

2,488,959

Fig. 1

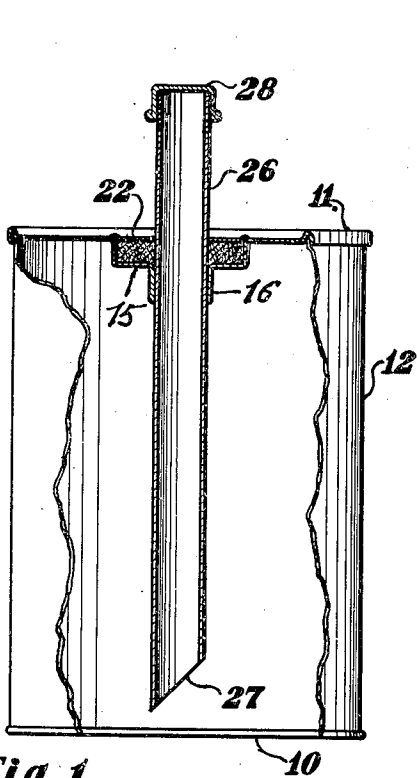


Fig. 3

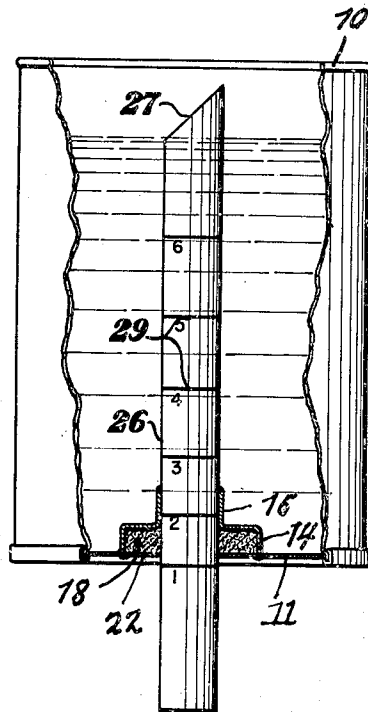
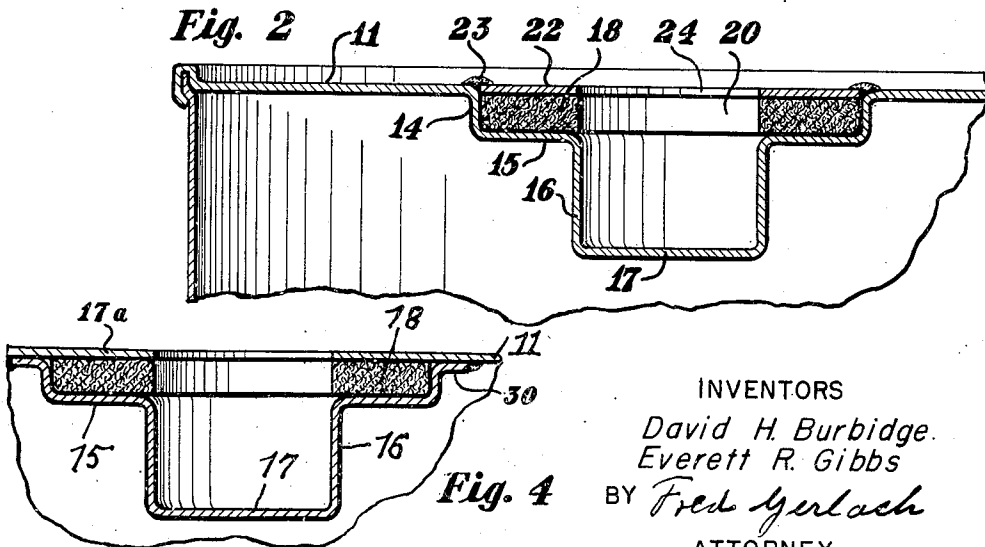


Fig. 2



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MEASURING AND DISPENSING CAN

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3 Claims. (Cl. 222-49)

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The invention relates to measuring and dispensing cans.

One object of the invention is to provide an improved can for oil which is adapted to measure and dispense predetermined quantities of oil for mixing oil with gasoline for use in internal combustion engines, such, for example, as outboard motors.

Another object of the invention is to provide a can of this type which is simple in construction, which includes a piercing and measuring tube which may be left in the can and used to pour predetermined volumes of oil from the can.

Other objects of the invention will appear from the detailed description.

The invention consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a longitudinal section of a can embodying the invention with the pouring and piercing tube therein, the closure cap on the tube.

Fig. 2 is a section taken through the top of the can before the pouring and piercing tube has been inserted into the can.

Fig. 3 is a section of the can inverted for pouring the first measured volume of oil from the can.

Fig. 4 is a section illustrating a modified form of invention.

The invention is exemplified in a can which is usually formed of sheet metal and comprises a bottom 10, a top 11, a cylindrical side 12, all of which are permanently secured together to form a closed body, for containing a supply of oil, for example, a quart.

The top 11 is depressed to form an integral annular wall 14 and a ledge 15 at the inner end of wall 14. The top is also formed with an integral cup-shaped member and includes a depending sleeve 16 of lesser diameter than the annular wall 14 and a bottom 17 which is adapted to be pierced or punctured downwardly for the removal of the oil from the can. A ring 18 of sealing material, such as "vellumoid" is seated on the ledge 15 between the annular wall 14 and is provided with a central opening 20 co-axial with the cylindrical side wall 16 of the cup-shaped member. A disk 22 is substantially flush with the outer portion of the top 11 and is secured, for example, by solder, as at 23 to the upper portion of wall 14 and is adapted to retain the sealing ring 18 confined in the chamber between ledge 15 and said disk. Disk 22 is provided with a central opening 24 which is substantially of the same

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diameter and co-axial with the inner diameter of the sleeve 16 of the cup-shaped member.

A cylindrical piercing and pouring tube 26 has an inclined annular lower end 27 which is adapted to punch out the bottom 17 of the cup-shaped member when it is driven therethrough. Tube 26 passes through the opening 24 in disk 22 and the opening in the sealing ring 18 and slidably fits in sleeve 16 of the cup-shaped member. The cylindrical wall 16, while the tube 26 is being driven or moved into and out of the can, guides the tube rectilinearly so that it will be co-axially positioned in the can and maintained in such position while it is in different positions in the can. A cap 28 fits over the outer open end of the tube 26 to form a closure for the tube after it has been inserted in the can and between uses. The tube has lines 29 thereon for indicating the elevation of the oil in the can. Tube 26 serves as a tube through which the predetermined volume of oil may be successively poured, and also as a punch for severing the bottom 17 of the cup-shaped member from the top 11.

Oil is kept sealed in the can until it is to be used. When it is desired to use a quantity of oil in the can, the tube 26 is inserted in opening 24 in disk 22 and in the opening in sealing ring 18 and into the sleeve 16 of the cup-shaped member by which the tube will be guided rectilinearly and axially. Tube 26 is then forced downwardly so that its lower inclined end 27 will punch out the bottom 17. When the bottom 17 is punched out, the tube will be communicatively connected with the oil in the can so that oil can be poured out by inversion of the can with the tube therein.

When the can contains a full supply of oil, tube 26 is positioned with its lower inclined end 27 close to the bottom of the can. The can is then completely inverted, as illustrated in Fig. 2, and oil will be discharged through tube 26 until the level of the oil drops to the level of the lowest portion of the opening through the inclined end 27 of the tube so that a limited volume of oil will be discharged from the tube. Tube 26 may be left in this position and closed with cap 28 thereon until the next use. When another charge of oil is desired, tube 26 will be raised until the next line 29 is positioned at the disk 22. The can is then again completely inverted and oil will be discharged through the tube until it drops to the level of the lower end of the opening in the inclined end 27 of the tube, so that another limited volume of oil will be discharged. For each successive use, tube 26 will be raised according to the next line indication and a limited quantity

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will be discharged upon inversion of the can. When oil has been discharged from the inverted can until the level of the oil drops to the level of the inner end of sleeve 16, a quantity of oil will be retained in the can which will not be discharged through tube 26 when the can is inverted. The spacing between the line indications 29 is graduated to compensate for variations in the height of the column of liquid in the tube 26, during the pouring of each charge, as the column of liquid in the can progressively increases.

The purpose of providing the can with the cup-shaped member of the desired height to retain the last charge of oil is to make it necessary to puncture the can in order to pour out the last charge. By making it necessary to puncture the can in order to remove the last charge, the user will dispose of the punctured can. After the can has been opened, cap 28 forms a closure against the inlet of any impurities into the can. The ring 18 forms a seal between the tube 26 and the can in all positions of the tube.

In the modification of the invention illustrated in Fig. 4, the annular wall 14, ledge 15 for the sealing ring 18, and the cup-shaped member including the cylindrical sleeve 16 and its integral bottom 17, are formed of a single piece of drawn or spun metal, separately from the top of the can. The annular wall 14 is provided with an outwardly extending flange 30 which is soldered or welded to the inner face of the top 11 of the can. The opening 24 for the piercing tool is formed in an integral portion of the top 11 which is extended as at 11^a to confine the sealing ring 18.

The invention exemplifies a can for measuring and dispensing oil in predetermined quantities, which is simple in construction and advantageous in use. The sleeve of cup-shaped member depending from the central portion of the top of the can below the sealing ring serves to guide the tube rectilinearly between its several positions in the can and while the bottom 17 is being punched out to open the can. It also functions to retail a volume of oil sufficient for one charge in the can, which cannot be removed through the tube, so that the can will be disposed of after the removal of the last charge.

The invention is not to be understood as limited to the details described, since these may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent is:

1. The combination with a sheet metal can for measuring and dispensing liquids, the can including; a bottom, a substantially flat top, and a surrounding side, all permanently joined together, an annular wall extending into the can, depending from and permanently joined to the top, an in-turned ledge on the lower end of and integral with said annular wall, a sealing ring confined in the space between a portion of the top, the ledge and the annular wall, and a cup-shaped member including a sleeve depending

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from and integral with the ledge and an integral closure at its inner end, the bore of the sealing ring and the sleeve being co-axial, the top having a substantially flush portion provided with an opening substantially co-axial with the sleeve and ring, of a cylindrical piercing and measuring tube adapted to pass through the opening in the top and the ring, slidably fitting in the sleeve for rectilinear movement and provided with a lower end adapted to pierce the bottom of the cup-shaped member.

2. The combination with a sheet metal can for measuring and dispensing liquids, the can including a bottom, a substantially flat top, and a surrounding side all permanently joined together, an annular wall extending into the can, depending from an integral with the top, an in-turned ledge on the lower end of and integral with said annular wall, a disk permanently joined to and flush with the top, a sealing ring confined in the space between the disk, the ledge and the annular wall, and a cup-shaped member including a sleeve depending from and integral with the ledge and an integral closure at its inner end, the bore of the sealing ring and the sleeve being co-axial, the disk having an opening substantially co-axial with the sleeve and ring, of a cylindrical piercing and measuring tube adapted to pass through the opening in the top and the ring, slidably fitting in the sleeve, for rectilinear movement, and provided with a lower end adapted to pierce the bottom of the cup-shaped member.

3. The combination with a sheet metal can for measuring and dispensing liquids, the can including a bottom, a substantially flat top, and a surrounding side all permanently joined together, an annular wall extending into the can, depending from and permanently joined to the top, an in-turned ledge on the lower end of and integral with said annular wall, a sealing ring confined in the space between a flush portion of the top, the ledge, and the annular wall, and a cup-shaped member including a sleeve depending from and integral with the ledge and an integral closure at its inner end, the bore of the sealing ring and the sleeve being co-axial, the top having an integral flush portion with an opening substantially co-axial with the sleeve and ring, of a cylindrical piercing and measuring tube adapted to pass through the opening in the top, and the ring, slidably fitted in the sleeve for rectilinear movement and provided with a lower end adapted to pierce the bottom of the cup-shaped member.

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