W. J. LIDDLE.

PRIMING CUP FOR MOTORS.

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1,227,459.

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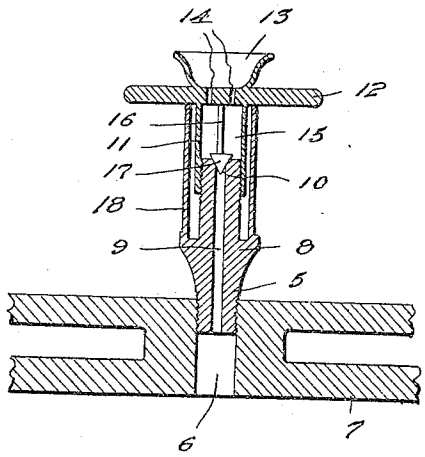


Fig. 1.

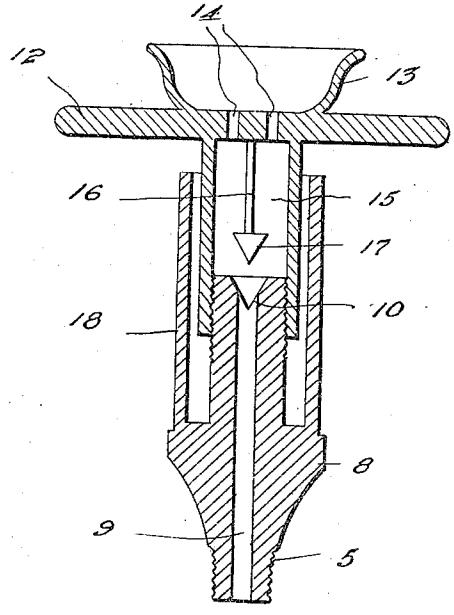


Fig. 2.

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UNITED STATES PATENT OFFICE.

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PRIMING-CUP FOR MOTORS.

1,227,459. Specification of Letters Patent. Patented May 22, 1917.

Application filed April 5, 1916. Serial No. 89,178.

To all whom it may concern:

Be it known that I, WALTER J. LIDDLE, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain useful Improvements in Priming-Cups for Motors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in priming cups for explosive engines, one object of the invention being the provision of a cup which is readily attached to the engine cylinder and provided with means for releasing the contents of the cup when it is desired to prime the engine.

A further object of this invention is the provision of a simple, durable and inexpensive device of this character which is thoroughly efficient and practical in use.

In the accompanying drawings:

Figure 1 is a sectional view through a portion of an engine cylinder showing the present cup complete as in use, the same being shown in section with the valve closed.

Fig. 2 is a sectional view through the cup with the valve open.

Referring to the drawings, the numeral 5 designates the hollow nipple which is adapted to be inserted in the opening 6 of the engine 7 so that the priming fluid may be directed into the cylinder. Carried by the member 5 is a cylindrical boss 8 having a port 9 therethrough which is a continuation of the port through the member 5, a needle valve seat 10, being formed at the upper end thereof.

The boss 8 is exteriorly screw threaded to receive a cap including the interiorly screw threaded shell 11 which is carried by the thumb wheel 12, which in turn supports the cup 13 which has the two ports or outlets 14 leading therefrom so that the priming fluid will enter the chamber 15 above the boss 8.

A concentrically disposed stem 16 provided with the valve 17, is carried by the thumb actuated wheel 12 for closing the port 9 by engagement with the seat 10. Thus when the parts are in the position as shown in Fig. 1, the priming fluid, generally gasolene, is poured in the cup 13, and after a sufficient quantity has been placed therein, the thumb wheel 12 is rotated to release the valve 17, or to assume the position as shown in Fig. 2, so that the priming fluid which was directed in the chamber 15 through the ports 14, will then flow to the engine cylinder.

A tubular sleeve 18 is carried by the member 5 and is concentric to the boss 8, the same being of a sufficient length to abut the under side of the wheel 12 when the parts are in the position as shown in Fig. 1. It will be appreciated that the sleeve serves as a protecting means for the boss and shell and in addition is engaged by the under surface of the wheel simultaneously with the seating of the valve and limits the downward movement of the shell to consequently prevent distortion of the valve stem when the valve engages its seat.

The members 12, 13, and 11 are preferably made of fiberoid or hard rubber, but it is evident that the same can be made of metal if so desired.

From the foregoing description, it is evident that with a priming cup constructed according to and embodying the present invention, that a proper priming charge may be directed into the cylinder of the engine.

What I claim as new is:—

1. A priming cup including a nipple, a boss on one end thereof, the nipple and the boss being provided with a longitudinal port, a closure cap adjustably engageable with the upper end of the boss forming a chamber between the cap and boss and also provided with means whereby liquid may flow into the chamber, valve means depending from the cap for controlling the flow of liquid through the port, and means on the nipple for protecting the lower part of the cap and the boss and for limiting the downward movement of the cap to consequently prevent distortion of the valve means subsequent to the seating of the valve means.

2. A priming cup including a nipple, a boss arranged concentric to and integral with the upper end thereof, the nipple and the boss being provided with a longitudinal port the upper end of which is enlarged to provide a valve seat, a protecting sleeve integral with the upper end of the nipple and surrounding and extending above the upper edge of the boss, a shell adjustably engageable with the upper end of the boss, an operating wheel integral with the upper edge of the shell, a cup arranged on the upper surface of the wheel and provided with openings in the bottom thereof to establish communication

with the chamber, provided between the shell, wheel and boss, a valve stem depending from the under surface of the wheel, a valve on the stem for engagement with the valve seat to control the flow through the port, and the outer edge of the wheel extending beyond the protecting sleeve and engageable with the upper edge of the sleeve whereby to limit the downward movement of the shell and prevent distortion of the valve stem.

In testimony whereof I affix my signature.

WALTER J. LIDDLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."