

F. L. SWANBERG.

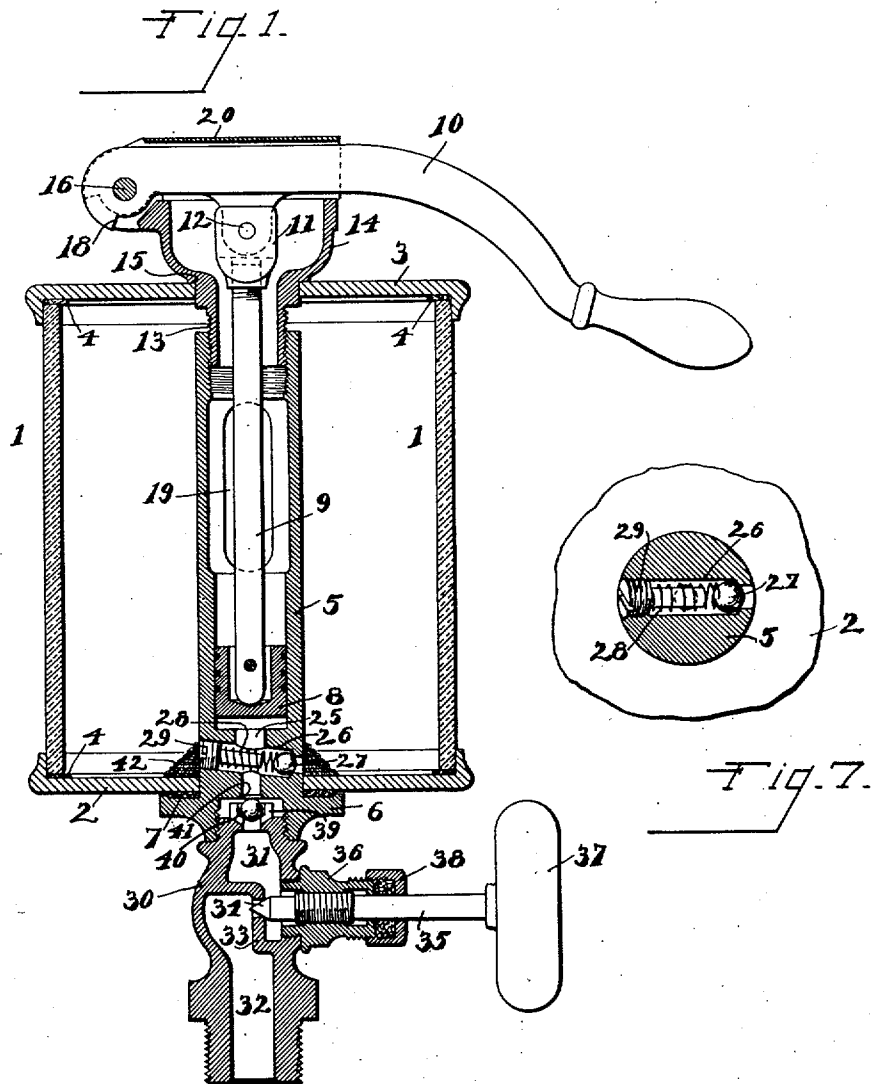
OIL PUMP.

APPLICATION FILED MAR. 7, 1908.

1,019,927.

Patented Mar. 12, 1912.

2 SHEETS—SHEET 1.



WITNESSES.
Homer Bradford.
Berrie Beall.

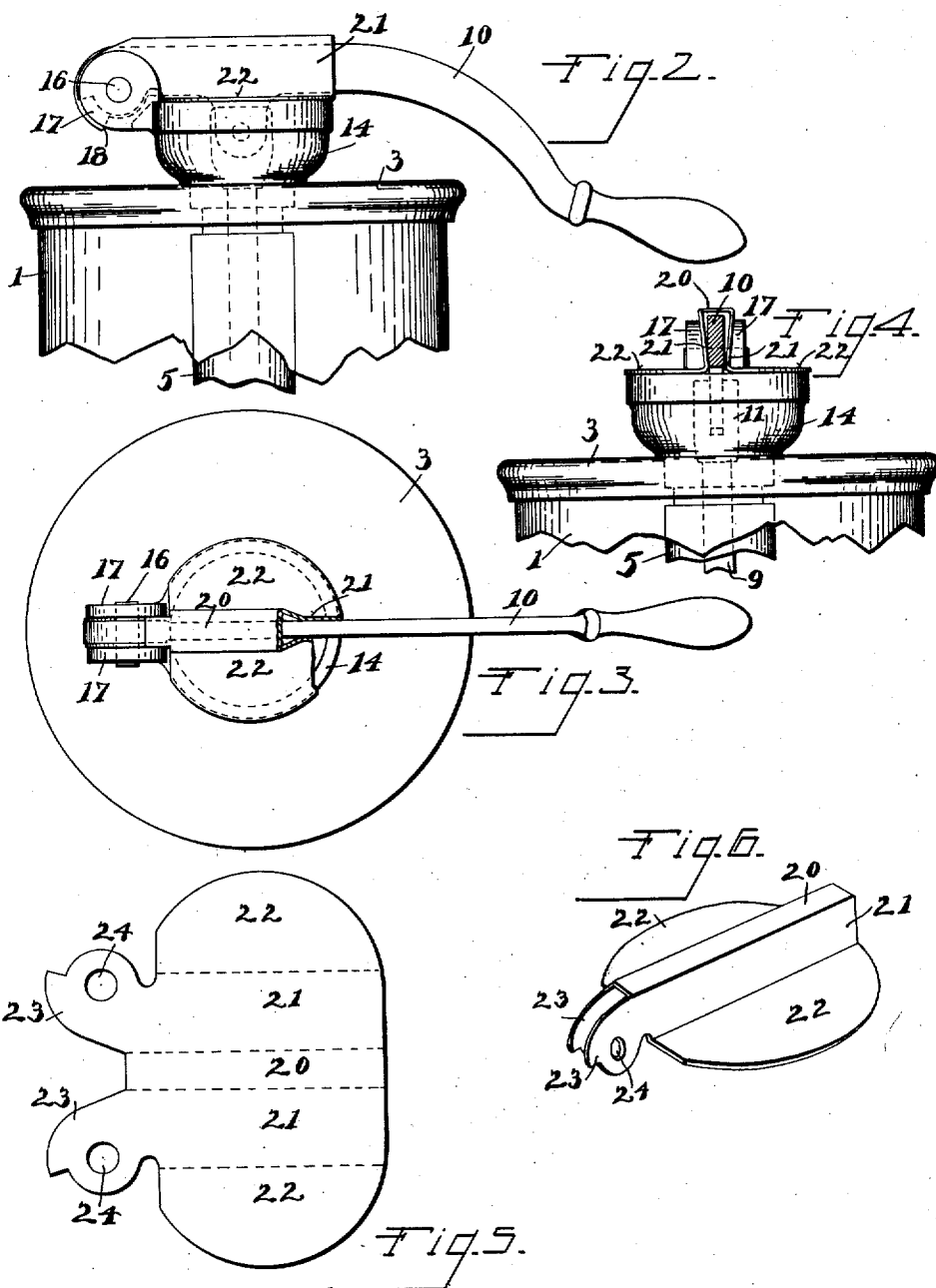
INVENTOR.
Floyd L. Swanberg
by Alfred M. Allen
att'y

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UNITED STATES PATENT OFFICE.

FLOYD L. SWANBERG, OF CINCINNATI, OHIO, ASSIGNOR TO THE D. T. WILLIAMS VALVE COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

OIL-PUMP.

1,019,927.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed March 7, 1908. Serial No. 419,732.

To all whom it may concern:

Be it known that I, FLOYD L. SWANBERG, a citizen of the United States, residing in Cincinnati, county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Oil-Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to pumps for discharging lubricating oil into engine cylinders, for lubrication of the valves and piston, when the engine is at rest, and the object of my invention is to provide a construction, in which the filling cup can be properly shielded or covered to prevent dirt from finding its way into the oil reservoir, and as a further object a construction is provided in which the pump valves are so arranged that the supporting stem of the pump may be materially shortened over the construction now in use, in order to prevent the fracture and breakage of the stem under the vibration of the engine.

In the drawings Figure 1 is a central vertical section of my improved pump. Fig. 2 is a side elevation of the upper portion of the pump. Fig. 3 is a top plan view of same. Fig. 4 is a front elevation with the pump handle in section. Fig. 5 is a plan view of the blank, from which the cover for the filling cup is constructed. Fig. 6 is a perspective view of this cover. Fig. 7 is a detail cross section, taken through the inlet check valve of the pump.

The reservoir for the oil, comprises the glass cylinder 1, with the bottom plate 2, and top cover 3, provided with flanges to engage the edges of the glass cylinder, and with suitable gaskets 4-4, to prevent leakage.

5 is the pump cylinder which passes up through a central opening in the bottom plate 2, of the oil reservoir, and is provided with a flange 6, below the bottom cover 2, to support same, and 7 is a gasket or washer interposed between the flange and bottom cover, to prevent leakage.

8 is the pump piston connected by the connecting rod pitman 9, with the pump handle 10. The upper end of the rod 9, is screw threaded, and a bifurcated coupling block 11, is secured thereon, so that the length of

the coupling rod 9, can be adjusted, and the pump handle 10, is pivoted to the coupling block 11, by the pin 12.

The upper end of the pump cylinder, which extends nearly to the top of the oil reservoir, is screw threaded interiorly, and the stem 13, of the filling cup 14, is screwed into this cylinder. A shoulder 15, is formed on the filling cup to bear upon the cup cover 3, of the reservoir, so that by screwing up the filling cup, the top and bottom plates and the cylinder casing of the reservoir are bound tightly together. The handle 10, of the pump is pivoted by the pin 16, in the bifurcated lugs 17, on the filling cup, and a shoulder 18, is provided for the end of the handle to contact with a lip on the filling cup, to limit the upward movement of the handle in pumping. The oil to fill the reservoir is poured in through the filling cup, and elongated openings 19, are left in the upper end of the pump cylinder for the free passage of this oil into the reservoir.

In order to prevent dirt from dropping down through the filling cup, and mixing with the oil, I provide a sheet metal cover to fit over the pump handle, and to cover the filling cup when the pump is at rest. This cover is cut from a blank of suitable sheet metal in the shape shown in Fig. 5, and the blank is then bent on the dotted lines indicated in Fig. 5, so as to inclose or surround the handle on the top and sides, thus forming the top 20, and sides 21-21, for the handle and semi-circular wings 22-22, to cover the upper edge of the filling cup. The ears 23-23, fit over the pivoted portion of the handle, and they are provided with openings 24-24, for the passage of the pin 16. The sides 21-21, of the cover, are sprung in slightly so that they will grasp and remain in position on the handle. The cover will thus be lifted in the operation of the pump handle, but when the handle is down in its normal position, the filling cup will be completely covered. A central opening 25, is bored in the base of the pump cylinder 5, for the passage of the oil, and a transverse opening 26, is also drilled through the base portion of the pump cylinder immediately above the bottom plate 2.

27 is a ball check valve held in place by the light coiled spring 28, which is mounted around the set screw 29.

30 is a coupling provided with the passage-ways 31 and 32, with a partition 33, and an opening therethrough which forms the valve seat for the cut off valve 34, with a screw threaded stem 35, carried by the coupling 36, mounted on the side of the coupling 30, and this valve is provided with a handle 37, for opening and closing the valve. The valve stem 35, is provided with the usual stuffing box 38, to prevent leakage.

Resting on the lugs 39, on the upper surface of the coupling 30, which is screw threaded, into the base of the pump cylinder, is the ball check valve 40, which finds its seat 41, under the engine cylinder pressure, at the end of the passage-way 25, through the base of the pump cylinder.

42 is a cone shaped wire screen, which is located around the lower end of the pump cylinder inside the reservoir, to guard against any sediment entering with the oil during the pumping.

The operation of the pump will be evident from the foregoing description.

The cut off valve 34, is first opened, which causes the check valve 40, to find its seat 41, under the pressure in the engine cylinder, and the pump handle 10, is then operated to raise the piston 8. The check valve 27, opens and allows the oil to enter the pump cylinder, and with the depression of the handle 10, this check valve closes, and the check valve 40, opens under the pressure of the

oil which passes through the passage ways 31 and 32 into the cylinder.

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

1. In an oil pump of the character specified, the combination, with an oil reservoir and a pump cylinder and piston mounted therein, of a filling cup extending from the pump cylinder above the reservoir, a pump handle with the pump piston pivoted thereto, and a cover for the filling cup, means for securing the cover firmly to the pump handle to completely inclose the filling cup when the pump is at rest substantially as described.

2. In an oil pump of the character specified, the combination, with an oil reservoir and a pump cylinder and piston mounted therein, of a filling cup extending from the pump cylinder above the reservoir, a pump handle with the pump piston pivoted thereto, and a sheet metal cover folded to tightly grasp the pump handle to completely inclose the filling cup when the pump is at rest, with a single pivot for the handle and cover at the upper edge of the filling cup substantially as described.

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Witnesses:

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