(No Model.)

D. J. M. CORSSEN.

OILER.

No. 397,050. Patented Jan. 29, 1889.

Fig. I.

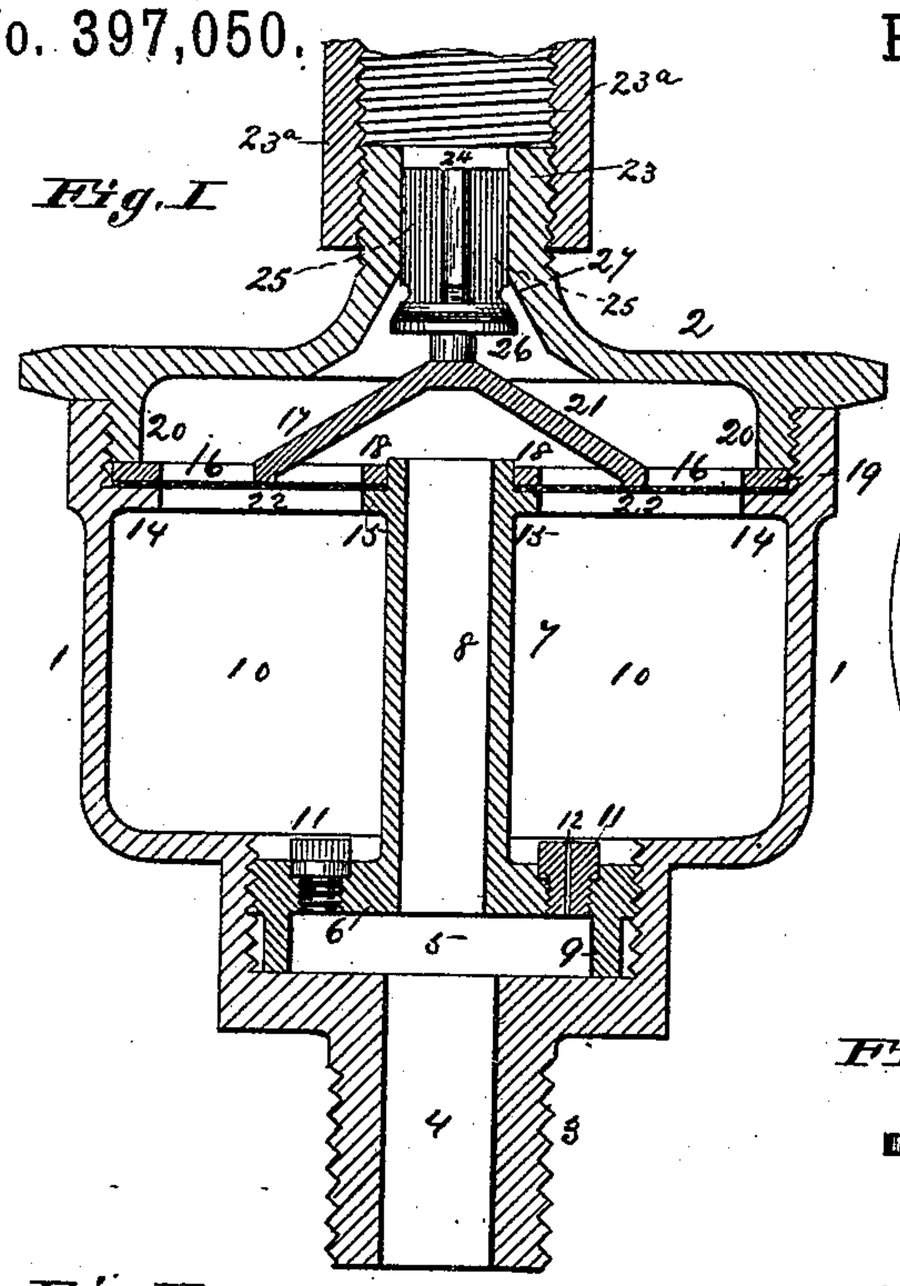


Fig. II.

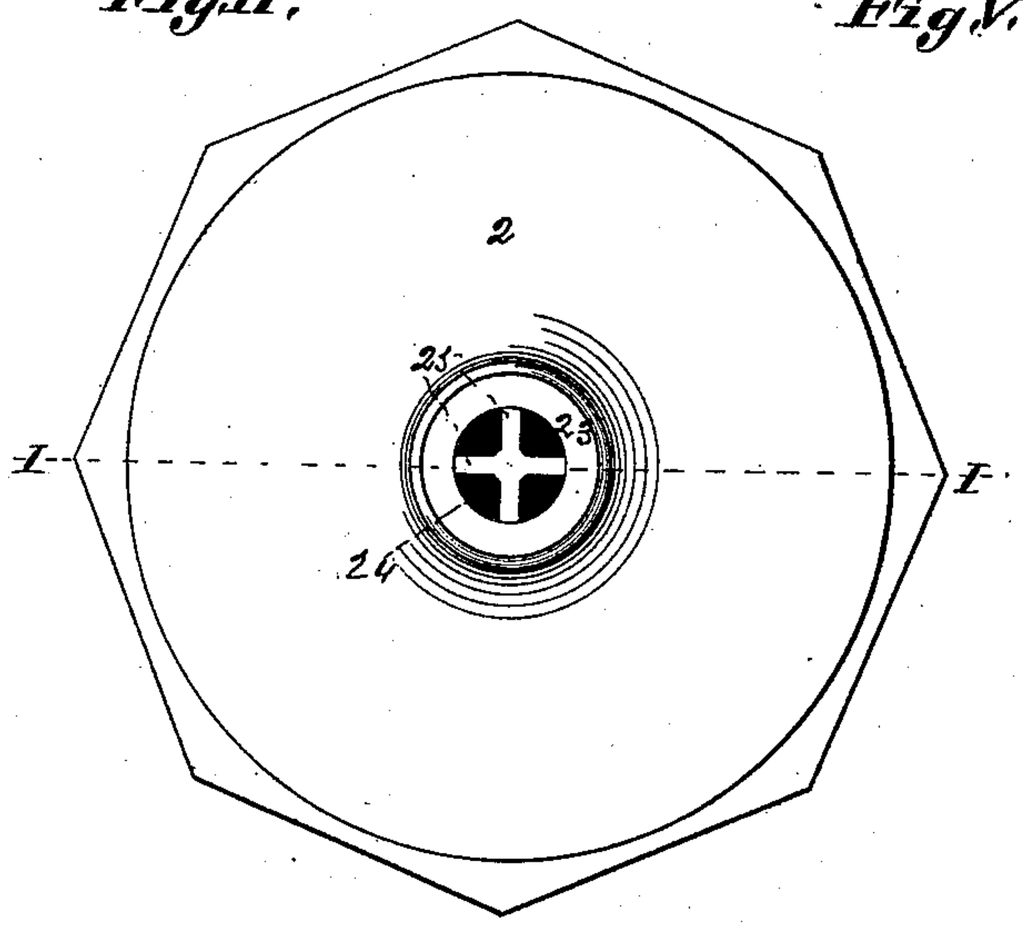


Fig. III.

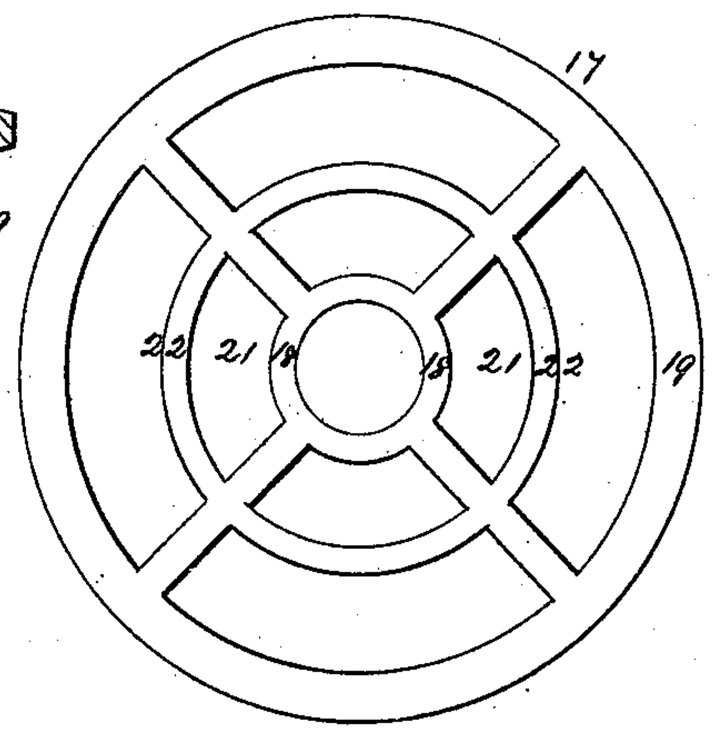


Fig. IV.

Fig. V.

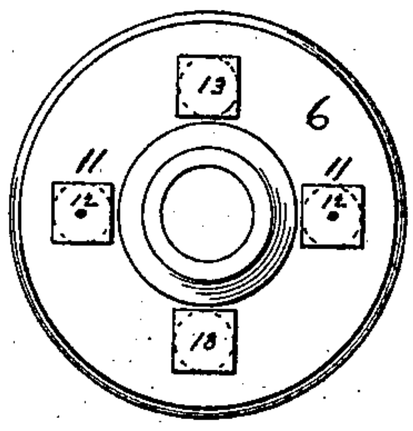
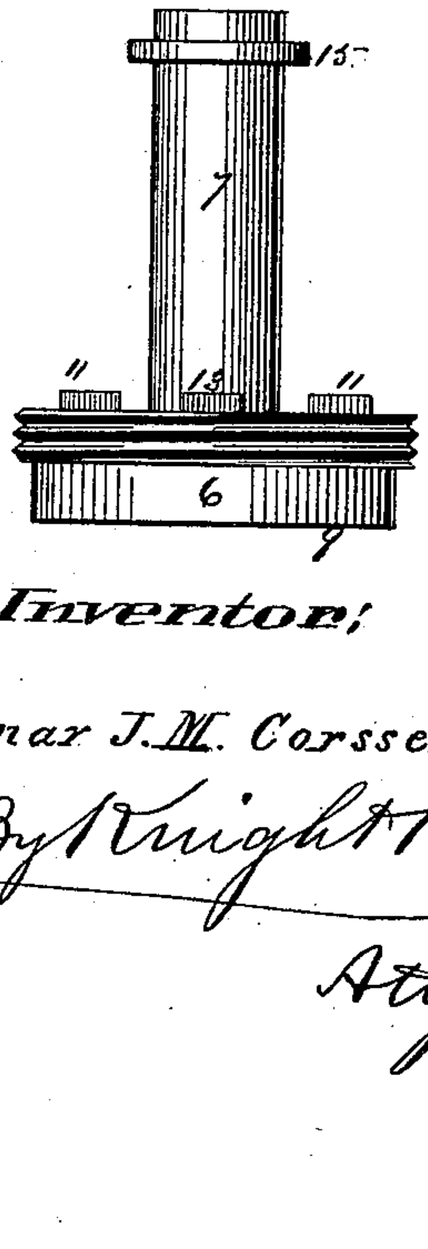


Fig. VI.



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UNITED STATES PATENT OFFICE.

DETTMAR J. M. CORSSEN, OF EFFINGHAM, ILLINOIS.

OILER.

SPECIFICATION forming part of Letters Patent No. 397,050, dated January 29, 1889.

Application filed May 25, 1888. Serial No. 275,028. (No model.)

To all whom it may concern:

Be it known that I, DETTMAR J. M. CORSSEN, of Effingham, in the county of Effingham and State of Illinois, have invented a certain new and useful Improvement in Oilers for Engine-Valves and Pistons, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The device is intended more especially for locomotive-engines, but is applicable to all engines. The device is applied to the steam-chest, and is constructed to close communication between the interior of the valve-chest and the "tallow-pipe" when the throttle-valve is open.

Figure I is an axial section of the device at I I, Fig. II. Fig. II is a top view of the device, the supply-pipe being omitted. Fig. III is an under view of the spider. Fig. IV is a side view of the spider. Fig. V is a top view of the flanged pipe, and Fig. VI is a side view of the same.

1 is the body of the device.

2 is a cap or top screwing into the body.

3 is a screw-threaded neck, which is tapped into the top of the steam-chest. The steam ascends through the bore 4 of the neck, and the oil or other lubricant descends through the same bore and serves to lubricate not only the valve, but the interior of the cylinder. Above the bore 4 there is a circular recess, 5, screw-threaded at its circumference.

6 is the flange of a standing pipe, 7, whose bore 8 is in line with the bore 4. The flange 6 has at its periphery a screw-thread and screws into the recess 5.

9 is an annular lip at the bottom of the flange, whose lower edge fits the bottom of the recess, so as to make a steam-tight joint. Above the flange 6 there is an annular oil or tallow chamber, 10, through which the pipe 7 extends upward.

11 are tubes tapped into holes extending through the flange, and having very small bores at 12 for the passage of oil from the chamber 10 to the bore or passage 4. The bores 12 are of such size as to allow the desired quantity of oil to pass through. To lessen the quantity, blind-screws 13 may be inserted in some of the holes in the flange 6.

The wall of the body has an interior annular flange, 14, and the pipe 7 has a flange, 15, surrounding it. These flanges 14 and 15 are on the same level and serve to support an annular piece, 16, of fine gauze, whose exterior and interior edges rest, respectively, on the flanges 14 and 15, and which is for the purpose of filtering the oil before it enters the chamber 10, as otherwise the small bore 12 would be apt to become choked.

17 is a circular spider having a central circular bar, 18, fitting the part of the pipe 7 above the flange 15 and resting upon the gauze 16. The periphery 19 of the spider extends over the flange 14 and bears upon the outer margin of the gauze, pressing it hard down on the flange 14. Upon the periphery 19 of the spider rests the lower edge, 20, of the cap or cover.

21 is a cone, which forms part of the spider, and whose lower edge is seen at 22, and which serves as a deflector, directing the lubricant onto the screen or strainer and preventing it from entering the upper end of the tube 7 directly from the upper bore or passage, 24. The top of the cap has a screw-threaded neck, 23, for connection with the lubricant or tallow supply pipe 23^a. In the bore or passage 24 of the neck work the wings 25 of a valve, 26, whose seat 27 is at the bottom of the bore 24. It will be seen that when there is a sufficient pressure of steam in the chamber 10 the steam in its rush to pass through the bore 24 will force the valve 26 closed and shut off communication between this chamber and the tallow-pipe. When the throttle-valve of the engine is closed, the valve 26 descends by gravity until arrested by impingement upon the apex of the cone 21. The lubricant then flows from the tallow-supply pipe 23^a, connected with the tallow-reservoir, (not shown,) through the valve-port, and, dropping upon the cone 21, is carried outward and drips into the annular chamber 10. The oil is constantly passing through the small bores 12 from the chamber 10 into the bore 4, whether the steam-pressure in the chamber 10 and steam-chest is more or less, for the pressure will always be substantially the same in the steam-chest and the chamber 10, as the com-

munication between them is free through the bores of the neck 3 and pipe 7.

I claim—

1. In a lubricator, the combination, with the vessel 1, having an oil-chamber therein and passages 24 4, for communicating with the supply of lubricant and with the steam-chest containing the part to be lubricated, respectively, of an inwardly-opening valve for controlling said passage 24, a chamber, 5, in communication with passage 4, having passages 12 leading into said oil-chamber, and a tube extending from chamber 5 up into said vessel, as set forth.

2. In a lubricator, the combination, with the vessel 1, having passages 24 4, for communicating with the supply of lubricant and with the steam-chest containing the part to be lubricated, respectively, of an inwardly-opening valve controlling said passage 24, a pipe communicating with the passage 4 and extending up into said vessel, and a deflector or cone arranged under said passage 24 and over said pipe, substantially as set forth.

3. In a lubricator, the combination, with the vessel 1, having an oil-chamber therein and passages 24 4, for communicating with the supply of lubricant and with the steam-chest containing the part to be lubricated, respectively, of an inwardly-opening valve controlling said passage 24 and extending up into said oil-chamber, a deflector or cone arranged under said passage 24 and over said pipe, and a strainer arranged between said cone and oil-chamber, as set forth.

4. The combination of the vessel 1, having necks 3 and 23, for attachment to a steam-chest and lubricant-reservoir, respectively, and said necks having passages 4 and 24, respectively, therethrough, leading to the interior of said vessel, the flange 6, secured in the bottom of said vessel, the tubes 11, having bores 12 tapped in said flange, the pipe 7, extending from said flange up into said vessel, and having a bore, 8, leading through said flange, flanges on said pipe and in said vessel, a spider, and a screen or strainer supported by said flanges and said spider, having a deflector over the tube 7, and a downwardly-opening valve in said passage 24, adapted to fall by gravity and rest upon said deflector, substantially as set forth.

5. A closed vessel adapted to be interposed between the lubricant-supply pipe and the valve or steam-chest of an engine, said vessel having an oil-chamber, 10, whose upper portion is in free communication with the interior of the steam-chest, and whose lower portion is in communication with said chest through small openings only, and a valve controlling said lubricant-supply pipe adapted to open toward the interior of said vessel, substantially as and for the purposes set forth.

DETTMAR J. M. CORSSEN.

In presence of—
JOHN C. EVERSMAN,
HENRY C. VAIL.