

No. 863,707.

PATENTED AUG. 20, 1907.

J. FARLEY.
AUTOMATIC LUBRICATOR.
APPLICATION FILED APR. 6, 1904.

Fig. 1.

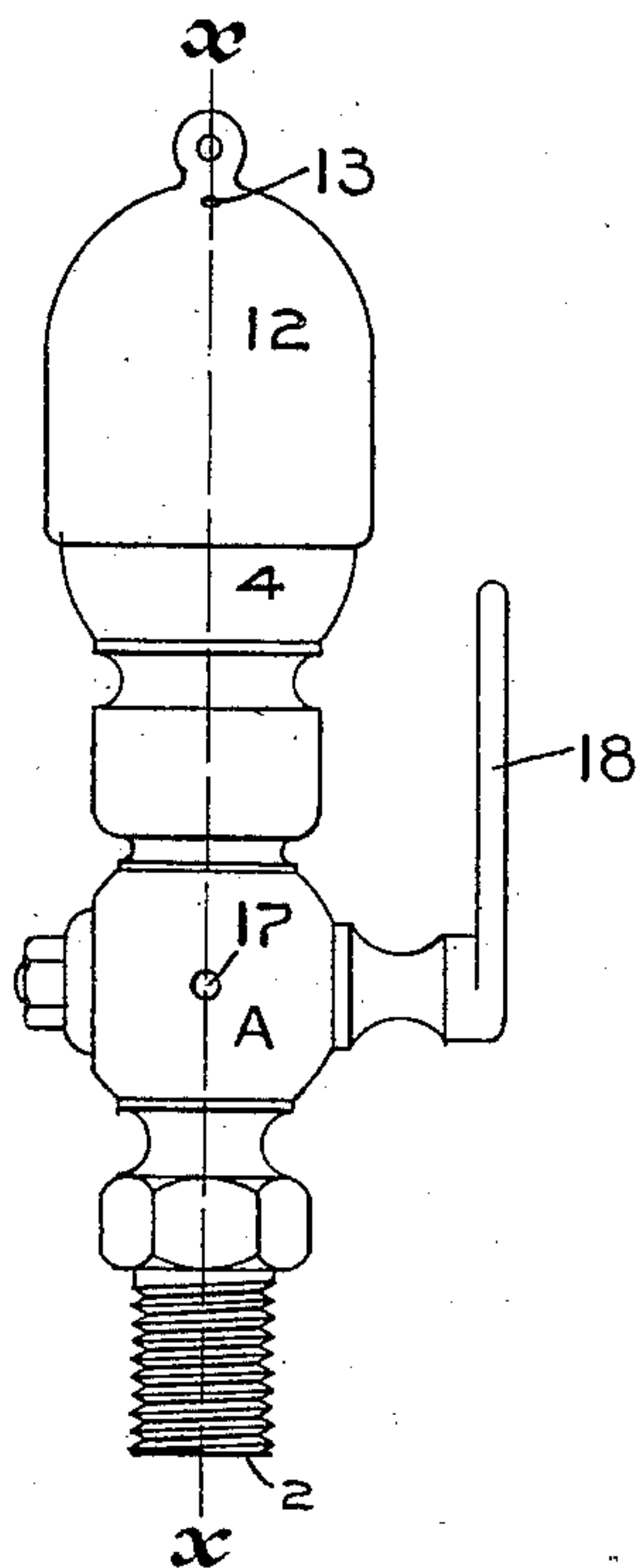


Fig. 2.

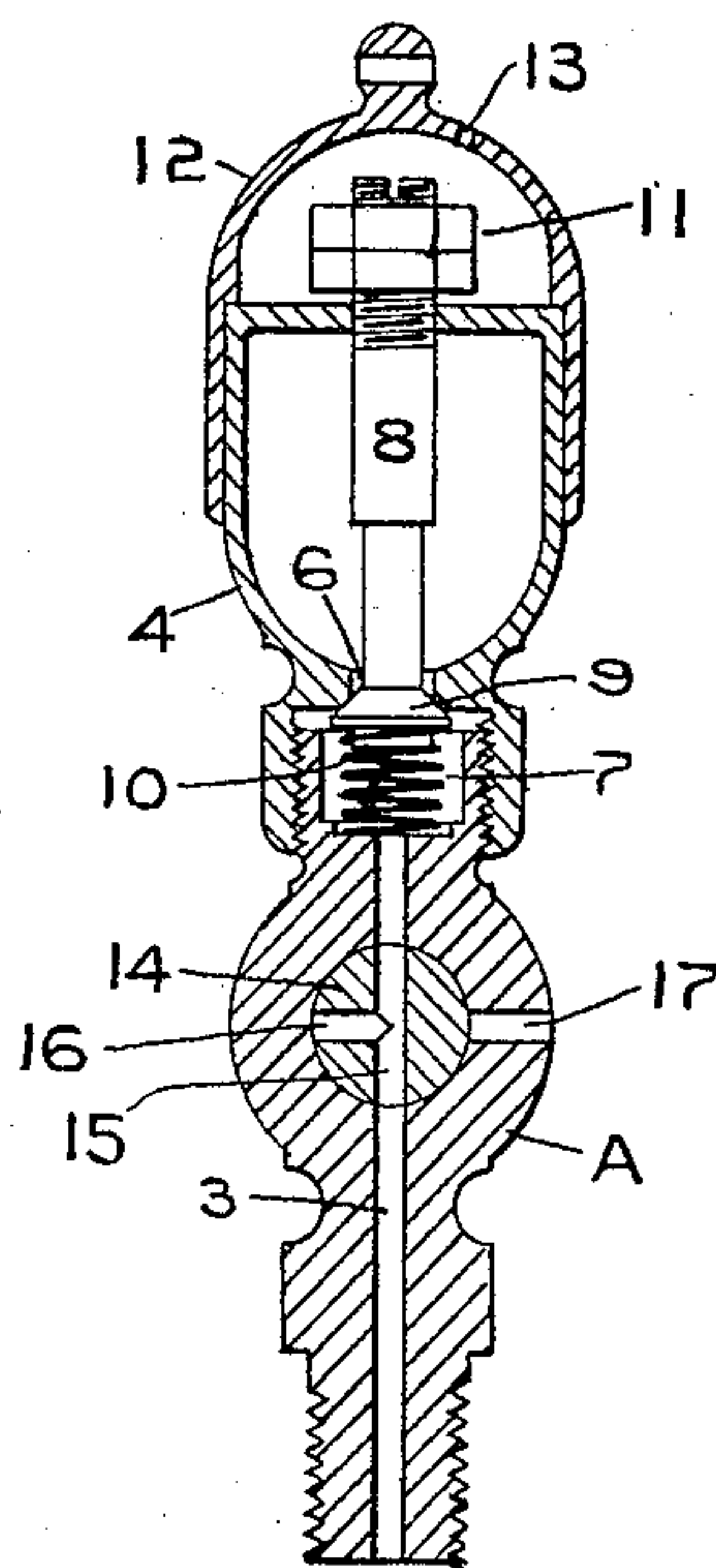
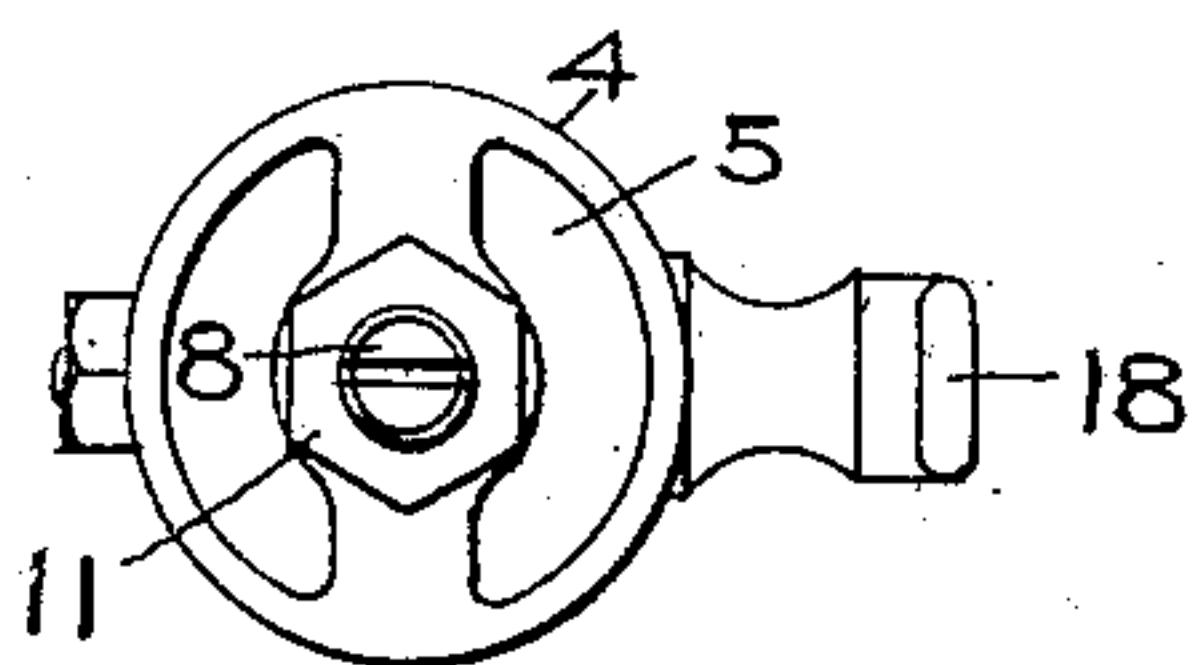


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES FARLEY, OF WAUKESHA, WISCONSIN.

AUTOMATIC LUBRICATOR.

No. 863,707.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed April 6, 1904. Serial No. 201,790.

To all whom it may concern:

Be it known that I, JAMES FARLEY, a citizen of the United States, residing at Waukesha, in the county of Waukesha and State of Wisconsin, have invented certain new and useful Improvements in Automatic Lubricators, of which the following is a specification.

My invention relates to improvements in automatic lubricators for the air cylinders of air pumps, its object being particularly to provide an improved form of automatic lubricator which will be actuated without waste of air from the cylinder, and, as a part of the lubricator, means for determining the existence of leaks through the air pump.

To this end my invention consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a side elevation of my improved lubricator; Fig. 2 is a section on line $x-x$ of Fig. 1, and Fig. 3 is a top view of the lubricator with the cover removed.

In the drawings A represents the lubricator casing having its lower end 2 threaded for insertion into the air cylinder of an ordinary air pump. Extending centrally through the casing A is an outlet port or conduit 3. Threaded upon the upper end of the casing A is an oil cup 4, formed in its top with openings 5 to permit the filling of the cup and at its bottom with a port 6 opening into the chambered upper end 7 of the outlet conduit 3. Extending slidably through the oil cup is a stem 8 formed upon its lower end with a valve 9 which is normally held closing the port 6 by means of a coil spring 10. Threaded upon the exterior upper end of the stem 8 are nuts 11 which, in operation, strike the top of the oil cup and limit the movement of the valve 9.

12 represents a closing cap adapted to fit over the oil cup, and provided with an inlet air opening 13.

Arranged in the oil conduit 3 is a three-way valve 14 provided with a diametric opening 15 constituting part of the oil conduit 3 when the valve is in the position shown in Fig. 2, and with a branch opening 16 adapted to be turned into registering position with an outlet opening 17 in the lubricator casing, as hereinafter described. The valve is provided with a suitable actuating handle 18.

In use, the lubricator being connected with the air cylinder, the cup will be filled with lubricant and the cover placed in position, as shown in Figs. 1 and 2. As a partial vacuum is created in the cylinder in the operation of the pump, the atmospheric pressure above the oil cup will open the valve 9, allowing oil to pass around said valve and through the conduit 3 to the cylinder, the valve being returned to its seat by the spring 10. By means of the spring 10 the valve is returned to its seat without the assistance of the back pressure of air from the cylinder through the oil conduit 3, and thus escape of air around the valve 9 is prevented. By adjusting the nuts 11, movement of the valve 9 will be regulated. When the pump is not running the three-way valve may be turned to register with the outlet port 17 and the pump thus tested for leaks, as any leakage of air through the pump will result in the escape of the leaking air through the oil conduit 3 and outlet port 17.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a device of the class described, a lubricant containing cup having a discharge passage, a spring closed valve for said passage, a main casing having a feed passage for the lubricant and provided with an air port, and a three way valve mounted in the casing and controlling the feed passage and the air port.

2. In a device of the class specified, a casing having a main feed passage and provided with a lateral port in communication with the outer air, a three way valve controlling the passage and the port, a lubricant cup arranged above the casing and having a discharge passage that communicates with the main feed passage, and a check valve adapted to prevent the discharge of the lubricant from the cup, said valve being arranged to be opened by suction.

3. In combination a lubricator casing provided with a longitudinal conduit and a connected branch conduit, an oil cup secured to one end of said casing and communicating with said conduit, a pair of valves arranged in said conduit, one at the inlet end thereof, and one in communication with the branch conduit, and a closing spring for said inlet valve.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES FARLEY.

Witnesses:

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