

W. A. WILSON.
LUBRICATOR.
APPLICATION FILED AUG. 25, 1910.

982,335.

Patented Jan. 24, 1911.

Fig. 1.

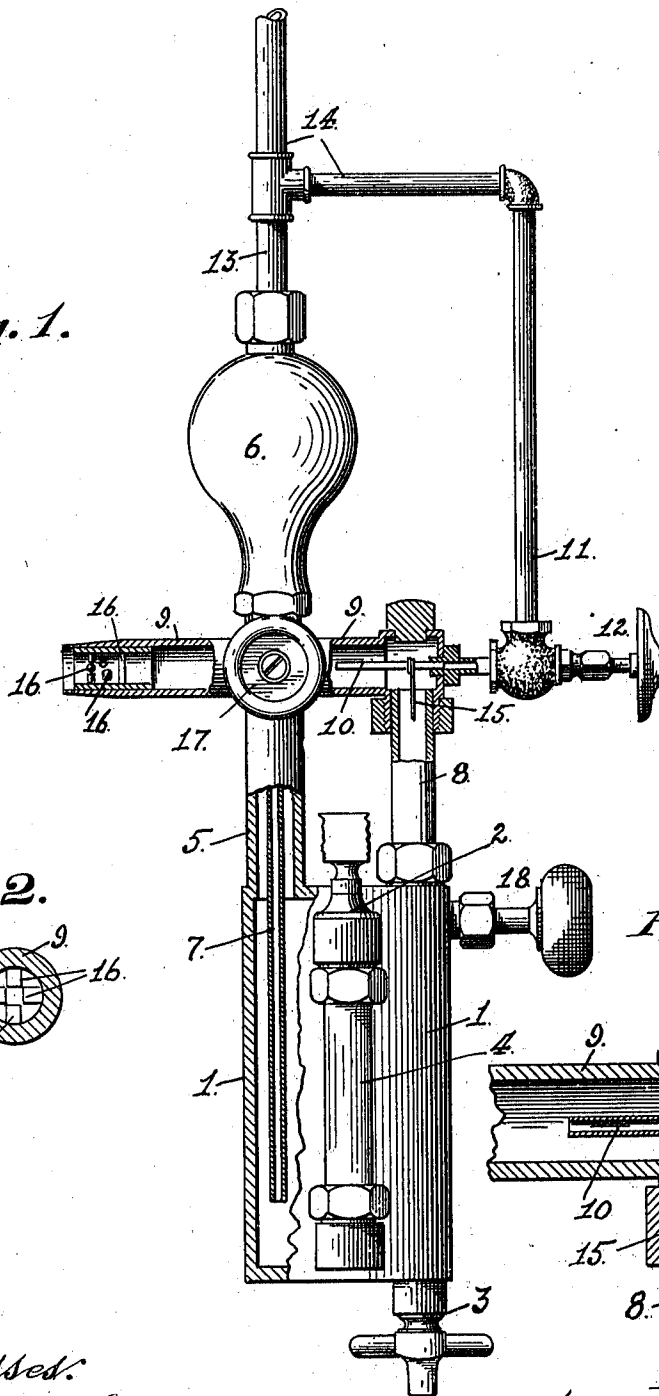


Fig. 2.

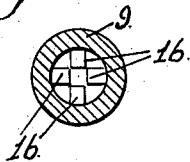
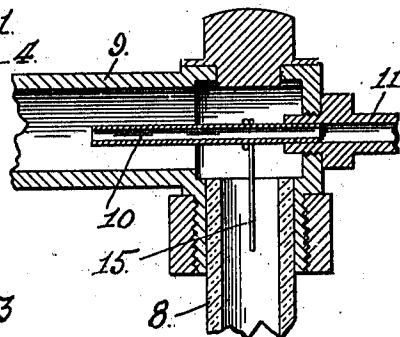


Fig. 3.



Witnessed:
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UNITED STATES PATENT OFFICE.

WILLIAM A. WILSON, OF SANTA CLARA, CALIFORNIA.

LUBRICATOR.

982,335.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed August 25, 1910. Serial No. 578,920.

To all whom it may concern:

Be it known that I, WILLIAM A. WILSON, a citizen of the United States, residing at Santa Clara, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

My invention relates to that class of lubricators in which the oil in the reservoir is subjected to the lifting pressure of water from a condenser, and the oil drop thus fed is subjected to the impelling and spraying action of a jet of steam from an injector, whereby it is delivered, mixed with and atomized by said steam.

My invention consists in the novel construction and arrangement of parts which I shall hereinafter fully describe and claim.

Referring to the accompanying drawings—Figure 1 is an elevation, partly broken, of my lubricator. Fig. 2 is an end view, enlarged, of the spray-pipe, showing the oil-breaker or atomizer. Fig. 3 is a sectional detail, enlarged, of the injector end of the spray-pipe.

1 is the reservoir, provided with a filling connection 2, a drain 3, and a gage glass 4. 5 is an extension tube leading from the top of the reservoir and supporting the condenser 6, from which the pressure pipe 7 leads down through the extension tube 5 and opens out into the reservoir near its bottom.

Leading from the top of the reservoir 1 is the feed tube 8, to the upper end of which is coupled the spray-pipe 9. In the end of this spray-pipe is fitted the injector nozzle 10 of the steam or superheater pipe 11, which latter is controlled by a valve at 12.

13 is the pipe connection which leads steam to the condenser, and 14 is the steam connection common to both the condenser pipe 13 and the superheater pipe 11. Suspended from the injector nozzle 10 of the superheater pipe and hanging down into the feed tube 8 is a needle 15 for the oil drop.

In the delivery end of the spray-pipe 9 is an oil-breaker or atomizer which consists

of projections 16 extending into and somewhat irregularly obstructing the passage of the pipe.

17 is the valve for controlling the outlet from the condenser to the pressure pipe 7.

18 is the valve for controlling the oil drop to the feed-tube 8.

In operation the oil in the reservoir being subjected to the lifting pressure of the condensed water through the pressure pipe 7, is fed upwardly into the feed tube 8, and thence is drawn by the suction of the steam issuing from the injector nozzle 10, drop by drop onto and up the needle 15 and thence forwardly until the drop joins the issuing steam and is mixed with and carried forward by the steam jet and delivered to its destination through the breaker or atomizer 16 in an emulsified spray. Superheated steam is found to give the best results as the oil is thus sprayed into the cylinder as superheated particles in a highly fluidic state capable of reaching all surfaces.

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

A lubricator of the described class consisting of a reservoir, a condenser having a connection with a source of steam, a pressure pipe from the condenser leading down through the top of the reservoir, a feed-tube leading from the top of the reservoir, a spray-pipe coupled to the top of the feed-tube and communicating therewith, a steam-injector nozzle fitted to the spray-pipe and having a connection with a source of steam, a needle for the oil drop suspended from the nozzle and hanging down into the feed-tube, and obstructing projections in the delivery end of the spray-pipe serving as an oil break or atomizer.

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

WILLIAM A. WILSON.

Witnesses:

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LUIS G. FATJO.