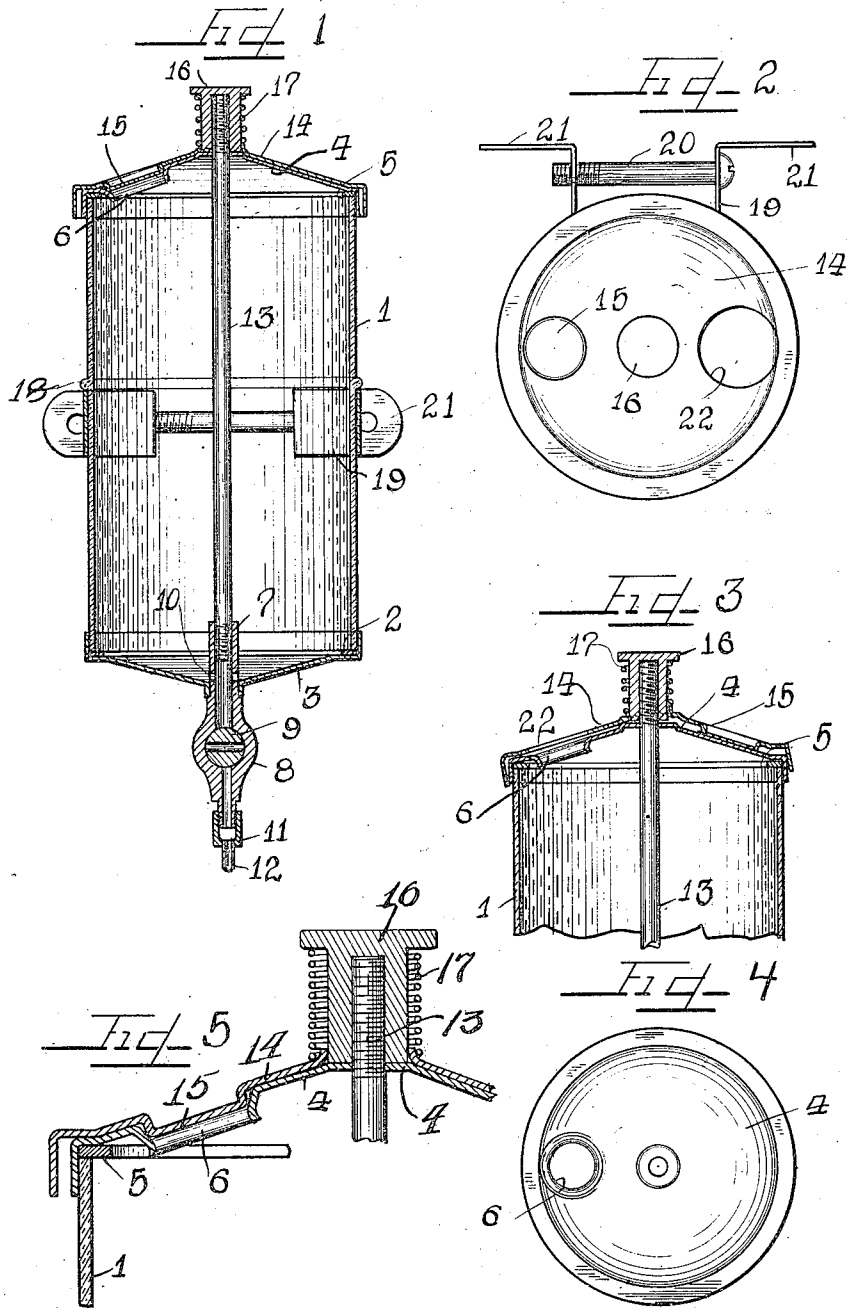


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PRIMER.

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WITNESSES

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To all whom it may concern:

Be it known that I, HENRY A. HILLS, a citizen of the United States, and a resident of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Primers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

A number of priming devices have been designed for the purpose of admitting a supply of hydro-carbon fluid directly in the manifold of an internal combustion engine independently of the carbureter to aid in starting the motor, but in general, the reservoirs containing the supply of hydro-carbon in such types of devices have leaked more or less under the severe jolting conditions to which a car is subjected upon the road, resulting in spilling of the fluid and endangering the car and its occupants by the possible occurrence of fire.

This invention relates to an improved type of reservoir for priming systems wherein introduction of the hydro-carbon fluid into the reservoir receptacle is greatly facilitated and yet leakage by splashing, spilling or capillary action past the closure element of the hydro-carbon fluid from the receptacle after the same has been closed is entirely prevented, and yet a quick and convenient operation of the parts for the purpose of opening or closing the receptacle for introduction of fluid thereinto, is afforded.

It is an object therefore of this invention to construct a primer reservoir provided with an improved entrance or receiving means and a closure therefor, and with the parts of the reservoir assembled in a novel and convenient manner to facilitate assembly, repair and cleaning thereof, and as well affording a fluid tight container when assembled and connected for use.

It is also an object of this invention to construct a primer reservoir wherein top and bottom members are clamped upon a glass cylinder in sealing relation therewith, and a cover member resiliently fitted over the top member and adjustable to cover an entrance opening therein for fluid introduced into the reservoir, with said cover provided with means which interlock with

the opening in said top member to seal the same and also prevent accidental displacement or opening of the cover.

It is also an object of this invention to construct a primer comprising a glass container, assembled in an improved manner with the upper cap member provided with an opening for injection of a hydro-carbon fluid into the container, said cap adapted to receive a cover interlocked therewith to prevent splashing or spilling of the fluid due to jolting or shocks imparted to the car on which the primer is mounted.

It is furthermore an important object of this invention to construct a primer reservoir comprising a glass cylinder assembled with a base member and apertured cap element and provided with a resilient apertured closure adapted to interlock with the cap element to insure a seal of the opening therethrough to prevent spilling and leakage of the fluid from within the container.

It is finally an object of this invention to construct an improved type of primer reservoir, simple in construction and assembly easy to install, and precluding leakage or splashing of the fluid from the reservoir.

The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a central vertical section taken through a device embodying the principles of my invention with parts shown in elevation.

Fig. 2 is a top plan view of the device.

Fig. 3 is a sectional detail at the upper end of the device showing the cover member adjusted to open position.

Fig. 4 is a top plan view of the device with the cover member detached.

Fig. 5 is an enlarged detail illustrating the closure cover interlocked with the upper cap member of the device.

As shown in the drawings:

The reference numeral 1, indicates a cylindrical glass member seated upon a sealing washer 2, within the flanged periphery of a lower conical cap member 3, and, at its upper end, provided with a flanged conical cap member 4, fitted over the upper edge of said glass cylinder with a sealing washer 5, interposed therebetween. Said upper cap member 4, is fitted tightly upon the upper end of the cylinder 1, and provided through said cap member 4, is an entrance opening 6,

for fluid to be introduced within the cylinder. The edges of said aperture or opening 6, are turned inwardly so as to afford not only a rounded smooth passage into the container but also a means to prevent leakage of fluid due to splashing effect of the fluid upwardly around the sides of the container. The lower cap 3, is centrally apertured and flanged downwardly and fitted therethrough is an inwardly projecting clamp extension 7, of a valve casing 8, which contains a rotatable plug valve 9, controlling the flow through said stem and casing. Passages 10, are provided through the stem 7, for exit of fluid from the container through said valve 8—9, and connected on the lower end of the valve casing 8, is a coupling 11, by which a pipe line 12, leading to any suitable point, as for instance, the manifold of an engine, is connected. Threaded into the upper end of the stem 7, is a rod 13, and the upper end thereof extends through a centrally disposed aperture in the top cap member 4. Inserted over the upper end of the rod 13, is a circular conical closure or cover member 14, which fits over the top cap 4, and is rotatable thereon, and is provided with a sharp edged indented closure portion 15, adapted to seat within the rounded entrance passage 6, of the cap 4, when registered therewith to effect a tight closure thereof; but as clearly shown in Fig. 5, spaced therefrom beyond the line of contact to prevent a capillary action being set up which would cause the liquid to seep out through the cover member.

A small interiorly threaded cap or head 16, is threaded through said closure 14, on the upper projecting end of the rod 13, bearing tightly against the cap 4, and coiled around said head and bearing against the upper flanged portion thereof, is a compression spring 17, which bears downwardly upon said cover 14, to hold the same closely upon the top cap member 4. Said head 16, is threaded downwardly upon the rod 13, and acts to clamp the cap 4, tightly upon the upper end of the glass cylinder 1, and also drawing the lower cap 3, upwardly on the lower end thereof thus insuring a fluid tight assembly of the parts.

A rib 18, is formed on the exterior of the glass cylinder 1, and clamped therearound is a metal attaching band 19, held clamped upon said glass cylinder 1, by a bolt 20, and provided with outwardly bent apertured ends 21, to receive attaching screws or other means for attaching the device in place upon a support. Said rotatable cover member 14, is provided with an aperture or opening 22, therethrough, which, when rotated, may be registered with the opening 6, through the cap 4, to permit introduction of a fluid into the primer reservoir.

The operation is as follows:

The assembly of the device is extremely

simple, it merely being necessary to slip the lower cap 3, over the lower end of the glass cylinder 1, and the upper cap 4, over the upper end thereof, and thread the rod 13, into the stem 7, of the valve casing, attached through the central aperture of the lower cap 3, tightening the same up by means of the head 16, threaded on the exterior upper end of said rod 13, and bearing against the cap 4 to hold the parts in assembled relation. The cover member 14, for the apertured cap 4, is rotatable thereon and held resiliently in different adjusted positions by the coiled spring 17, bearing downwardly thereon. The indented sharp edged portion 15, of the cover member 14, serves to fit tightly within the rounded entrance passage 6, through the cap 4, to effectually seal the same when the cover member is in a closed position in a manner to avoid the possibility of capillary action, and in order to introduce fluid into the reservoir, it is only necessary to slightly elevate and rotate the cover member 14, to bring the aperture 22, thereof, in register with the passage 6, for the purpose. Adjustment of the plug valve closure 9, within the valve casing 8, in the lower end of the device, permits a quantity of fluid therein to be drawn off through the reservoir in amounts desired through the small passages 10, in the valve casing stem in the lower end of the device.

I am aware that various details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. In a device of the class described a container comprising means having an inlet opening therethrough, a rounded flanged portion surrounding said opening, and a cover element resiliently mounted in close frictional contact with said means and constructed to interfit with said flanged opening to effect a sealing closure thereof.

2. In a priming container of the class described, a cylinder, an apertured cap therefor, the aperture therein having a downwardly inwardly curved flange therearound, and an apertured cover member rotatably and resiliently associated therewith adapted to be registered with said cap to permit entrance of fluid into said cylinder, and provided with an integral inwardly struck sharp edged portion adapted to interlock with and to seal the entrance aperture in said cap.

3. In a device of the class described, a container, a cap sealingly mounted thereon and having an entrance aperture therein, an inwardly directed deflecting flange formed around said entrance aperture to prevent splashing of the fluid upwardly from the

sides of the container through said aperture, and a movable resiliently mounted cover associated with said cap for registration with said entrance aperture and indented to interlock with and seal said flanged entrance aperture of the cap.

4. In a device of the class described, a container, a top and bottom cap member connected to one another through said container, one of said cap members having an entrance opening therethrough with the metal of said cap member curved inwardly into the container around said aperture to deflect splashing of the contents of the con-

tainer from exit through said opening, and a cover member apertured for registration with the opening in said cap member to permit introduction into the container and constructed by adjustment to interlock with and seal the entrance opening through said cap member.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

HENRY A. HILLS.

Witnesses:

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EARL M. HARDINE.

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