(No Model.)

L. PARKER.

LUBRICATOR.

No. 562,740. Patented June 23, 1896.

Fig. 1

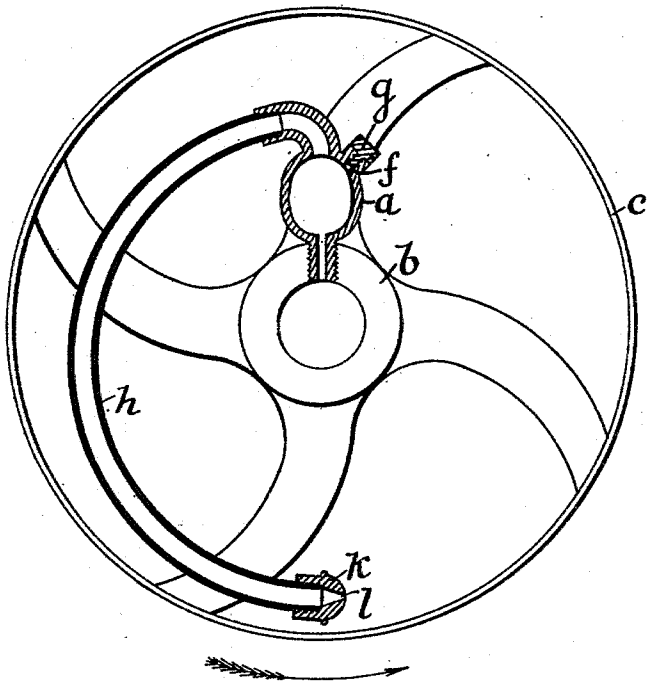
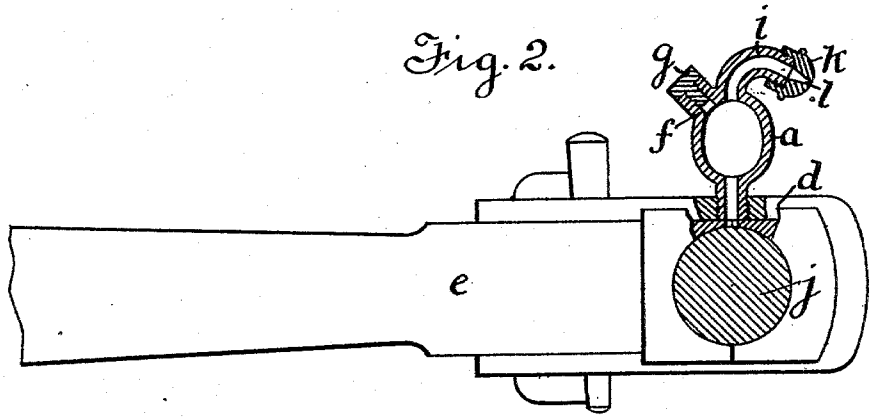


Fig. 2.



Witnesses.
H. Fallowgall
J. S. Lockwood.

Inventor.
Leonard Parker
By A. P. Thayer
Atty

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON, D.C.

UNITED STATES PATENT OFFICE.

LEONARD PARKER, OF NEW YORK, N. Y.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 562,740, dated June 23, 1896.

Application filed September 22, 1894. Serial No. 523,789. (No model.)

To all whom it may concern:

Be it known that I, LEONARD PARKER, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Loose-Pulley and Crank-Pin Lubricators, of which the following is a specification.

My invention relates to the kind of lubricators for loose pulleys and crank-pins having an air-compressing attachment, whereby, through the motion of the pulley or crank-pin, compressed air takes effect on the lubricant to overcome centrifugal action and insure more effective impingement of the lubricant on the shaft or crank-pin to be lubricated, my invention being more particularly designed for the use of tallow or other viscous lubricant of sluggish action.

My invention consists in an oil-cup attached directly to the part to be lubricated, and provided with means for filling it with a lubricant, combined with a curved air-pipe, which is attached to the oil-cup at its inner end, and has its outer end extended forward in the direction of rotation and outwardly from the axis of rotation, whereby this outer end has a larger range of movement through space than the range of the outer end of the cup, as will be more fully described hereinafter.

Figure 1 is a side view of a loose pulley and sectional view of the lubricating-cup and my attachment for loose pulleys. Fig. 2 is a side view of part of a connecting-rod and section of the crank-pin and lubricating-cup with my attachment adapted for crank-pins.

The lubricator *a* is attached to the hub *b* of the loose pulley *c* or to the cup *d* of the connecting-rod *e* in the usual way, said cup having the usual or any approved filling-orifice *f* and plug *g* for closing it. To the outer extremity of the cup I connect the small air-inlet pipe *h* in the case of the loose pulley and the like, but shorter pipe *i* in the case of the connecting-rod, the pipe *h* being extended about half the circuit of the axis of the loose pulley in the direction in which the pulley is to be run, and divergent from the axis of the pulley, so that the end terminates near the rim of the pulley and traverses a greater range than the range of the cup. The short pipe *i* only extends far enough to point in the direction tending to force air into the cup during part of the circuit of the crank-pin *j* and to insure air-compression above the oil, and on the forward end of each pipe I prefer to fit a cap *k*, having a small perforation *l* and being of oval form adapted to cause divergent action of the air to throw off dust particles and only admit a small beam of air—so to speak—which will be relieved of dust particles through the effect of the oval-ended cap.

I am aware that a concentric tubular oil-reservoir, making an entire circuit of the axis of the pulley, or nearly so, and having an air-inlet at the outer end having less range in space for air-compression than the oil, or part of it, has for centrifugal action, and also having a valve at the outer end to prevent escape of oil, but which is also obstructive to the action of the air, said reservoir also having a regulating-valve for the oil at the inner end, has been used, as shown in the Patent No. 201,487, and I make no claim for such a device, as my invention is essentially an open-air-inlet tube attached to the outer extremity of the lubricator-cup.

It will be seen that when the pulley stops so that the pipe *h* hangs with its outer end lower than the lubricator-cup said cup will be so high that the lubricant will remain in it by gravitation, and when the cup stops in a lower position the open end of the pipe is so high as to prevent the escape of the lubricant, and the lubricant will in no case escape by siphonic action, as it will in some cases when the pipe extends an entire circuit of the axis or nearly so.

I claim—

In a lubricator for a moving device, as a loose pulley, or a crank-pin, the combination with an oil-cup attached directly to the part to be lubricated, and provided with means for filling it with the lubricant, of an air-pipe attached at its inner end to the outer end of the cup, and extended forward relatively to the direction of rotation and also outward relatively to the axis of rotation, whereby the

outer end which is open to the atmosphere has a larger range of movement through space than the range of the outer end of the cup, and competent to cause pressure of air on the oil in the cup to overbalance the effect of centrifugal action on the oil, and force it into the bearing substantially as described.

Signed at New York city, in the county and State of New York, this 6th day of August, A. D. 1894.

LEONARD PARKER.

Witnesses:
W. J. MORGAN,
A. P. THAYER.