

2 Sheets—Sheet 1.

## OIL FEEDER FOR FEEDING OIL TO VALVES.

Patented May 4, 1886.

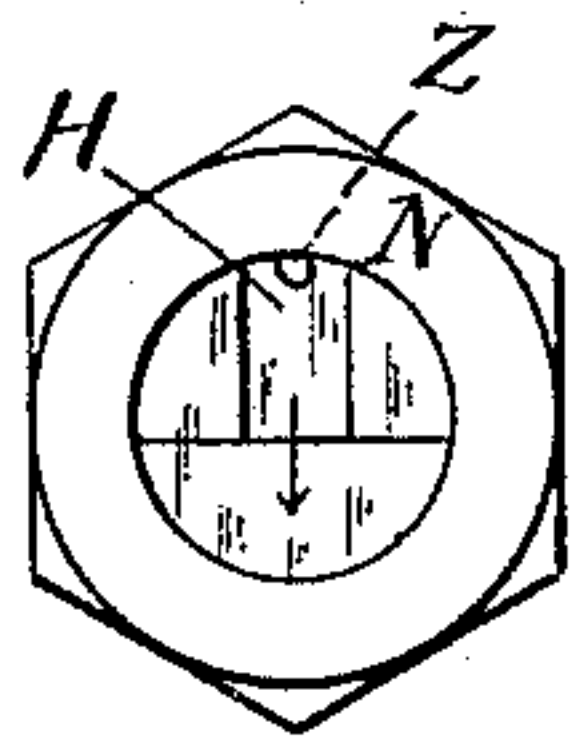


Fig. 6.

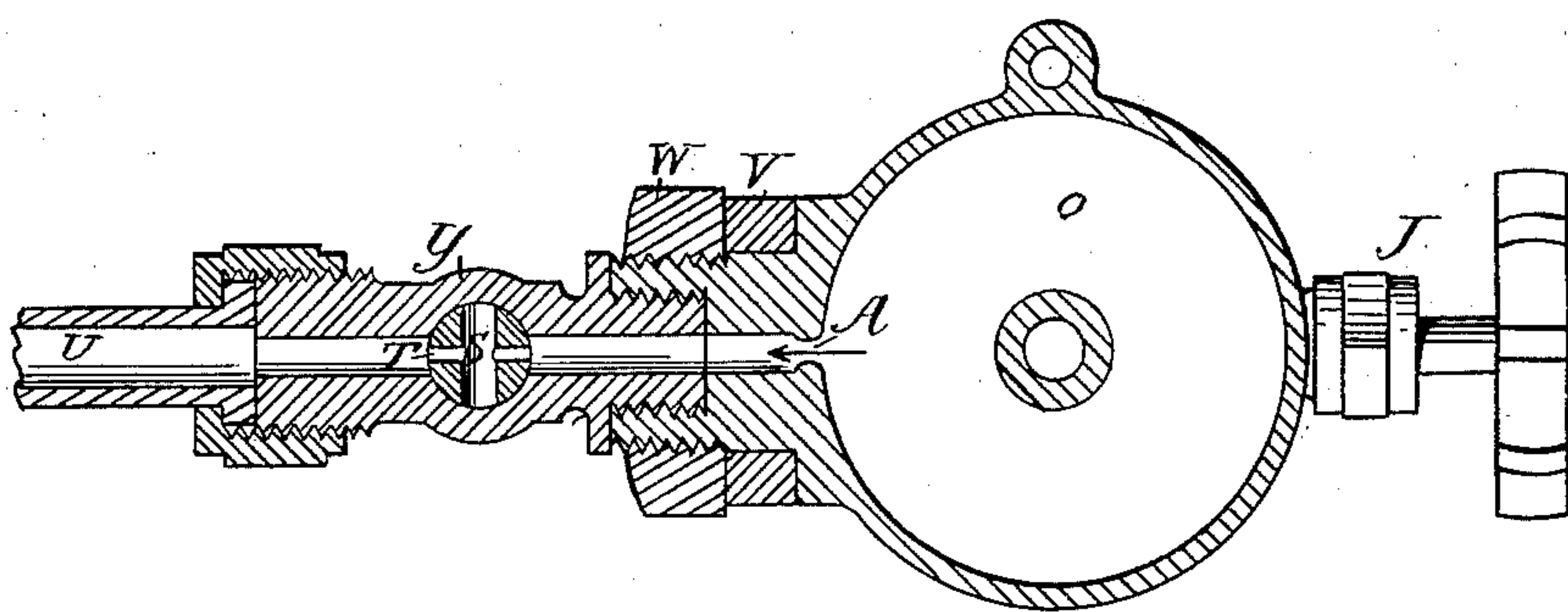


Fig-2.

INVENTOR

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(No Model.)

2 Sheets—Sheet 2.

N. SEIBERT..

OIL FEEDER FOR FEEDING OIL TO VALVES.

No. 341,352.

Patented May 4, 1886.

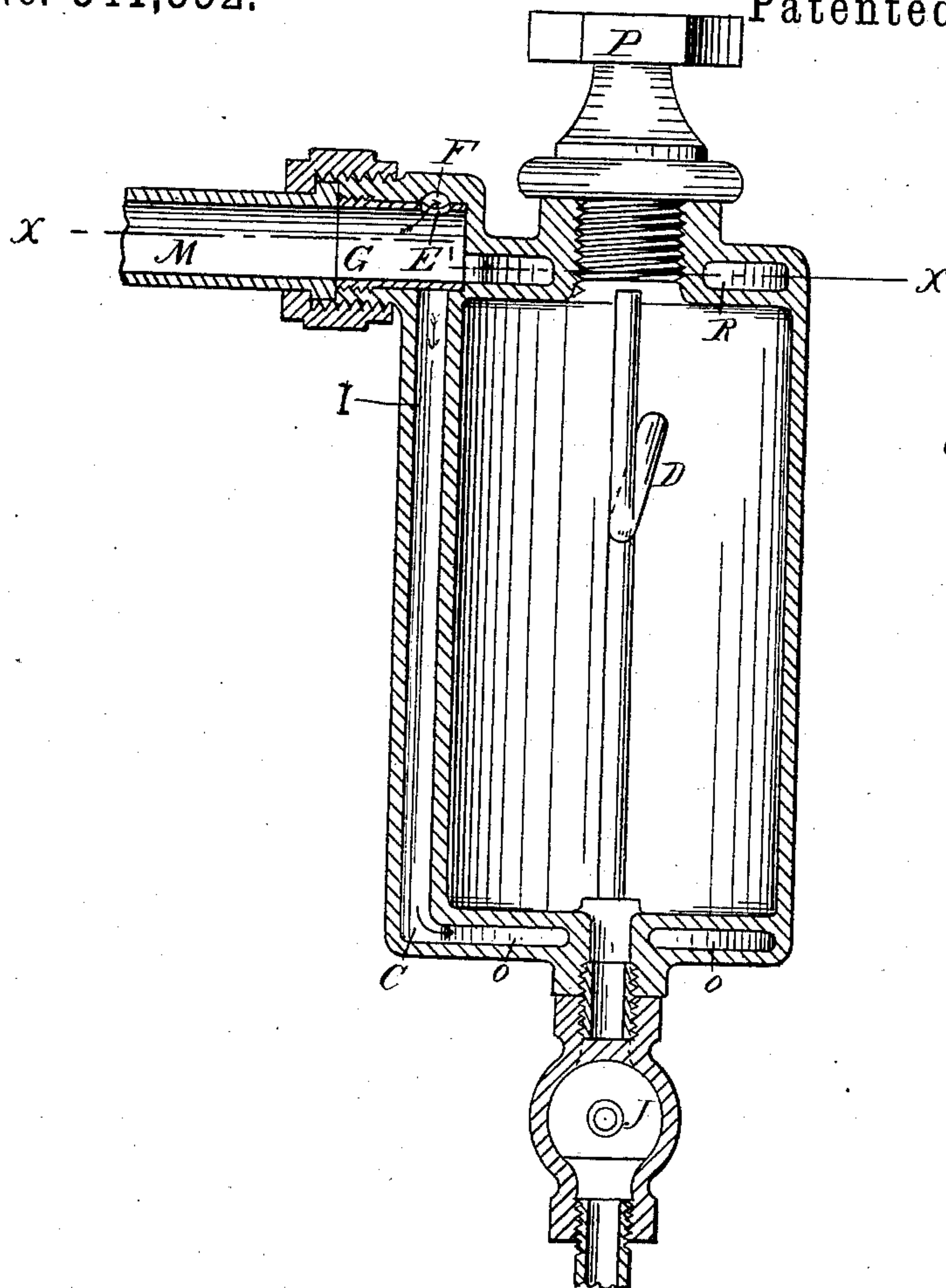


FIG-3.

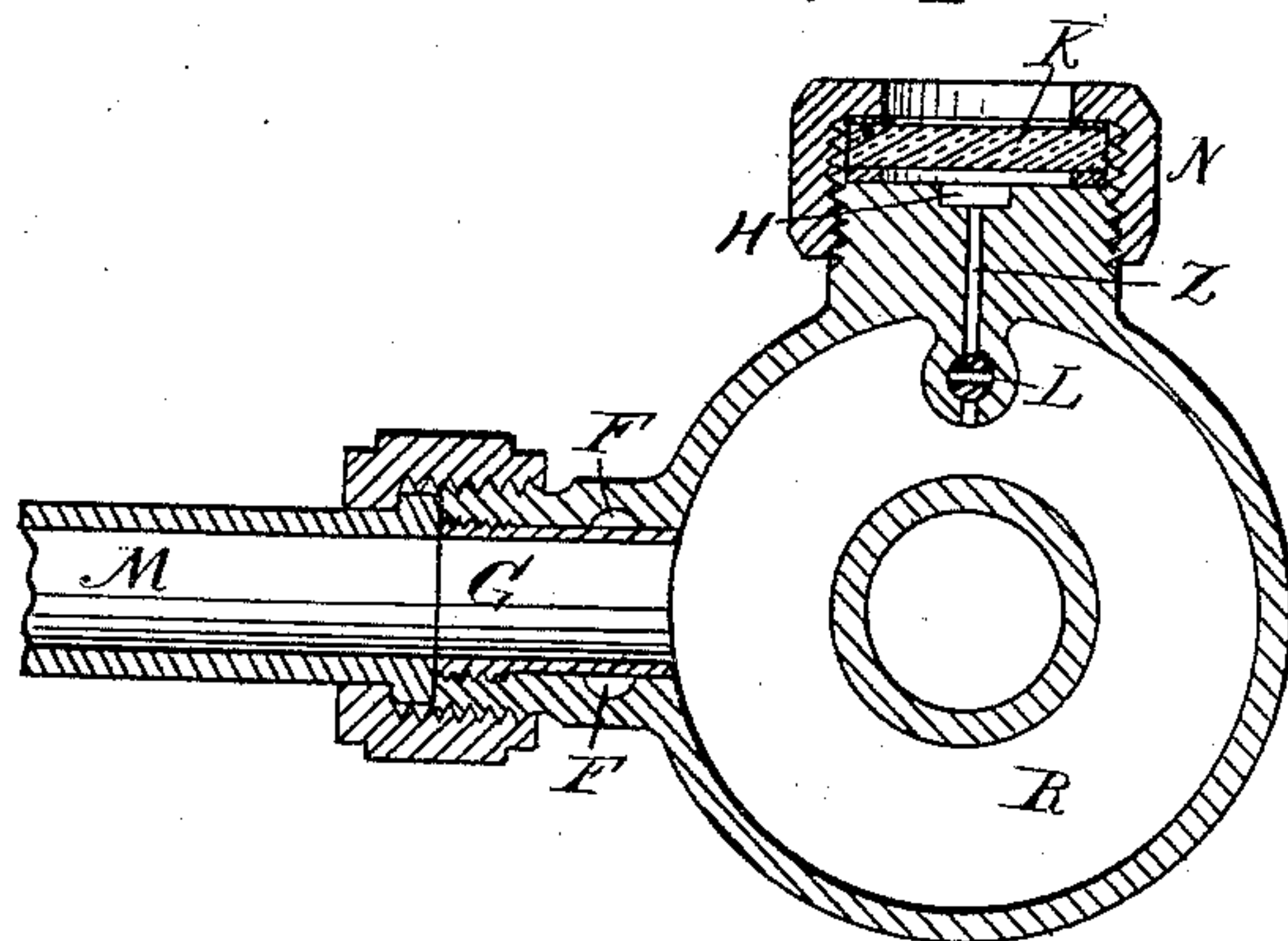


FIG-4.

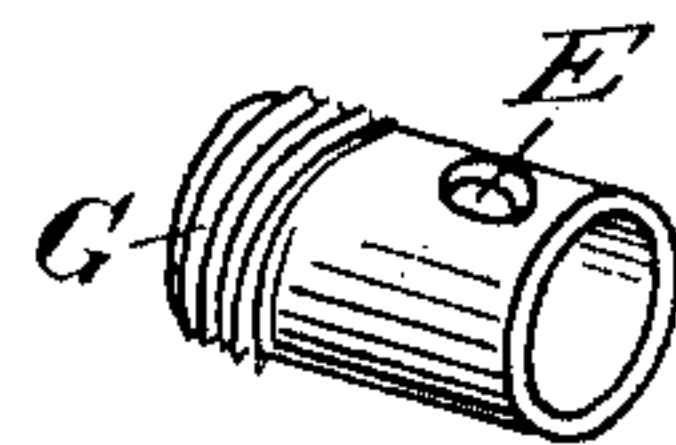


FIG-5.

WITNESSES

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# UNITED STATES PATENT OFFICE.

NICHOLAS SEIBERT, OF BOSTON, MASSACHUSETTS.

## OIL-FEEDER FOR FEEDING OIL TO VALVES.

SPECIFICATION forming part of Letters Patent No. 341,352, dated May 4, 1886.

Application filed September 12, 1885. Serial No. 176,964. (No model.)

*To all whom it may concern:*

Be it known that I, NICHOLAS SEIBERT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Oil-Feeders for Steam-Valves, of which the following is a description.

My invention relates to that class of oil-feeders commonly called "displacement-lubricators," wherein the water of condensation is fed into the oil contained in a reservoir and by its own gravity sinks to the bottom, displacing an equal amount of oil.

Heretofore it has been very difficult to oil uniformly the valves and pistons of locomotive-cylinders, for the reason that the cylinders are subject to many changes of steam-pressure, and these changes being communicated to the oil-feeders through the oil-pipes; hence the oiling is not uniform—either too much or not enough.

My invention is designed to overcome this difficulty; and it consists nearly of one casting, to avoid leakage and also to cheapen to the purchaser.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 represents a vertical section through oil-feeder; Fig. 2, a horizontal section on line *x x* of Fig. 1. Fig. 3 represents cross-section of oil-feeder; Fig. 4, a horizontal section on line *x x* of Fig. 3; Fig. 5, a sleeve detail of cross-section, Fig. 3; Fig. 6, a detail showing front view of sight-feed of section, Fig. 1.

Q is the oil-reservoir; P P, plug; R R R, water-chamber; L L, feed-valve; H H H, solid part or lip over which the feed-water passes in the sight-feed; N N N, nut; Z Z Z, water-passage; K K, glass; D D, oil-tube; Y Y, two-way plug-cock; S S, large passage; T T, small passage, about one-sixteenth of an inch; U U, oil-pipe leading to the valve-chest; W W, nut; V V V, iron to fasten oil-feeder to boiler; B, oil-passage into steam-equalizing chamber; O O O O, equalizing-chamber; A A, oil and steam passage leading to the valve-chest; J J, water draw-off valve; M M, steam-pipe from boiler; G G G, sleeve; E E, steam-passage; F F F, annular steam-passage; I, steam-passage; C, steam-passage. The oil-feeders are placed one on each side of the boiler in the cab, and pipe U connected with the oil-pipes now in use.

A half-inch T with nipple is screwed into the top of boiler. The branches of the T are reduced to three-eighths, which is connected to pipe M on oil-feeders. The top of oil-feeders on each side is on a level with the top of the boiler.

The operation of my invention is as follows: Plug P is removed, and reservoir Q is filled with oil or other lubricant, steam is let into pipe M, the two-way plug-cock is turned so that the small passage T will communicate with the steam-equalizing chamber O O. The feed-valve L is now set so as to feed as much water as oil may be required on the valves and pistons, which can be observed through the glass K, the water flowing into the oil by its own gravity, and thereby an equal amount of oil is being expelled through tube D into the steam-equalizing chamber, steam coming from the boiler through pipe M, and into sleeve G, and out at E, into the annular steam-passage F, and down through steam-passages I and C, as indicated by the arrows, into the steam-equalizing chamber, then meeting the oil coming through passage B, and mixing with the steam, is forced out by the steam through passages A and T into pipe U, and upon the valves and pistons.

The object of the sleeve G is to prevent the water of condensation in pipe M from passing down into steam-passage I, and causing the water to flow through sleeve G into the water-chamber R R R.

The object of the steam-equalizing chamber is to have an equal pressure of steam therein as that contained in the boiler when the steam is shut off from the cylinders or engines. It cannot disturb the oil-feed, because the oil and steam passages A and T are so small, particularly the passage T, in the two-way plug-cock, that it does not diminish the pressure of steam in the equalizing-chamber, for the reason that the supply is so much greater than the small amount of steam going out with the oil. I found by actual experiment that the steam-pressure in the boiler when the engines were working was from ten to twenty per cent. greater than the returning steam-pressure in the oil-pipes near the oil-feeders; hence I utilize this superior pressure to blow or force the lubricant against the returning steam-pressure in the oil-pipes, and thence to the valves and pistons.



Another object is to oil one or more engines from one equalizing-chamber, and also that either oil or tallow may be used in cold weather.

5 The object of the large passage in the two-way plug-cock is to enable the engineer to blow out any large pieces of dirt which may find their way into the equalizing-chamber by turning the passage S to communicate with that of the chamber.

10 The object of the small passage is to retain a constant boiler-pressure in the equalizing-chamber, in order to have a uniform oil-feed under all conditions of steam-pressure in the oil-pipes, or when the steam is shut off from  
15 the engines going down grade.

The object of the sight-feed with a projection or lip over which the water passes is to leave a large vacant space to fill with water when the oil is fed out.

20 What I claim is—

1. The combination, in a cylinder oil-feeder,

of a sleeve, G, with the opening E, and placed in the steam-passage I, so as to form an annular steam-passage surrounding said sleeve, the steam-passages I C, and steam-chamber O O, 25 and reduced outlet A, for the purposes as set forth, substantially as described.

2. In combination with a cylinder oil-feeder, a two-way plug-cock with its passages T S, for the purposes as set forth, substantially as de- 30 scribed.

3. The combination, in a cylinder oil-feeder adapted to feed a steady supply of oil, the steam-passages I C, steam-chamber O O, and re- 35 duced outlet A, so constructed as to retard the outgoing steam and oil, for the purposes as set forth, substantially as described.

NICHOLAS SEIBERT.

Witnesses:

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LUTHER DAVIS.