

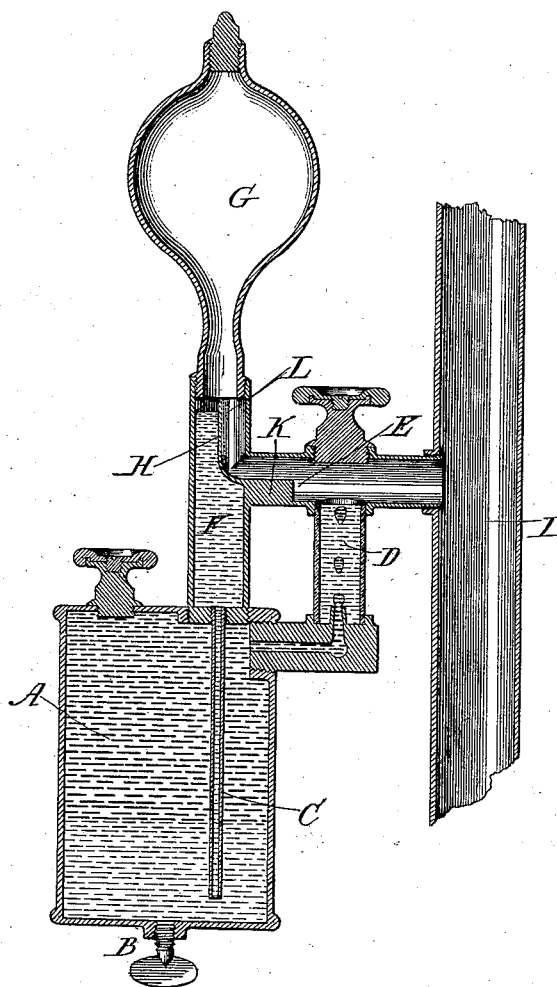
(No Model.)

P. A. BENNETT.

LUBRICATOR.

No. 347,284.

Patented Aug. 10, 1886.



Witnesses:

Frank Blanchard  
E. P. McNaughton

Inventor

Phineas A. Bennett

# UNITED STATES PATENT OFFICE.

PHINEAS A. BENNETT, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
THOMAS BENNETT, OF SAME PLACE.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 347,284, dated August 10, 1886.

Application filed November 28, 1885. Serial No. 184,215. (No model.)

*To all whom it may concern:*

Be it known that I, PHINEAS A. BENNETT, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lubricators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, such drawing being a view in axial section, illustrating my invention adapted to a sight-feed lubricator.

My invention relates to that class of lubricators in which the pressure of a hydrostatic column is employed to feed, in a gradual and uniform manner, the oil or other lubricant into the steam-chest, cylinder, &c.; and my present improvement has for its object to supply a simple and effective means to attain a uniform and continuous condensation of steam with a free and direct back or over flow into the engine-pipe of the surplus water of condensation, and thus enable the apparatus to work properly during cold weather or in exposed situations, and at the same time entirely obviate the danger of the condensing chamber filling with water and rendering the apparatus inoperative; also, to furnish means to attain a ready and direct reflux or overflow of the surplus water of condensation, and also prevent the oil feed or flow from being carried up into the condensing-chamber by the incoming volume of steam, and in consequence admit of the use in common of a single horizontal passage to admit the supply of steam to the condenser and conduct the oil and overflowing water of condensation into the steam-pipe.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its particular construction and operation.

The general form and arrangement of the lubricator parts will be substantially the same as any other sight-feed lubricator in which the oil is gradually displaced and fed by the pressure of a hydrostatic water-column.

In the drawing, A is the oil-receptacle; G, the condensing-chamber, superimposed above said reservoir or receptacle and connected

thereto by a tubular neck, F, the upper end of which is open and is screw-threaded for the attachment of the condenser G, while its lower end is closed and provided with a downwardly-extending tube for conveying the water of condensation to a point beneath the oil contained in said reservoir.

The body of steam to supply the hydrostatic column is introduced into the condenser G by a horizontal branch neck or passage, E, arranged some distance below the upper end of the vertical neck F, with its outer end in communication with the steam-pipe J of the engine, the oil as it is fed passing through a bent neck sight-feed, D, that communicates with the branch neck E.

My present improvement, as applied to the form of lubricator above described, consists in dividing the upper open end of the neck F by a transverse partition, H, so as to form the main chamber F for the body of water constituting the operating hydrostatic column, and a combined return or overflow passage, L, for the surplus water of condensation and an inlet-passage for the steam-supply into the condenser G, the horizontal portion of said passage L being arranged out of line with and above the axis of the main passage E, so as to form an abutment shoulder or offset, K, to prevent the oil from being carried up through passage L into the condenser by the incoming steam, and at the same time form an impediment to break up the body or volume of steam and in such condition cause its more rapid condensation by contact with the returning water of condensation.

The advantages of my improved construction above described are as follows: First, certainty of action in cold weather or in feeding heavy oils, due to the constant warm feed attained by my improved construction. Second, it readily admits of the connecting-shank F, containing the hydrostatic column, being made of any desired height to attain any degree of operating-pressure that circumstances or the quality of oil used may require. Third, it requires the use of but a single connection to the steam-pipe of the engine by admitting of the use of but a single passage to introduce steam into the apparatus and to carry the oil and surplus water of condensation into the

engine steam-pipe, and, fourth, it prevents any possibility of a vacuum forming in the condenser and rendering the apparatus inoperative.

5 Having thus fully described my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In a lubricator operated by a hydrostatic column, as described, a vertical connecting-  
10 neck between the condenser and oil-reservoir, having its upper end open and provided with a transverse partition, and a horizontal branch passage common to the incoming steam and  
15 oil-feed and adapted to receive and carry off the surplus water of condensation, essentially as set forth.

2. In a lubricator operated by a hydrostatic column, as described, an open-ended vertical  
20 neck, F, connected to the condenser G, and provided with a transverse partition, H, in combination with the horizontal passage E, having communication with the steam-pipe of  
the engine and oil-feed, essentially as and for the purpose set forth.

25 3. In a lubricator operated by a hydrostatic column, as described, the horizontal branch

passage E, common to the incoming steam and oil-feed, the inner end of which communicates with the contracted passage L, that is arranged  
30 above the central axis of said passage E, so as to form an abrupt shoulder or offset, K, at the inner and lower end of the same, as described, and for the purpose set forth.

4. In a lubricator operated by a hydrostatic column, the combination, with the condenser  
35 G and oil-reservoir A, of the open-ended connecting-neck F, partition H, horizontal branch passage E, and passage L, ending in an offset, K, as described, and for the purpose set forth.

5. In a lubricator operated by a hydrostatic  
40 column, the combination of the condenser G, connecting-neck F, partition H, passages L and E, shoulder or offset K, sight-feed tube D, and oil-reservoir A, in the manner and for the purpose set forth.

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

PHINEAS A. BENNETT.

Witnesses:

FRANK S. BLANCHARD,  
E. P. McNAUGHTON.