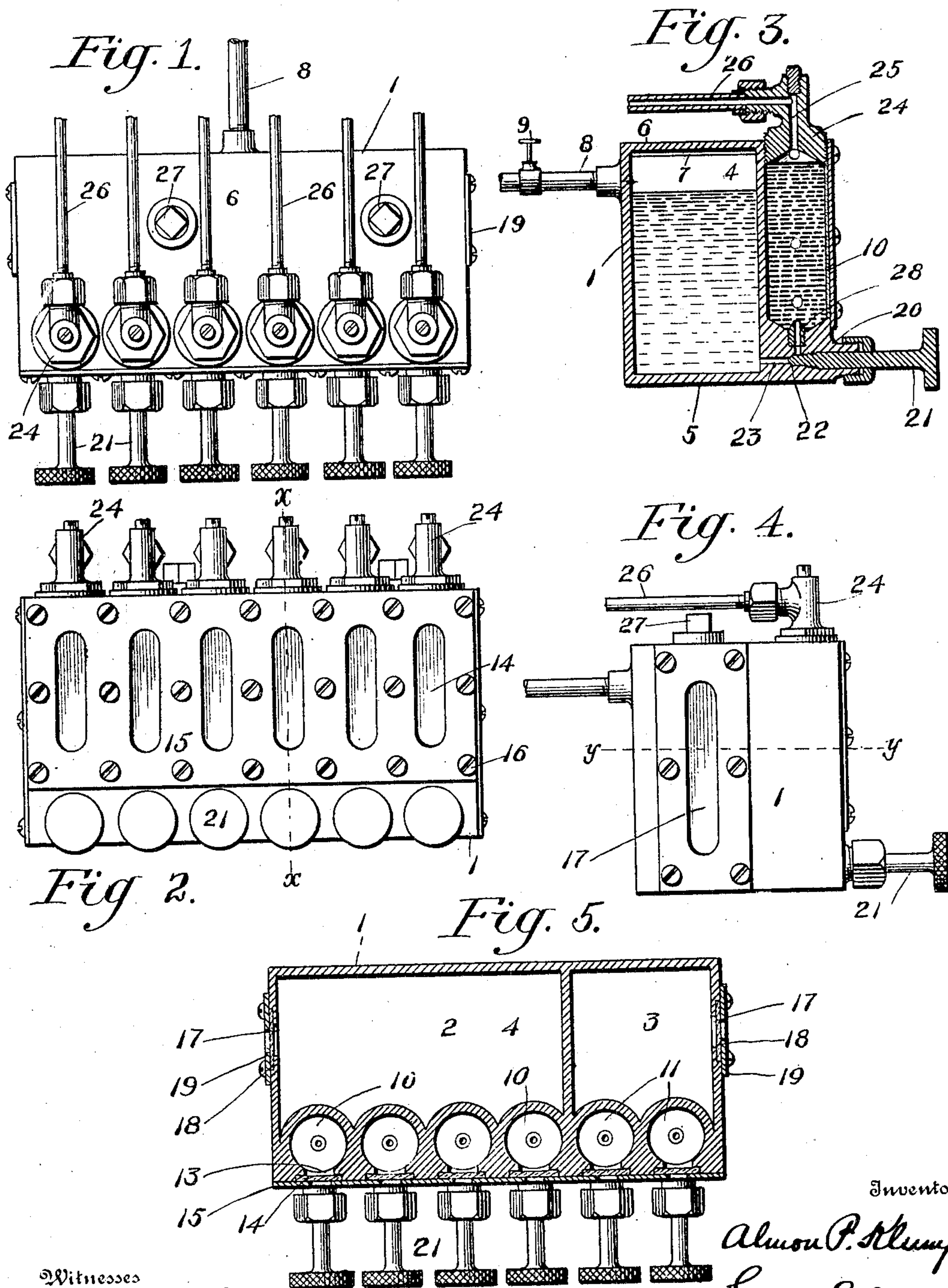


No. 871,418.

PATENTED NOV. 19, 1907.

A. P. KLUMPH.
 MULTIPLE FORCE FEED SIGHT LUBRICATOR.
 APPLICATION FILED OCT. 19, 1906.



Witnesses
R. W. Edelin.
James F. Marr

Inventor
Almon P. Klumph
Edward E. Blum
 Attorney

UNITED STATES PATENT OFFICE.

ALMON P. KLUMPH, OF ELYRIA, OHIO, ASSIGNOR OF ONE-HALF TO ED. LEBER, OF ELYRIA, OHIO.

MULTIPLE FORCE-FEED SIGHT-LUBRICATOR.

No. 871,418.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed October 19, 1906. Serial No. 339,713.

To all whom it may concern:

Be it known that I, ALMON P. KLUMPH, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Multiple Force-Feed Sight-Lubricators, of which the following is a specification, reference being had thereto to the accompanying drawing.

My invention relates to multiple force feed sight lubricators, and is especially designed for locomotive use wherein the air from the train service can be utilized to force the oil from its receptacle to the respective parts or bearings to be lubricated.

The object of the invention is to combine in one lubricator a simple and efficient structure adapted to feed two separate kinds of oil for different purposes and to different parts. Another object of the invention is the novel arrangement of supply-oil-tanks whereby a single source of pressure may be utilized for any number of chambers.

Specifically stated, the invention consists of a cast tank divided into two compartments by a partition which does not extend the entire height of the tank but leaves an air space affording communication between the two compartments. In each of these two compartments there are provided a plurality of oil feed chambers, usually filled with glycerin or water. The front of the casing opposite each one of the chambers is milled out to receive a glass, which is held in place by a clamping plate secured to the front of the tank. Each one of the chambers is also provided with a pin valve so that the oil feed can be properly regulated.

My invention is illustrated in the accompanying drawings, in which

Figure 1 is a top plan view of the lubricator. Fig. 2 a front elevation thereof. Fig. 3 a vertical section on line $x-x$ of Fig. 2. Fig. 4 is an end elevation, and Fig. 5 is a transverse longitudinal section on line $y-y$ of Fig. 4.

In the drawings, 1 represents a tank of any suitable material but I preferably make it by casting iron into the requisite shape and design. The tank 1 is divided into two compartments 2 and 3 by a partition 4 which extends from the bottom 5 of the tank 1 to a point adjacent the top 6 where it terminates a sufficient distance below the top to allow an air passage 7 forming a communication

between the two compartments for the air pressure from the train service. This pressure is conducted to the tank through the pipe 8 which is provided with the cut-off valve 9, to be used when filling the respective compartments with oil.

In forming the tank 1 several chambers 10 and 11 are formed within the compartments 2 and 3 respectively. These chambers are milled out to form sight openings 13 which are covered by the glasses 14 held in place by the clamping plate 15 which is attached to the front of the tank by screws 16. Similar sight openings 17 are formed in each end of the tank and have glasses 18 secured by the plates 19 in the manner described for the glasses 14. These sight openings are provided so that the engineer may note the amount of oil in each chamber and the amount of oil being fed to the respective bearings. A plurality of projections 20 extend from the lower end of the tank and have threaded therein pin valve shafts 21 having their ends engaging seats 22 to close the oil feed opening 23 leading into the chambers 10. Plugs 24 are threaded into the upper portion of the chambers 10 and are provided with oil feed apertures 25 which communicate with the feed pipes 26 secured to feed plugs 24. Threaded into the top of the casing above the center of each compartment 2 and 3 are plugs 27 which can be removed to fill the chambers when needed and are only removed after the valve 9 has been closed.

The operation of the device is as follows: The two compartments 2 and 3 are filled with oil, one a common lubricating oil and the other with cylinder oil. The valve 9 is then opened and the air from the train service forced in through the pipe 8 forming a pressure on the oil in both chambers, (it having clear communication through the passage 7) equal to that carried on the train systems. The pin valve shaft over whatever bearing it is desired to lubricate is loosened by unscrewing so that the oil may pass through the channel 23 into the chamber 10 and through glycerin or water therein to the oil channel 25 and from there to the bearing to be lubricated through the feed pipe 26.

Seated in the bottom of the chambers 10 is a nozzle 28 which is in communication with the chamber 10 and with the channel 23. This nozzle concentrates the flow of oil so that it will have more of a tendency to

pass straight up through the chamber instead of following the sides. Although I have shown this screw threaded into the casting, in practice it will be cast integral with the tank.

Although I have shown and described the simplest form of accomplishing the desired end it is evident that I may make many changes and resort to many modifications without departing in any way from the spirit or scope of the invention and I wish it clearly understood that all such modifications or changes are contemplated by me and are considered to be within the scope of the appended claims.

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

1. In a force feed lubricator, the combination with a casing, means dividing said casing into a plurality of oil compartments, oil feed pipes, a plurality of oil feed chambers in the casing connecting the oil feed pipes and the compartments, and means for controlling the feed from the compartments to the oil feed chambers.

2. In a force feed lubricator, the combination with a casing, there being a plurality of oil compartments therein adapted to contain different kinds of oil, a plurality of feed pipes, a plurality of oil feed chambers in each compartment and having a connection therewith and with the oil feed pipes, means for controlling the feed from the compartments to the oil feed chambers, and a single source

of pressure connected to one of said compartments, communication being provided between all of the compartments.

3. In a force feed lubricator, the combination with a casing, there being a plurality of oil feed chambers in the casing and a plurality of oil compartments having communication with said chambers, a sight opening for each compartment whereby the amount of oil therein may be determined, means for controlling the feed from said compartments to the oil chambers and sight openings for each oil feed chamber whereby the amount of feed may be determined.

4. In a force feed lubricator the combination with a tank adapted to contain two kinds of oil, a partition separating the oils and forming two compartments, sight feed chambers therein and a sight opening for each compartment to determine the amount of oil therein.

5. In a force feed lubricator, the combination with a casing, having a plurality of oil feed chambers therein and oil compartments, means for forcing the oil from the oil compartments to the oil feed chambers and to the bearings to be lubricated, and controlling valves for each oil feed chamber.

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

ALMON P. KLUMPH.

Witnesses:

H. W. PATRICK,

JOE KEARNES,

CHAS. A. METCALF.