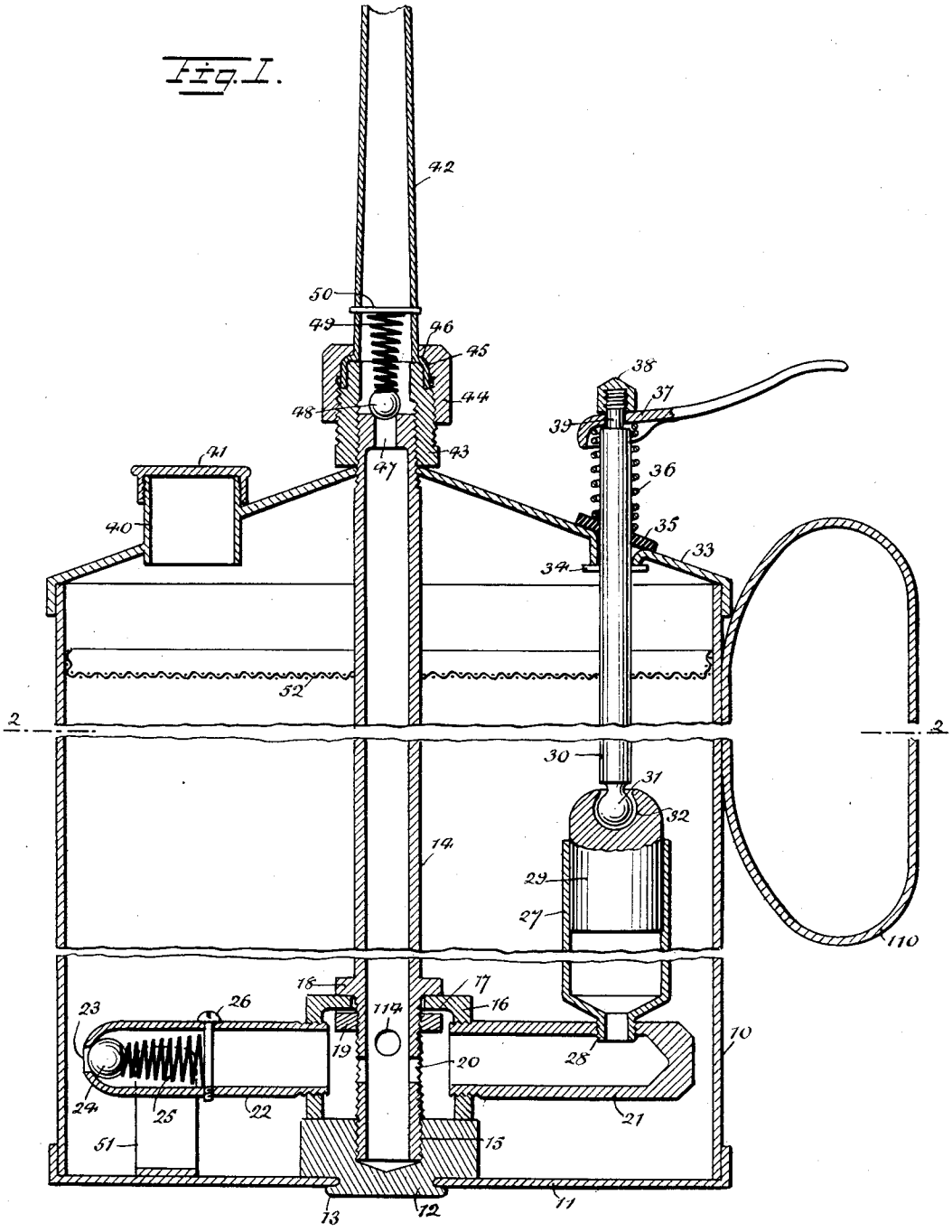
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OIL CAN

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Fig. 1.



WITNESSES

H. T. Walker

INVENTOR

Fred I. Jaden

BY Munn & Co.

ATTORNEY

Aug. 13, 1929. F. I. JADEN 1,724,839

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Fig. 2.

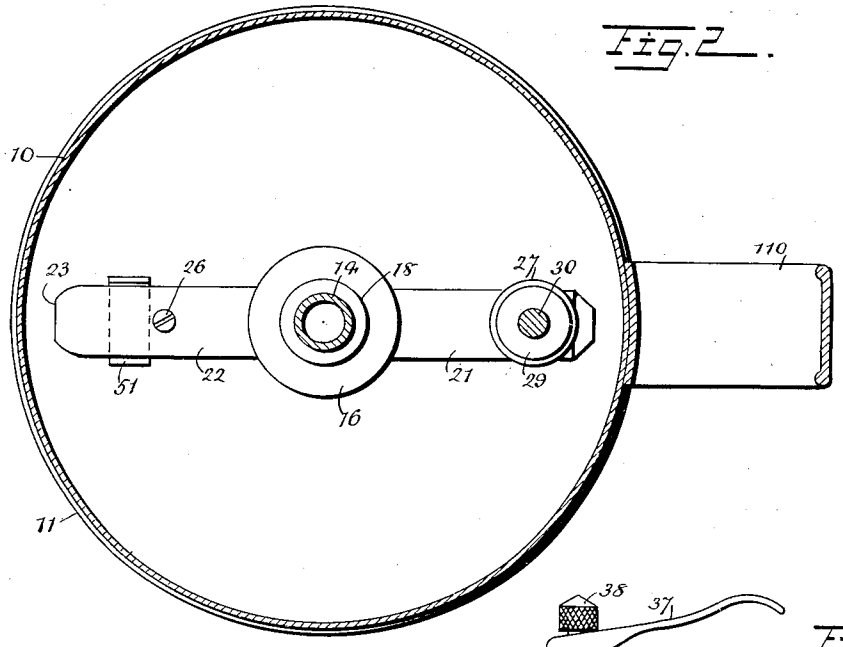


Fig. 3.

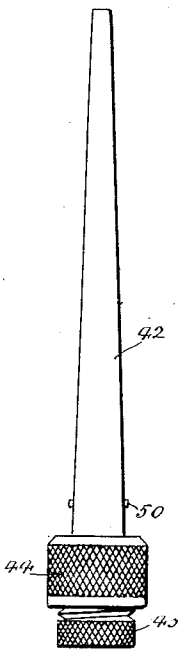
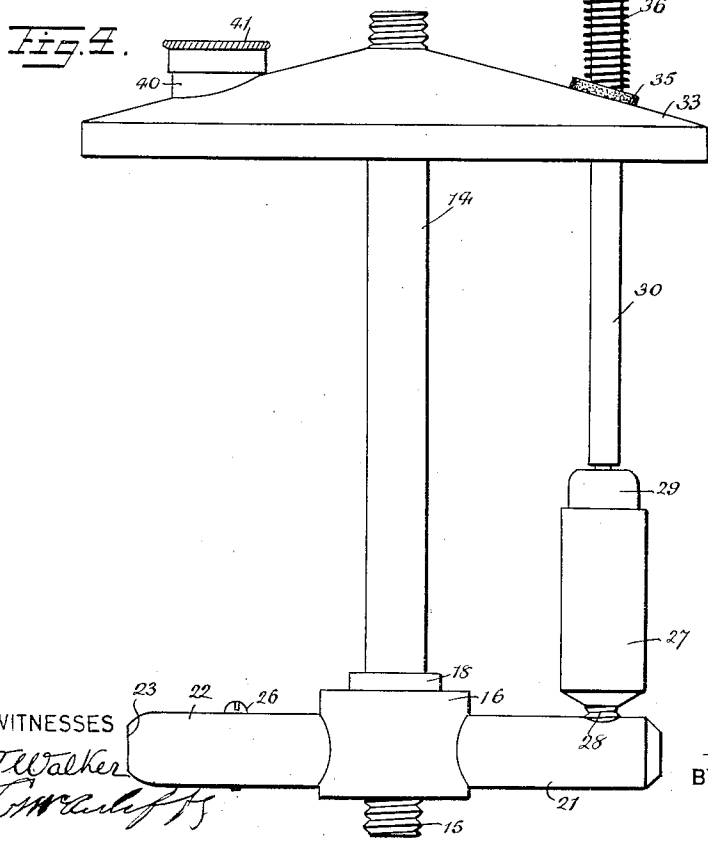


Fig. 4.



WITNESSES

H. T. Walker

INVENTOR

Fred I. Jaden

BY Pierce & Co.

ATTORNEY

Patented Aug. 13, 1929. 1,724,839

UNITED STATES PATENT OFFICE.

FRED I. JADEN, OF HASTINGS, NEBRASKA.

OIL CAN.

Application filed November 19, 1927. Serial No. 234,401.

This invention relates to an oil can and particularly to an oil can embodying a pump to force the oil under pressure from the nozzle or spout.

The general object of my invention is to provide an oil can of the indicated character improved in various particulars and especially with respect to the pump and oil chambers communicating with the pump and with the oil spout, the assemblage being characterized by simplicity of construction, and the removability of the discharge tube, pump and oil chambers as a unit to facilitate the cleaning of the parts, and characterized further by efficiency in use.

The nature of my invention and its distinguishing features and advantages will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a vertical section of an oil can embodying my invention;

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

Figure 3 is an elevation of the spout and its securing means; and

Figure 4 is a side elevation of the removable unit including the oil can cover, the discharge tube, pump and oil chambers associated with the pump and the discharge tube.

In carrying out my invention in practice in accordance with the illustrated example, the can 10, usually cylindrical and having a bottom 11, has secured to the bottom centrally thereof a plug 12, the lower reduced end of which is flanged over at 13 against the under side of the bottom 11 to hold said plug in place. The numeral 14 indicates a discharge tube, the threaded lower end of which is screwed into plug 12, as at 15. A shell 16 having an inwardly directed flange 17 at the top is loosely held between the rigid collar 18 on the tube 14 and a nut 19 on the tube at the under side of said flange 17. The numeral 20 indicates lateral openings in tube 14 near the lower end thereof. The shell 16 seats on top of plug 12, and tapped into the shell at one side is the open end of the lateral tube 21, the other end of which is closed. At the opposite side of shell 16 there is tapped into shell 16 a second tube 22 having an oil inlet 23 at the outer end controlled by ball valve or other check valve 24 under pressure of a coil spring 25 which abuts at the end opposite ball 24 against a screw 26, or equivalent abutment.

Tapped into the upper side of tube 21 is the reduced threaded end 28 of a pump cylinder 27 in which operates a piston 29, the rod 30 of which connects by a ball 31 and socket 32 with said piston 29. The rod 30 of the plunger or piston 29 extends upwardly through the removable cover 33 of can body 10. A pin 34 or the like may be employed as a stop to limit the upward movement of the piston 29 through cover 33. On the rod 30 also is a felt washer 35 held tightly against the top of cover 33 about the rod 30 to prevent leakage, pressure being applied by a coil spring 36 on said plunger rod. An operating arm 37 is placed on the reduced end 39 of rod 30 and held against displacement by a cap nut 38.

The numeral 40 indicates the filling neck on cover 33, said neck having a screw cap 41.

The upper end of tube 14 is provided with a spout 42 secured to said tube 14 by the following devices: A nut 43 is screwed to the upper threaded end of discharge tube 14 and receives a cap nut or bonnet 44 which has an inwardly directed flange 46 and bears downwardly on flaring flange 45 on the lower end of spout 42 to give a tight fit and prevent leakage. The outlet passage 47 at the top of tube 14 is controlled by a ball valve 48 or other check valve subject to the pressure of a spring 49 upon the same, said spring abutting at its upper end against transverse pin 50 disposed transversely in the spout.

With the above described assemblage, movement upwardly of the plunger rod 30 and an upward movement of the plunger 29 will create a vacuum in tube 14 and tube

sections 21, 22. The oil is thereby drawn into inlet 23, flows through tube 22 and can then pass freely around tube 14 inside of shell 16 in addition to more or less passing through the lateral openings 20 and 114, the oil then flowing on through tube section 21 and into the cylinder 27. The downward pressure on rod 30 through the medium of the arm 37, or equivalent device, will cause valve 24 to be seated in addition to the seating tendency of the spring 25 on said ball 24. The oil finds escape through the passage 20 and through lateral inlet 114 in the discharge tube 14 so that oil will be forced upwardly in the discharge tube 14 and through passage 47 at the upper end thereof, the pressure of the oil serving to lift the check valve 48 against the pressure of spring 49 so that oil passes to and through the spout 42 under pressure.

A few turns of the discharge tube 14 to the left will disconnect the same from the plug 12, the tube sections 21 and 22 being prevented from turning with the tube 14 by reason of a holding yoke 51, or equivalent members, disposed at opposite sides of the tube section 22. With the tube 14 unscrewed from plug 12 said tube 14, shell 16, tube sections 21 and 22, pump cylinder 27, plunger 29, pump rod 30 and cover 33 may be lifted as a unit, the lifting action being brought about by the nut 19 engaging the flange 17 of shell 16 and causing the complete pumping assemblage and discharge spout to be lifted as a unit. The spout 42 may be removed by unscrewing the nut 43 from the threaded upper end of discharge tube 14.

Important advantages result from the described construction by reason of the removability of the internal parts as a unit so that they can be cleaned or repairs readily made of any of the interior parts. An advantage also is that the intake valve 24 is near the bottom of the oiler body and also it is located at the opposite side of the oil can from the handle 110, and due to the tilting of the can when grasped by the side handle 110 the oil accumulates adjacent to the oil inlet 23 and ball valve 24 so that the oiler may be relied upon to function effectively until the oil is substantially dispensed from the oiler.

An advantage also, as will be observed, is that the pump is located adjacent to the handle 110 so that the plunger 30 may be operated by the thumb of the hand grasping said handle. The ball and socket connection 31 and 32 of piston 29 and piston rod 30 prevents binding in the operation of said rod. It is an advantage also that the working parts are close to the bottom where they will be usually surrounded by oil, which results in a more positive action of said working parts. Further, all the internal parts of the can, as described, may be produced on an automatic screw machine making it convenient to manufacture and at the same time holding the manufacturing costs at a low figure.

I would state furthermore that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

I claim:

1. An oil can, including a can body, a removable cover, an element rigid on the bottom of said body, an oil discharge tube detachably secured at its lower end to said element, a shell resting on said element, means holding said shell to said discharge tube, tube sections attached to said shell and forming with said shell an oil chamber in communication with the discharge tube, and a pump secured to one of said tube sections and having an operating rod extending through said cover.

2. An oil can, including a can body, a removable cover, an element rigid on the bottom of said body, an oil discharge tube detachably secured at its lower end to said element, a shell resting on said element, means holding said shell to said discharge tube, tube sections attached to said shell and forming with said shell an oil chamber in communication with the discharge tube, a pump secured to one of said tube sections and having an operating rod extending through said cover, said oil discharge tube projecting through said cover, together with a spout above the cover and detachably held in register with said discharge tube.

3. An oil can, including a can body, a detachable cover thereon, a plug secured to said can body at the bottom, an inverted cup-shaped shell seating on said element, an oil discharge tube detachably secured at its lower end to said bottom element, a collar on said discharge tube beneath the top of the shell and serving with said collar to lift the shell with the lifting of the discharge tube, tube sections secured on said shell at opposite sides, one of said tube sections having an oil inlet, a spring pressed valve closing said inlet, a pump cylinder mounted on the other of said tube sections, a piston operating in said cylinder, a piston rod connected with said piston and projecting through the cover, means above the cover for operating the plunger, said discharge tube extending through said cover, and a spout detachably held in register with said discharge tube above the cover.

4. An oil can, including a body, a pump within the body, means on the exterior of

the oil can to operate said pump, means having an oil inlet and forming an oil passage in communication with said pump, a discharge tube rising from said last mentioned means, and means on said discharge tube to lift the pump and the means forming the oil passage as a unit from said body, together with means on the can body at the bottom to detachably secure the discharge tube for holding said assemblage in place.

Signed at Hastings in the county of Adams and State of Nebraska this 14th day of November, A. D. 1927.

FRED I. JADEN.