Jan. 16, 1923. 1,442,278.

W. M. LE GORE.

FUNNEL DEVICE.

FILED SEPT. 13, 1921.

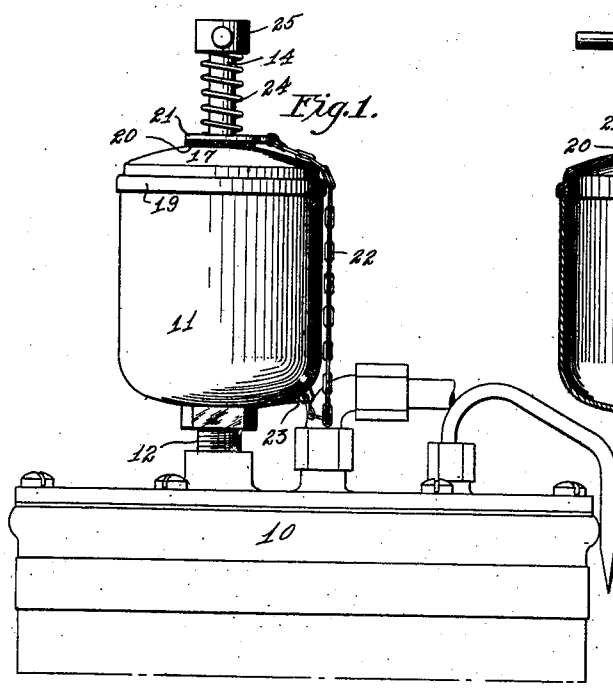


Fig. 1.

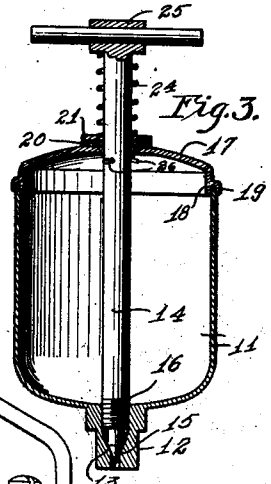


Fig. 3.

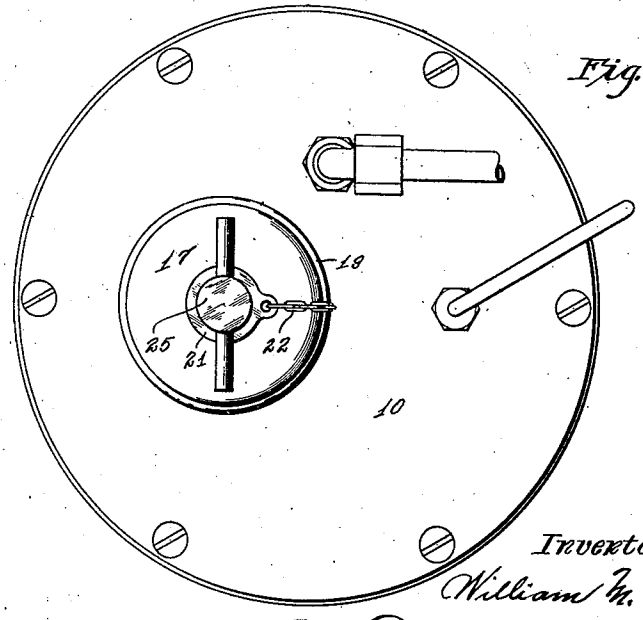


Fig. 2.

Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM M. LE GORE, OF JEFFERSON, IOWA.

FUNNEL DEVICE.

Application filed September 13, 1921. Serial No. 500,394.

To all whom it may concern:

Be it known that I, WILLIAM M. LE GORE, a citizen of the United States, and a resident of Jefferson, in the county of Greene and State of Iowa, have invented a certain new and useful Funnel Device, of which the following is a specification.

The object of my invention is to provide a funnel device of simple, durable and inexpensive construction especially adapted for filling such things as the vacuum gasoline feed tanks for automobiles for the purpose of priming them when the vacuum feed fails to properly operate.

A further object is to provide a device of this class in which the operator may readily, quickly and easily remove the funnel cover and valve so that they will not in any way interfere with the operation of filling the funnel and then after the funnel has been filled and the vacuum feed chamber properly primed, the valve and funnel cover may be quickly and easily returned and placed in fixed position where they will form an air tight enclosure between the funnel and the vacuum feed device, and at the same time provide a dust and water tight enclosure for the interior of the funnel; and

Further in this connection it is my object to provide a device of this character in which the valve and cover are at all times connected and may be handled and operated as a unit and prevented from rattling or working loose when installed in an automobile.

My invention consists in the construction, arrangement and combination with a funnel, of a combined valve and funnel sealing cover, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of a part of a vacuum feed device having my improved funnel device installed thereon.

Figure 2 shows a top or plan view of same.

Figure 3 shows a vertical sealed sectional view of my improved funnel device.

Referring to the accompanying drawings I have used the reference numeral 10 to indicate that portion of a vacuum feed tank for automobiles of the kind now in common use. This vacuum feed device of itself forms no part of my present invention and hence need not be further illustrated or described herein.

These vacuum feed devices are usually supplied on their upper ends with a screw threaded priming opening, in the end of which a screw plug is ordinarily inserted, and my funnel device is especially designed to be screwed into this opening in place of the plug.

The funnel proper is indicated by the numeral 11, and is substantially cup shaped and provided at its lower end with a screw threaded extension 12 designed to be screwed into the screw threaded opening of the vacuum feed device. This extension 12 is provided on its interior with a needle valve seat 13 and a screw threaded opening at its upper portion above the valve seat. The valve proper comprises a valve stem 14 having at its lower end a needle valve 15 and a screw threaded portion 16, this screw threaded portion being designed to enter the screw threaded portion 12 and the needle valve to seat against the needle valve seat 13. When the valve is screwed down tight the passage way through the bottom of the funnel is partly closed by the screw threaded portion of the valve stem and is tightly sealed by the needle valve.

The cover for the funnel comprises a body portion 17 having at its edges the flanges 18 and 19 to overlap the inner and outer surfaces of the upper edge of the funnel to form a dust and water tight joint. In the center of the cover 17 is a round opening through which the valve stem is projected. Above the cover I have provided a flexible washer 20 surrounding the valve stem, and above it is a metal collar 21 slidingly mounted on the valve stem. This collar 21 is preferably attached to a chain 22 which is also attached to a stationary support 23 to hold the valve stem and cover when it has been removed from the funnel. Above the collar 21 is a coil spring 24 surrounding the valve stem, with its upper end bearing against the handle 25 at the top of the valve stem and its lower end bearing against the collar 21. A cotter pin 26 is provided in the valve stem below the cover 17.

In practical operation there are numerous advantages obtained by the use of the invention heretofore described. When the device is installed upon an automobile, the funnel is securely sealed from the interior of the vacuum feed device by the needle valve and screw so that it can not in any way interfere with the ordinary use of

the vacuum feed device. Furthermore, the spring exerts a yielding pressure on the valve stem preventing it from being accidentally turned and loosened by the vibration of the automobile. During this time also the entrance of either water or dust to the interior of the funnel is prevented because the spring tends to firmly hold the cover against the funnel, thus forming a dust and water tight joint at this point, and in addition thereto the spring acting upon the collar 21 flattens out the flexible washer 20 and causes it to firmly engage the valve stem and the cover in such a manner as to prevent the entrance of water or dust at this point.

When the device is to be used as a funnel the operator simply unscrews the valve stem by grasping the handle at the top thereof and turns it a few revolutions until the screw thread at its lower end is disengaged from the screw at the opening, whereupon the spring elevates the valve stem a short distance so the operator can readily determine that the valve stem has been freed from the funnel device and then the operator raises the valve stem and lays it to one side where it is held by its chain. The cotter pin by engaging the cover raises the cover with the valve stem and thus all of these loose or detachable parts are held together in such a manner that they can not be lost or misplaced. And furthermore, when filling the funnel the valve stem and cap are all removed to positions where they can not in any way interfere with the operation of filling.

I claim as my invention:

A funnel device of the class described comprising a funnel body having a screw threaded extension at its lower end provided with a central opening and having at its upper portion an internal screw thread, and at its lower portion a needle valve seat, a cover for the funnel shaped to form a water and dust tight joint with the top of the funnel and provided with a central opening, a valve stem extended through the central opening of the cover and having at its lower portion a screw thread and a needle valve, a flexible washer surrounding the upper portion of the valve stem above the cover, a coil spring surrounding the upper portion of the valve stem and bearing against said flexible washer and also against the valve stem handle, and a pin in the valve stem spaced below the cover, for the purposes stated.

Des Moines, Iowa, August 11, 1921.

WILLIAM M. LE GORE.