Jan. 2, 1923.

1,440,844.

O. A. SMITH.

PRIMING CUP.

FILED MAR. 1, 1921.

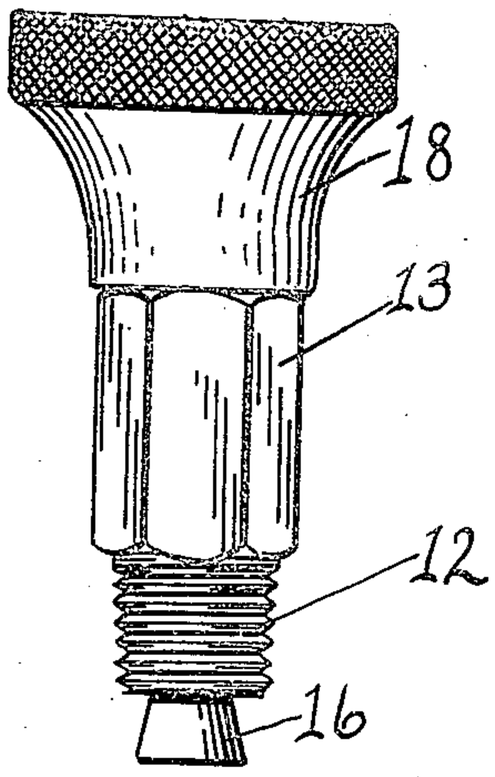

Fig. 1.

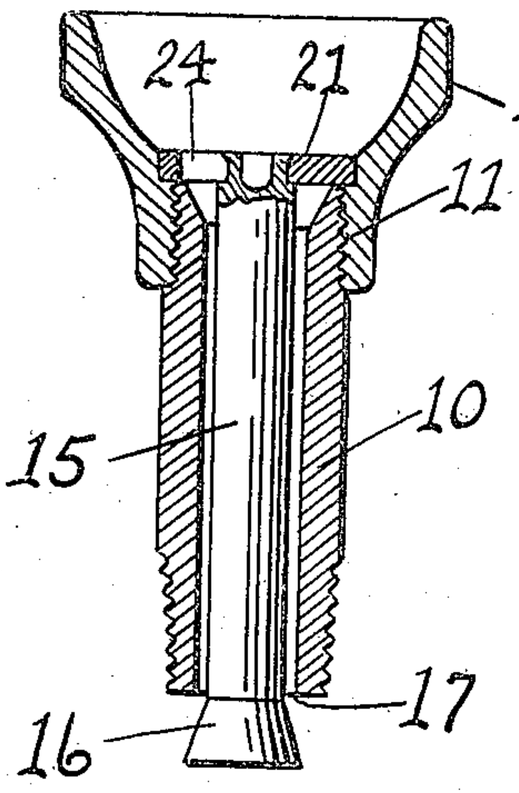

Fig. 2.

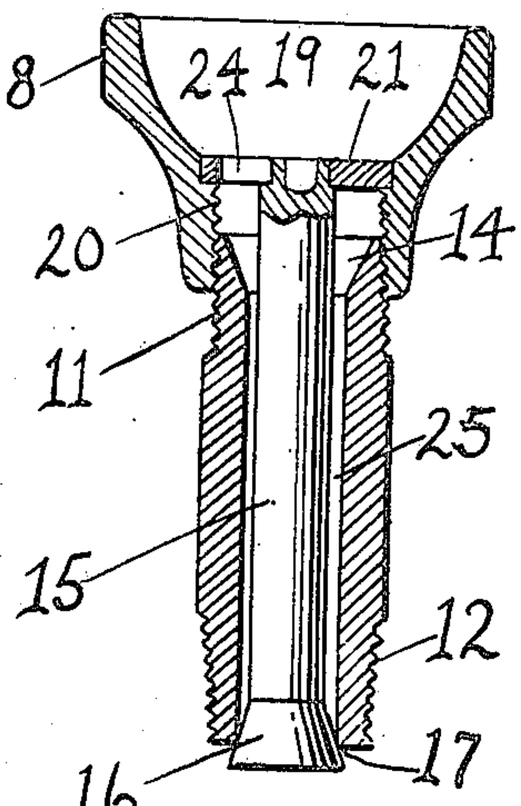

Fig. 3.

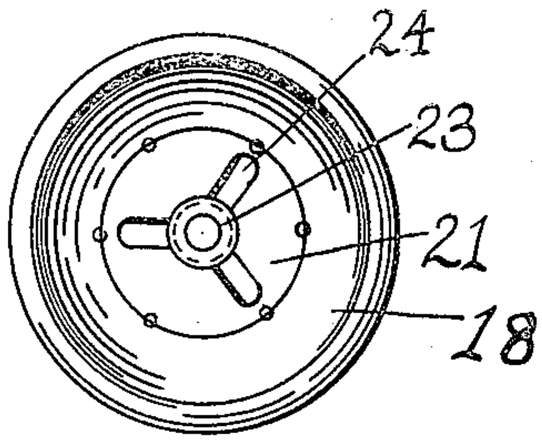

Fig. 4.

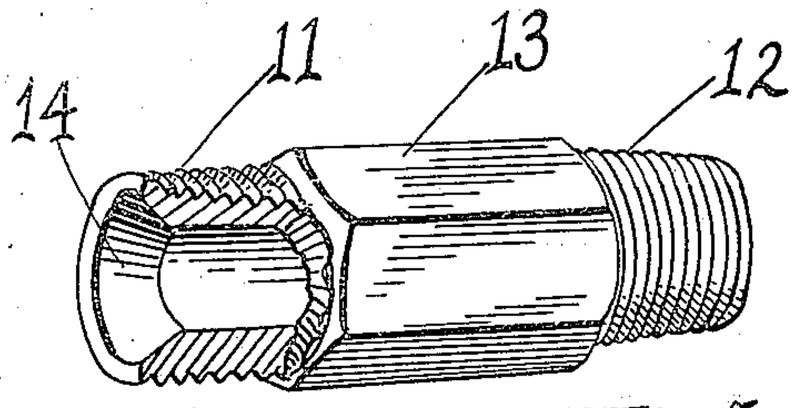

Fig. 5.

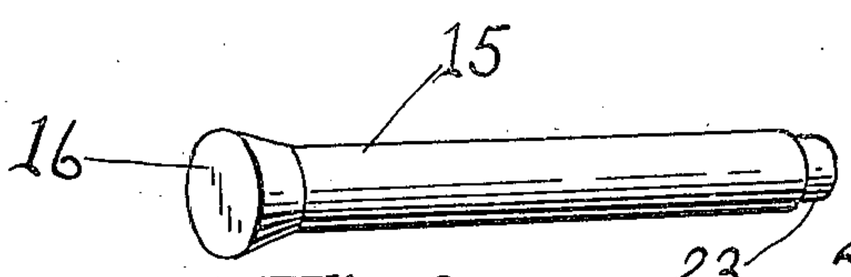

Fig. 6.

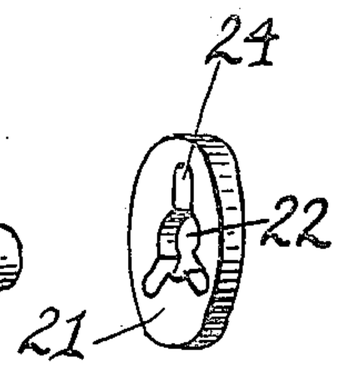

Fig. 7.

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Patented Jan. 2, 1923. 1,440,844

UNITED STATES PATENT OFFICE.

OSCAR A. SMITH, OF EAST CLEVELAND, OHIO.

PRIMING CUP.

Application filed March 1, 1921. Serial No. 448,819.

To all whom it may concern:

Be it known that I, OSCAR A. SMITH, a citizen of the United States, residing at East Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Priming Cups, of which the following is a specification.

This invention relates to priming cups for internal combustion engines, an object thereof being to provide an improved test or priming cup for admitting or introducing a priming fluid such as gasoline into the cylinder of the engine and which cup can be manufactured readily at a minimum of expense, and will be effective and durable in use.

A further object of this invention is to provide a priming cup having a valve openable in the direction of flow of the fluid and controlled in its operation through the medium of a cup or fluid receiving chamber, the latter being carried by the body portion of the device, and adapted to be shifted relatively thereto for opening or closing the valve.

A further object of this invention is to provide a priming device wherein the fluid receiving chamber or cup portion is threaded exteriorly to the body of the device and shiftable, by rotating the same in successive directions, to open and close the valve.

A further object of this invention is to provide a priming device comprising an axially bored body member terminating in a valve seat, and a valve cooperating therewith and having its stem connected or secured to the fluid receiving chamber or cup interiorly thereof.

Other objects of this invention will appear in the following description thereof, reference being had to the accompanying drawing forming a part of this specification wherein like reference characters indicate corresponding parts in the several views and wherein Fig. 1 is a side elevation of my improved priming cup with the valve open; Fig. 2 is a sectional view thereof; Fig. 3 is a sectional view similar to Fig. 2 with the valve closed; Fig. 4 is a top plan view of this priming cup; Fig. 5 is a perspective view thereof, parts being removed; Fig. 6 is a perspective view of the valve and stem; and Fig. 7 is a perspective view of the valve cup member.

In its preferred form herein shown and described my improved test or priming cup, although particularly constructed for use with internal combustion engines, is of course adapted to be used for various other purposes, and comprises a body member 10, drilled to form an axial passage-way therethrough, and provided at its lower end with straight right-hand threads 12 to permit the device to be attached to the cylinder head. At its upper end the body member 10 is provided exteriorly thereof preferably with straight left-hand threads 11, the central portion 13 of the body being angularly formed for the reception of a wrench. The body member 10 adjacent to its upper end is chambered or counter-bored, as at 14, to permit greater freedom for the flow of the gasoline or other fluid to the valve.

The valve member in this priming device comprises the usual elongated stem 15 terminating at one end in a valve 16, which in the present embodiment is shown as a tapered valve adapted to cooperate with the valve seat 17 formed at the lower end of the body member 10. In the present instance the valve seat 17 is shown as having straight walls, but it will be understood that the same may be provided with tapered walls or faces conforming substantially to the taper of the valve 16, such for instance as illustrated in my Patent No. 1,153,457, dated Sept. 14, 1915.

My improved priming device is provided with a fluid receiving chamber or cup-shaped member 18 formed interiorly thereof with the chamber 19 for the reception of the priming fluid. The cup 18 has interior threads 20 cooperating with the exterior threads 11 of the body member 10, and is provided intermediate its depth with a bushing 21, spun or otherwise secured therein. This bushing 21 is adapted to form a base for the priming cup and the portion 23 of the stem 15 is fastened or secured in any suitable way to the center 22 of the bushing. In order to permit the passage of the

fluid from the chamber 19, the base 21 is perforated or provided with suitable openings 24. In the present instance the body member 10 is spaced as at 25 from the stem 15 thereby to form a passage for the flow of the fluid to the valve, although it is to be understood that any other suitable passage-way may be provided for the flow of the fluid from the cup to the valve.

Thus it will be seen that I have provided a priming device wherein the fluid receiving chamber is shiftable exteriorly of the body member, and by virtue of the fact that the valve is connected to the chamber interiorly thereof, the same will be opened and closed upon shifting the chamber in successive directions relatively to the body member. Furthermore the cup or chamber is shiftable to open the valve in the direction of flow of the fluid, and hence because of the fact that the valve opens downwardly, the possibility of carbon or soot clogging the parts or interfering with their operation is eliminated.

Although I have described my invention in its preferred form it is to be understood that I do not limit myself to the construction herein shown and described except in so far as defined in the claims and embraced within the scope thereof.

I claim as my invention:

1. A priming cup for internal combustion engines comprising a body member having a passage therethrough, a valve communicating with said passage, and a fluid receiving chamber shiftable upon the outside of said body member for opening and closing said valve.

2. A priming cup for internal combustion engines comprising a body member having a passage therethrough, a valve communicating with said passage, and a fluid receiving chamber threaded upon the outside of said body member and shiftable in the direction of flow of the fluid thereby to shift said valve to open the same.

3. A priming cup for internal combustion engines comprising a body member having a passage therethrough, a stem provided with a valve at one end and extending through said passage, and a fluid-receiving member threaded exteriorly to said body member and shiftable in the direction of flow of the fluid thereby to open said valve.

4. A priming cup for internal combustion engines comprising a body member having a passage, a valve cooperating therewith, and a fluid chamber mounted upon the outside of said body and shiftable thereover for opening the valve in the direction of flow of the fluid.

5. A priming cup for internal combustion engines comprising a body member having a passage therethrough, and terminating at one end in a valve seat, a valve communicating with said passage, and a fluid chamber threaded exteriorly to said body member and shiftable relatively to said body member for opening and closing said valve.

6. As an article of manufacture, a priming device comprising in combination a body member, a valve stem surrounded by said body member and having a valve located at the lower end of the body member, a priming cup secured to the stem and shiftable relatively to said body to open the valve in the direction of flow of the fluid.

7. A priming device comprising a valve and its stem, a body surrounding said stem, a cup secured to the stem interiorly thereof and shiftable upon the outside of the body to open said valve in the direction of flow of the fluid.

8. A priming device comprising a valve and its stem, a body surrounding said stem, a cup secured to the stem, and shiftable outside of said body to open the valve in the direction of flow of the fluid, said body and stem having a passage-way communicating with said cup.

9. A priming device comprising a valve and its stem, a body surrounding said stem, a cup having a perforated base and secured to the stem, said cup being shiftable upon the exterior of said body to open and close said valve.

10. A priming device comprising a valve and its stem, a body surrounding said stem, a cup having a base located intermediate its depth and secured to the stem, said cup being threaded to the outside of the body and shiftable relatively thereto to open said valve in the direction of flow of the fluid.

11. A priming device comprising a valve and its stem, a body surrounding said stem, a fluid receiving chamber having a base located intermediate its depth and provided with openings therethrough, said stem being secured to the base interiorly of said cup, said cup being shiftable upon the exterior of the body to open and close said valve, said body and stem having a passage-way therebetween communicating with said chamber.

12. As an article of manufacture, a priming device comprising in combination a body member, a shiftable fluid receiving chamber, and a valve shiftable with said fluid receiving member and cooperating with the extreme lower end of the body member.

13. As an article of manufacture the combination of a body, a valve located at and cooperating with one extreme end of said body, and a chambered member located at the opposite extreme end of the body and shiftable relatively thereto and connected to said valve whereby the latter is shift-

able with said member to open and close the valve.

14. As an article of manufacture, the combination of a body, a valve located outside one end of the body, and a chambered member adapted to be located outside the opposite end thereof and shiftable relatively thereto and connected to said valve whereby the latter is shiftable with said member to open the valve in the direction of flow of the fluid.

Signed at Cleveland, Ohio, this 26th day of February, 1921.

OSCAR A. SMITH.