June 11, 1957 C. J. MEEHAN 2,795,245

LIQUID TRANSFER DEVICES

Filed Feb. 16, 1953

Fig. 1.

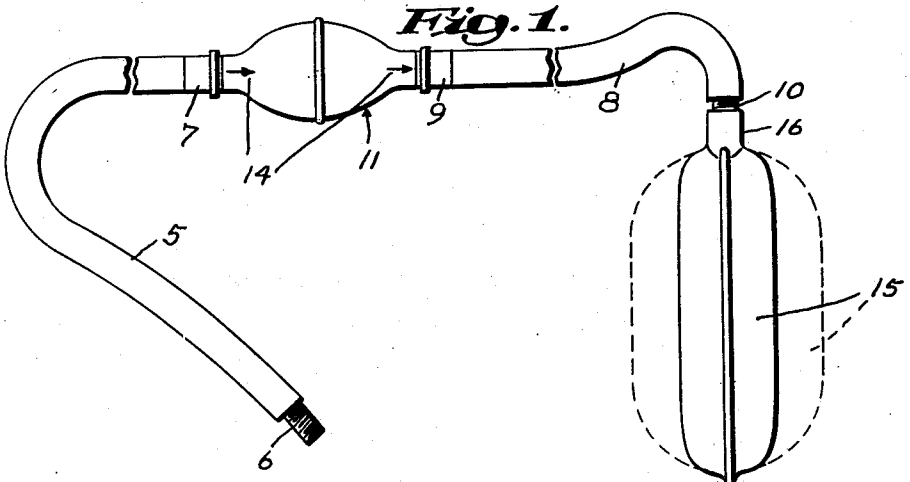


Fig. 2.

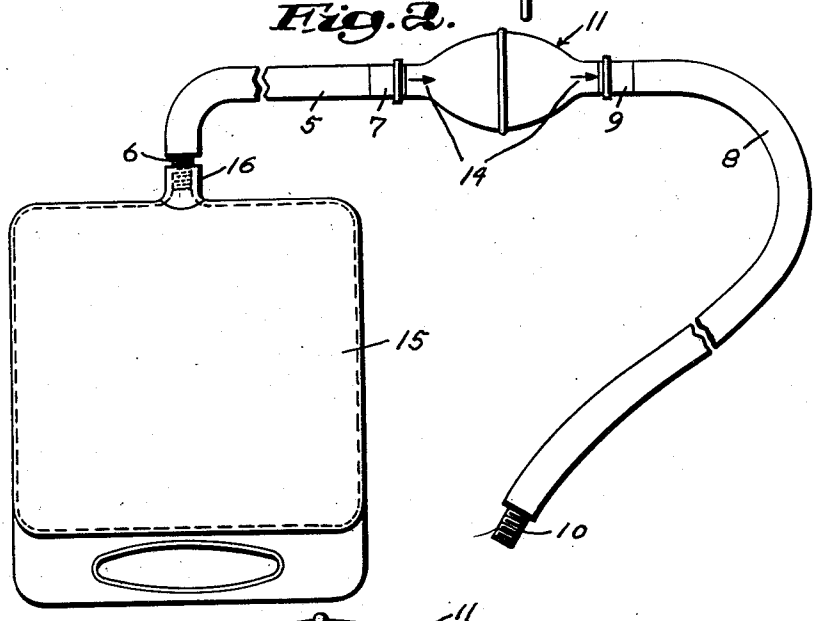
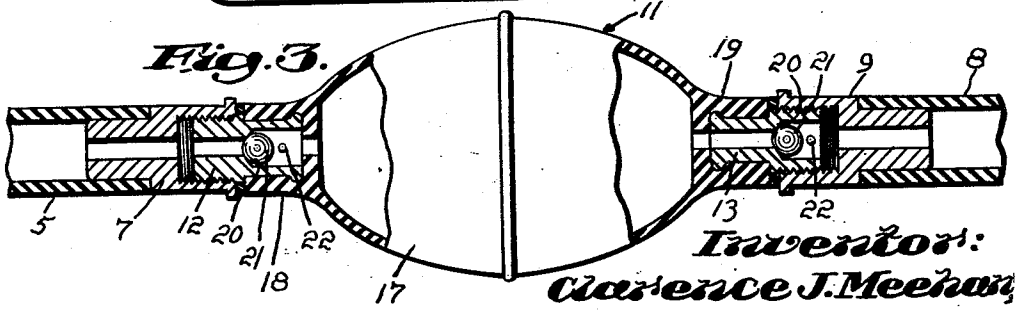


Fig. 3.



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LIQUID TRANSFER DEVICES

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2 Claims. (Cl. 141—26)

The present invention relates to devices for use in transferring liquids from one container to another and particularly to a device for emergency use in transferring gasoline to an empty gasoline tank from one that is sufficiently full to spare that amount that will enable a filling station to be reached.

It has been estimated by the Automobile Club of New York that, annually, more than 1¼ million motorists experienced the inconvenience of finding their vehicles stalled for lack of gasoline. While, in many instances, this happened close to a filling station, a substantial percentage of cases occurred late at night or on toll roads and other highways where filling stations are spaced far apart.

Under such circumstances, it is often necessary to rely on the courtesy of a passing motorist to give assistance by way of driving the other motor vehicle operator to a filling station or to a place where he may telephone for help or the aid may be by way of delivering a message as to the trouble directly to the filling station.

In any such event, there is a substantial loss of time and usually considerable expense involved before the stalled vehicle is back in service even though the assisting motorist had gasoline in his tank, which could it be easily transferred would have saved the lost time and the needless expense.

It is thus the objective of this invention to provide a device to enable gasoline to be quickly, easily, and safely transferred from one gasoline tank to another and which is inexpensive to manufacture and adapted to be compactly packaged for convenience in storage.

In accordance with the invention, a device consists of a conduit, preferably flexible, having a hand operated pumping unit, conveniently of the squeeze bulb type, located between and establishing inlet and discharge ends. While this enables gasoline to be pumped from one tank, it is frequently impossible for the assisting car to be so located with reference to the stalled car, that gasoline may be pumped directly from one tank to the other. It is thus necessary to utilize a container that can be carried easily to the stalled car so that its contents may be poured into the empty tank or pumped thereto by the above described unit. The use of a container also has the advantage that it enables an approximate measurement of the gasoline to be taken.

In the accompanying drawings, there is shown an illustrative embodiment of the invention from which other of its objectives, novel features and advantages will be readily apparent.

In the drawings:

Fig. 1 is an illustrative view of a device in accordance with the invention assembled for use in pumping gasoline from a tank, with the container being shown in edge view, and

Fig. 2 is a similar view of the device assembled for use in pumping gasoline into an empty tank, with the container being shown in elevation, and

Fig. 3 is an enlarged and partly sectional elevational view of the pumping unit.

In the embodiment of the invention shown in the drawings, there is a flexible conduit 5 having threaded terminals 6 and 7, a flexible conduit 8 having like terminals 9 and 10, and a squeeze bulb type of pump, generally indicated at 11, provided with threaded plugs 12 and 13, as shown in Fig. 3, connected to the terminals 7 and 9, respectively. As the pump 11 is alternately squeezed and released, liquid is pumped from the conduit 5 through the conduit 8 in the direction indicated by the arrows 14 in Figs. 1 and 2 with which the pump 11 is preferably marked. The terminals 6 and 10 are, accordingly, the inlet and outlet ends, respectively, of the device.

The container 15 is of resilient and flexible material having a normal collapsed position, in which the volume of air contained therein is an insignificant percentage of the capacity of the container when fully extended. (See Fig. 1.) By this construction, air venting of the container 15 is unnecessary so that it may be provided with a neck 16 interiorly threaded to receive either the terminal 6 or the terminal 10. The neck 16 is shown as sufficiently long to facilitate the pouring of the container contents directly into a gasoline tank where that is feasible.

While the pump 11 may be variously constructed, it is shown in Fig. 3 as consisting of a bulb 17 having tubular end portions 18 and 19 for the plugs 12 and 13, respectively. Each plug has a seat 20, a valve element 21 in the form of a ball, and a pin 22 enabling that element to move between open and closed positions to permit flow of liquids only in the direction of the arrows 14.

The container 15 may be rolled for compact storage while the conduits are equally well suited for convenient packaging. The device thus can be conveniently stored by a motorist in his car to be ready when either he finds another motorist out of gasoline or he, himself, suffers that misfortune.

In that case, the device is assembled as shown in Fig. 1 and the inlet terminal 6 of the conduit 5 is inserted into the gasoline tank of the car of the assisting motorist with the terminal 10 of the conduit 8 threaded into the neck 16 of the collapsed container 15. The bulb 18 of the pump 11 is then alternately squeezed and released until the container 15 is pumped full. It may then be carried to the stalled car when either the conduit 8 may be detached from the container 15 and the gasoline poured directly into the empty tank or the conduits 5 and 8 may be reversed with respect to the container 15, as shown in Fig. 2, with the terminal 6 threaded into the neck 16 of the full container 15 and the terminal 10 disposed in the empty tank so that gasoline may be pumped thereto. It is also possible, with the device assembled as shown in Fig. 1, to disconnect the conduit 8 from the pump 11 where the neck 16 is not long enough for use in pouring the contents from the container 15.

It will thus be apparent that devices in accordance with the invention are well adapted for use in such purposes as effecting the emergency transfer of gasoline.

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

1. A device for transferring liquid from one tank to another, said device comprising a container of flexible and resilient material and having a normal collapsed position, and including a threaded port, and a flexible conduit including threaded terminals, either of which may be connected to said port, and a hand operated pumping unit intermediate said terminals operable to pump liquid in a predetermined direction through said conduit, dependent on which of the terminals is connected to said port.

2. A device for transferring liquid from one tank to another, said device comprising a container of flexible and resilient material and having a normal collapsed posi-

tion, and including a threaded port, and a flexible conduit including threaded terminals, either of which may be connected to said port, and a hand operated pumping unit of the squeeze bulb type intermediate said terminals operable to pump liquid in a predetermined direction through said conduit, dependent on which of the terminals is connected to said port.

References Cited in the file of this patent

UNITED STATES PATENTS

247,142 Woods ---------- Sept. 13, 1881
723,042 Schwerin ---------- Mar. 17, 1903
1,527,190 Jennings ---------- Feb. 24, 1925
1,836,029 Hutt ---------- Dec. 15, 1931
2,066,977 Iler ---------- Jan. 5, 1937
2,264,099 Shaw ---------- Nov. 25, 1941
2,598,869 White ---------- June 3, 1952