

(No Model.)

S. D. MERSHON.  
VALVE OILER.

No. 294,898.

Patented Mar. 11, 1884.

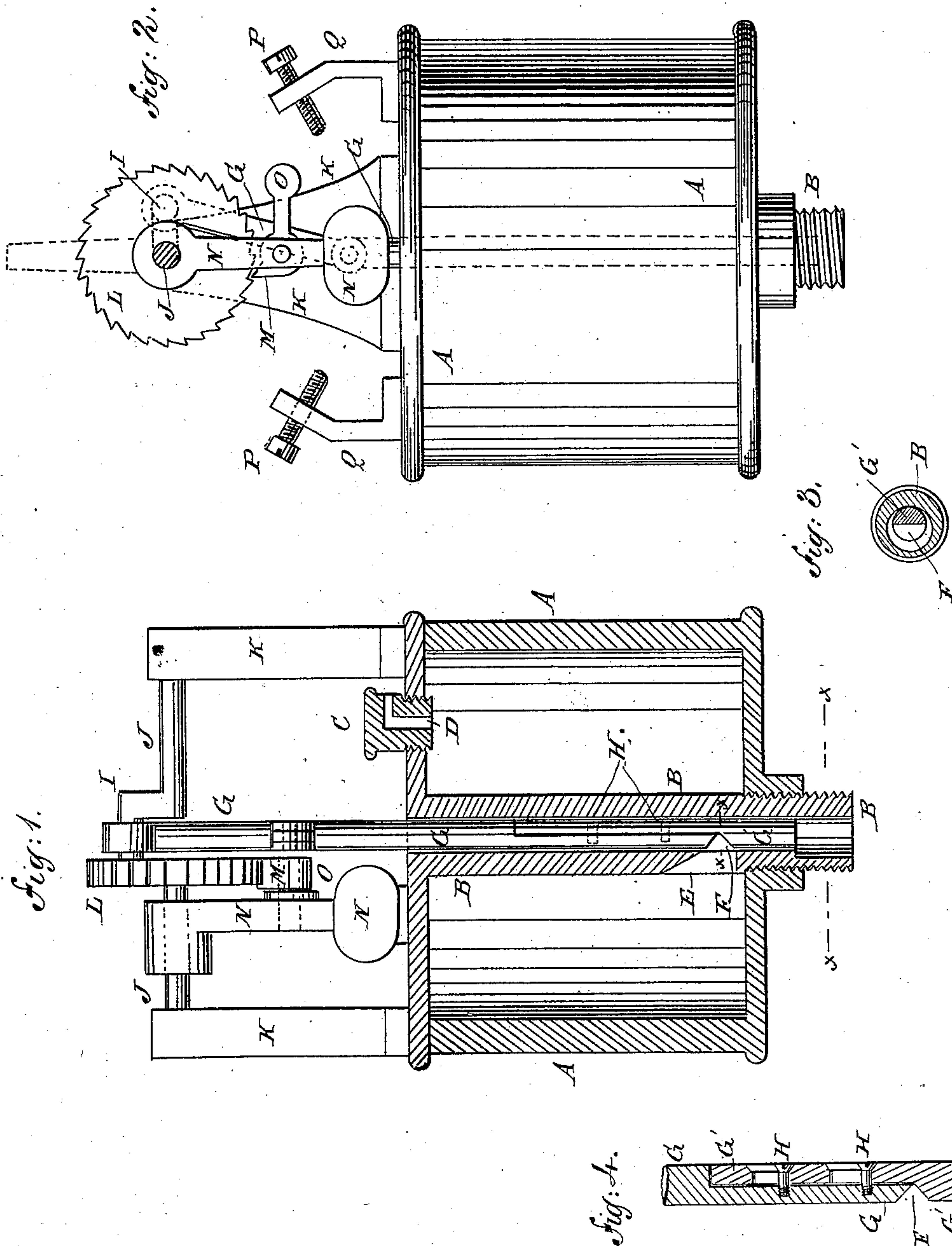


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

WITNESSES:

*Chas. Aida*  
*C. Sedgwick*

INVENTOR:

*S. D. Mershon*

BY

*Munn & Co*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

SAMUEL DAVIES MERSHON, OF RAHWAY, NEW JERSEY.

## VALVE-OILER.

SPECIFICATION forming part of Letters Patent No. 294,898, dated March 11, 1884.

Application filed December 21, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL DAVIES MERSHON, of Rahway, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Reciprocating Valve Oilers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement. Fig. 2 is an elevation of the same turned one-quarter around from the position shown in Fig. 1. Fig. 3 is a sectional plan view of the tube and discharge-rod, taken through the broken line *xxxx*, Fig. 1. Fig. 4 is a longitudinal section of the discharge-rod.

The object of this invention is to facilitate the oiling of engines, shafts, and other bearings and moving parts of machinery, and also to secure regularity in the amount of oil delivered.

The invention consists in an oiler constructed with an oil-reservoir provided with a tube having an opening in one side, and a jointed discharge-rod having a recess in one side, and moved forward and back by a crank-shaft driven by a ratchet-wheel, pawl, and vibrating pendulum or lever. The swing of the pendulum, and consequently the rapidity of feed, are regulated by set-screws passing through the inwardly-inclined upper ends of two standards attached to the top of the oil-reservoir. The oil-discharging rod is made in two parts, halved to each other, connected adjustably by screws, and having a recess between the end of one part and the shoulder of the other part, so that the size of the said recess can be readily regulated, as will be hereinafter fully described.

A represents the oil reservoir or cup, through the center of which passes a tube, B. The tube B may be formed solid with the top of the reservoir, and screwed into a screw-hole in the bottom of the said reservoir, or screwed in place in any other suitable manner. Oil is introduced into the reservoir A through an opening in its top, which opening is closed by a screw-plug, C, having a perforation, D, formed through it to admit air to the said reservoir, to take the place of the oil as it is discharged. In one side of the lower part of the tube B is

formed an opening, E, through which oil can pass into the interior of the said tube and enter the pocket or recess F in the side of the rod G, fitted accurately into the said tube. The recess or pocket F is formed between the end of the main part of the rod G and the shoulder of the extension part G' of the said rod. The main and extension parts of the said rod G are halved to each other, and are held in place by screws H, which pass through short slots in the extension part G' and screw into the main part G. The outer parts of the slots in the extension part G' are countersunk to receive the heads of the screws H, so that the said heads will be flush with the outer surface of the said rod. With this construction, when the rod G is raised, the recess F comes opposite the opening E and becomes filled with oil. As the rod G moves downward, the oil in the recess F is carried with it and flows out through the lower part of the tube B to the surface to be oiled. The bore of the lower part of the tube B is enlarged opposite the recess F, where the rod G is at the lower end of its stroke, as shown in Fig. 1, so that the oil can flow out of the recess F freely. The upper part of the rod G is jointed, and its upper end is pivoted to a crank, I, formed upon the shaft J, which revolves in bearings in the upper ends of the standards K, attached at their lower ends to the top of the reservoir A, so that the rod G will be moved down and up at each revolution of the shaft J, and will thus discharge the contents of the recess F to the surface to be oiled at each of said revolutions.

To the shaft J is attached a ratchet-wheel, L, into the teeth of which meshes the engaging end of a pawl, M, pivoted to the pendulum N, so as to be operated by the swing of the said pendulum. The pawl M is made with a weighted arm, O, projecting in such a direction that the said pawl will be held in gear with the ratchet-wheel by the gravity of the said arm. The jar of the engine will be sufficient to keep the pendulum N in motion; but, if desired, the said pendulum N may be extended into a lever, as indicated in dotted lines in Fig. 2, and vibrated by arms or other stops attached to the piston-rod or some other moving part of the engine or machinery. The swing of the pendulum N is limited by set-



screws P, which pass through screw-holes in the upper ends of the standards Q. The lower ends of the standards Q are attached to the top of the oil-reservoir A, and the said standards Q are made of such a height and their upper ends are inclined inward at such an angle that the said set-screws P will be nearly in the line of the arc described by the pendulum-ball, so that the said ball will strike squarely against the forward ends of the set-screws. However, the said set-screws may be adjusted as shown in Fig. 2. With this construction the set-screws P can be adjusted to cause the pendulum N at each swing to move the ratchet-wheel L through the space of more or less teeth, so as to increase or diminish the time required for the said ratchet-wheel to make a revolution, and thus regulate the time between the successive discharges of oil.

If desired, the oiler can be arranged in a horizontal position; but in this case the rod G must work through a stuffing-box to prevent the oil from leaking out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An oiler constructed substantially as herein shown and described, and consisting of the oil-reservoir provided with a tube having an opening in one side, and a jointed discharge-rod having a recess in one side, and moved forward and back by a crank-shaft driven by a

ratchet-wheel, pawl, and vibrating pendulum or lever, as set forth.

2. In an oiler, the combination, with the oil-reservoir A and the tube B, having side opening, E, of the jointed extensible sliding rod G, having oil-receiving recess F between the main part of said rod and the shoulder G' of the extensible part, whereby the size of the recess F may be regulated, and a driving mechanism, as set forth.

3. In an oiler, the combination, with the jointed oil-discharging rod G, of the crank-shaft J, the ratchet-wheel L, the weighted pawl M, and the vibrating pendulum or lever N, substantially as herein shown and described, whereby the said recessed rod will be operated at regular intervals to discharge oil, as set forth.

4. In an oiler, the oil-discharging rod G, made, substantially as herein shown and described, in two parts, halved to each other, connected adjustably by screws, and having a recess, F, between the end of one part and the shoulder of the other part, whereby the size of the said recess can be readily regulated, as set forth.

SAMUEL DAVIES MERSHON.

Witnesses:

SAML. M. BREASLEY,  
ROBERT D. GIBBY.