

(No Model.)

W. W. DASHIELL.
LUBRICATOR.

No. 526,025.

Patented Sept. 18, 1894.

Fig. 1.

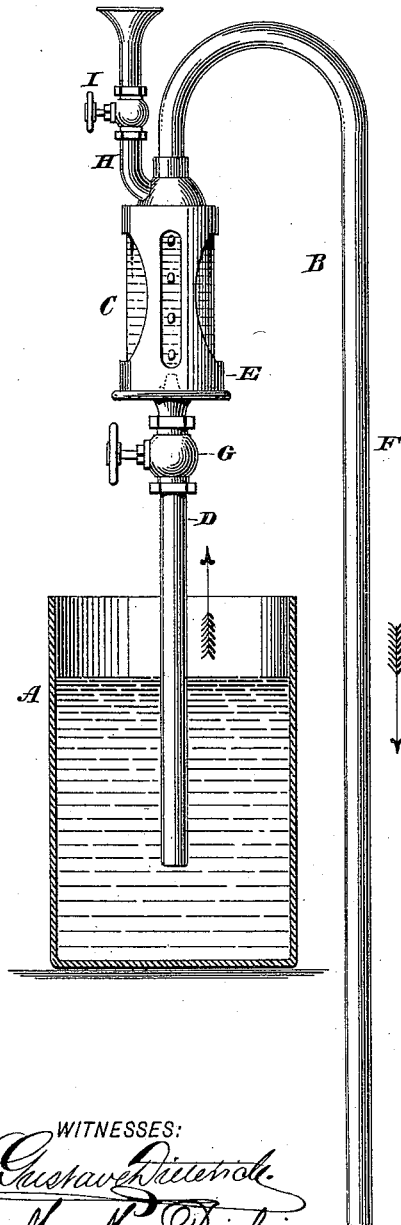
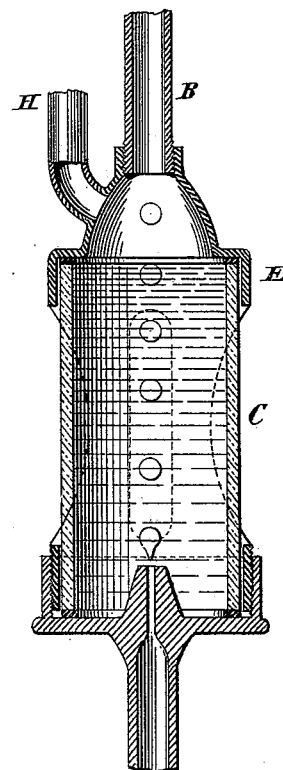


Fig. 2.



WITNESSES:
Chas. W. Dutton
M. M. Dickie

INVENTOR
William W. Dashiell
BY
Chas. C. Gill
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM W. DASHIELL, OF BAYONNE, NEW JERSEY.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 526,025, dated September 18, 1894.

Application filed February 13, 1893. Serial No. 462,009. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. DASHIELL, a citizen of the United States, and a resident of Bayonne city, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Devices for Feeding Oil for Lubricating Purposes, of which the following is a specification.

The invention relates to improvements in devices for feeding oil for lubricating the working parts of marine or other engines or other classes of machinery, and its object is to provide a new article of manufacture constituting an oil feed which will be automatic, reliable and capable of ready adjustment with respect to the quantity of oil to be fed, and in which the oil on its passage from the reservoir may be readily observed.

A further object of the invention is to produce an oil feed which will be simple of construction and durable and not depend for its operation on capillary attraction or the employment of hydrostatic or steam pressure.

In carrying my invention into effect in its preferred form, I employ a siphon whose longer arm will lead to the engine or other mechanism while the shorter arm thereof will be immersed in or connected with an oil reservoir, and in and forming a part of said shorter arm is provided a transparent receptacle containing water, up through which the oil will pass in full view on its way from the oil reservoir to the longer arm of the siphon. The shorter arm of the siphon is also provided with a regulating valve below the transparent receptacle and with an inlet and valve above said receptacle.

The invention will be more fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a device constructed in accordance with and embodying the invention; and Fig. 2 is an enlarged central vertical section of the transparent receptacle containing the water through which the oil passes.

In the drawings A represents the oil reservoir; B, the siphon, and C the transparent receptacle located in the shorter arm D of said siphon. The reservoir A may be of any suitable construction, and the siphon B will

preferably, though not necessarily, be formed from copper tubing. The receptacle C will preferably be a vertical glass cylinder greater in diameter than the siphon and securely held between the upper and lower ends of its encompassing frame E, the two parts of which will be screwed together, as indicated in Fig. 2, and bind upon the upper and lower ends of the receptacle. The upper and lower ends of the frame E at their center open into the siphon so as not to prevent the passage of the oil from the reservoir A to the longer or discharge arm F of said siphon.

In the shorter arm D of the siphon and preferably in near relation to the lower end of the receptacle C is provided the valve G by which the passage through said arm may be wholly or partially closed; and into the siphon above the receptacle C is led the inlet or branch pipe H having a valve I which controls the passage through the same. The exact location of the inlet pipe H is unimportant, the only essential consideration being that it serves to direct the water to the receptacle C and as a means, in starting the operation of the siphon, of filling the longer arm F with oil, the valve G being closed and the valve I open during the entrance of the water to the receptacle and the oil to the arm F, and the valve G being wholly or partially open and the valve I wholly closed thereafter. The form and construction of the receptacle C and its encompassing frame E are also unimportant, the purpose of the frame being merely to support and protect the receptacle without entirely concealing it.

While the device is in use feeding oil, the valve I, as above stated, will be closed and the valve G wholly or partially opened, and at such time the oil will pass upward from the reservoir A through the arm D and into and through the receptacle C, the oil in globules or drops ascending through the water and passing thence to the longer arm F which conducts it to the point of discharge. The volume of oil passing upward through the siphon may be regulated at will by means of the valve G, and the oil on its passage may be observed at all times through the receptacle C, which is preferably made of glass for that purpose.

During the operation of the device the outward flow of oil from the siphon preserves the

water in a state of suspension in the receptacle C, and hence the water is not displaced or permitted to leave the receptacle but is maintained therein and the oil passes through it on its upward passage to the discharge arm F. The oil is siphoned from the reservoir A and does not depend upon capillary attraction or hydrostatic or steam pressure to effect its movement.

The suspension of one liquid in the shorter arm of a siphon while another liquid passes upward through the same to the longer arm involves a principle of the operation which I believe to be new, and hence I do not confine the invention solely to the feeding of oil but reserve the right to use and employ the same for any purpose for which it may be applicable.

When it is desired to employ the siphon above described I first open the valve G or the valves G and I, and immerse the arm D in the oil to a suitable depth, thus permitting the oil to pass into the arm to the level of the oil in the reservoir and the air displaced thereby to escape upward, after which I close the valve G and the valve I being open I pour water downward through the branch H until the receptacle C has become full. Thereafter oil is poured downward through the branch H until the longer arm F has become full, when the valve I will be closed and the valve G opened and the siphon will then start and continue its operation, the oil in the reservoir passing upward through the receptacle C and being discharged through the arm F.

One of the essential features of the invention is that the siphon is connected with a transparent reservoir containing water, and that the oil passes upward through the water in full view prior to its discharge to the engine or other mechanism to be lubricated.

Without limiting myself to the details of construction, what I claim as my invention, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a tubular siphon having its short arm in communication with a reservoir containing one liquid, combined with a transparent receptacle in said siphon and adapted to contain a heavier liquid than that being siphoned and the diameter of which is greater than the inlet thereto and the outlet therefrom for the liquid being siphoned, substantially as set forth.

2. As a new article of manufacture, the siphon having its short arm immersed in a reservoir containing one liquid, combined with the transparent receptacle in said arm containing in suspension a heavier liquid through which the first mentioned liquid passes, and the valve in said arm; the diameter of said receptacle being greater than that of the inlet thereto for the liquid being siphoned; substantially as set forth.

3. As a new article of manufacture, the tubular siphon having its short arm immersed in a reservoir containing one liquid, combined with a transparent receptacle in said arm containing in suspension a heavier liquid through which the first mentioned liquid passes, the valve in said arm, the inlet for the liquid to said receptacle, and the valve for said inlet, the diameter of said receptacle being greater than that of the inlet thereto for the liquid being siphoned, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 10th day of February, A. D. 1893.

WILLIAM W. DASHIELL.

Witnesses:

CHAS. C. GILL,
ED. D. MILLER.