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R. M. FREEMAN
LUBRICATING OIL CAN
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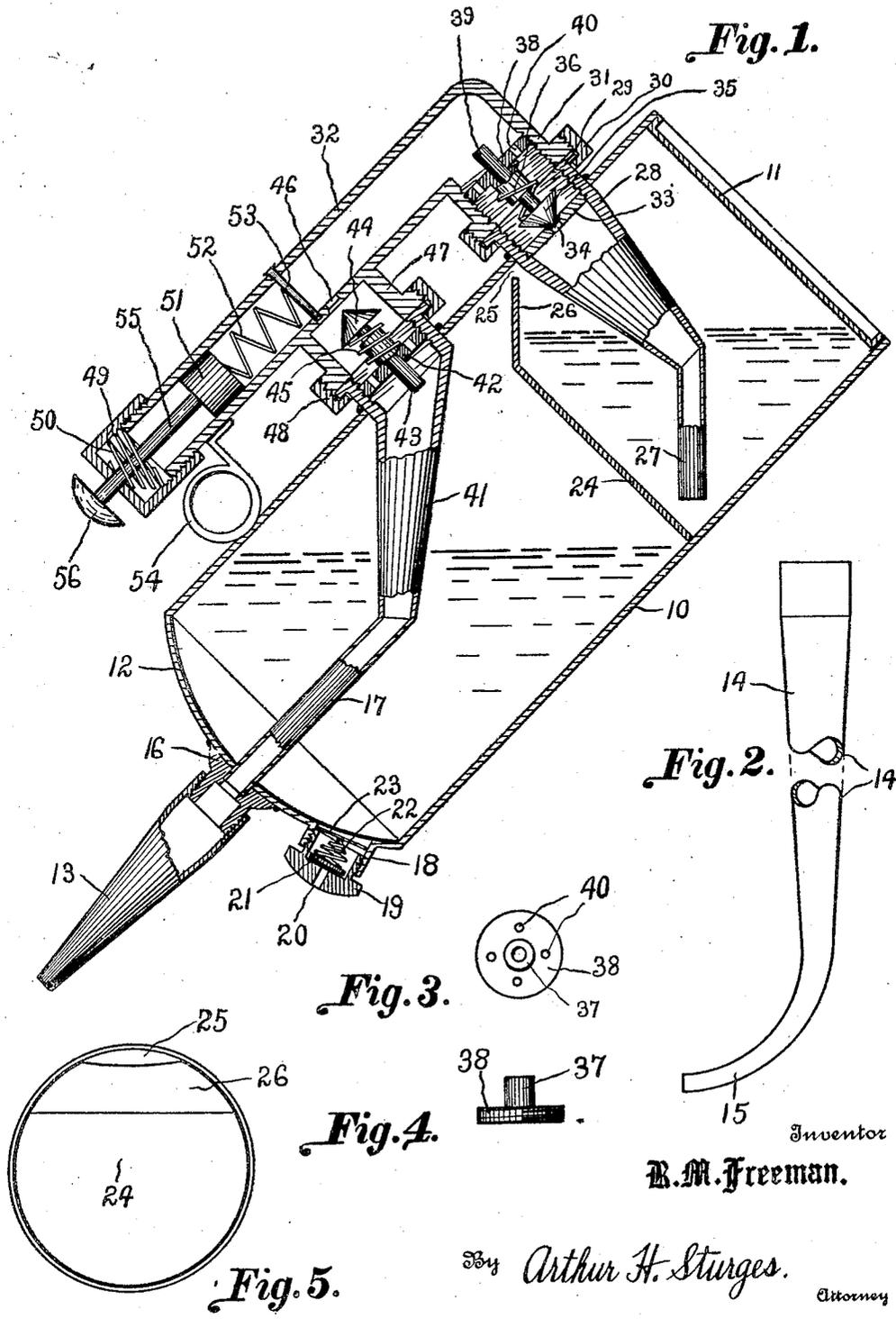


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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ROBERT M. FREEMAN, OF NICKERSON, NEBRASKA.

LUBRICATING-OIL CAN.

Application filed July 10, 1922. Serial No. 573,966.

To all whom it may concern:

Be it known that I, ROBERT M. FREEMAN, a citizen of the United States, residing at Nickerson, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Lubricating-Oil Cans, of which the following is a specification.

The present invention relates to dispensing cans for use particularly with heavy and viscous substances, such as a heavy lubricating oil.

An object of the invention is to provide a can with means for facilitating the ejection of the heavy oil therefrom and by means which does not render the can bulky or inconvenient to handle.

Another object of the invention is to provide a can of this type which will hold a relatively large amount of oil, will maintain the oil in even small amounts in position for dispensing, and which is provided with a handle forming a support or housing for a pump and its associated parts by means of which the oil may be positively and freely ejected.

It is well known that heavy oil unless it is heated is difficult to handle in oil cans, spouts and various distributing devices because the oil when cold congeals and is heavy and offers considerable resistance to pressure. The aim of the present invention is therefore to provide an oil can of the conventional type which may be used for dispensing in small quantities cold heavy oil.

The above and various other objects and advantages of this invention will be in part described and in part understood from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawing; wherein:—

Figure 1 is a longitudinal section taken through a dispensing can constructed according to the present invention and shown in inverted position and with the parts in the position of distributing the contents of the can.

Fig. 2 is a detail fragmentary view of a

modified form of can spout which may be used.

Fig. 3 is a plan view of one of the valve guides employed.

Fig. 4 is an edge view of the same and

Fig. 5 is a transverse section through the can taken immediately above the partition and looking toward the same.

Referring to the drawing, 10 designates the body of a dispensing can which may be of any suitable configuration but which, as shown in Fig. 5, may be cylindrical in form. The can is closed at its lower end by a bottom 11 and is provided with a suitable top 12 for closing the upper end of the can and which may serve as a support for a nozzle 13 through which the contents of the can is distributed. The nozzle 13 may be of the straight tapering form shown in Fig. 1, or may be constructed as shown in Fig. 2 where the nozzle 14 is provided on its outer end with a curved portion 15 arranged to fit into restricted openings for the distribution of the oil. The top 12 is provided with an exteriorly threaded boss 16 upon which the nozzles 13 and 14 may be interchangeably attached and which serves as a source of communication between the nozzle and a feed pipe 17 which is located in the upper end of the can.

The top 12 is also provided with a filling opening 18 normally closed by a plug 19 having a vent opening 20 therein and which is held closed by a disk valve 21 held over the opening 20 by spring 22. The inner end of the spring 22 rests upon a cross bar 23 which supports the spring but which does not materially interfere with the passage of oil and air through the opening 18. The can body 10 is divided into an upper storage compartment and into a lower sump or reservoir from which the oil is initially taken. The division of the can is effected by a partition 24 which is sealed against the inner wall of the can at all sides with the exception of the upper side, or that side which is uppermost when the can is tilted in such position as shown in Fig. 1. At the upper side of the can the partition 24

is provided with a notch or recess 25 which provides a restricted passage through which oil is adapted to flow from the top to the bottom of the can when in upright position, and the partition 24 adjacent to the opening 25 is bent downwardly at a suitable angle to form a retaining wall 26 forming with the lower end of the can a basin or container adapted to hold a quantity of the oil in the lower part of the can after such part has been elevated by the overturning of the can.

A supply pipe 27 is arranged in the sump of the can and opens preferably at the lowest point of the sump when the can is inverted as shown in Fig. 1 so as to insure the feeding of the entire contents of the can by the devices hereinafter described.

This supply pipe 27 extends from a valve casing 28 which is secured through the upper side of the can and which at its outer end has an out-turned flange 29 about which is fitted a flange nut 30 adapted to be threaded upon the open end of an elbow 31 formed on a cylindrical handle 32 which is arranged at the upper side of the can. The casing 28 is provided with a disk or diaphragm 33 which is threaded down into the casing substantially in line with the adjacent wall of the can and which has a valve opening 34 therein normally closed by a valve head 35 urged against the diaphragm 33 by a spring 36.

The spring 36 surrounds a bushing 37 which is carried upon a guide plate 38 threaded into the elbow 31 and having an axial opening therethrough for the stem 39 of the valve to guide the latter in its movement toward and from its seat. The plate 38 is provided with a suitable number of apertures 40 through which oil may freely pass.

The upper end of the can body 10 is provided with a second valve casing 41 which is secured by solder or the like in the same manner as the valve casing 28, through the wall of the can and which is connected to the feed pipe 17. The casing 41 has a guide plate 42 threaded into its outer end for receiving the stem 43 of a valve 44. The plate 42 is constructed similarly to the plate 38 and is shown in Figs. 3 and 4.

A spring 45 surrounds the valve stem 43 and the bushing of the guide plate for urging the valve 44 against the inner side of the handle 32 to close the valve opening 46 formed through the wall of the handle. An annular flange or hollow boss 47 is carried upon the inner side of the handle for attachment to the upper valve casing 41 by means of a coupling nut 48.

The upper end of the hollow handle 32 is closed by removable cap 49 threaded or otherwise detachably connected to the cap and which houses a buffer spring 50 for re-

ceiving the thrust of a piston 51 when the latter is moved outwardly by the spring 52. The handle 32 is in the form of a cylinder and has a transverse pin or bar 53 intermediate its ends and against which the lower end of the spring 52 is adapted to rest.

The handle 32 is secured to the can body 10 not only by the coupling nuts 30 and 48 but also by a thumb ring 54 which is soldered or otherwise suitably secured between the can and the outer end of the handle. The piston 51 has a stem 55 which projects through the cap 49 and is provided with a button 56 on its outer end arranged to be depressed for operating the piston.

In use the can when in upright position may be filled through the opening 18 when the plug 19 is removed.

In use the handle 32 is grasped with a finger or thumb engaging through the ring 54 to prevent sliding of the handle through the hand when pressure is exerted. A finger is placed against the button 56 and the latter is forced inwardly to move the piston 51 against the tension of the spring 52. This action compresses the air in the lower end of the handle, allows the valve 35 to remain seated and forces the valve 44 from its seat, ejecting the contents in the lower end of the handle into the boss 47 and casing 41.

When the button 56 is released the spring 52 moves the piston 51 outwardly against the buffer spring 50 and such action creates a suction in the lower end of the handle 32 and raises the valve 35 from its seat and also raises oil from the sump into the lower end of the handle. During this operation the valve 44 retains the opening 46 closed and consequently the oil prior delivered to the casing 41 is retained therein and caused to flow and be forced by subsequent actions of the pump into the feed pipe 17 and nozzle 13.

It is obvious that various changes and modifications may be made in the size, proportion, materials and design of the various parts of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claim.

What is claimed is:

A dispensing can comprising a body portion having an intermediate transverse partition therein intercommunicating the upper and lower compartments at one side of the body portion, said body portion having an opening in said side opposite each of the compartments, a pump cylinder having a right angular connection at one end and having a second right angular connection intermediate its ends arranged to register with said openings in the body portion of the can, a pipe device fitting in each of said

openings of the can body and projecting
respectively into the upper and lower com-
partments, oppositely acting valves in said
right angled connections of the pump,
5 means for connecting said pump connec-
tions to the pipe devices whereby upon
operation of the pump the liquid is trans-
ferred from one compartment to the other,
and an outlet nozzle on the upper end of the

can in communication with the upper com- 10
partment and directly connected to said pipe
device therein.

In testimony whereof, I have affixed my
signature in presence of two witnesses.

ROBERT M. FREEMAN.

Witnesses:

V. M. HUFFMAN,
LUTHER MONKE.