D. RUNYEN.

GREASE CABINET.

APPLICATION FILED OCT. 9, 1916.

1,284,462. Patented Nov. 12, 1918.

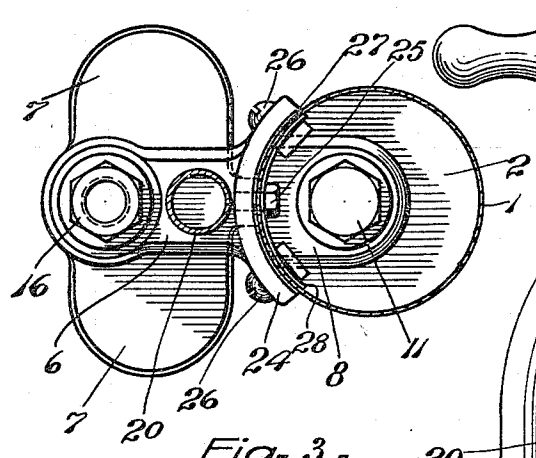


Fig. 3.

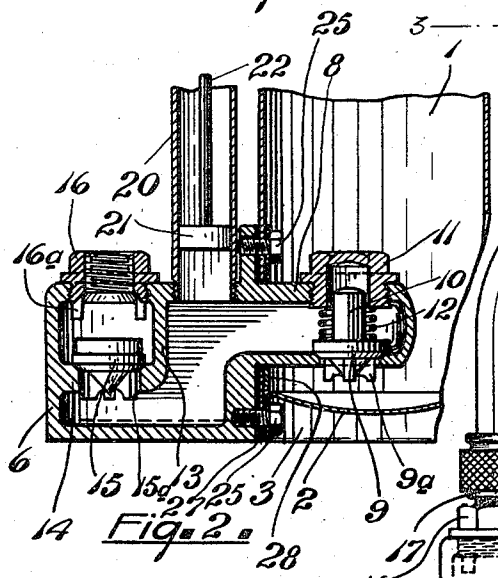


Fig. 2.

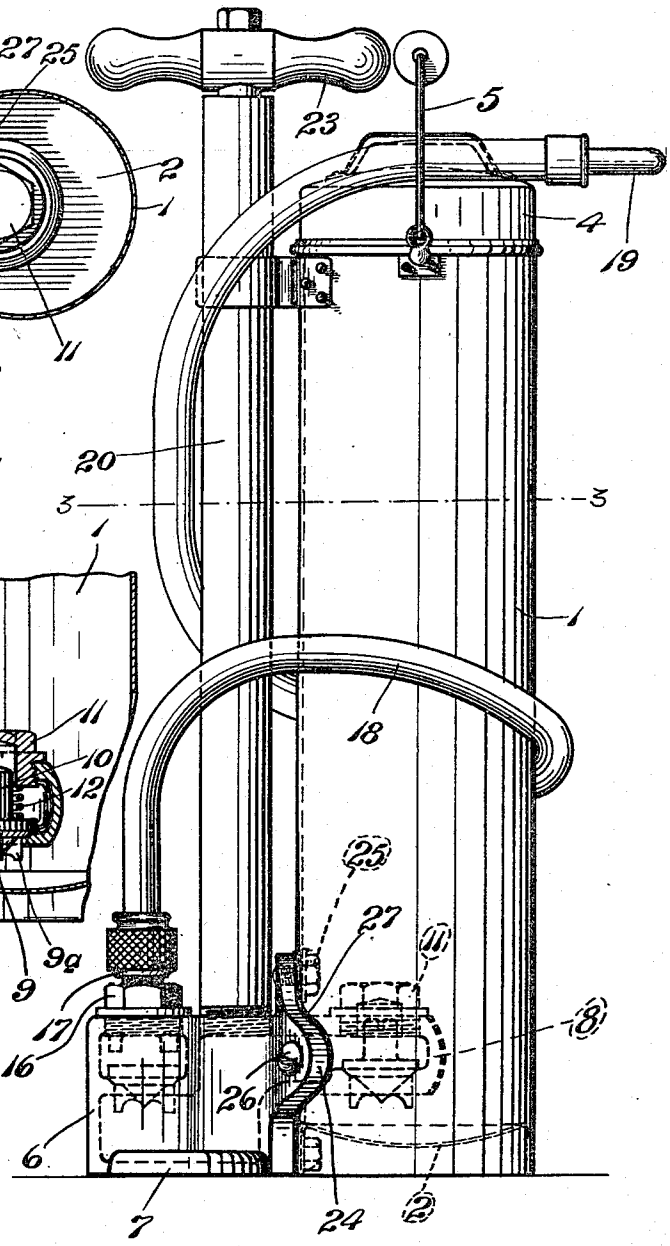


Fig. 1.

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UNITED STATES PATENT OFFICE.

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GREASE-CABINET.

1,284,462. Specification of Letters Patent. Patented Nov. 12, 1918.

Application filed October 9, 1916. Serial No. 124,626.

To all whom it may concern:

Be it known that I, DAVID RUNYEN, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Grease-Cabinets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a grease cabinet of the general character disclosed in a former application Ser. No. 875,841 filed Dec. 7th, 1914, in which I am joint inventor and it is an object and purpose of the present invention to provide a device of this character with many novel details of construction whereby it is adapted to contain greases and oils of different viscosities and handle the same in measured quantities so that the grease or oil may be transferred from the cabinet to any place where it is to be used such as in a transmission case or differential housing in automobiles or to any other casing containing gearing or bearings for lubrication of the same. Especially my invention has for its object the provision of a novel construction of measuring force pump for withdrawing oils from the cabinet and forcing the same outwardly through a flexible conduit to the casing or other receptacle which is to receive it.

For an understanding of the invention reference may be had to the accompanying drawings illustrating the preferred embodiment of the same in which;

Figure 1 is a side elevation of a cabinet equipped with my invention.

Fig. 2 is a vertical sectional view taken through the lower part of the cabinet, and

Fig. 3 is a horizontal section through the cabinet substantially on line 3—3 of Fig. 1 looking downwardly on the construction below the section plane.

Like reference characters refer to like parts throughout the several views of the drawing.

The grease or oil is adapted to be contained in a receptacle 1 preferably of cylindrical outline and having a base 2 which has a flange 3 turned downwardly at its outer edges and lying alongside the inner surface of the receptacle 1 adjacent its lower edges. The open top of the receptacle is normally closed by a cover and in practice a bail 5 equipped with a suitable handle is attached to the receptacle for easy transportation of the same.

At one side and near the lower end of the receptacle a hollow member 6 formed preferably of cast iron is located its lower face lying in the same plane as the lower edges of the receptacle 1 and having outstanding flat projections 7 upon which the feet of the operator may be placed in the operation of the pump. From one side of the casting 6 a projection 8 extends entering through an opening in the side of the receptacle to the interior thereof being spaced a distance above the bottom of the receptacle. The member 6 being hollow permits the passage of the grease and oil therethrough and in the lower side of the projection 8 an opening is made in which is seated a valve 9 it having downwardly projecting guides 9^a to guide it as it moves up and down when the pump is operated. A pin 10 projects upwardly from the valve and enters a recess in a cap 11 threaded into the upper wall of the projection 8. A coil spring 12 of light tension may be interposed between the upper side of the valve and the lower end of the cap 11 such spring surrounding the pin 10 as shown in Fig. 2.

The space within the casting 6 is divided into two compartments by means of a vertical wall 13 integral with which is cast a horizontal wall 14 a distance above the base of the casting. An opening is made in said horizontal wall and a valve 15 having downwardly projecting guides 15^a is seated in such opening. The upper wall of the casting immediately above the valve has a threaded opening in which an interiorly threaded nut 16 is screwed and from the lower side of which projects a plurality of fingers 16^a serving as stops to limit the upward movement of the valve 15. By means of a coupling 17 which threads into nut 16 a

flexible conduit 18 may be secured to the casting said conduit being of considerable length and terminating in any suitable delivery nozzle 19.

A barrel 20 is threaded into the upper side of the casting and communicates with the compartments thereof which extends into the receptacle 1. In the barrel a piston 21 is mounted at the lower end of a rod 22 which extends above the upper end of the barrel and carries any suitable operating handle 23. It is apparent that upon upward movement of the piston a suction is produced which draws the valve 15 tightly against its seat and serves to elevate valve 9 drawing grease or oil carried by the cabinet into the compartment with which the barrel is associated, and that on the downward stroke of the piston the pressure causes valve 9 to seat firmly against its seat and elevates the valve 15 forcing the oil or grease past the valve and out through the conduit 18 for delivery from the nozzle 19. In practice with heavy oils and greases the valve 15 may be eliminated as the frictional resistance offered by the sides of the tube 18 precludes the grease from returning and entering the barrel 20 on further upward strokes of the piston. Furthermore the spring 12 is not essential to the working of the device especially with light oils and may be left out in many instances to good advantage.

The casing 6 is formed with a flange 24 which is curved substantially to fit the side of the receptacle 1. Screws 25 and bolts 26 are used to fasten this flange to the receptacle and a paper gasket 27 is interposed between the flange and the wall of the receptacle while a metal gasket 28 lies between the heads of the screws 25 and the nuts of bolts 26 thereby protecting the wall of the receptacle from injury. This construction of the casting 6 to the receptacle precludes any escape of oil from the receptacle at the joint between said receptacle and casting.

A construction of the character described is very simple and easy to manufacture and in practical use has met with ready acceptance. Slight changes in minor detail of construction may be resorted to without departing from the construction defined in the appended claims and I consider myself entitled to all of such departures from the specific structure shown which fall within the scope of such claims.

I claim:—

1. In a device of the character described, a receptacle, a hollow casting located adjacent the lower end of the receptacle and attached thereto, a projection on said casting extending into the receptacle said projection having an opening in the lower wall thereof, a valve seated in said opening, a cap provided with a recess in its under side threaded into the upper wall of said projection and lying directly above the valve, a pin on the valve extending into said recess, a coiled spring around the pin between the valve and cap, a barrel threaded into the upper wall of the casting outside the receptacle, a piston head and rod in the barrel, a handle on the end of the rod above the upper end of the barrel, a wall depending from the upper wall of the casting, a horizontal wall connected to the lower end of said depending wall and positioned horizontally above the lower wall of the casting and connected to the end of said casting, said horizontal wall having an opening therethrough, a valve seated in said opening above the wall, an interiorly threaded nut threaded into the upper wall of the casting immediately above the valve, a coupling threaded into said nut and a flexible conduit terminating in a discharge nozzle secured to the coupling.

2. In a device of the character described, a receptacle, a hollow casting attached thereto at its lower end, a projection on the casting extending into the receptacle, said projection having an opening in its lower wall, a valve in the projection seated in the opening, a cap threaded into the upper wall of said projection directly above the valve, a barrel connected to the upper wall of the casting outside the receptacle and communicating with the interior of said casting, a piston in the barrel, means for operating the piston, a wall depending from the upper wall of the casting for a distance and then turned horizontally to connect with the end of the casting, said horizontal piston having an opening therethrough, a flexible conduit, and means to connect said conduit to communicate with the compartment set off by said depending wall, substantially as described.

3. In a device of the character described, a receptacle, a hollow casting attached thereto, means within the casting dividing it into two compartments with an open passage therebetween, a projection to the casting extending into the receptacle, said projection having an opening in its under wall, a valve in the projection loosely seated in said opening, a barrel attached to the casting, a piston therein, means for operating said piston in the barrel, and a flexible conduit secured to the casting and communicating with the interior thereof, said barrel and conduit being in communication with different compartments in the casting.

4. In a device of the character described, a receptacle, a hollow casting having a projecting portion extended into the receptacle, a flange on the casting shaped to conform to the wall of the receptacle and lying there-

against, means connecting the receptacle wall and flange together, a partition dividing the interior of the casting into two compartments, said partition being provided with an opening therethrough and said projecting portion within the receptacle also having an opening in its lower wall, a valve seated in said last mentioned opening, a pump connected to the casting and communicating with one compartment of the casting, and a flexible conduit secured to and communicating with the other compartment of the casting.

In testimony whereof I affix my signature.

DAVID RUNYEN.