

No. 680,570.

Patented Aug. 13, 1901.

T. DIXON.
LUBRICATOR AND HEATER.

(Application filed Jan. 19, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

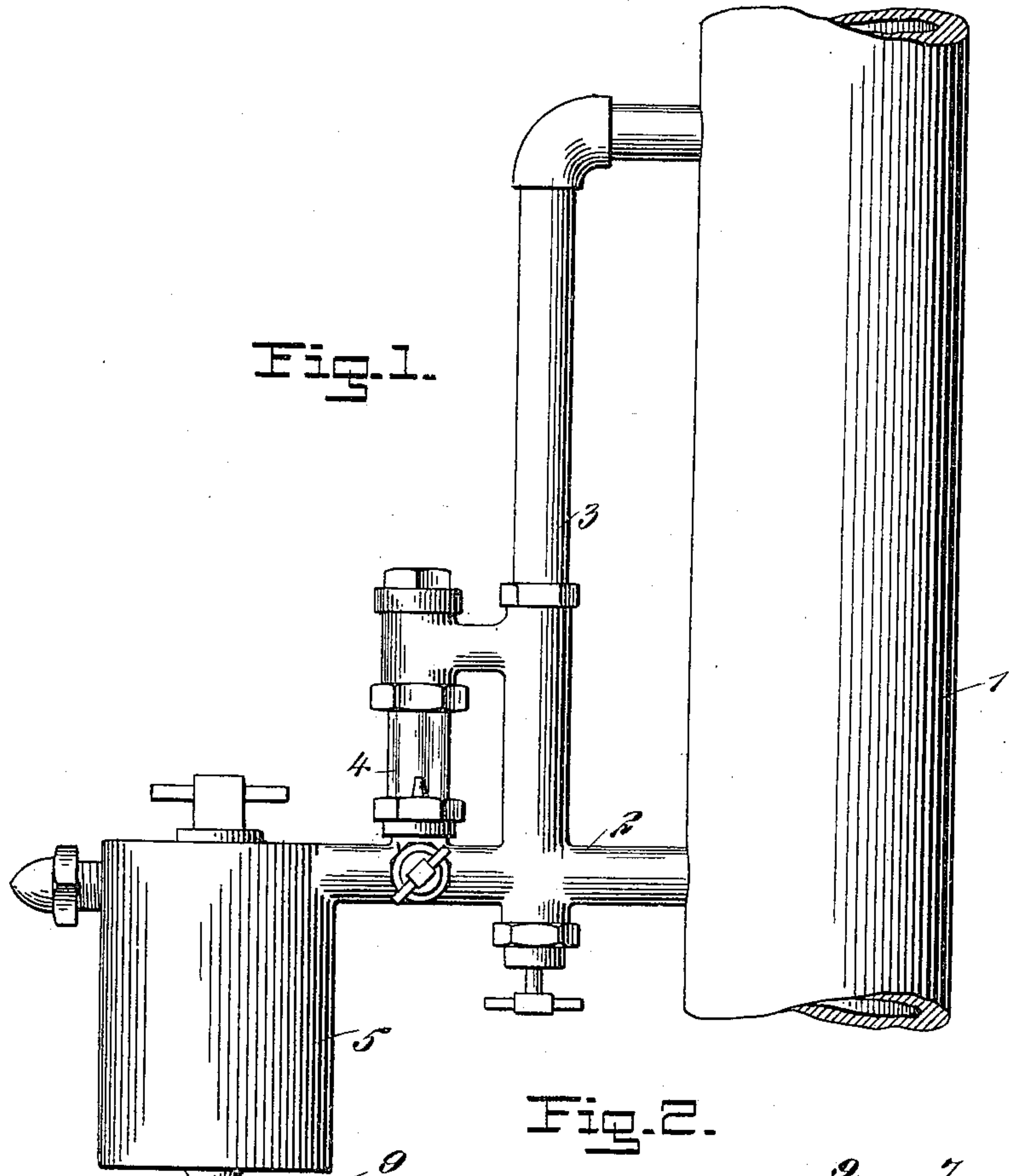
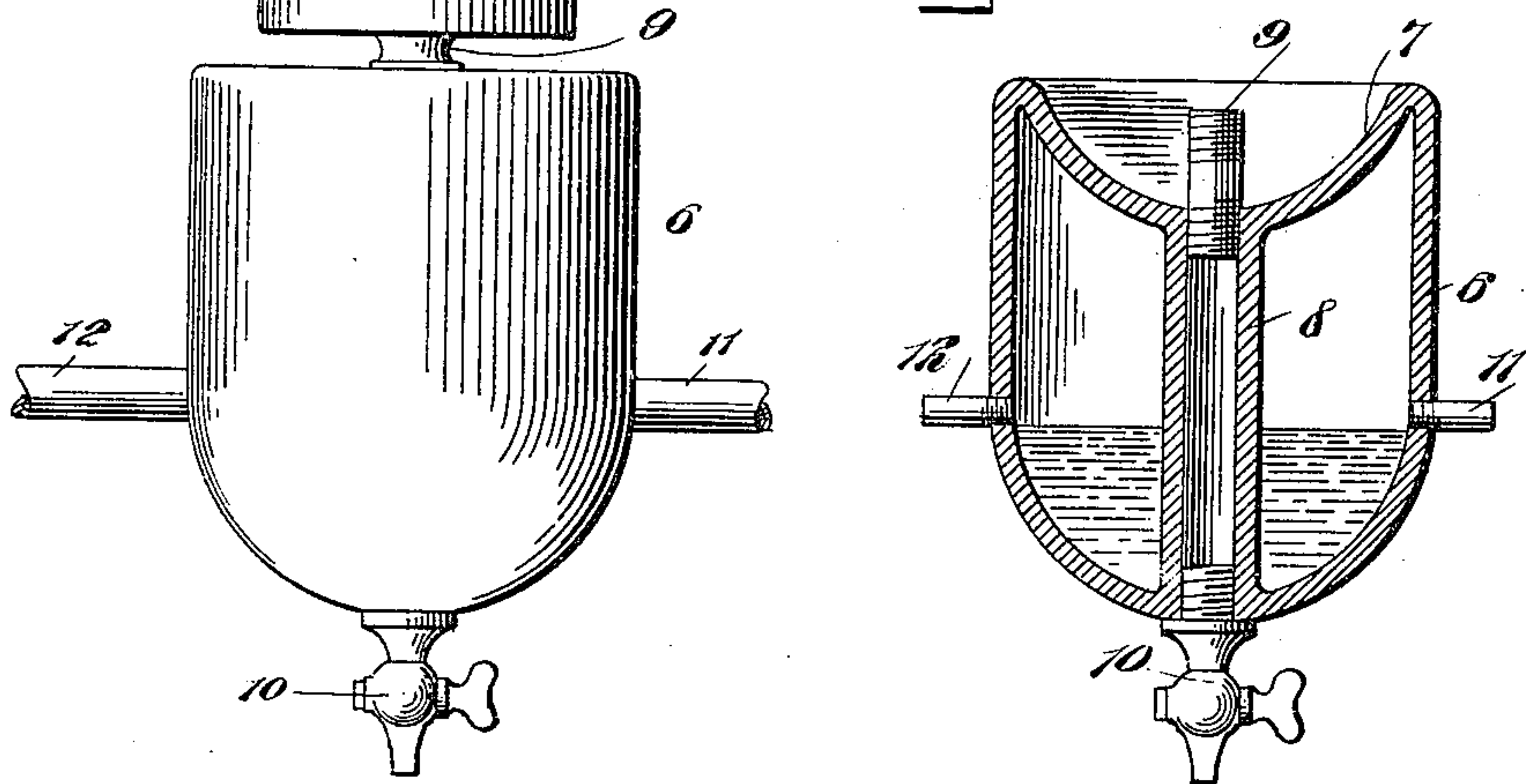


Fig. 2.



WITNESSES:

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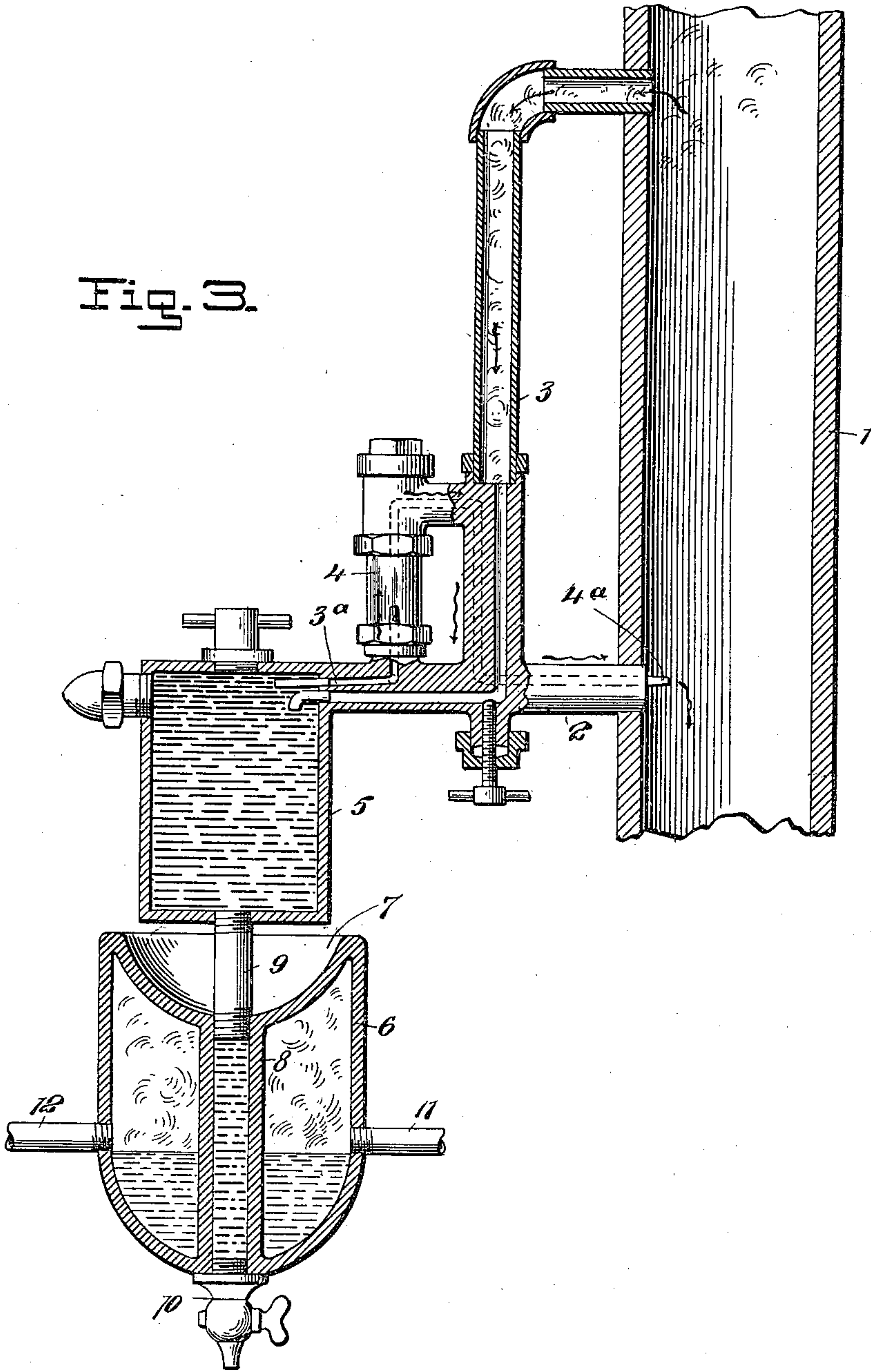
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2 Sheets—Sheet 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS DIXON, OF McKEESPORT, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JACOB H. ALBIG AND JOHN W. ALBIG, OF SAME PLACE.

LUBRICATOR AND HEATER.

SPECIFICATION forming part of Letters Patent No. 680,570, dated August 13, 1901.

Application filed January 19, 1901. Serial No. 43,891. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DIXON, a citizen of the United States, and a resident of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Lubricator and Heater, of which the following is a full, clear, and exact description.

This invention relates to improvements in lubricating devices for valve or piston mechanism of steam-engines; and a main object is to provide in connection with the lubricator a simple device for keeping the lubricant warm or in a flowing state during cold weather.

I will describe a lubricator and heater embodying my invention and then point out the novel features in the appended claims.

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 all the figures.

Figure 1 is a side elevation of a lubricator and heater embodying my invention. Fig. 2 is a vertical section of the heater, and Fig. 3 is a sectional view of the device, clearly illustrating the path of the oil and steam.

Referring to the drawings, 1 designates a steam-pipe with which circulating-tubes 2 and 3 connect, and also connecting with these circulating-tubes 2 and 3 is a glass sight-tube 4 of the usual construction and within which is arranged the usual oil-discharge nipple. This sight-tube 4 communicates with the upper portion of the oil-cup 5. This oil-cup 5 is arranged above the heater, which consists of a closed cylinder 6, having a concaved top wall 7. This concaved top wall 7 is somewhat larger in diameter than the oil-cup 5, and by this shape it will deflect the air that strikes its surface and becomes heated against the exterior of the oil-cup. A tube 8 extends vertically through the center of the heater and communicates with the interior of the oil-cup through a pipe 9. This tube 8 forms a heating-chamber for oil, as will be hereinafter described. The lower portion of this tube 8 is provided with a valve 10, through which oil may be drawn off when desired. The heater has a steam-inlet pipe 11 and an outlet-pipe 12.

In operation a portion of the oil from the cup 5 will pass into the tube 8. Then as steam is admitted through the pipe 11 the said tube 8 will be heated, and consequently the oil therein will be heated, and the heat from this oil will be transmitted to that contained in the cup, so as to keep the oil in said cup in a liquid condition. This will be materially aided by the heat deflected from the concaved top 7. The oil will pass in the usual manner through port 3^a, the sight-tube 4, and into the steam-pipe through the outlet 4^a.

It will be noted that the inlet and outlet pipes 11 and 12 are situated somewhat above the bottom of the heater. This is a great factor in the saving of steam, as the steam condenses and fills the heater with water on a level with the outlet, and as this water will remain hot for a considerable length of time a comparatively small amount of steam will be sufficient to maintain the proper heat.

A device embodying my invention will be found very cheap to manufacture and has no parts liable to get out of order, and, further, it may be readily attached to any oil-cup or lubricator.

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

1. The combination with an oil-cup or lubricator, of a heater arranged below the same and having a central chamber communicating with the cup, the said heater consisting of a closed cylinder having a concaved top, substantially as specified.

2. The combination with an oil or lubricator cup, of a heater consisting of a closed cylinder, a tube extended through said cylinder and communicating with the interior of the cup, an inlet-pipe leading into said heater, and an outlet-pipe leading from said heater, the said two pipes being arranged some distance above the bottom of the heater, whereby water may be maintained in the heater, substantially as specified.

3. The combination with an oil or lubricator cup, of a heater, consisting of a closed cylinder having a concaved top arranged underneath the cup, a tube extended centrally

through said heater and communicating with the interior of the cup, a valve arranged at the lower portion of said tube, and steam inlet and outlet pipes for said heater, substantially as specified.

5 4. The combination with a cup for containing a lubricant, of a heater arranged underneath the cup, and consisting of a closed cylinder having a central chamber communicating with the cup, and means for causing

a circulation of a heating medium through said cylinder, substantially as specified.

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

THOMAS DIXON.

Witnesses:

ALLAN GRAHAM,
JOHN ASHTON.