F. J. LACINA.

DISPENSING CAN.

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1,382,200.

Patented June 21, 1921.

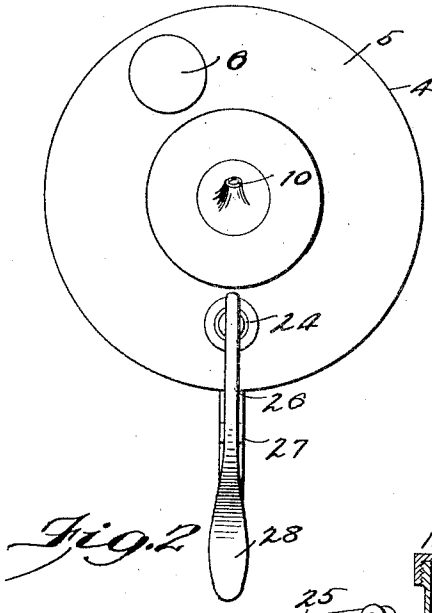


Fig. 2.

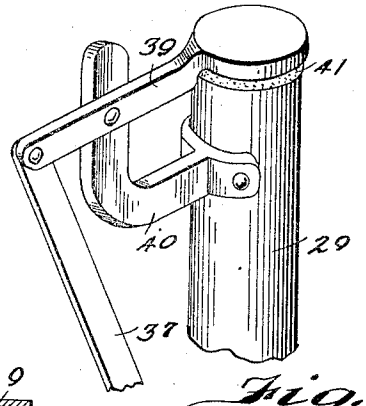


Fig. 3.

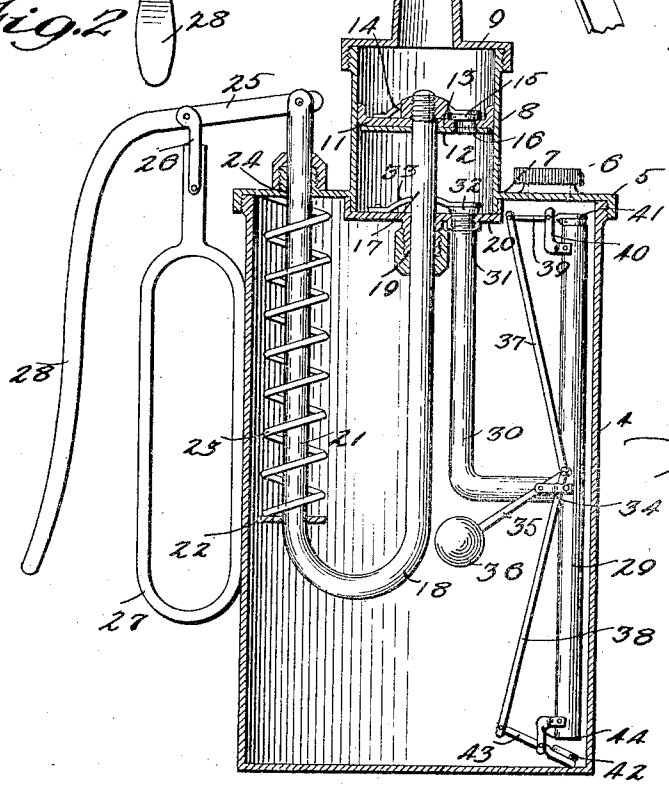


Fig. 1.

WITNESSES

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DISPENSING-CAN.

1,382,200. Specification of Letters Patent. **Patented June 21, 1921.**

Application filed March 25, 1920. Serial No. 368,489.

To all whom it may concern:

Be it known that I, FRANK J. LACINA, a citizen of the United States, and a resident of Clarkson, in the county of Colfax and State of Nebraska, have invented certain new and useful Improvements in Dispensing-Cans, of which the following is a specification.

My invention relates to improvements in dispensing cans.

An important object of my invention is to provide a can which may be held in any position convenient to the user and yet will dispense its contents without difficulty.

A further object of the invention is to provide means whereby the liquid will be prevented from flowing from the can when it is unintentionally inverted.

A still further object is to provide means whereby the oil may be drawn from the can until it is practically empty, thus avoiding the necessity of too frequently having to fill the can.

Further objects of the invention will appear in the following detailed description, taken in connection with the following drawing, forming a part of this specification, and in which:—

Figure 1 is a vertical cross sectional view of the apparatus,

Fig. 2 is a plan view of the same, and,

Fig. 3 is an enlarged view of one of the valves upon the ends of the supply pipe of the apparatus.

In the accompanying drawing, wherein similar numerals refer to similar parts throughout the same, the numeral 4 indicates the body portion of my dispensing can upon which is fitted a top 5, having an aperture 6 fitted with a screw cap, whereby the can may be filled. An aperture 7 is formed in the center of the top 5 and a cylinder 8 is fitted therein. In the top 9 upon the cylinder 8 is formed a nozzle portion 10 through which the liquid may be dispensed.

A piston 11 in the cylinder 8 is formed of a metallic disk 12 to the upper surface of which is attached a disk 13 of leather or any material which will make an air-tight connection with the walls of the cylinder. A spring strip 14 is attached to the upper face of the piston 11 by means of screws or rivets through to the metallic disk 12. A disk check valve 15 at the free end of the strip 14 is adapted to be seated upon an aperture 16 in the piston. The piston 11 is rigidly attached to the end of one arm 17 of a U-shaped rod 18 which passes up into the cylinder 8 from the body portion 4 through an aperture 19 in the bottom 20 of the cylinder. Suitable packing units at the aperture insure a tight joint between the bottom of the cylinder and rod 18.

To the lower portion of the other arm 21 of the member 18 is rigidly attached a ring 22 which is connected to a coil spring 23 mounted on the arm 21 of the rod 18. The arm 21 passes up through an aperture 24 in the top 5 of the can and has a lever 25 pivotally attached to its upper end. The lever 25 is pivotally connected to the upper portion of a link 26 which is itself pivotally connected to the top of the handle 27 of the can. The lever 25 is bent downward and its lower portion 28 serves as a pump handle fulcrumed upon handle 27 whereby the piston 11 may be caused to reciprocate within the cylinder 8.

Within the body portion 4 of the can is a pipe 29 extending from a point near the bottom to a point near the top of the can. A right angled pipe 30 has one of its arms connected to pipe 29 about midway of its length while its other arm is fitted within an aperture 31 in the bottom 20 of cylinder 8. A disk check valve 32 upon a spring strip 33 riveted to the bottom of cylinder 8, as shown, is adapted to be seated upon the aperture 31. One end of a metallic or suitable strip 34 is secured to the pipe 29 midway of its length, as shown. A lever 35 is pivotally secured to the free end of the strip 34.

A weight 36 is mounted upon one end of lever 35 while two links 37 and 38 are pivotally connected to the opposite end of lever 35. Link 37 is pivotally connected at its farther end to a valve arm 39 fulcrumed upon a bracket 40 attached to the pipe 29 near its upper end.

A disk valve 41 is mounted at the free end of valve arm 39 and is adapted to be seated upon the upper end of pipe 29. The lower end of the pipe 29 is closed by a valve 42 on a valve arm 43 fulcrumed upon a bracket 44 on the lower end of pipe 29 and pivotally connected to the lower end of link 38.

It will be seen that when the can is inverted, weight 36 upon lever 35 will drop

and so will always alternately open and close valves 41 and 42, with the lowermost valve always open. The purpose of the pipes 29 and 30 is to keep the weight of the liquid in the can from opening check valves 32 and 15 and flowing from the can should the can be accidentally inverted. Since the lowermost of the two valves 41 and 42 is always the open one, the liquid may be pumped from the can until it is almost empty.

Considering the top of the can to be uppermost, when valve 42 at the lower end of pipe 29 will be open, the operation of my apparatus is as follows: The can is first filled with oil or any desired liquid through the opening 6 and the cap is then screwed upon the opening. By applying sufficient pressure to pump handle 28 the U-shaped rod will be forced upward against the action of spring 23 and will cause the piston 11 in cylinder 8 to move upwardly. When handle 28 is released the spring 23 will pull rod 18 and piston 11 downward again. The upward movement of piston 11 will tend to form a vacuum below the piston and this will open check valve 32 and draw oil up from the body of the can through the lowermost end of pipe 29 and into cylinder 8. On the next downward movement of piston 11 the oil below the piston will open check valve 15 and will pass up through aperture 16 and so will be above the piston. The next upward movement of the piston will draw more oil into cylinder 8 through check valve 32. It will be seen that after continuing the reciprocating movement of piston 11 for a few strokes sufficient oil will be above piston 11 to pass out of nozzle 10.

This same mode of operation will apply no matter what position the can is in, except that when the can is held in any position which will cause weight 36 to swing toward valve 41 on pipe 29 that valve will open and oil will be drawn into cylinder 8 through that end of pipe 29.

It is to be understood that the form of my invention shown and described is to be taken as a preferred example of the same and changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. A device of the character described, comprising a body portion, a top upon the body portion, a cylinder in the top, a nozzle for the cylinder, a valved piston adapted to reciprocate in the cylinder, a U-shaped rod carrying the piston upon one of its arms, a pump handle pivotally connected to the other arm of the U-shaped rod, a vertically arranged pipe within the body portion, a lever pivoted approximately midway of the length of the pipe and having a weight upon one end, links connected to the opposite end of the lever and extending to the ends of the pipe, valve arms connected to the links, valves upon the valve arms adapted to be alternately seated upon the ends of the pipe, and a pipe connecting the first named pipe with the bottom of the cylinder and valved at its latter end.

2. A device of the character described, comprising a body portion, a top upon the body portion, a cylinder in the top, a nozzle for the cylinder, a valved piston adapted to reciprocate in the cylinder, a U-shaped rod carrying the piston upon one of its arms, a pump handle pivotally connected to the other arm of the U-shaped rod, a vertically arranged pipe within the body portion, valves at each end of the pipe, means whereby said valves may be seated alternately, and a pipe connecting the first named pipe with the bottom of the cylinder and valved at its latter end.

3. A device of the character described, comprising a body portion, a top upon the body portion, a cylinder in the top, a nozzle for the cylinder, a valved piston adapted to reciprocate in the cylinder, a U-shaped rod carrying the piston upon one of its arms, a pump handle pivotally connected to the other arm of the U-shaped rod, a pipe extending from the bottom of the cylinder into the body portion to a point near the bottom of the can and valved at its end within the cylinder.

4. In a device of the character described, the combination with a cylinder in the top of the body portion, of a vertically arranged pipe within the body portion, a lever pivoted approximately midway of the length of the pipe and having a weight upon one end, links connected to the opposite end of the lever and extending to the ends of the pipe, valve arms connected to the links, valves upon the valve arms adapted to be alternately seated upon the ends of the pipe, and a pipe connecting the first named pipe with the bottom of the cylinder and valved at its latter end.

5. A can having a dispensing pump, a supply pipe for feeding oil to said pump and valves at the opposite ends of said supply pipe, and a weighted rocker for operating said valves.

6. An oil can having a dispensing pump, a feed pipe for the pump, a supply pipe communicating at its middle with the feed pipe and extending in the direction of length of the can, valves at the opposite ends of said supply pipe, and a weighted rocker for operating said valves.

7. An oil can having a dispensing pump and a handle, a feed pipe leading to the pump, a supply pipe communicating between its ends with the feed pipe, valves at

the opposite ends of the supply pipe, and a weighted rocker for operating said valves as the position of the can is shifted.

8. An oil can comprising a body portion, a cylinder arranged at the top of said body portion, a nozzle for said cylinder, means for supplying oil from the body portion to the cylinder, a piston in said cylinder, a U-shaped rod arranged within said body portion and having an arm connected to said piston and an arm projecting exteriorly of said body portion, a handle connected to said body portion and an operating lever fulcrumed upon this handle and pivotally connected to the arm of said U-shaped rod projecting from the body portion.

9. An oil can comprising a body portion, a cylinder arranged at the top of said portion, a nozzle for said cylinder, means for supplying oil from the body portion to the cylinder, a piston in said cylinder, a U-shaped rod arranged within said body portion and having an arm connected to said piston, and an arm projecting exteriorly of said body portion, a coil spring arranged upon last said mentioned arm for urging said piston to one position in said cylinder and means coöperating with the projecting end of said mentioned arm for urging the piston to the opposite position in said cylinder against the action of said spring.

FRANK J. LACINA