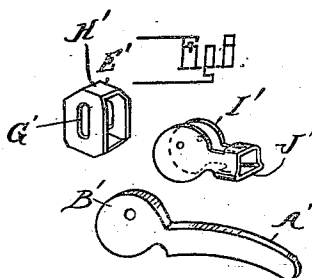
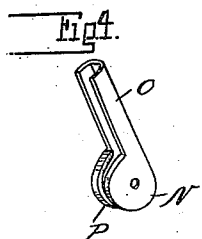
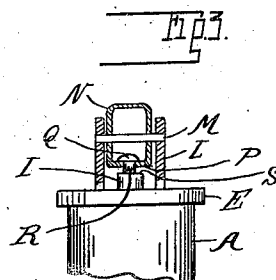
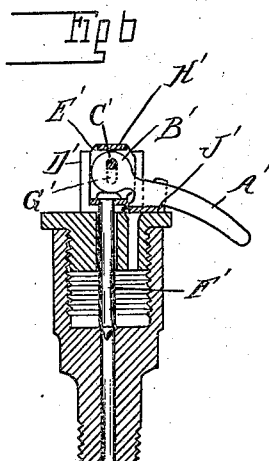
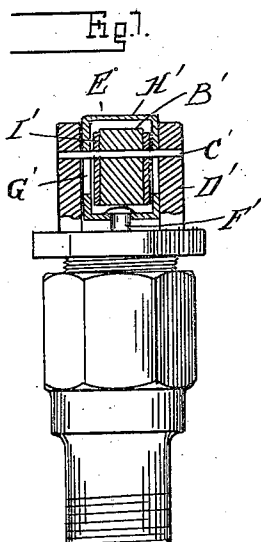
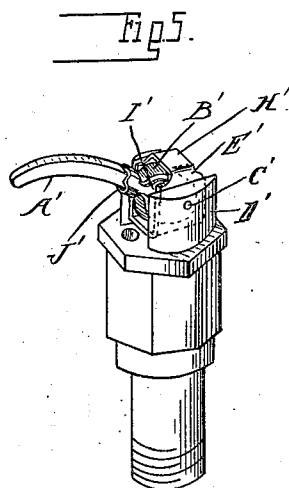
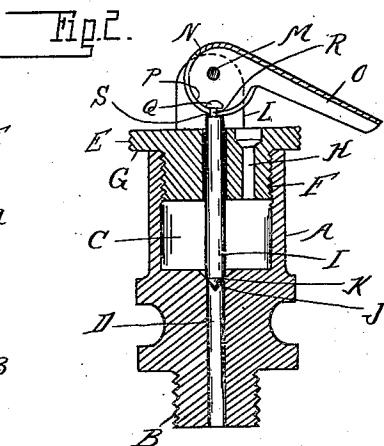


1,369,877.



By *Edithmore Reddick* Edithmore

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES W. BECK, OF DETROIT, MICHIGAN, ASSIGNOR TO THE BECK-FROST CORPORATION, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

PRIMING-CUP.

1,369,877.

Specification of Letters Patent.

Patented Mar. 1, 1921.

Application filed August 28, 1915. Serial No. 47,745.

To all whom it may concern:

Be it known that I, CHARLES W. BECK, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Priming-Cups, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to priming cups, and resides in the provision of a valve-controlled priming cup in which the valve may be readily opened and closed; in the provision of a priming cup that may be easily and cheaply manufactured. The invention further resides in certain novel constructions, arrangements and combinations of parts as will more fully hereinafter appear.

In the drawings,—

Figure 1 is a perspective view of a priming cup embodying the invention;

Fig. 2 is a longitudinal, central section therethrough;

Fig. 3 is a partial section at right angles to Fig. 2;

Fig. 4 illustrates a detail of construction;

Figs. 5, 6, 7 and 8 illustrate a modification.

Referring to the structure shown in Figs. 1 to 4 inclusive, A designates the casing of the priming cup having its lower end threaded as indicated at B to engage an opening in the cylinder; in the usual manner, and having in the upper end thereof a chamber C. D is a bore leading from the chamber through the lower end of the casing, and E is a cap for closing the upper end of the chamber C. This cap has an externally threaded portion F engaging the internal threads of the chambered portion, and is provided with a flange G adapted when the cap is in place to seat upon the upper end of the casing. H is a bore leading through the cap to permit a priming fluid to be placed in the chamber C without removing the cap, and I is a valve having a portion extending through the cap and longitudinally, slidably engaging the latter. This valve is formed of a short rod having its lower end conical, as indicated at J, to form the valve proper, and this conical end J is adapted to engage a seat K at the upper end of the bore D.

Mounted upon the cap is a support in the form of spaced standards L carrying a

shaft M upon which is mounted an eccentric N. O is a handle for actuating the eccentric. The eccentric engages the upper end of the member I and is adapted upon the raising and lowering of the handle to open and close the valve J respectively. In the structure shown in Figs. 1 to 4 inclusive, the handle and eccentric are formed from a flat sheet metal blank, the handle being channel-shaped and the eccentric comprising bifurcations at the inner end of the handle. These bifurcations have inwardly-extending flanges P which are slightly spaced from each other and are adapted to engage a head Q formed at the upper end of a stud R. This stud is of a lesser diameter than the member I, providing a shoulder S arranged below and spaced from the head. Preferably the stud is formed integral with the member I. During the upward movement of the handle the head engages the inner faces of the flanges P and is positively raised, thereby opening the valve J. During the downward movement of the handle the outer faces of the flanges P engage the shoulder S and cause a downward movement of the member I, thereby seating the valve proper J.

In the structure shown in Figs. 5 to 8 inclusive, the general construction of the casing and cap is the same as that described in connection with Figs. 1 to 4 inclusive, but the connection between the valve and the lever is of different construction, and also the lever differs in construction from the member O. Thus the handle A' is formed from a solid piece of metal, the inner end of the handle being attached to an eccentric B', the handle and eccentric preferably being made integral. C' is a shaft upon which the eccentric is mounted, and D' are spaced standards carrying the shaft C'. Arranged between the standards D' is a loop-shaped member E' the lower end of which engages with the valve F'. The sides of the member E' are arranged parallel to the inner faces of the standards D' and are vertically slotted, indicated at G', to engage the shaft or pivot pin C'. This member E' is preferably formed from a flat sheet of metal bent into loop-shaped form, the free ends being suitably engaged with the valve F', while opposite the closed ends of the loop is a connecting portion H'. It will be noted upon reference to the drawings that the eccentric

B' is arranged within the loop-shaped member. The arrangement of parts is such that during the lifting of the handle or lever A' the eccentric will engage the portion H' and
 5 move the member E' upwardly. This will carry with it the valve F', thereby establishing communication between the bore in the casing and the casing chamber. Upon the downward movement of the lever the eccentric engages the upper end of the member
 10 F' and positively moves it downward.

As will be noted upon reference to Fig. 2, the upper end of the bore H is arranged directly beneath the handle when the latter
 15 is closed. The handle, therefore, serves to shield the opening to a considerable extent. In the construction shown in Figs. 5 to 7 inclusive, the handle carries a portion which when the valve is closed, is adapted to fit
 20 over the upper end of the bore in the cap. This portion is herein shown as formed by a sheet metal stamping having ears I' arranged upon opposite sides of the eccentric and having a closure portion J' which, when
 25 the valve is closed, rests upon the top face of the cap.

With either of the constructions described, when it is desired to prime the engine the handle is raised and the priming fluid injected into the chamber through the passage
 30 in the cap. To close the valve it is merely necessary to lower the handle. It will, therefore, be apparent that it is not necessary to employ a wrench or other tool to open or
 35 close the valve in the priming cup.

In cutting the threads upon the casing and the cap there is liable to be a slight inaccuracy between the alinement of the opening in the cap through which the valve extends and the opening in the casing. To
 40 permit the end of the valve to seat properly upon the opening in the casing the opening in the cap is made slightly larger than the cross-section of the valve member so as to
 45 permit a slight play. This will allow the valve member to be properly alined with the opening in the casing and thereby insure a proper seating of the valve.

What I claim as my invention is:—

50 1. In a priming cup, the combination of a casing having a chamber and having a passage extending from said chamber, a cap closing the upper end of said chamber and provided with a passage therethrough, a
 55 valve mounted in said cap and controlling the passage in the casing, and a lever for actuating the valve, said lever having a portion adapted to shield the passage through said cap in one position of the lever.

60 2. In a priming cup, the combination of a casing having a chamber and having a pas-

sage extending from said chamber, a cap closing the upper end of said chamber and provided with a passage therethrough, a
 65 valve mounted in said cap and controlling the passage in the casing, and a lever for actuating the valve, said lever having a portion adapted to close the passage through said cap in one position of the lever.

3. In a priming cup, the combination with
 70 a casing having a passage therethrough, of a cap for said casing, a pair of standards surmounting said cap, a valve for closing the passage through the casing having a
 75 portion projecting between said standards, a loop-shaped member engaging the valve, an eccentric mounted within said member, and a lever projecting from the eccentric for rotating the same to actuate the valve.

4. In a priming cup, the combination with
 80 a casing having a chamber in its upper end and having a passage extending from said chamber, a cap closing the upper end of said chamber, a valve controlling the pas-
 85 sage through said casing and extending through said cap, said valve having a head on its outer end, an eccentric pivoted upon said cap and engaging said head, and a lever integrally projecting from said eccentric
 90 to seat or unseat said valve according as it is adjusted to one side or the other of said cap.

5. In a priming cup, the combination with
 95 a casing having a chamber and an outlet therefrom, of a valve comprising a stem having a tapered end for closing said outlet, an actuating member for said valve
 100 above the casing, and a member carried by the casing formed with two orifices, one serving as an oil inlet to said chamber and the other receiving said stem and being proportioned to allow lateral play thereof to facilitate seating of the valve.

6. In a priming cup, the combination with
 105 a casing having a chamber in its upper end and having a passage extending from said chamber, of a cap closing the upper end of said chamber and provided with a filling opening therein, a valve mounted in said
 110 cap and controlling the passage leading from said chamber, and an actuating member for said valve constituting also a closure for said filling opening, unseating of the valve and uncovering of the filling opening being accomplished by the same movement of said
 115 actuating member.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. BECK.

Witnesses:

WM. J. BELKNAP,
 PHYLLIS COBURN.