(No Model.)

J. S. HALL.

AUTOMATIC OILER.

No. 342,510. Patented May 25, 1886.

Fig. 1.

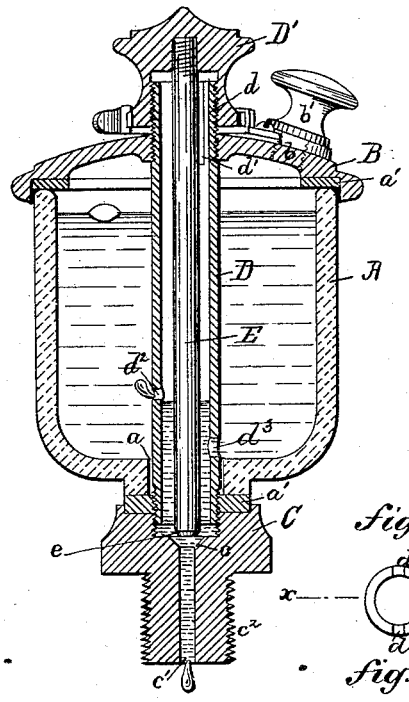


Fig. 2.

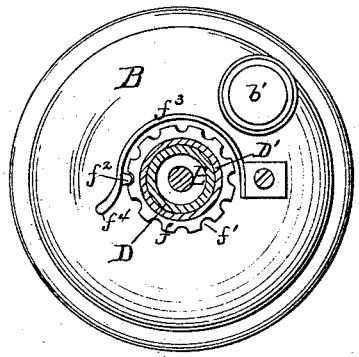


Fig. 3.

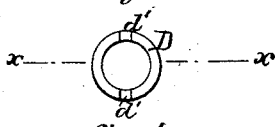
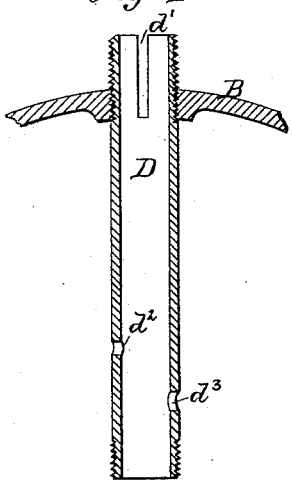


Fig. 4.



Witnesses:

Harry Eichling

A. S. Fitch.

Inventor

John S. Hall

By P. P. Pitch.

His Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JOHN S. HALL, OF NEW YORK, N. Y.

AUTOMATIC OILER.

SPECIFICATION forming part of Letters Patent No. 342,510, dated May 25, 1886.

Application filed October 8, 1885. Serial No. 179,296. (No model.) Patented in England March 24, 1885, No. 3,781.

To all whom it may concern:

Be it known that I, JOHN S. HALL, of the city, county, and State of New York, and a citizen of the United States, have invented an Improved Automatic Oiler, (which was patented in England by Letters Patent No. 3,781, dated March 24, 1885,) of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a vertical central sectional view of an oiler containing my invention. Fig. 2 is a plan of the same. Fig. 3 is an end view of the central or air tube of the oiler, and Fig. 4 is a vertical central section of the said tube.

My invention relates to an oiler for affording lubrication automatically to journal-bearings, &c.; and it consists in an automatic oiler in which the flow of oil therefrom is regulated by an adjustable oil-valve at the bottom of the oiler, and by an adjustable air-inlet valve above the line of the bottom of the oiler and below the level of the surface of the oil, so that the air on being admitted will pass upward through the oil and act as a visual indicator of the corresponding rate of outflow of the oil to the journal, and so that the air-valve and oil-escape valve will co-operate to regulate the rate of outflow of the oil; and it further consists in the combination, with the air-valve devices, of the locking device hereinafter described, whereby the air-valve is locked or held in the desired position, as and for the purpose specified.

A is the body of the oiler, and is made of glass or other transparent material, and is closed at the top by a cap, preferably of metal, as shown at B. At the lower end of the cup or body is the comparatively-restricted opening *a*, which is fitted with a metal cap, C. The joints between the caps and the body are hermetically closed, which may be accomplished by suitable packings or washers. (Shown at *a'*.)

D is a tube, the upper end of which is screw-seated in the cap B, and at its lower end is screw-seated in the cap C, whereby the caps may be held tightly to the body. The upper end of the tube D extends beyond the cap B, as at *d*, and is there provided with one or more slotted openings, *d'*, extending longitudinally of the tube. The exterior of the end *d* of the tube is threaded.

D' is a cap interiorly threaded, and adapted to be seated upon and close down over the slots in the end *d* of the tube D.

Intermediate the ends of the tube D, and within the body of the oiler, is an aperture, d^2, in the wall of the tube. At the bottom of the body an aperture, d^3, is made in the wall of the tube D. From the cap D', and longitudinally of the tube D, extends the rod or valve-stem E, the lower end of which forms or carries a valve, *e*, adapted to fit into and upon a valve-seat, *c*, which is located interiorly of the cap C, and from which longitudinally of the cap C extends the orifice or tube *c'*. The extremity of the cap C is threaded, as seen at c^2, whereby the device may be seated in a journal-bearing.

The parts are so constructed and arranged relatively to each other that when the cap D' is screwed down to wholly close the upper slotted end of the tube D the valve *e* will be closed down tightly upon its seat *c*.

At *b* is shown an orifice, through which the cup may be conveniently filled with oil, closed by a screw-plug, *b'*.

The cap D' is provided with an exterior annular flange, *f*, carrying a series of notches, *f'*, as shown, and a detent or catch, f^2, mounted on or provided with a spring, f^3, is fixed on the exterior of the cap B, to engage either of the said notches. The catch has a releasing thumb-piece, f^4. It is evident that the transparent cup being filled with oil air may be admitted, turning the cap D' upward to open the slots in the top of tube D. The air thus admitted will pass down the tube D, and thence, through the aperture d^2, will pass upward through the body of oil, and will cause a corresponding bulk of oil to pass through aperture d^3 and through valve *e c* into the tube *c'*, and so to the journal; and it is evident that the rate at which the oil flows to the journal may be regulated by the extent to which air is admitted through the slots in the top of the tube D by the raising or lowering of the cap D', such movement of the cap D' causing a corresponding opening or closing of the valve *e*, and that the passing of the air in bubbles

upward through the oil in the body of the cup will give visual evidence of the rate of the outflow of oil to the journal. It is also evident that by means of the spring-catch f^2 and flange f the cap D′ may be locked in any desired position, and will not be liable to be disturbed by the motion or jarring of the journal.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an oiler for journals, having a transparent body, and metal caps closing the top and bottom of said body, the combination therewith of the tube D, extending longitudinally of said body and screw-seated in said caps, and having apertures d', d^2, and d^3, together with the cap D′, rod E, and valve e, and the tube c', with valve-seat c, as described, and for the purpose specified.

2. In an oiler for journals, having a transparent body, and metal caps closing the top and bottom of the same, and an air-tube extending longitudinally of the body and apertured, as described, the cap D′, controlling the air-inlet, and carrying the valve controlling the oil-outlet, in combination with the notched flange f and the spring-catch f^2, as described, and for the purpose specified.

JOHN S. HALL.

Witnesses:
A. G. N. VERMILYA,
HENRY EIDLING.