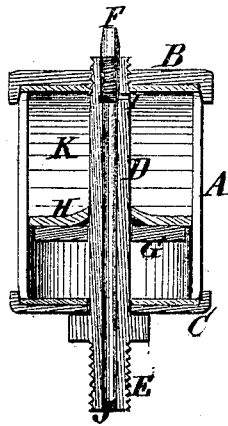


C. MATHER.

Improvement in Lubricators.

No. 114,317.

Patented May 2, 1871.



Witnesses

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UNITED STATES PATENT OFFICE.

COTTON MATHER, OF STEUBENVILLE, OHIO.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **114,317**, dated May 2, 1871.

To all whom it may concern:

Be it known that I, COTTON MATHER, of Steubenville, in the county of Jefferson and State of Ohio, have invented a new and useful Improvement in Lubricators; 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 make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and useful improvement in a device for lubricating the shafts or bearings of loose pulleys and for similar purposes; and consists in so constructing the oiler or lubricator that the oil is forced from the reservoir by the centrifugal force operating upon a solid substance of greater weight than the oil, and thus forced through a tube to the bearing in opposition to centrifugal force.

The accompanying drawing represents a central longitudinal section of the lubricator.

Similar letters of reference indicate corresponding parts.

A is the reservoir for the oil, which is confined between the flanged heads B and C with packing in the joints, as seen in the drawing. D is a central tube, with a screw-thread, E, on one end for attaching it to the loose pulley. On the other end of the tube there is a screw-thread for confining the head B, which latter screws onto the tube.

F is a little screw, which stops the end of the tube. G is a weight, of lead, which works freely on the tube with the packing-disk H, above which latter fits the reservoir. I is an orifice in the tube, through which the oil is forced from the reservoir into the tube.

It will be understood that the lubricator is screwed into the hub of a loose pulley or wheel and revolves therewith.

The oil which enters the tube is discharged at J onto the shaft.

As the pulley revolves, the centrifugal force will operate upon the weight G with greater effect than it will upon the oil.

K represents the oil.

The packing-disk H prevents the oil from getting below the weight, and the tendency of the weight is to force or drive the oil before it and force it into the tube. This is done with a force proportioned to the speed.

The quantity of oil discharged is regulated by the screw F, which, by turning down, is made to close, or partly close, the orifice I.

It will be seen that there must be a constant pressure exerted on the oil in opposition to centrifugal force by the weight, which will force the oil through the tube and keep the pulley constantly lubricated.

I do not confine myself strictly to loose pulleys in the application of my improvement, but design it for use in all situations where it can be applied for overcoming centrifugal force exerted on oil by exerting it on a weight.

There may be an orifice in the head B, closed by a tight-fitting thumb-screw, through which the reservoir may be filled, so that it will not be necessary to remove the head in supplying the reservoir with oil.

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

The chamber A, tube D, and weighted centrifugal piston G H, combined and applied as and for the purpose specified.

COTTON MATHER.

Witnesses:

JAMES MCLEE,
D. W. CRESLER.