

C. STEWART.
LUBRICATING CUP.
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899,352.

Patented Sept. 22, 1908.

Fig. 1.

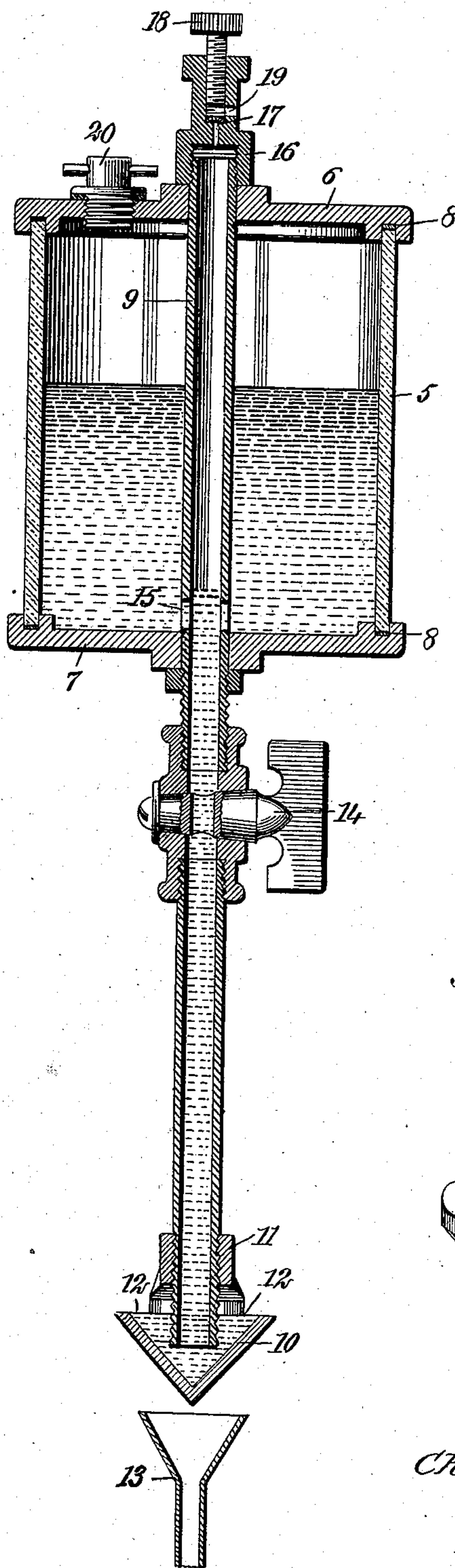
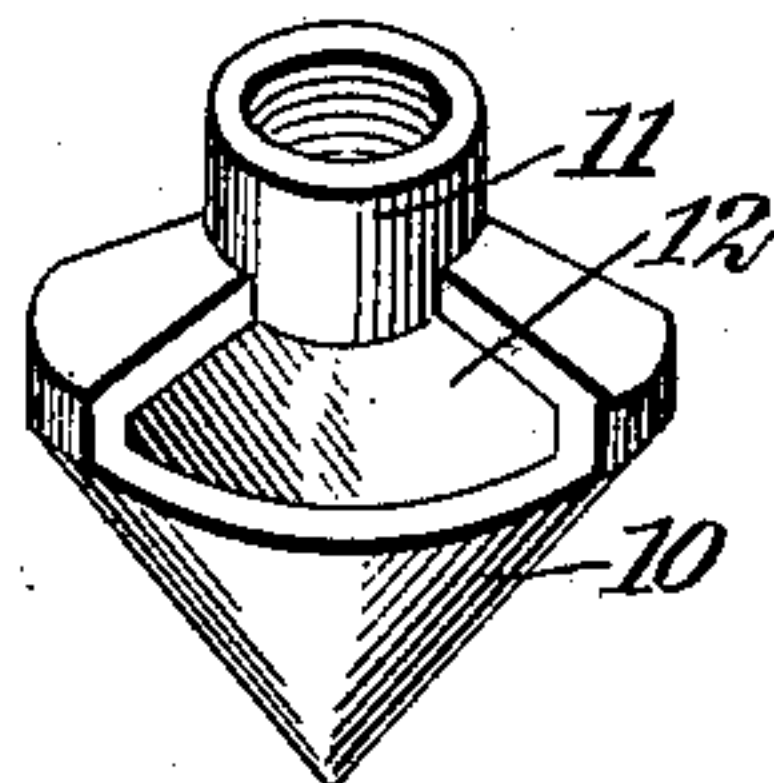


Fig. 2.



WITNESSES

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LUBRICATING-CUP.

No. 899,352.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed October 22, 1907. Serial No. 398,618.

To all whom it may concern:

Be it known that I, CHARLES STEWART, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Lubricating-Cup, of which the following is a full, clear, and exact description.

This invention is an improvement in oil or other fluid lubricating cups, and has for an object primarily to provide a cup of air-tight construction having an outlet below the normal liquid level and an air inlet, in connection with means for controlling the admission of air at atmospheric pressure through the inlet into the cup for governing the flow of the lubricant through said outlet.

The invention further resides in certain special features of construction and combination of parts as will be more specifically described and hereinafter claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a central vertical section of my improved lubricating cup complete; and Fig. 2 is a perspective view of a conical body or member carried by the cup's outlet.

The construction of the cup embodies the usual glass or other transparent cylindrical body 5, which is secured between the top and bottom heads 6 and 7, the latter being respectively grooved on their under and top faces for the reception of said body, the said grooves being also provided with the usual gaskets 8, in order to form liquid and air-tight connections when the heads of the cup are drawn together.

Passing through the heads 6 and providing an outlet for the cup, is a tube 9, centrally and longitudinally arranged, and which extends a substantial distance below the lower head 7 and carries threaded to its extremity a conical member or receptacle 10. This receptacle, as is best shown in the detail perspective view, Fig. 2, has an internally-threaded neck 11, for attaching it to the tube, and is cut out at opposite sides and at the top to provide openings 12, through which the lubricant flows and runs down at the outside of the conical receptacle and drips centrally from the point thereof. This drip may be caught in the enlarged end of a lubricating pipe 13, arranged therebelow and leading to one or more points of the engine

or machinery in connection with which the cup is used.

The length of the tube 9, intermediate the drip receptacle 10 and the oil cup, is preferably provided with a cock 14, and at the bottom of the cup the said tube is provided with openings 15. The top of the tube 9 is closed by an air admission valve 16, which is constructed with a vertical aperture, above which is placed loose silk or cotton 17, in a position to be clamped by an adjusting screw 18, the latter being threaded into the upper end of the valve casing and further operating to open and close an air admission opening 19.

I have found in practice that by providing the air inlet with the silk or cotton 17, the flow of the oil or other liquid lubricant in the cup may be adjusted with minuteness.

The top head 6 of the cup is provided with the usual filling plug 20, which, when forced to its seat and the screw 18 turned to cut off the admission of air into the cup, makes the cup air-tight and thus prevents the flow of the oil through the tube 9 to the conical receptacle 10; *i. e.*, the oil is held in suspension by the pressure of the atmosphere on the outlet.

On opening the valve 16 slightly, the air will pass through the opening 19 down through the aperture containing the silk or cotton 17, and at intervals bubble up through one of the openings 15 to the surface of the lubricant in the cup, thereby releasing a quantity of the oil from the cup, which passes through the outlet and drips from the receptacle 10.

It is thus seen that I have produced a sight feed oil cup, in which the flow of oil is controlled entirely by the admission of air under atmospheric pressure above the surface of the oil.

The invention may be obviously modified in various particulars, without departing from the nature thereof as defined in the claims annexed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An air-tight lubricating cup comprising a transparent body having heads, an outlet tube connecting said heads with the body and having an opening therein below the normal liquid level in the cup, for the discharge of the lubricant; a conical feeding member secured to the lower end of said tube, and means for controlling the admission of air

into the cup through said opening carried at the upper end of said tube.

2. A lubricating cup having a discharge tube, and a conical feed receptacle surrounding the lower extremity of the tube having openings at its top for the discharge of the lubricant.

3. A lubricating cup having a discharge tube, and a conical feed receptacle surrounding the lower extremity of the tube having openings at its top for the discharge of the lubricant, and provided with a neck threaded on the tube.

4. An air-tight lubricating cup having a valve for controlling the admission of air therinto, comprising a member having an air entrance opening and provided with an open passage leading to the cup, a compressible body pervious to air, arranged over the entrance end of the passage, and a screw for cutting off said opening and pressing the body over the open passage.

5. A lubricator having a sealed cup with a lubricant outlet from the bottom thereof, a valve for opening and closing the outlet, a cup inclosing the lower end of the outlet to seal the same from the atmosphere but permit the flow of lubricant, an air supply tube

passing from the top of the cup downward in the same and opening at a point near the bottom thereof, a compressible body pervious to air arranged in the inlet of the air pipe and means for compressing said body at will, whereby minutely to regulate the flow of air through it and consequently the amount of air supplied to the cup.

6. A lubricator having a sealed cup with a lubricant outlet from the bottom thereof, a valve for opening and closing the outlet, an air supply tube passing from the top of the cup downward in the same and opening at a point near the bottom thereof, a compressible body pervious to air arranged in the inlet of the air pipe and means for compressing said body at will, whereby minutely to regulate the flow of air through it and consequently the amount of air supplied to the cup.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES STEWART.

Witnesses:

JOSEPH WATKINSON,
ALAN S. JOHNSTONE.