

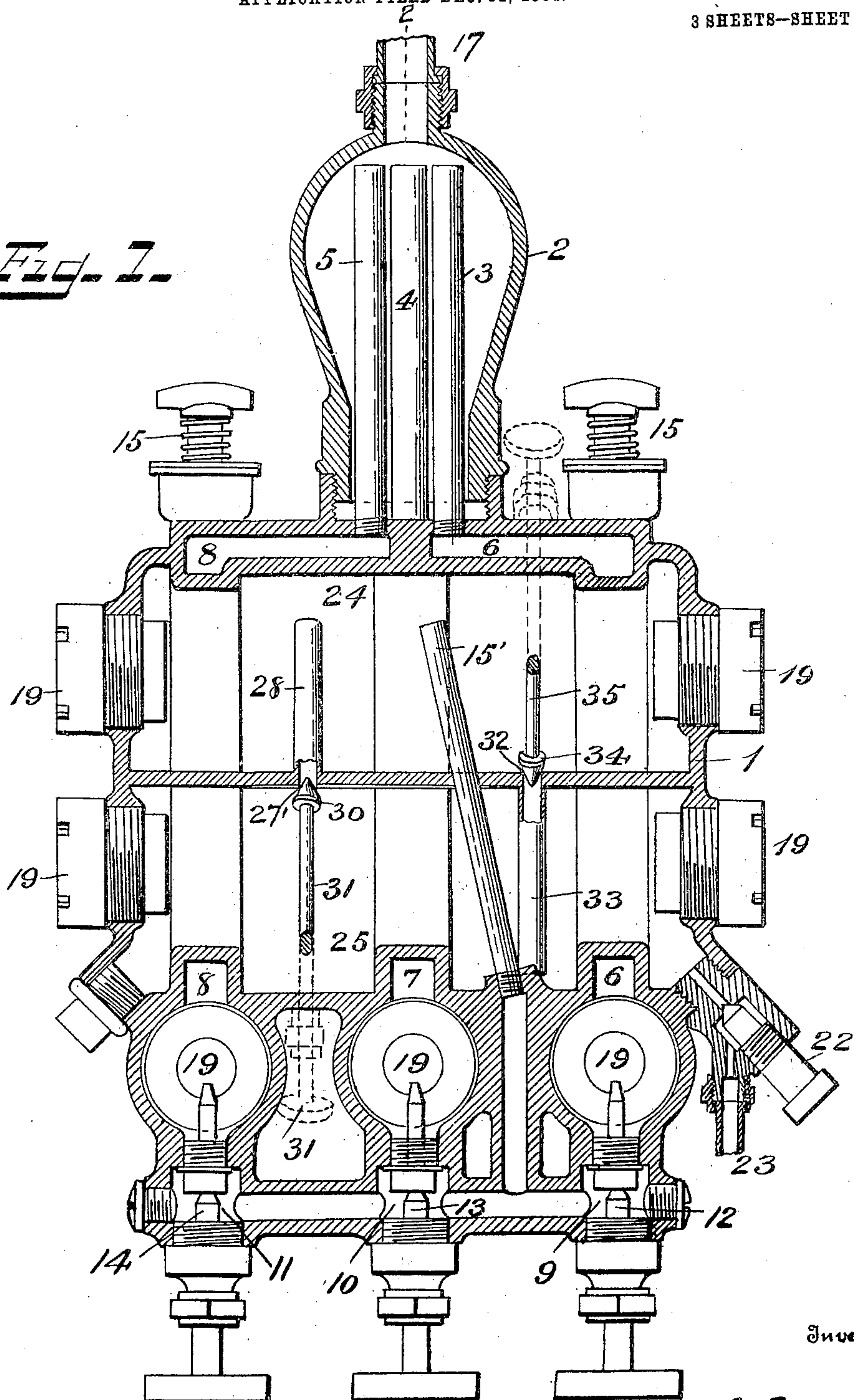
No. 797,948.

PATENTED AUG. 22, 1905.

H. G. ELMORE.
CYLINDER LUBRICATOR.
APPLICATION FILED DEC. 31, 1904.

3 SHEETS—SHEET 1.

Fig. 1.



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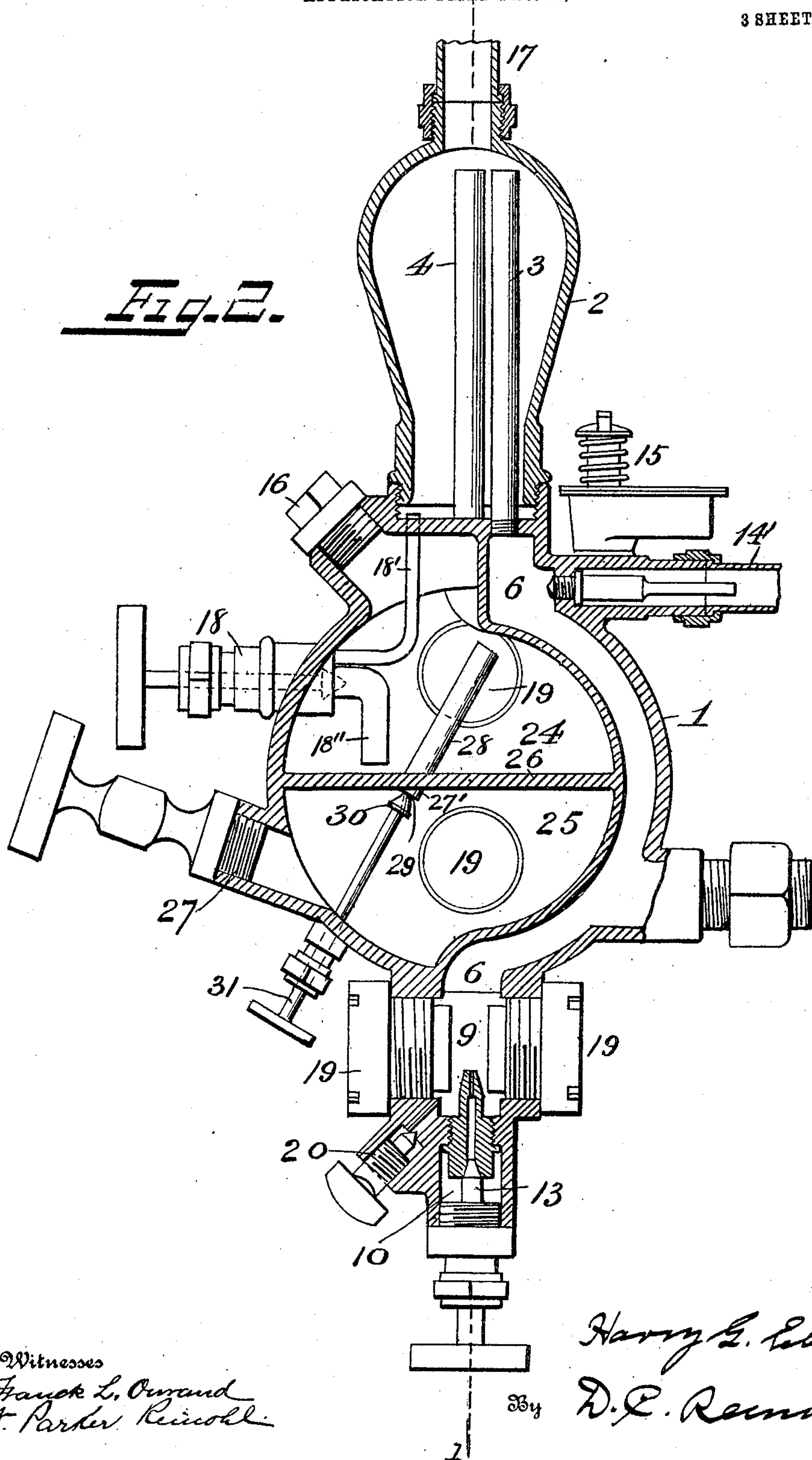
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3 SHEETS—SHEET 2.

Fig. 2.



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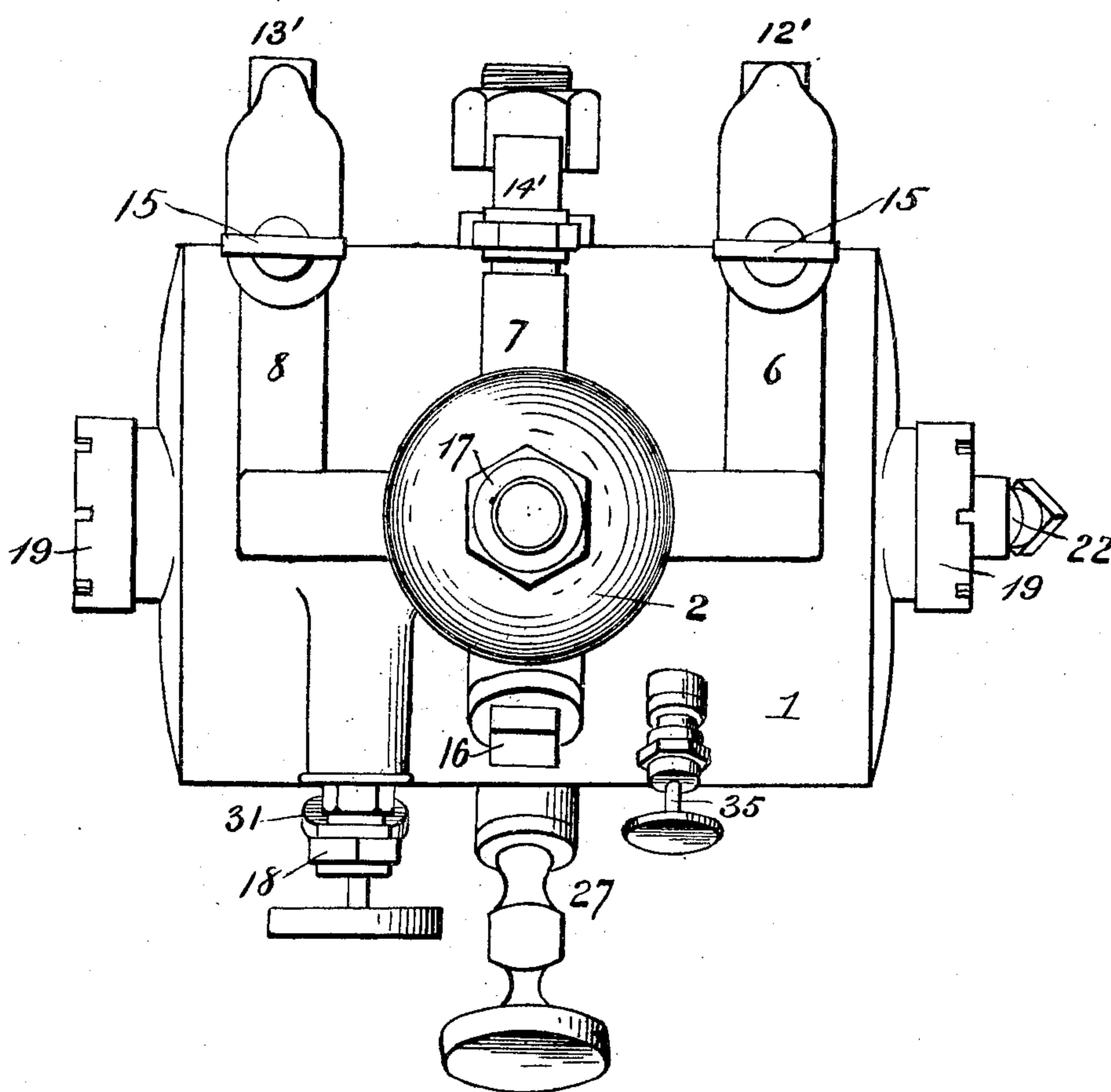
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY G. ELMORE, OF SPENCER, NORTH CAROLINA.

CYLINDER-LUBRICATOR.

No. 797,948.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed December 31, 1904. Serial No. 239,169.

To all whom it may concern:

Be it known that I, HARRY G. ELMORE, a citizen of the United States, residing at Spencer, in the county of Rowan and State of North Carolina, have invented certain new and useful Improvements in Cylinder-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.

My invention relates to lubricators for steam-engine and other cylinders, has especial reference to the lubrication of locomotive-engine and other cylinders in which the lubricant is supplied under pressure of steam from the boiler, and consists in certain improvements in construction whereby the supply of oil in the reservoir may be replenished while the lubricator is at work and without withdrawing the water therefrom.

The invention will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a vertical longitudinal section, partly in side elevation, of a lubricator embodying my invention on line 1 1, Fig. 2; Fig. 2, a vertical transverse section, partly in side elevation, on line 2 2, Fig. 1; and Fig. 3, a plan top view.

In the practical operation of this class of lubricators it frequently occurs that the oil in the reservoir has been consumed when the engine has nearly reached the end of its run or trip, and to recharge the lubricator by drawing off the water and furnishing a fresh supply of oil, then admitting steam to the reservoir and allowing it to condense, and then again admitting steam to the reservoir requires time and necessitates the stopping of the train while this renewal of oil is being effected, or that the engine and other cylinders must be run without a lubricant, which is very injurious and even destructive to the pistons, valves, and the cylinders. To remedy this serious defect, I have provided means for refilling or resupplying the lubricator with oil while the lubricator is at work or without interruption of its work by means which will be hereinafter fully disclosed.

Reference being had to the drawings and the designating characters thereon, 1 indicates the body or reservoir of the lubricator, 2 the condenser, provided with vertical tubes 3 4 5, communicating, respectively, with passages 6 7 8, leading to chambers 9 10 11, con-

trolled by valves 12, 13, and 14, 12 and 14 controlling the supply of lubricant to the cylinders of a locomotive-engine and 13 the supply to the air-pump cylinders, 15 15 hand-oilers, 15' the feed-pipe in the reservoir 16 the filling-plug for the reservoir, 17 the steam-supply pipe, 18 the water-valve, 18' and 18'' pipes for supplying water of condensation from the condenser to the oil-reservoir, 19 observation-glasses, 20 sight-feed drain-valve, 22 the waste-valve, 23 the waste-pipe for cleaning the reservoir, 12' and 13' the oil-pipes leading to the cylinders on opposite sides of the locomotive, and 14' the oil-feed pipe leading to the engine-cylinder of the air-pump, all of which parts and their operation are well known to those skilled in the art to which my invention appertains, form no part of my invention, and therefore require no further elucidation.

The reservoir 1 is separated into an upper and a lower chamber 24 and 25 by a transverse and longitudinal partition 26, and the lower chamber is provided with a supplemental filling-plug 27 for supplying oil to the lubricator while it is at work. In the partition 26 is a passage or opening 27', from the upper side of which extends a pipe 28, and on the under side of the passage is a valve-seat 29, controlled by a valve 30, whose stem 31 extends through the wall of the body of the lubricator. 32 is a like opening or passage in the partition, from which a pipe 33 extends downward near to the bottom of the reservoir, and said passage is controlled by a valve 34, whose stem 35 also extends through the wall of the body.

The lower end of pipe 33 extends near the bottom of chamber 25 to receive water under pressure of steam from chamber 24 and conducts it to the lower chamber 25, near the bottom thereof, to force the oil up through pipe 28 into chamber 24. The valves 30 and 34 are closed, the waste-valve 22 opened and the plug 27 removed, and waste-valve 22 again closed. Oil is then supplied to the chamber 25, the plug 27 returned, the valve 34 opened slightly at first to allow water under pressure of steam to enter bottom of chamber 25 and float or raise the oil to the top of said chamber. The valve 30 is then opened, when oil will pass through pipe 28 into chamber 24 under pressure of water and steam admitted through valve 34 and pipe 33 from the condenser 2. The water and steam supplied through valve 34 and pipe 33 flows from the

condenser 2 through pipe 18', discharged near the bottom of chamber 24, and is controlled by valve 18.

Having thus fully described my invention, what I claim is—

1. A lubricator provided with a condenser, a reservoir provided with an upper and a lower oil-chamber and having a transverse partition provided with means forming communication between said chambers, valves for controlling said means of communication, means for supplying water of condensation to the reservoir, and means for supplying steam thereto.

2. A lubricator provided with a condenser, a reservoir provided with an upper and a lower oil-chamber and having a transverse partition, pipes extending from said partition into both of said chambers, valves for con-

trolling said pipes, means for supplying water of condensation to the reservoir, and means for supplying steam thereto.

3. A lubricator provided with an upper and a lower oil-chamber, and having a transverse partition, passages through the partition, a pipe extending from one passage near the bottom of the lower chamber, a valve controlling said passage, a pipe extending from the other passage near the top of the upper chamber, a valve controlling the passage, and means for supplying steam to the reservoir.

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

HARRY G. ELMORE.

Witnesses:

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