

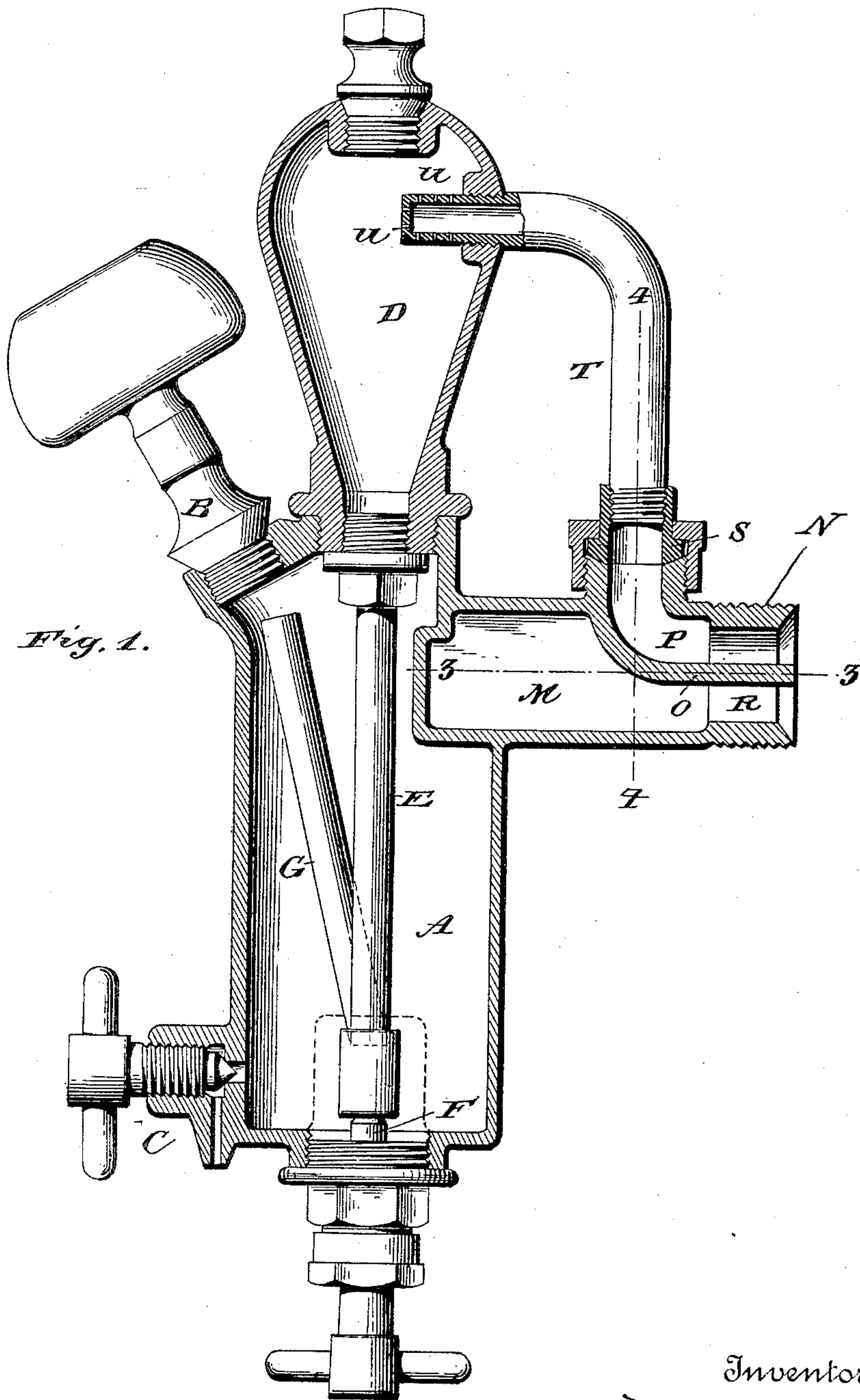
(No Model.)

2 Sheets—Sheet 1.

W. JAMES.  
LUBRICATOR.

No. 442,322.

Patented Dec. 9, 1890.



Witnesses

*L. C. Hilly*  
*William H. Shipley*

Inventor

*William James*  
*by Marcus Bahr*  
his Attorney

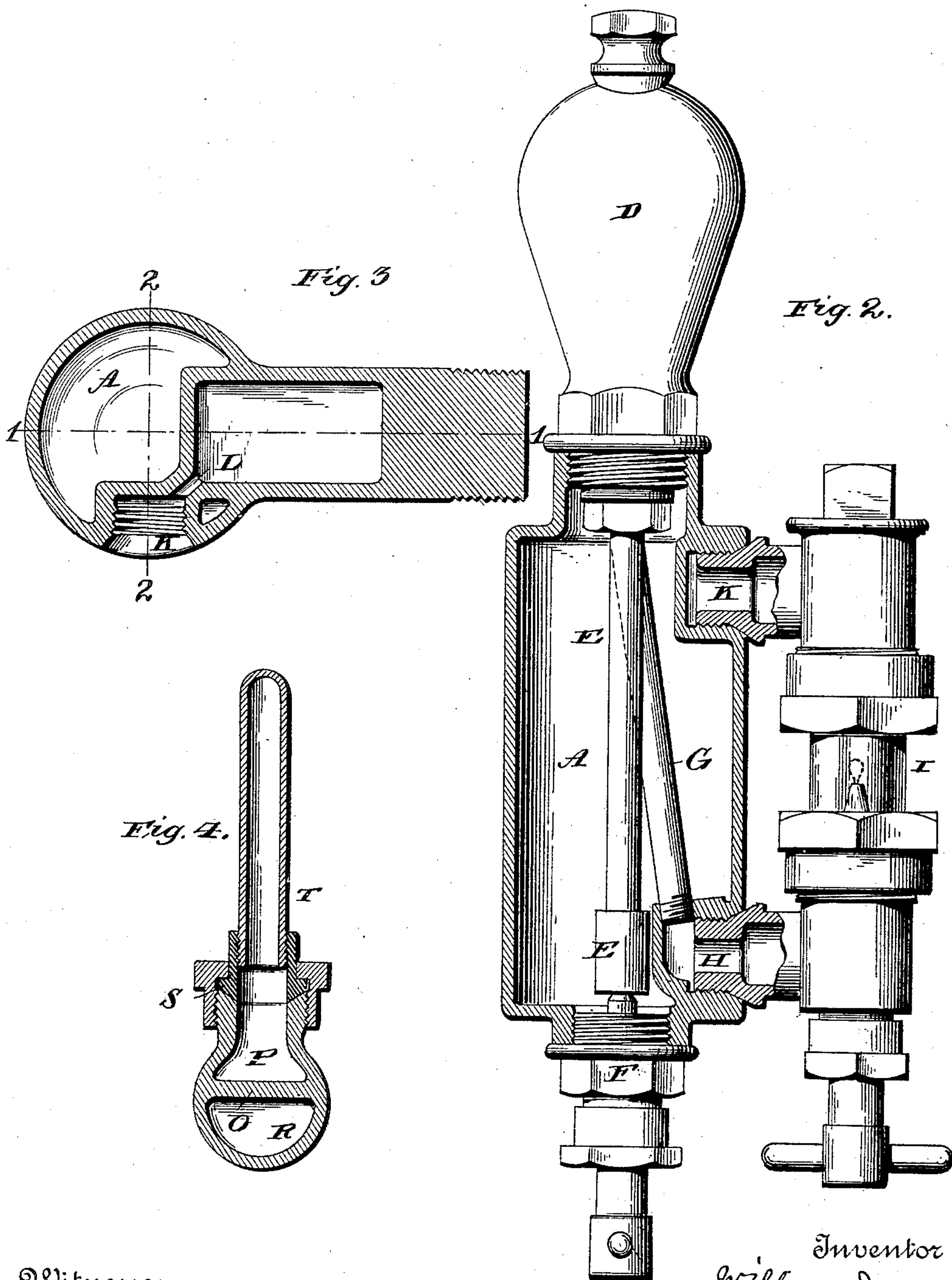
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William James  
by Marshall Davis  
his Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM JAMES, OF BROOKLYN, ASSIGNOR TO THE NATHAN MANUFACTURING COMPANY, OF NEW YORK, N. Y.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 442,322, dated December 9, 1890.

Application filed August 5, 1890. Serial No. 361,091. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM JAMES, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

My invention relates to single-connected sight-feed lubricators, by "single-connected" intending a lubricator in which the inlet for the steam and the outlet for the oil are in one and the same shank by which the lubricator is connected to the part to be lubricated. In lubricators which have, as these do, a common passage for the steam and the oil more or less of the latter is carried into the condenser by the force of the intrushing steam. The oil thus carried does not of course reach the parts to be lubricated, and while it may not be absolutely wasted, still it does not perform properly its intended functions. To obviate this difficulty I provide the lubricator with a connection-shank having a separate inlet-passage for the steam and a separate outlet-passage for the oil, in combination with other improvements which tend to make the lubricator more effective and complete in its functions and operations.

The nature of my improvements can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of the lubricator on line 1 1 of Fig. 3. Fig. 2 is a vertical central section of the same on line 2 2, Fig. 3. Fig. 3 is a horizontal cross-section of the oil-chamber on line 3 3, Fig. 1, omitting the interior pipes of this chamber and the sight-feed connections. Fig. 4 is a section on line 4 4, Fig. 1.

A is the oil-chamber, provided with the usual filler B for filling the receptacle with oil, and with a drain-cock C for the purpose of drawing off the water of condensation after the oil has been fed out. On top of the oil-chamber is screwed the condenser D, provided with a pipe E to lead the water from the condenser to the bottom of the receptacle. The bottom of this pipe is seated for the usual water-valve F.

G is the oil-pipe, which leads the oil from the top of the oil-chamber down into the pas-

sage H, leading to the sight-glass I, which is filled with water, through which the oil-drops float upward until they pass through passages K and L into the connection or delivery shank M. This shank, which is shown as being cast in one with the main body of the lubricator, is intended to screw into the main steam-pipe cylinder or steam-box of the steam-engine by means of the externally-threaded neck N. It is divided into two parts by means of a cross-partition O, which is cast in one with it, one of the parts P forming the inlet-passage for the steam, the other part R forming the outlet-passage for the oil. Shank M is furthermore provided with a neck S, connecting the steam-pipe T to it. This pipe at its upper end screws into the condenser at some distance below the top of the latter, thus leaving an air space or chamber in the condenser about the point where the steam enters the chamber. The pipe at its upper end projects some distance into the condenser and is provided with a number of holes *u* to form a steam-spray, thus facilitating condensation.

The operation of the lubricator is as follows: Steam being admitted, it passes through passage P and pipe T into the condenser. The water of condensation passes down pipe E and, if valve F is opened, into chamber A, and the oil displaced by the water passes down pipe G, through passage H, glass I, and through passages K, L, and R into the main steam-pipe cylinder or steam-box.

In this lubricator the steam-connection with the condenser is simplified, rapid condensation of the steam without danger of "plugging" is secured, and the conveying of oil to the condenser in any material quantity is wholly avoided.

In conclusion I state that I am aware of Patents Nos. 184,426, 191,425, and 202,736, and claim nothing that is disclosed in the same.

Having described my improvements, what I claim, and desire to secure by Letters Patent, is—

A single-connection lubricator comprising, in combination, the following elements: the single-connection shank M, divided by cross-partition O into passages P R, separate and

distinct from each other, the external steam-  
pipe T, leading from passage P into the con-  
denser at a point below its top, and provided  
at its discharge end with a rose or series of  
5 perforations, the condenser D, the oil-cham-  
ber A, the water-pipe E, and valve F, the up-  
right-feed devices, and the ducts K L, lead-  
ing from the glass I of the upright feed into

passage R, substantially as and for the pur-  
poses hereinbefore set forth. 1c

In testimony whereof I have hereunto set  
my hand this 4th day of August, 1890.

WILLIAM JAMES.

Witnesses:

JACOB W. MACK,  
CHARLES JUDGE.