

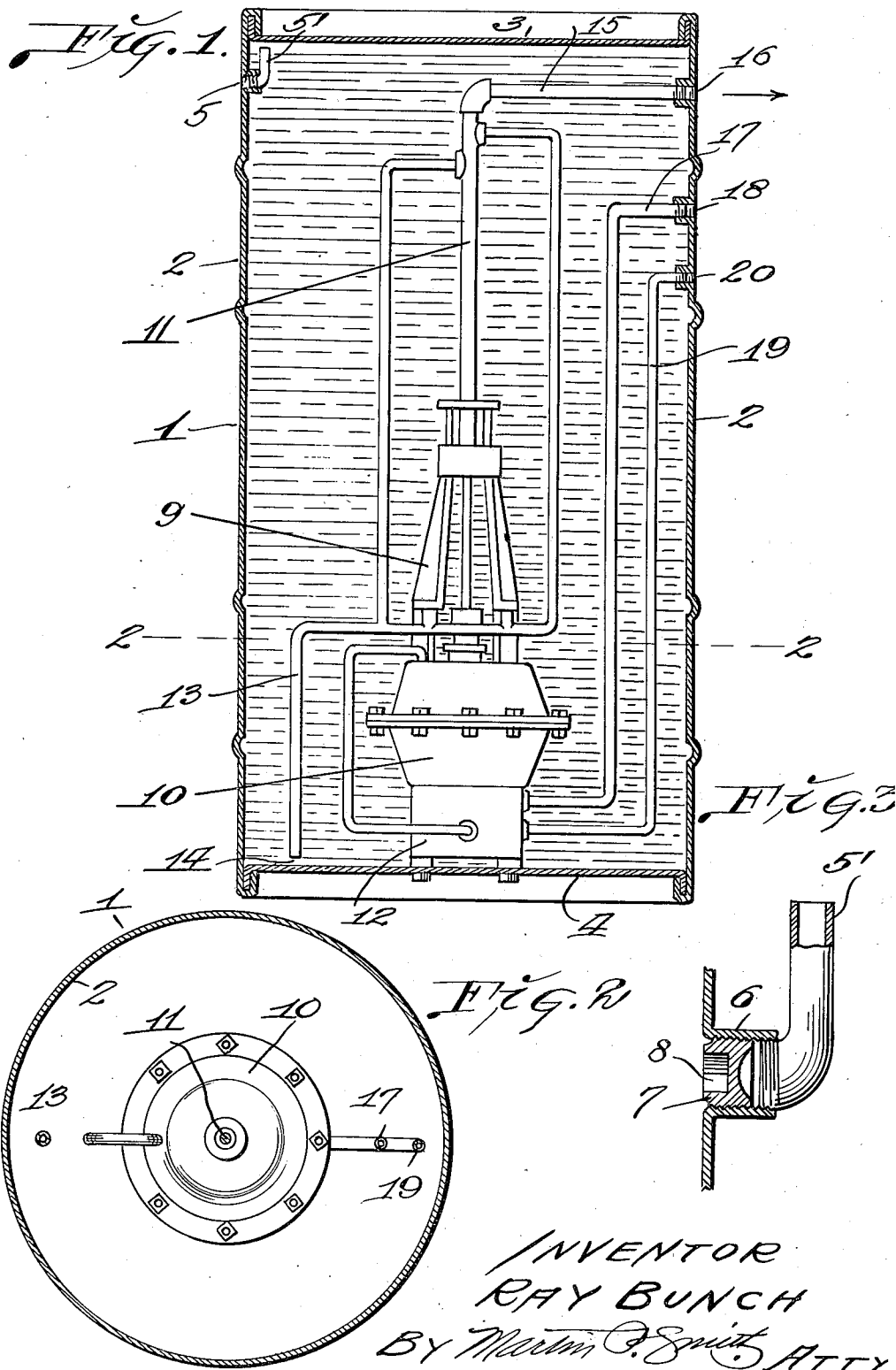
May 7, 1940.

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2,199,657

DISPENSING PACKAGE

Filed Dec. 15, 1937



UNITED STATES PATENT OFFICE

2,199,657

DISPENSING PACKAGE

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Application December 15, 1937, Serial No. 179,923

6 Claims. (Cl. 221—80)

The invention herein disclosed relates to a specially designed portable container or package in which fluids such as oils and greases are transported to the place of sale and/or utilization.

5 The package is equipped with a means, preferably a pump-motor unit entirely enclosed by and concealed within the package, and fixed thereto so that when the package is delivered, for instance, at an automobile service station, it is ready to immediately dispense the oil or grease, or other fluid contained therein when connected to a source of power.

The package is preferably of a convenient size to be easily transported from the wholesaler to the retailer and may have any desired capacity for instance one barrel, one-half barrel, or one-quarter barrel. Several of such packages may be delivered to the retailer; each package containing a particular oil or other lubricant best suited for the purpose intended.

15 Although the package has been designed as a transportable dispensing container for various grades of lubricants, applicant is well aware of the fact that such containers can also be used for carrying fuel and other fluids which may readily and conveniently be dispensed by a retailer or consumer at the place of utilization.

The consumer, in order to use the package, merely makes a power connection upon the outer side of the package in order to operate the motor therein. The kind of power required will depend upon the type of motor within the package. A plug-in type of connection is used where the motor is an electric one; whereas, should the motor operate from the vacuum system of an engine or other device, provision is made for connection with the suction line thereof. It is to be understood, however, that any power may be utilized for operating the motor that is contained within the package, and which expels the fluids or semi-fluids therefrom; for instance, the motor may be operated by vacuum, compressed air or other fluid, a combination of vacuum and compressed air or fluid or by electricity. To conduct the contents from the package, a duct, preferably flexible pipe or hose, is connected to the pump outlet, which extends through the wall of the package, and the oil or grease forced under high pressure to the frictional parts of the engine or vehicle requiring such services.

50 In order to show one how to make, use and vend the invention, one form of the invention is disclosed in the following specification and drawing, but it is to be understood that the specification and drawing are not to limit the inven-

tion in any manner whatsoever except as limited by the appended claims.

An object of this invention is to provide a package for the transportation of fluids in a convenient and efficient manner, and having contained therein means for dispensing the fluids under pressure when connected with a source of power at the point of delivery.

10 Another object is to provide a self-contained unit for the delivery of a fluid, such as oil and grease, to a consumer or retailer in a manner that it can be dispensed safely and with little effort, directly to the place of utilization, by merely making a power connection to the unit and a duct connection from the unit to the place where lubrication is desired.

A further object of my invention is to provide a dispensing package of the character referred to wherein the pump, the connections to and from said pump and the outlet for the oil or grease that is expelled by the pump, are all contained wholly within the tank so that the latter has no external projections that would otherwise prevent the package or container from being rolled on level surfaces, stacked one on top of the other, or piled one on top of the other while lying on their sides.

25 A still further object is the provision of a package and motor-pump unit connected therein, for distribution of a lubricant to a consumer wherein it can be fed to frictional parts of an engine by merely making a few simple connections, or if desired, the lubricant can be discharged into a carrier or other container for some particular purpose.

30 Still further objects will appear or become apparent by reading the specifications, and by perusing the drawing wherein:

Fig. 1 of the drawing shows applicant's invention in longitudinal vertical view, the package being shown in section and the motor-pump unit in elevation.

Fig. 2 is a cross-sectional view taken substantially along the line 2—2 of Fig. 1.

Fig. 3 shows a sectional view of a detail.

45 The numeral 1 represents a portable container or package, preferably metal, in the shape of a barrel or tank so that it can be readily rolled about. Such a package may be of any conventional and convenient type having sides 2, top 3 and bottom 4. Applicant does not wish to limit the application of his invention to any particular tank or package for the reason that his invention may be applied to any portable container for the transportation of fluid, such as oil and grease,

now in use, or eventually to be used for such purposes.

The particular container designated by the numeral 1 is provided with a vent 5 near the top thereof and may have an upturned portion 5' to permit atmospheric pressure to reach the surface of the fluid with a minimum of impediment and to aid in the dispensing of the fluid.

Where the vent passes through the wall of the package, structural means or a fitting such as shown in detail in Figure 3 may be used. A hole may be formed in the side of the tank and provided with an inwardly projecting flange 6 which is threaded to receive a plug 7. The outer surface of the plug is recessed and configured as at 8 to accommodate a particular shaped wrench for removing the plug. Sufficient threaded portion of the flange remains to accommodate the threaded end of the vent pipe 5'.

The reference character 9 designates a motor-pump unit fixed to the bottom of the package as by screws in a manner to assure that the unit will be held in a definite fixed position within the package. Any motor-pump unit may be employed for the purposes of removing the fluid from within the tank, but for convenience, a motor-pump unit of the type shown in the drawing may be employed which is disclosed in detail in applicant's application, Serial No. 166,320 filed September 29, 1937.

The motor-pump unit illustrated in Fig. 1 and shown within the package 1 has a diaphragm type motor 10 upon which is mounted a double acting plunger type pump 11. Beneath the motor is provided a valve chamber 12, which automatically controls the pressure differential on either side of the motor diaphragm in order to cause the diaphragm to continuously reciprocate and operate the pump so long that power is delivered to the valve chamber. The pump has an inlet 13 which extends near to the bottom of the package as shown at 14. The outlet of the pump is by means of the pipe 15 which leads through the wall of the package and terminates in a fitting like that shown in Fig. 3.

The particular motor shown in Fig. 1 is of the type operable from the vacuum system which may be installed at the filling station.

A vacuum line duct 17 leads from an opening fitting 18 to the valve compartment 12 and from the same compartment leads another pipe 19 to an opening fitting 20. The fittings 18 and 20 are also constructed substantially as shown in Fig. 3 of the drawing, and when the plug of such a fitting is removed, the vacuum line is connected to the fitting 18, so that atmospheric pressure can be admitted to the motor in a well known manner.

From the foregoing disclosure, the advantages of such an equipped package becomes apparent. When the package is delivered to the retailer filled with lubricant, it is ready for use when stood upright and a few plugs removed for making power connections and a dispensing connection.

Inasmuch as the plug 7 that closes the opening to the vent 5, together with the fitting 16 for the outlet pipe 15 and the fittings 18 and 20 for the pipes 17 and 19 that lead to and from the engine, are all located within the walls of the container and below the outer surfaces thereof, there are no external projections on the package to interfere with its being freely rolled from one place to another after the manner of rolling a barrel or cylindrical tank and further, the absence of projections enables the containers to be readily piled

one on top of the other, either end to end or sideways, thereby effecting a material saving of space when the containers are packed for storage or transportation.

A flexible pipe is connected between the suction side of an engine, which may be the engine of the vehicle to be serviced, and the vacuum port 18 of the package. A flexible lubricant hose or pipe is connected to the outlet 16 of the package for conducting a portion of the contents to the part of the vehicle to be lubricated. A valve may be provided at any convenient point along the vacuum line to control the operation of the motor and hence, the discharge of the lubricant.

Thus it will be seen that I have provided a dispensing package that is relatively simple in construction, inexpensive of manufacture and very effective in performing the functions for which it is intended.

I claim as my invention:

1. A package for transporting a fluid; top, bottom and side walls of the package forming a chamber for the fluid, a motor-pump unit in the chamber fixed to one of the walls of the package and contained wholly therein, means for the transmission of power to the motor and passing through a wall of the package, dispensing means connected to the pump and passing through a wall of the package, said transmission and dispensing means where they pass through the wall of the package being provided with separate closure fittings for removable connection with means to supply power and means to receive the fluid, respectively and said fittings being located wholly below the external surface of the wall of the package.

2. The combination with a portable container, of a motor pump unit located wholly within said container, the wall of said container being provided with inlet and outlet fittings, ducts arranged between the motor of said motor pump unit and said fittings and plugs removably positioned in said fittings and located wholly below the external face of the wall that carries said fittings for normally closing the latter.

3. The combination with a portable container, of a motor pump unit located wholly within said container, the wall of said container being provided with inlet and outlet fittings, ducts arranged between the motor of said motor pump unit and said fittings, plugs removably positioned in said fittings and located wholly below the external face of the wall that carries said fittings for normally closing the latter, a fitting located on the upper portion of the wall of said container below the surface thereof, a vent secured to said last mentioned fitting and disposed within the container and a plug removably located in said last mentioned fitting and positioned wholly below the external surface of the container.

4. In a drum for transporting and dispensing fluids, side, bottom and top walls sealed to form a liquid tight container, a pump and motor sealed in the container and fixed to one of the walls thereof, conduits leading from the motor to openings through a wall of the container for connection to a source of power to operate the motor, plugs normally closing said openings, said plugs being substantially flush with the wall of the container, a vent, a tube for delivering fluid outside of the container, said vent and tube having openings through the container wall and plugs for closing said openings, which plugs are substantially flush with the container wall when closing said openings.

5. In a drum for transporting and delivering fluids, side, bottom and top walls sealed to form a fluid tight container, a pump within said container and fixed on the interior thereof, means
5 leading from the pump to a fitting in a wall of the container for connection to a source of power to operate said pump, a second fitting in a wall of the container communicating with the discharge of said pump for delivering fluid outside
10 said container, a third fitting in a wall of said container for permitting ingress of air to said container when fluid is being delivered therefrom, all of said fittings being substantially free from external projections beyond the outer surfaces of
15 said walls and having means for sealing the in-

terior of the container from the exterior when transporting fluids therein.

6. The combination with a portable container, of a pump located wholly within the container, the wall of said container being provided with
5 fittings communicating with said pump for connection to a source of power to operate said pump and for delivering fluid discharged by said pump outside said container, said fittings being substantially free from external projections beyond
10 the outer surface of said container and having means for sealing the interior of the container from the exterior thereof.

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