

T. HAYNES.
LUBRICATOR.

No. 183,002.

Patented Oct. 10, 1876.

Fig. 1

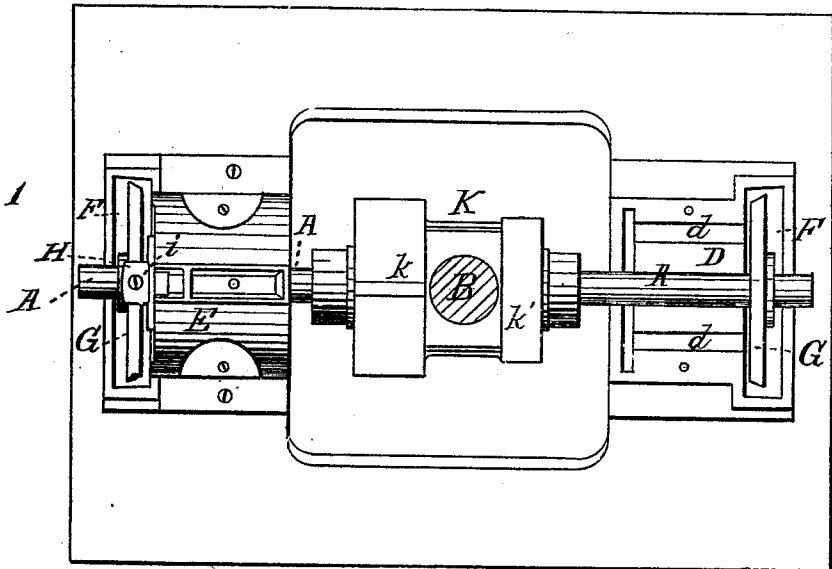
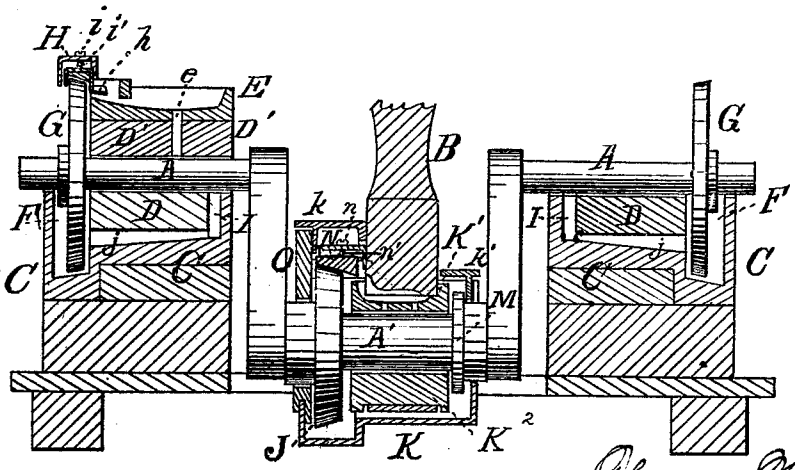


Fig. 2



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Fig. 3

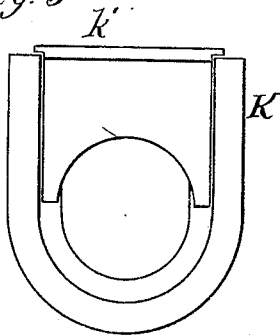


Fig. 8

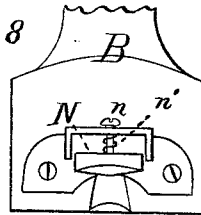


Fig. 4

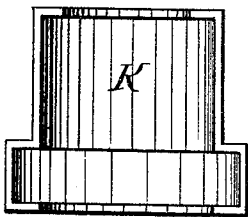


Fig. 9

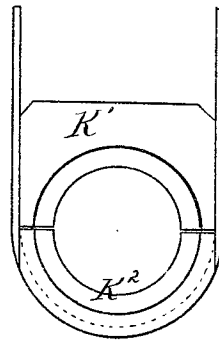


Fig. 5



Fig. 10

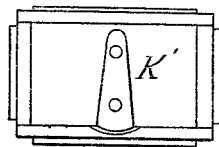


Fig. 6

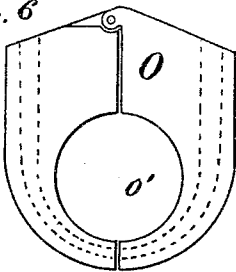


Fig. 11

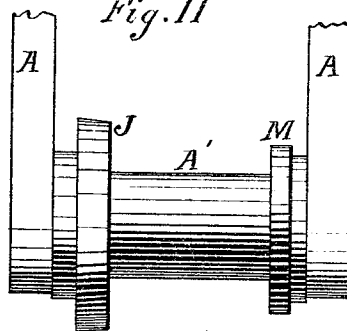


Fig. 7



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UNITED STATES PATENT OFFICE.

THOMAS HAYNES, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **183,002**, dated October 10, 1876; application filed August 11, 1876.

To all whom it may concern :

Be it known that I, THOMAS HAYNES, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Lubricators for Marine and other Engine-Shafts, Car-Axles, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a plan view of my improved lubricator, which, to show its application, is applied to the shaft of a marine engine; Fig. 2, a longitudinal vertical section thereof. Figs. 3 and 4 are detached views, respectively in side elevation and plan, of the oil cup or reservoir, which is attached to the stub end of the connecting-rod, and inclosing or embracing brasses surrounding the crank-pins. Figs. 5 and 6 are views of the packing-ring of the oil cup or reservoir, in plan and elevation respectively. Fig. 7 is a cover of the oil box or reservoir to protect the scraper. Fig. 8 is a side elevation of the stub end of the connecting-rod, having the scraper to remove the oil or lubricant from the oil-feeding disk to the crank-pin. Fig. 9 is a similar view of the strap of the connecting-rod and the crank-pin brasses. Fig. 10 is a plan view of Fig. 9, and Fig. 11 a side elevation of the crank-pin of a marine-engine shaft.

Corresponding parts in the several figures are denoted by like letters.

This invention appertains to certain improvements in lubricators for marine and other engine shafts, car-axles, &c.; and it consists in providing the shaft crank-pin with an oil-feeding disk or wheel, which takes the oil or lubricant from a cup or reservoir attached to the stub end of the connecting-rod, it being conducted from the said disk or wheel, by a scraper, to the brasses, through which it reaches the crank-pin. Opposite the feeding disk or wheel is a flange or smaller disk, to prevent the escape of oil or lubricant. It further consists of reservoirs attached to or cast with the shaft-bearings, to which the escaping

oil or lubricant from the shaft is returned by communicating passages leading from additional or smaller reservoirs, substantially as hereinafter more fully set forth.

In the annexed drawing, A refers to a shaft, with the connecting-rod B of a marine engine attached to its crank-pin A', and mounted in its bearings C C upon brasses D D. Over the shaft A are also placed brasses D' D', resting upon the said shaft, and covered or held down thereon by the caps or binders E E. In each side of the bearings C C, and adjacent the lower brasses D D, are inclined grooves or passages *d d*, to conduct any oil or lubricant escaping laterally from the brasses back to the reservoirs or cups. F F are reservoirs or cups at the outer ends of the bearings C C, to hold the oil or other lubricant taken up therefrom by feeding disks or wheels G G upon the shaft A, from whence it is taken and conducted by triangular-shaped scrapers H H to the binders or caps E E, through which and the upper brasses D' D' it passes to and lubricates the shaft and its bearings. Passages *e e* are provided in the binders or caps E E and the upper brasses D D, for the flow of the lubricant to the shaft, &c. At the inner or convergent ends of the scrapers are downwardly-projecting portions, having curved plates *h h*, upon which the oil or lubricant is received from the scrapers and passed to the binders or caps E E. The pressure of the scrapers H H upon the feeding disks or wheels may be regulated by the springs and adjusting-screws *i i'*. I I are additional or smaller reservoirs or cups attached to or cast with the inner ends of the shaft-bearings C C, to receive any oil or lubricant escaping from that end of the shaft, from which it is returned to the main reservoirs F F by passages or grooves *j j*, inclining or sloping toward the latter, as seen in Fig. 2. Upon one end of the crank-pin A' is a stationary feeding disk or wheel, J, within the oil or lubricant reservoir or cup K, which incloses the crank-pin, and is attached to the stub end of the connecting-rod B, strapped with its brasses, in the usual way, to the crank-pin A'.

It will seen, of course, that when the engine or connecting-rod is in motion the feeding-disk J will be carried around with the crank-

pin, and thus take up the oil or lubricant in the reservoir K and feed it to the crank-pin and its brasses K¹ K², lubricating the same.

Upon the opposite end of the crank-pin A' is a flange or smaller disk, M, to prevent the escape of the oil at that point. To the stub end of the connecting-rod B is attached a scraper, N, with tension-regulating mechanism *n n'*, for feeding the oil or lubricant from the feeding-disk J, through punctured brass, to the crank-pin. The enlarged portion of the reservoir K is provided with a bisected packing-ring, O, the parts of which are hinged together to permit of their being opened and closed in removing and replacing the reservoir or oil-cup. The packing-ring O is slitted vertically in its sides, as shown at *o o*, to receive and permit of its attachment to the reservoir, it being also provided with an orifice, *o'*, for the passage of the crank-pin.

The packing-ring O may be provided with an adjusting-screw working in screw-eyes or studs, secured one upon each half of the ring, and a nut for taking up wear, &c.

The oil cup or reservoir K is provided with covers or caps *k k'*.

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

1. The oil-feeding disk or wheel J upon the crank-pin A', in combination with the oil cup or reservoir K, attached to the connecting-rod B and inclosing the crank-pin, and a scraper, N, arranged to take the oil or lubricant from the said feeding disk or wheel and deliver it upon the brass of the crank-pin, substantially as and for the purpose set forth.

2. The shaft-bearing C, having the oil cups or reservoirs F I, connected together by a passage, *j*, substantially as and for the purpose set forth.

3. The bisected packing-ring O, having its parts hinged together and slitted, as at *o o*, to receive and permit of its attachment to the oil-reservoir K, substantially as set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

THOMAS HAYNES.

Witnesses:

JOS. R. EDSON,
JNO. JOY EDSON.