquid level in the reserve compartment, a fuel discharge pipe extending through said stand pipe and into the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, and a fitting connectingly supporting said discharge pipes and removably mounted in the fuel container in alignment with the stand pipe.

8. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment for limiting the liquid capacity of the reserve compartment, a fuel discharge pipe extending through said stand pipe to the reserve compartment and into the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, and a fitting connectingly supporting said discharge pipes and threaded into the fuel container in alignment with the stand pipe whereby the first named discharge pipe rotates in the stand pipe and the second named discharge pipe revolves around the stand pipe when the fitting is threaded into the container.

9. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment for limiting the maximum liquid level in the reserve compartment, a fuel discharge pipe extending through said stand pipe and into the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, a fitting connected with the fuel container having channels respectively connected with said pipes and terminating in valve seats, a common outlet connection for the fitting on the outlet side of said seats, and valves supported in the fitting for selectively engaging said seats.

10. A fuel container having an upper reserve fuel supply compartment and a lower fuel service compartment, a stand pipe connected with the service compartment and extending through the reserve compartment to form a filler whereby the service compartment is filled through the reserve compartment, a fuel discharge pipe extending through said stand pipe and into the bottom of the service compartment, a second discharge pipe extending to the bottom of the reserve compartment alongside said stand pipe, means connecting said fuel discharge pipes to form a common outlet exteriorly of the container, and means selectively controlling flow through said discharge pipes into said common outlet.

11. A fuel container comprising a tank, a partition dividing the tank into an upper reserve fuel storage compartment and a lower fuel serv-

ice compartment, a fill fitting in the tank having connection with the reserve fuel compartment, a stand pipe supported by said partition and extending upwardly in the reserve fuel compartment but having its upper end spaced below the top of the tank whereby fuel admitted through said fill fitting fills the reserve compartment to the level of said stand pipe before filling the service compartment whereby a reserve storage is maintained incidental to filling the service compartment, separate fuel discharge pipes connected with said compartments, a common outlet line connecting the discharge pipes, and means selectively controlling flow through the respective discharge pipes to said common outlet line.

WILLIAM C. COLEMAN.