June 24, 1930. J. B. EASTES 1,767,354

OIL DISPENSING PUMP

Filed April 30, 1929

Fig. 1.

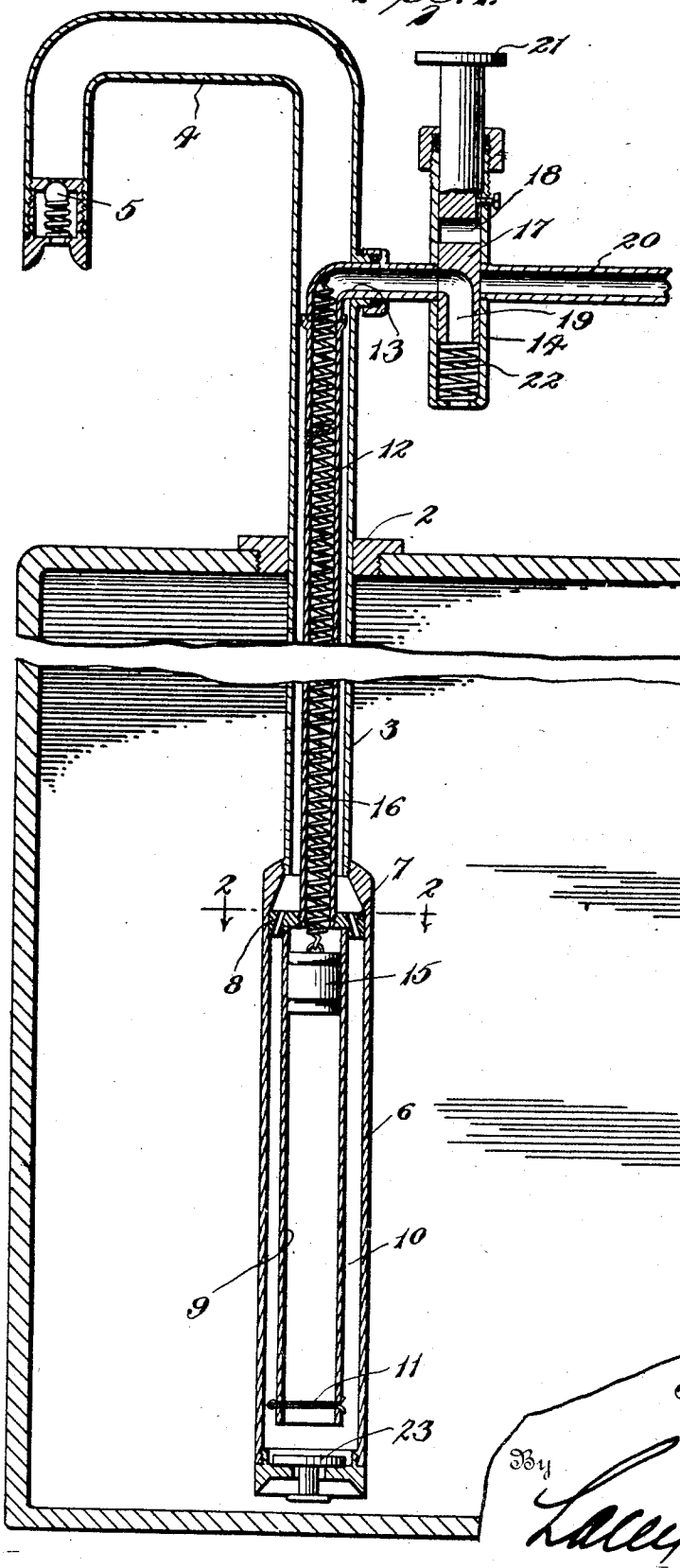
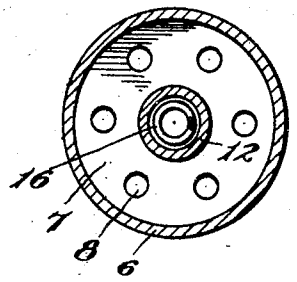


Fig. 2.



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OIL-DISPENSING PUMP

Application filed April 30, 1929. Serial No. 359,292.

The present invention is directed to improvements in oil dispensing pumps.

The primary object of the invention is to provide a device of this character so constructed that oil can be pumped from a barrel or other container in measured quantities.

Another object of the invention is to provide a device of this character constructed in such a manner that the piston of the pump will be actuated by compressed air to force the oil from the barrel or container.

Another object of the invention is to provide a device of this character which is simple in construction, efficient in operation, durable, and one which can be manufactured at a small cost.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed, and illustrated in the accompanying drawing, in which:

Figure 1 is a vertical sectional view through the device.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Referring to the drawing, the numeral 1 designates a barrel or other container of any well known type and in the bung 2 of which is fitted a pipe 3, the upper end of which carries a discharge connection 4 having a check valve 5 in its terminal. The pipe 3 extends into the barrel and has connected to its lower end, the upper end of a casing 6, said casing being of greater diameter than the pipe and having fitted in its upper end a disc 7 in which is provided a plurality of openings 8. A measuring tube 9 is disposed concentrically within the pipe 6 and is spaced therefrom to provide an annular chamber 10. The upper end of said tube is threaded in the disc 7 and has a cross pin 11 mounted in its lower end.

Mounted in the pipe 3 is an air conducting pipe 12, the lower end of which extends into the casing 6 and is threaded in the disc 7. The pipe 12 has its upper end engaged with an elbow 13 which has one branch extending through the pipe 3 and connected to a casing 14.

A piston 15 is slidable in the tube 9 and has secured thereto the lower end of the coil spring 16, the upper end of which is fixed in the elbow 13. This spring serves to normally hold the piston 15 in its elevated position.

A valve 17 is slidable in the casing 14 and is provided with an inlet port 18 and an exhaust port 19. Connected to the casing 14 is an air conducting pipe 20 which leads from a compressed air storage tank. The valve 17 is of such length that a portion thereof extends above the casing 14 and has a head 21 thereon for convenience in operation. A coil spring 22 is mounted in the casing and normally serves to hold the valve with the port 19 in registration with the elbow 13.

The lower end of the casing 6 has mounted therein a check valve 23.

The tube 9, in this instance, has a capacity of one quart of oil so that upon each down stroke of the piston 15 one quart of oil will be dispensed.

Briefly, the operation is as follows:

Assuming that the tube 9 is filled with oil, the valve is depressed until the port 18 registers with the elbow 13, whereupon the air under pressure will pass downwardly through the pipe 12 and force the piston 15 downwardly, thus forcing the oil from the measuring tube, the oil then passing through the annular chamber 10 through the perforations or openings 7 into the pipe 3, and from thence past the check valve 5 into a container for receiving the discharged oil. After this operation, pressure upon the valve 17 is released and the spring 22 will force the same upwardly until the port 19 registers with the elbow 13, thus permitting the air in the tube 9 and pipe 3 to escape to atmosphere, whereupon the spring 16 will move the piston 15 to its elevated position for the next operation. The pin 11 will obviously limit the downward sliding movement of the piston 15 and it will be obvious that when the piston 15 moves downwardly, the check valve 23 will close so that the oil will be compelled to flow through the annular chamber 10, pipe 3, and neck 4.

From the foregoing, it is thought that the construction, operation and many advan-

tages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

1. A pump including a casing having an upwardly opening valve at its lower end, a discharge pipe connected with the casing and provided with a downwardly opening valve, a tube within the casing and having an enveloping space forming a chamber which is in communication with the said discharge pipe, a piston in the tube, an air pipe in the discharge pipe and spaced therefrom and connected with the upper end of the said tube, means normally holding the piston elevated, a pressure supplying pipe connected with said air pipe, and a manually operable valve for controlling the supply of pressure to the piston and permitting a discharge of the spent pressure when the piston is returning to normal position after being actuated.

2. A pump including a casing having an upwardly opening valve at its lower end, a discharge pipe connected with the casing and provided with a downwardly opening valve, a tube within the casing and having an enveloping space forming a chamber, a disc in the upper portion of the casing and closing the tube and formed with openings establishing communication between the said chamber and discharge pipe, an air pipe in the discharge pipe spaced therefrom and connected with the disc and said tube, a piston in the tube, means normally holding the piston elevated, a pressure supplying pipe connected with the air pipe, and a manually operable valve for controlling the flow of pressure to the air pipe and the discharge of the spent pressure therefrom.

3. A pump including a casing having an upwardly opening valve at its lower end, a discharge pipe connected with the casing and provided with a downwardly opening valve, a disc in the upper portion of the casing having openings in its outer portion, a tube within the casing depending from the said disc and having an enveloping chamber, an air pipe within the discharge pipe and connected with the said disc and opening into the tube, a piston in the tube, a coil spring in the air pipe and connected with the piston to normally hold it elevated, a pressure supplying pipe connected with the air pipe, and a manually operable valve for controlling the flow of pressure to the air pipe and the discharge of the spent pressure therefrom.

In testimony whereof I affix my signature.

JAMES B. EASTES. [L. S.]