Oct. 28, 1958 R. W. BARNARD 2,858,050

DISPENSING UNIT

Filed Dec. 16, 1955

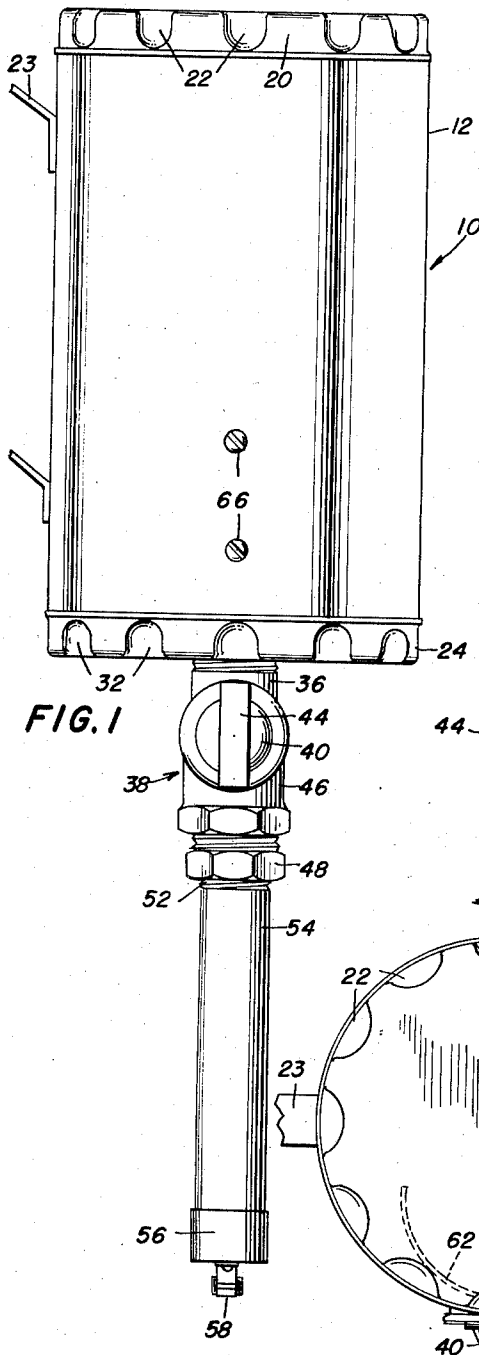


FIG. 1

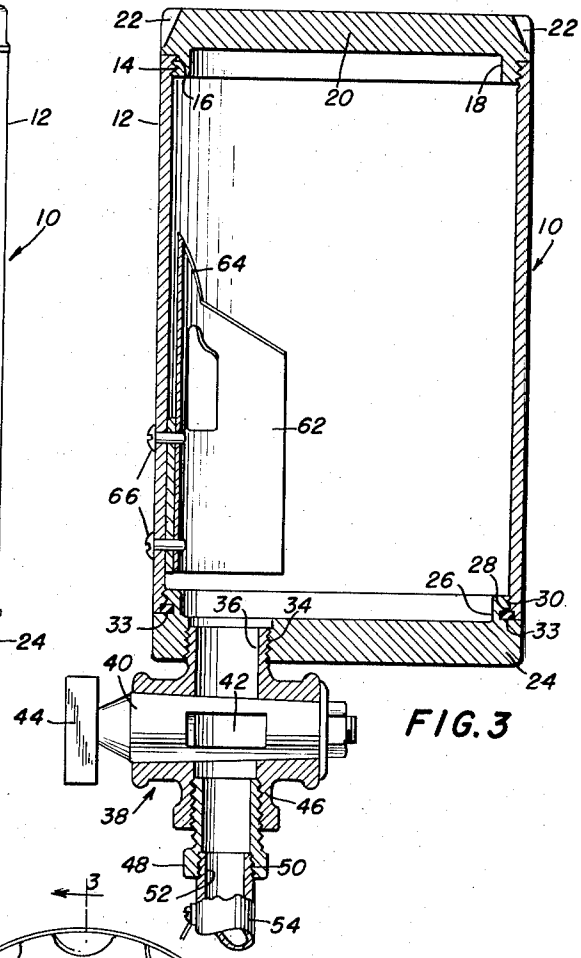


FIG. 3

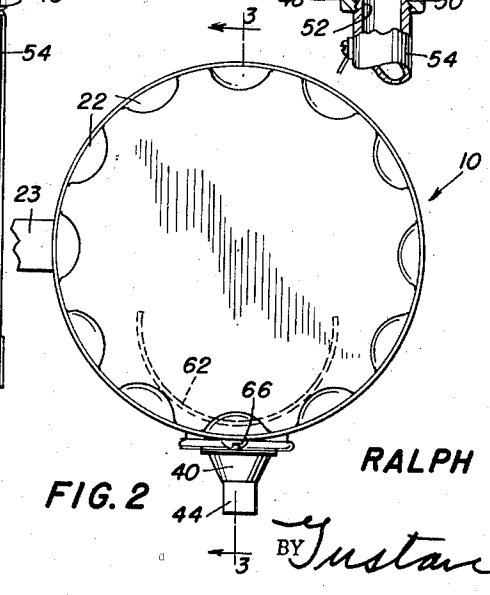


FIG. 2

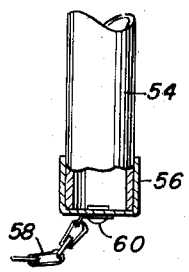


FIG. 4

INVENTOR

RALPH W. BARNARD

BY Gustav Miller

ATTORNEY

United States Patent Office

2,858,050

Patented Oct. 28, 1958

2,858,050

DISPENSING UNIT

Ralph W. Barnard, Caldwell, Kans.

Application December 16, 1955, Serial No. 553,515

1 Claim. (Cl. 222—88)

This invention relates to a liquid dispensing device, and it particularly relates to a device for dispensing bulk oil, or the like, from barrels, 5-gallon cans, or the originally sealed container.

It is the general practice to take bulk oil from a barrel or 5-gallon can. Because of the extremely dirty and dusty conditions of many areas, particularly in the Middle-West, it is necessary to have a clean dispensing unit. None such unit is now available. At present, farmers use jugs and gallon cans of all kinds to take oil to the field. They generally, however, have difficulty in filling power controls on their machinery because they cannot readily control the flow of oil into the small oil reservoirs. It is, therefore, necessary to use a dispensing unit or spout; these units have a tendency, however, to collect dust and dirt.

Other disadvantages inherent in the above-described apparatus are, for example, that in addition to the fact that the oil can, itself, is difficult to handle because of its bulk, there is a seepage of oil around the spout which not only results in waste of the oil but also causes the can to become slippery and, therefore, even more difficult to handle. Furthermore, once the spout is inserted, it is necessary to use the entire contents of the can since it is difficult to adequately seal the can once it is punctured and the spout is inserted.

There have been previous attempts to solve the above problems by providing various types of housings for the oil cans as well as various types of spouts and valve arrangements in combination with such housings; but none of these prior attempts have proven to be very successful either because they were too bulky, complicated and difficult to handle, or because they were too expensive to manufacture, or because they tended to become easily clogged or broken.

It is, therefore, one object of the present invention tto provide a clean dispensing unit at all times, both for bulk liquids and canned liquids.

Another object of the present invention is to overcome the above, as well as other difficulties, by providing a dispensing unit which is simple in construction, which consists of relatively few parts, but which performs the dispensing operation easily, quickly and effectively.

Another object of the present invention is to provide a funnel in itself as well as a valve to control the flow of liquid if necessary.

Another object of the present invention is to provide a dispensing unit which is light in weight and easy to handle, while, at the same time, not being subject to easy damage.

Another object of the present invention is to provide a dispensing unit which is adapted to puncture a sealed can, simultaneously apply a spout thereto, and also be adapted to stop and start the flow of liquid from the unit at will.

Another object of the present invention is to provide a device adapted to carry a supply of liquid from the barrel to equipment where it is to be used, by putting a lid on securely; and, by turning it upside down, to provide a container.

Other objects of the present invention are to provide an improved dispensing unit, of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing in which:

Fig. 1 is a side elevational view of a device embodying the present invention.

Fig. 2 is a top plan view of the device of Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary side view, partly in elevation and partly in section, of the spout.

Referring now in greater detail to the drawing wherein similar reference characters refer to similar parts, there is shown a container, generally designated **10**, comprising a cylindrical side wall **12**, the cylinder being provided with open ends at top and bottom.

The open end at the top of the cylinder is defined by internal threads **14** which are adapted to engage the external threads **16** on a depending annular flange **18** of a closure lid or cap **20**.

Grooves **22** are formed around the periphery of the lid **20**, these grooves extending from the top surface of the lid, as shown in Fig. 2, to the side surface, as shown in Fig. 1. These grooves provide finger notches to facilitate loosening or lightening the cover. A handle **23** extends out from the cylindrical wall **12**.

At the bottom of the container is provided a second closure lid **24** which is substantially similar to lid **20** in that it is provided with an annular flange **26** having external threads **28** to engage internal threads **30** on the cylinder **12**. The lid **24** also has finger grooves **32** similar to grooves **22**. A sealing ring **33** is positioned between the threaded cylinder wall portion and the flange **26**.

The lid **24** differs from lid **20**, however, in that it is provided with an internally threaded opening **34** at one side. Threadedly engageable within the opening **34** is an externally threaded nipple **36** extending upwardly from a valve housing **38**.

Within the valve housing **38** is provided a rotatable sleeve valve **40** having opposite openings **42** to open or close the lateral passageway through the valve housing upon rotation by a handle **44**.

An internally threaded nipple **46** depends from the valve housing **38** and is adapted to engage an externally threaded coupling member **48**. The lower portion of the coupling member **48** is internally threaded, as at **50**, to engage with the externally threaded end portion **52** of a spout **54**.

The elongated spout **54** is closable by a cap **56** which may be either internally threaded to engage with external threads on the spout, or which may have a friction fit with the spout, as illustrated in Fig. 4. A chain **58** having one end secured to the cap **56**, as by a rivet **60**, may have the other end connected to the spout **54** so that the cap **56** cannot readily be lost when it is removed from the spout.

Within the container **10** there is provided a curved knife **62** having a punch portion **64** at the upper end thereof. This knife **62** is fixed to the bottom portion of the cylindrical wall **12**, just above the opening **34**, by screws, or the like, indicated at **66**.

In operation, the lid **20** is removed, and an oil can is inserted through the top opening of the container **10**. As the oil can is inserted, the point **64** of the knife **62** pierces

the bottom of the can and the resultant opening in the can is enlarged and shaped by the lower portion of the knife as the can descends into the container. By the time the can is seated on top screws 66, there is a completely formed pouring opening positioned above the dispensing opening 36 in valve body 38. This leaves a part of the can above wall 12, and after the dispenser has received the liquid, the can may be removed and the lid put on.

Preferably, the valve 40 is closed when the oil can is inserted into the container, so that there is no loss of oil. The valve, can, thereafter, be opened when desired to dispense as much of the oil as required. It can then be closed until a further dispensing action is needed.

The dispenser can be used as a clean liquid funnel when lid 22 and cap 56 have been removed and valve 44 is opened. It can also be used as a container when valve 44 is closed and lid 22 is replaced after it has been filled with liquid to be carried. Lid 22 will become the bottom of the can when it is turned upside down and used as a container.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A container and dispenser unit for receiving fluid from a sealed can and for storing and dispensing the fluid in controllable amounts, said unit comprising a cylindrical member open at both ends, an internal thread on each of the two ends of the inner cylindrical wall of said cylindrical member, the two ends of said cylindrical member providing shoulders extending in a plane normal

to the axis of said cylindrical member, a closure member for each of said two threaded ends of said cylindrical member, each said closure member comprising a disc having finger engageable grooves spaced around the edge of one side of each disc, a flange depending from the opposite side of each disc and spaced inwardly therefrom leaving a shoulder between said flange and the edge of said disc, each flange being externally threaded complementary to the internal threads of said cylindrical member, whereby each said disc may be manually rotated with its thread engaging the cylindrical member thread to bring the disc shoulder and cylindrical member shoulder into fluid sealing engagement, one of said closure member discs having a threaded aperture therethrough, a valve housing having a threaded nipple threaded through said disc threaded aperture, a manually controllable valve in said housing, a discharge spout secured to said valve housing, and a removable captive dust cap on the discharge end of said spout, said unit being for use with a sealed fluid can having an external diameter to fit within the inner cylindrical wall of said cylindrical member, a semi-cylindrical curved knife fixedly secured to the inner cylindrical member of said cylindrical member in spaced relation thereto and having a sharpened punch edge extending axially of the container to punch open a sealed can as it is inserted therein to drain its contents into said cylindrical member, and handle means on said cylindrical member.

References Cited in the file of this patent

UNITED STATES PATENTS

1,621,109	Drummond	Mar. 15, 1927
2,516,787	Moody	July 25, 1950