

(No Model.)

A. M. WAY.
LUBRICATOR.

No. 597,157.

Patented Jan. 11, 1898.

Fig. 1

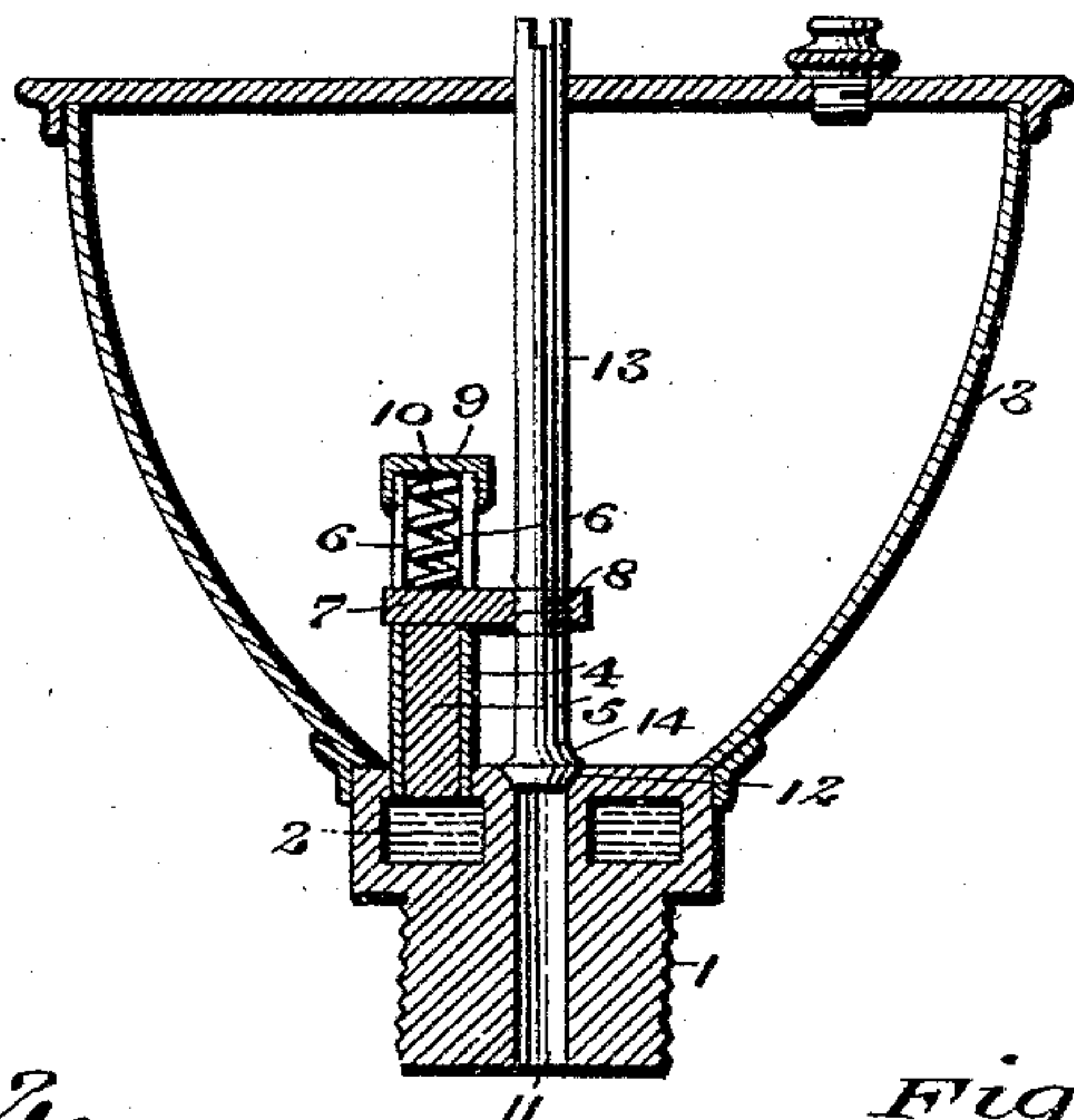


Fig. 2.

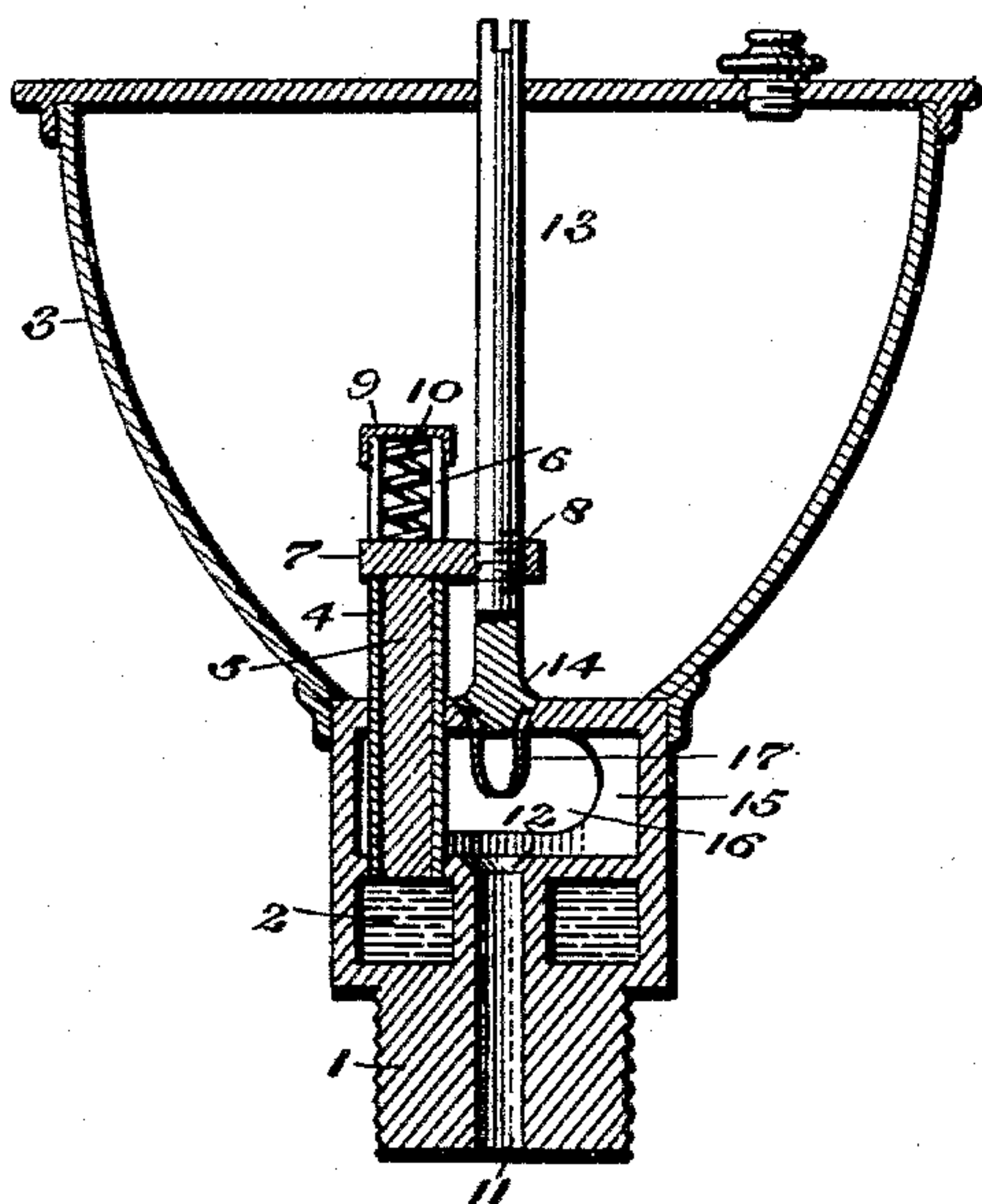
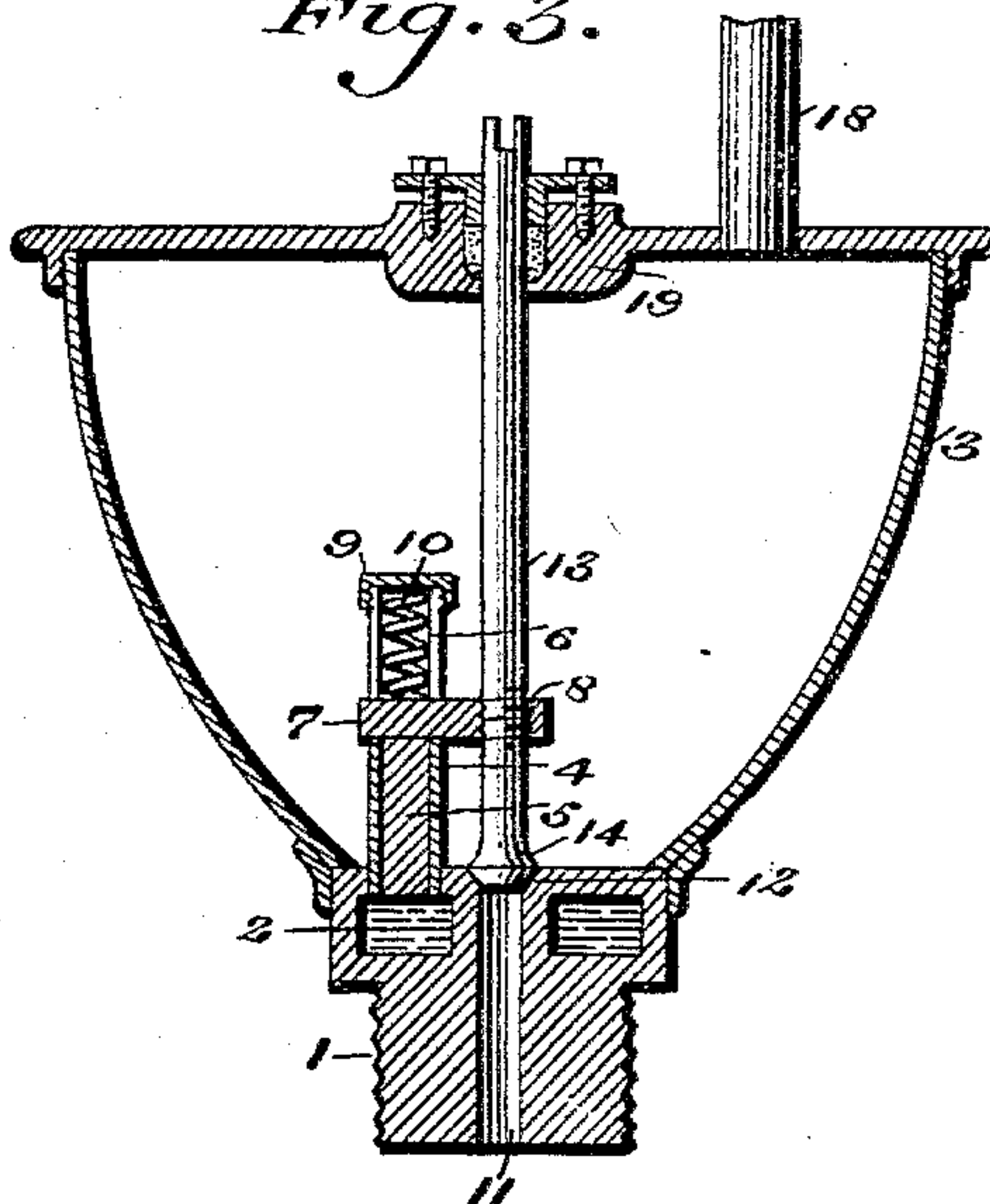


Fig. 3.



WITNESSES:

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LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 597,157, dated January 11, 1898.

Application filed August 27, 1897. Serial No. 649,779. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. WAY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a novel construction in a lubricator-cup, and has for its object to provide means for automatically controlling the supply of the lubricant.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a central vertical section of a lubricator constructed in accordance with this invention. Figs. 2 and 3 are central vertical sections of two modifications embodying this invention.

Referring now to said drawings, 1 indicates the base or stem of the cup, by means of which it is secured to the part to be lubricated, and it is provided with a chamber 2 at its upper end and with the cup 3, that is closed at its upper end. Situated within the cup and leading upwardly from the chamber 2 is an upright cylinder or tube 4, within which is situated a piston 5. The upper end portion of this cylinder 4 is provided with longitudinal slots 6 to receive the ends of a finger 7, that is secured to the piston 5, and which projects toward the center of the cup, where it is provided with a screw-threaded opening 8 to receive the valve stem or rod 13. The upper end of the cylinder 4 is closed by a cap 9, and between the cap and the upper end of the piston is a spring 10, that serves to normally keep the piston at the lower end of its movement. Extending through the stem 1 is an opening 11, through which the lubricant passes to the part to be oiled, and the upper end of this opening forms a valve-seat 12.

Referring now specifically to Fig. 1, an upright rod 13 is provided at its lower end with a valve 14, which is seated upon the valve-

seat 12, while the upper end of this rod projects through the top end of the cup and is conveniently notched, so that it may be turned. Near its lower end the rod 13 is screw-threaded, whereby it has a screw-threaded connection with the finger 7 to permit the adjustment of said rod or stem 13.

In operation the chamber 2 is filled with mercury or other sensitive fluid that expands and contracts materially under variations in temperature. The lubricant is placed within the cup 3, and the rod 13 is rotated and the position of the valve 14 adjusted so that the amount of oil passing into the passage 11 is sufficient to keep the bearing oiled under normal conditions. Should the bearing run dry and begin to heat, the mercury within the chamber 2 expands and raises the piston 5, which consequently raises the rod 13 and allows a greater supply of oil to pass into the opening 11. As the bearing cools off the valve returns to its normal condition, as is obvious.

In the modification shown in Fig. 2 the invention is illustrated in connection with a feed-cup, the parts being the same, with the exception that above the chamber 2 is a compartment 15, in the side of which the opening 16 is situated, while the wall of the opening or valve-seat in the top of compartment 15 is provided with a downwardly-projecting nozzle or spout 17, which enters said compartment.

In the modifications shown in Fig. 3 the parts are arranged to act in connection with the pressure-feed—that is to say, the oil-cup communicates by means of a pipe 18 with a suitable source supplying the lubricant under pressure, while the opening through the top of the oil-cup, through which the rod 13 passes, is provided with a stuffing-box 19. Owing to the connection of the chamber 3 with a pressure-feed, the device can be used in also a horizontal or an inverted position.

Having thus described the invention, what is claimed as new is—

1. A lubricator consisting of a cup, a stem with a chamber therein adapted to contain a thermostatic fluid, a valve for the discharge-opening of said cup, a tube in communication with said chamber and a piston located in said tube and connected with said valve.

2. A lubricator comprising a stem having

a chamber, a cup, an opening through said stem having an upper end formed as a valve-seat, a tube communicating with said chamber and provided with a piston, a thermostatic fluid within said chamber, a finger connected with said piston, and a rod connected with said piston having one end formed as a valve to enter said valve-seat.

3. A lubricator comprising a stem having a chamber, a cup, an opening through said stem having an upper end formed as a valve-seat, a tube communicating with said chamber and provided with a piston, a thermostatic fluid within said chamber, a finger connected with said piston, and a rod adjustably connected with said piston having one end formed as a valve to enter said valve-seat.

4. A lubricator comprising a stem having a chamber filled with a thermostatic fluid, a tube communicating with said chamber and having longitudinal slots at its upper end, a piston situated within said tube having a finger extending through said slot, a cap upon

the upper end of said cylinder, a spring between said cap and said piston, a lubricator-cup mounted upon said stem, an opening through said stem having its inner end formed as a valve-seat, and a rod having a valve at its lower end and extending through the upper end of the cup, said rod having a screw-threaded connection with said finger.

5. A lubricator consisting of a cup, a stem having a discharge-opening therein for said cup, and a chamber, a tube in said cup communicating with said chamber, a spring-controlled piston in said tube, and a valve in said cup for said discharge-opening, said valve being connected with said piston and said chamber containing a thermostat.

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

ALBERT M. WAY.

Witnesses:

ANNA K. WAY,
GEORGE W. BEAN.