

(No Model.)

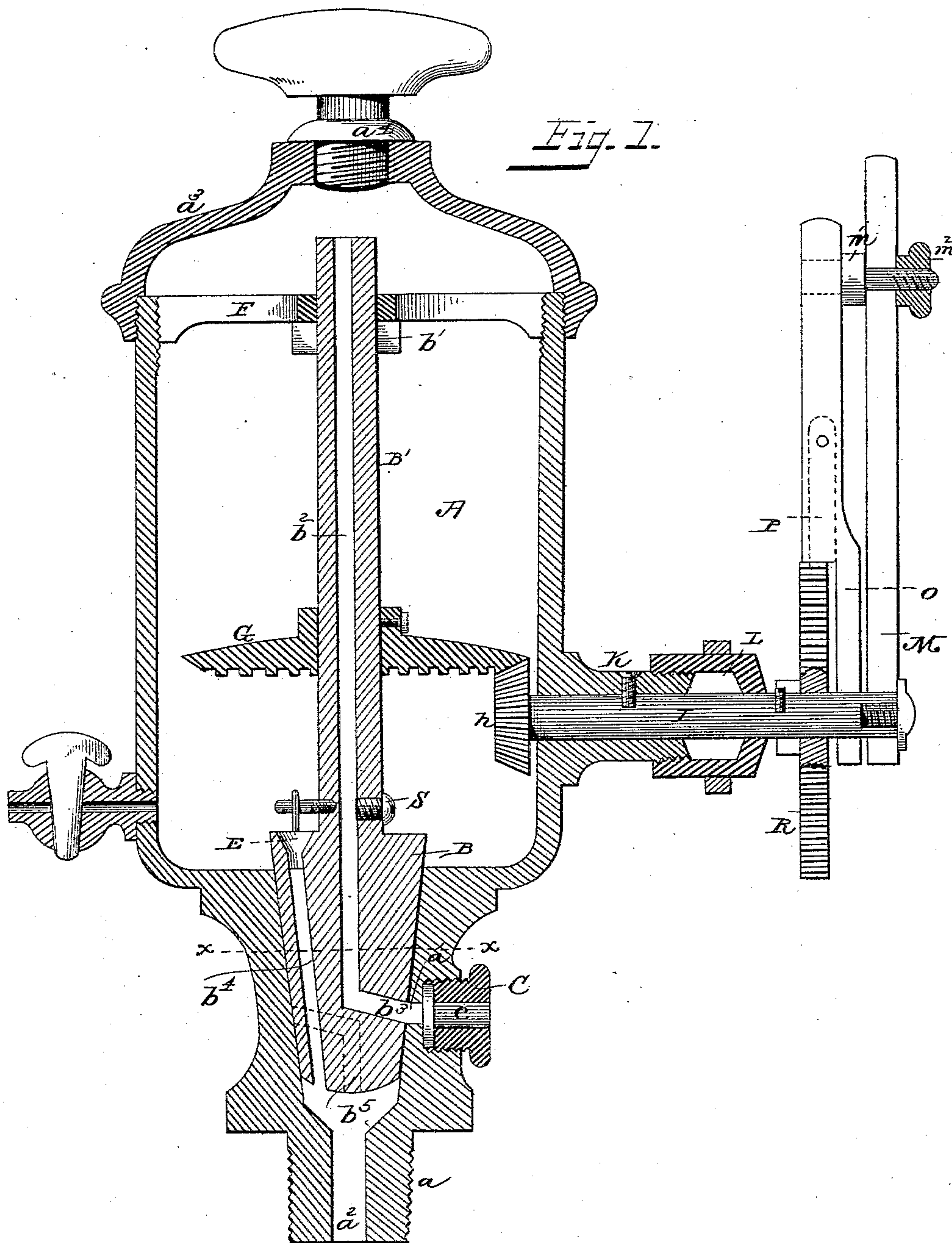
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E. J. WELLS.

OILER.

No. 319,154.

Patented June 2, 1885.



(No Model.)

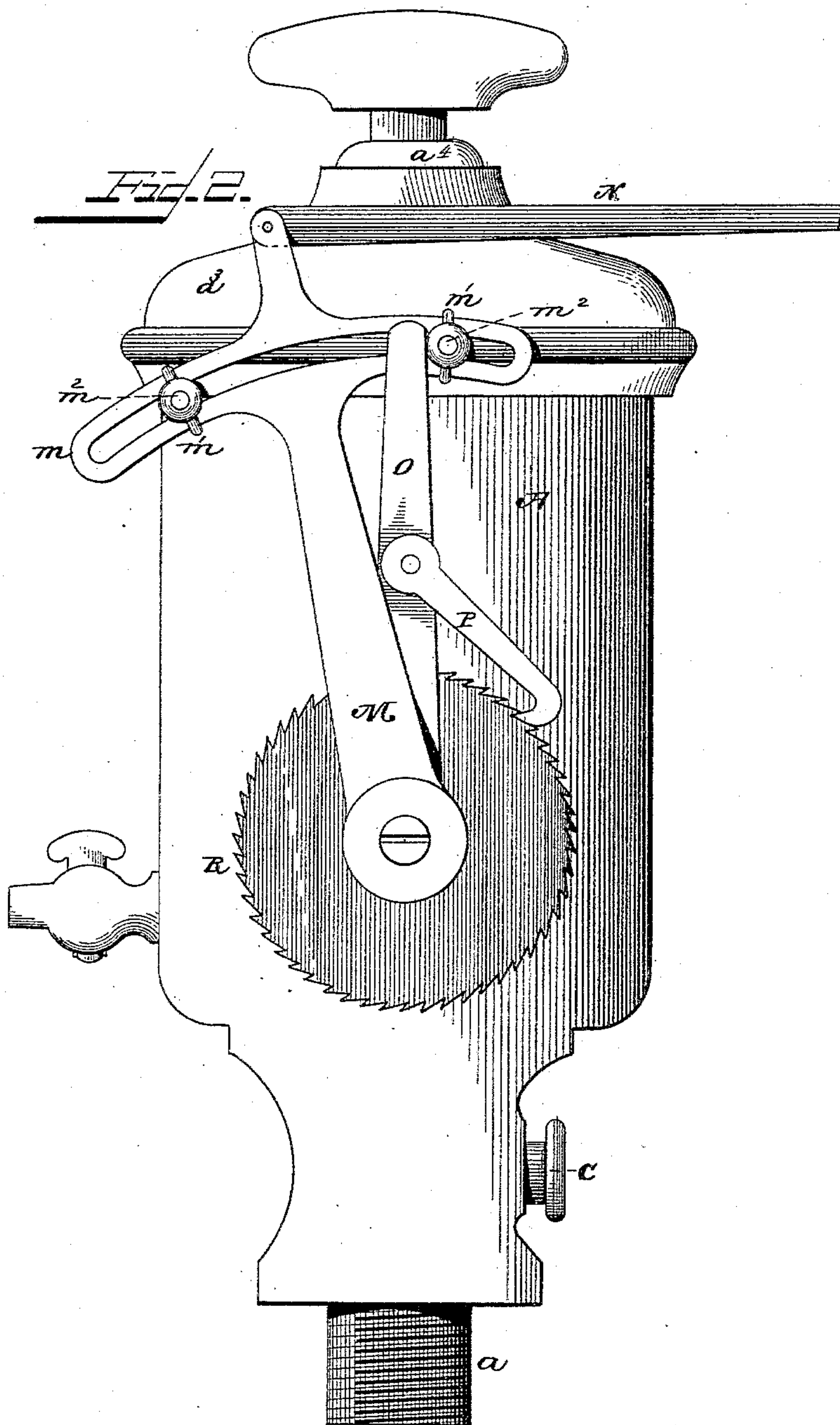
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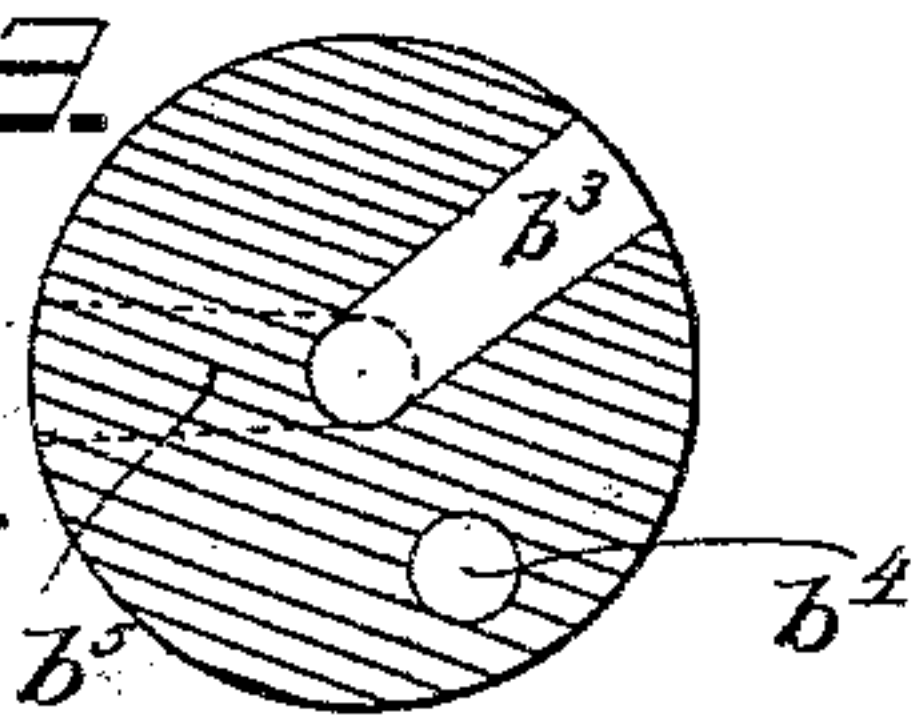
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WITNESSES

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UNITED STATES PATENT OFFICE.

EDGAR JAMES WELLS, OF TICONDEROGA, NEW YORK.

OILER.

SPECIFICATION forming part of Letters Patent No. 319,154, dated June 2, 1885.

Application filed April 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, EDGAR J. WELLS, a citizen of the United States, residing at Ticonderoga, in the county of Essex and State of New York, have invented a new and useful Improvement in Oilers, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in oilers; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

This invention is an improvement upon that for which Letters Patent of the United States were granted to me October 17, 1882, No. 266,237.

In the accompanying drawings, Figure 1 is a vertical sectional view of an oiler embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view taken on the line *x x* of Fig. 1.

A represents a cup or reservoir for the oil, which is provided at its lower end with a threaded projection, *a*, to adapt the cup to be secured to a steam-cylinder, steam-chest, or any other mechanism to be lubricated.

B represents the oil-feeder, which has its lower end tapered and ground into an opening made to receive it in the lower end of the oil-cup. This oil-feeder has a vertical extending hollow shaft, *B'*, the upper end of which bears in a spider, *F*, that is screwed into the upper side of the oil-cup. A collar, *b'*, is made near the upper end of the shaft *B'* and bears under the spider *F*. The central opening, *b²*, which extends down through the shaft *b*, connects with an oblique opening, *b³*, which extends out to one side of the oil-feeder, near the lower end thereof, and communicates with an opening, *a'*, which is made in one side of the oil-cup, near its lower end.

C represents a bushing which is screwed into an opening formed in the oil-cup, and this bushing is provided with a central opening, *c*, which communicates with the opening *a'*.

a² represents the central opening, which is made in the lower end of the oil-cup and communicates with an opening, *b⁴*, which extends up near one side of the oil-feeder. The upper

end of the opening *b⁴* is normally closed by a gravity-valve, *E*.

S represents a screw which passes through an opening that communicates with the central opening, *b²*, in the shaft *B'*, near the lower end thereof.

b⁵ represents an opening which extends from the lower side of the center of the oil-feeder *B* up to the side thereof, on a horizontal line with and nearly opposite to the lower end of the opening *b³*, so that when the oil-feeder revolves the openings *b³* and *b⁵* will alternately communicate with the opening *a'*. The upper end of the oil-cup is provided with a cover, *a³*, which is screwed onto the upper side of the oil-cup, and is provided at its center with a screw-plug, *a⁴*, by means of which the oil is introduced into the oil-cup.

G represents a miter gear-wheel which is fixed to the shaft *B'* at a suitable distance from the lower end thereof, and with this gear-wheel G meshes a miter-pinion, *h*, which is attached to the inner end of a horizontal shaft, *I*, that extends out through a bearing-sleeve, *K*, that is formed in one side of the oil-cup.

L represents the packing-box, which is screwed on the outer end of the sleeve *K*, to prevent leakage of oil or steam around the shaft *I*.

To the outer end of the shaft *I* is loosely fixed an arm, *M*, the upper end of which is connected by a rod, *N*, to a valve-stem or other suitable part of the mechanism to which the oiler is attached. The arm *M* is provided near its upper end with a slotted quadrant, *m*.

O represents an arm which is loosely secured on the shaft *I*, adjacent to the arm *M*, and to this arm *O* is pivoted a pawl, *P*, that is adapted to engage a ratchet-wheel, *R*, that is fixed to the shaft *I*. The upper end of the arm *O* bears against the inner face of the quadrant *m*, and said quadrant is provided with blocks *m'*, which are secured by means of thumb-screws *m²*, by which means the blocks *m'* may be moved nearer together or farther apart, so as to regulate the throw of the arm *O*, and thereby regulate the quantity of oil that is fed from the oil-cup. By means of this construction it will be readily understood that as the rod *N* reciprocates a rotary motion is imparted to the oil-feeder.

When the feeder is to be used for oiling a steam-cylinder or steam-chest, the steam from the cylinder or steam-chest passes up through the opening a^2 into the opening b^4 , and from thence beyond the valve E into the bottom of the oil-cup. The action of the steam in the oil-cup forces the oil down through the opening b^2 , and as the opening b^3 registers with the opening c said opening c is filled with oil. When the opening b^5 communicates with the opening c , as the oil-feeder rotates, the oil in said opening c passes down through the opening b^5 , and is fed to the cylinder or steam-chest, as will be very readily understood. When the engine is not in operation, the valve E closes the upper end of the opening b^4 and prevents the oil from being wasted. When the oiler is to be used for lubricating machinery not provided with steam, the screw S will be removed from the opening in the shaft b , and the oil will be then fed through said opening to the parts to be lubricated, as in the previous manner.

In order to enable the engineer to ascertain to a certainty that the oil-cup is performing its function the bushing C will be made of glass or provided with an opening covered by a glass pane.

It will be seen that the operating parts of my oiler are all located in the interior of the oil-cup, and are thereby protected from the wear incidental to the accumulation of dirt and grit.

Having thus described my invention, I claim—

1. The combination of the oil-cup A, having the opening a^2 , and the bushing C, having

the channel c , with the revolving oil-feeder B, located in the oil-cup, said feeder being provided with the openings b^2 b^3 b^5 b^4 , and the valve E, for closing the upper end of the opening b^4 , and the screw or plug S, inserted in an opening in the oil-feeder communicating with the opening or channel b^2 , near the lower end of the oil-cup, for the purpose set forth, substantially as described.

2. The combination of the oil-cup A, having the opening a^2 , and the bushing C, having the channel c , with the oil-feeder B, located in the oil-cup, said feeder being provided with the openings b^2 b^3 b^5 b^4 , and the valve E, for closing the upper end of the opening b^4 , the miter-wheel G, secured to the oil-feeder, and the pinion H on the revolving-shaft I engaging with the miter-wheel, substantially as described.

3. The combination of the oil-cup A, having the opening a^2 , and the bushing C, having the channel c , with the oil-feeder B, located in the oil-cup, said feeder being provided with the openings b^2 b^3 b^5 b^4 , and the valve E, for closing the upper end of the opening b^4 , the miter-wheel G, secured to the oil-feeder, and the pinion H, on the revolving-shaft I, ratchet-wheel R, fixed thereto, arm M, having the slotted quadrant m , blocks m' , and set-screws m^2 , and the arm O, having the pawl P, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDGAR JAMES WELLS.

Witnesses:

EDWARD C. D. WILEY,
A. H. WEED.