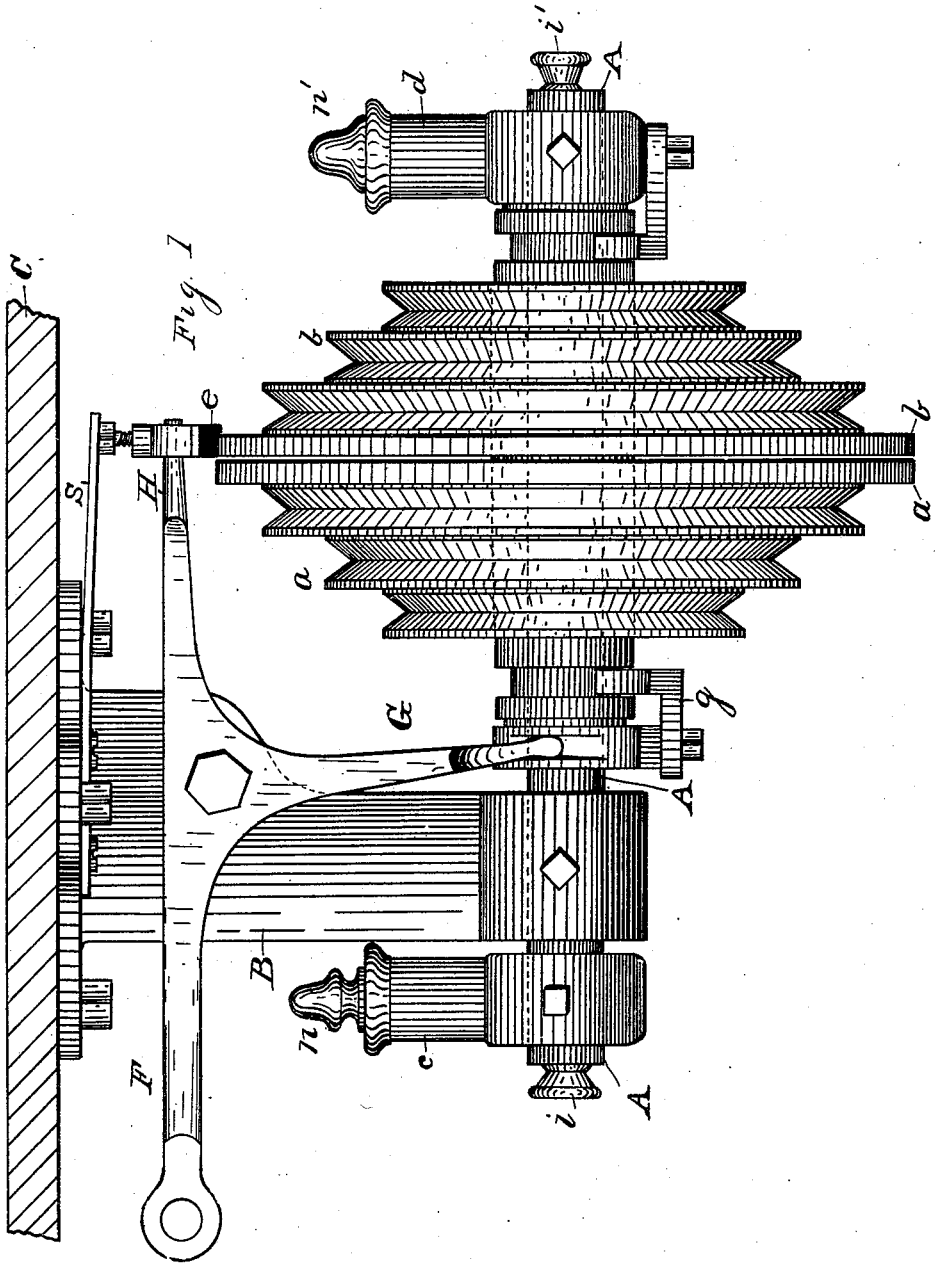
(No Model.) 2 Sheets—Sheet 1.

R. E. THOMPSON.

LUBRICATOR.

No. 306,975. Patented Oct. 21, 1884.



WITNESSES:

Stanley Ms. Holden.

W. H. Hollister Jr

INVENTOR

Richard E. Thompson

BY

Geo. A. Mosher

ATTORNEY.

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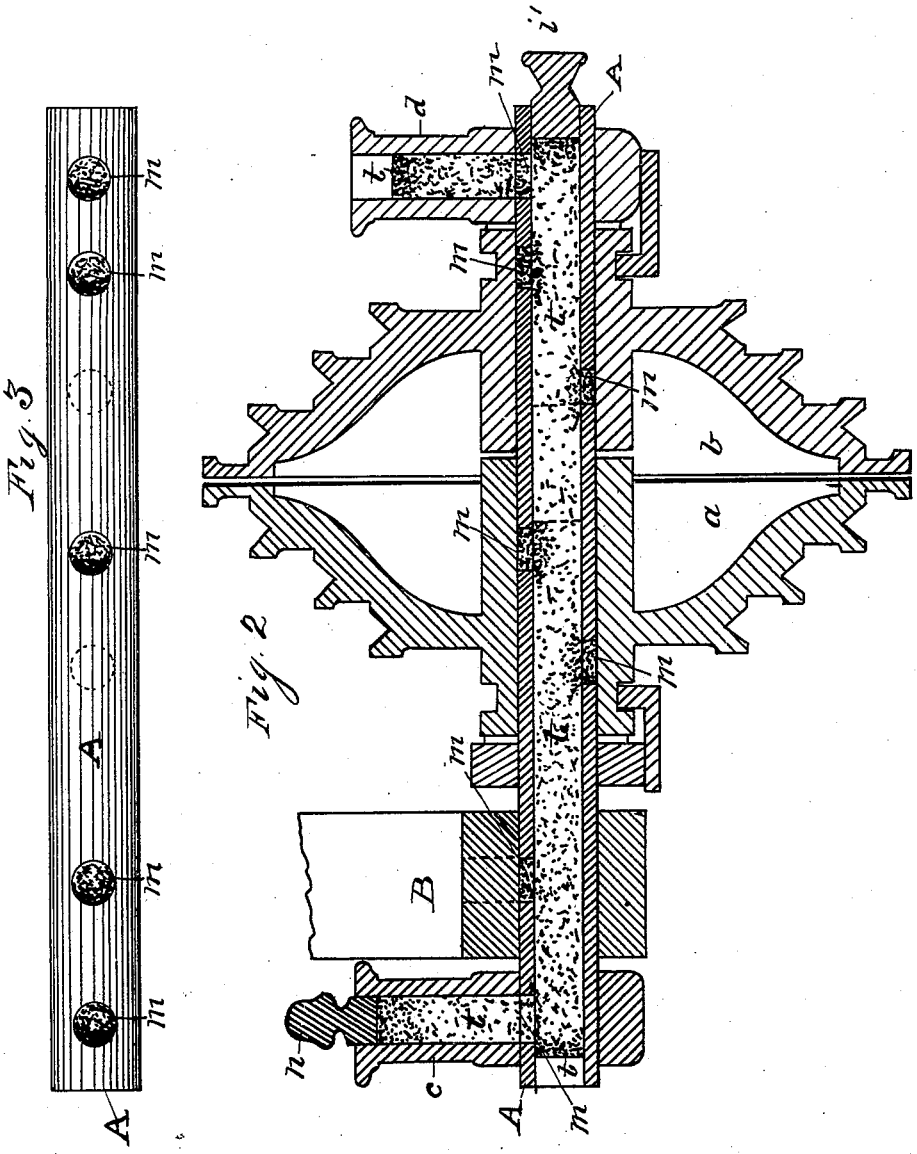

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Richard E. Thompson

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ATTORNEY

UNITED STATES PATENT OFFICE.

RICHARD E. THOMPSON, OF COHOES, NEW YORK, ASSIGNOR TO REUBEN B. THOMPSON, OF SAME PLACE.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 306,975, dated October 21, 1884.

Application filed September 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, RICHARD E. THOMPSON, a resident of the city of Cohoes, in the county of Albany, and State of New York, have invented certain new and useful Improvements in Lubricants; and I do hereby declare that the following is a full, clear, and exact description of the invention, that 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.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in lubricators for loose pulleys or sleeves.

The object of my invention is to provide a self regulating and feeding lubricator that will not waste the lubricant nor soil surrounding objects.

My invention consists in providing a continuous duct from a lubricating-reservoir to the bearing-surface of a loose pulley or sleeve interiorly of the pulley or sleeve-supporting shaft, and feeding tallow or similar solid lubricants through the same to lubricate said pulley or sleeve.

Figure 1 of the drawings is a side elevation of my improved device applied to a sewing-machine transfer-power. Fig. 2 is a central vertical longitudinal section of same. Fig. 3 is a plan view of the hollow supporting-shaft.

A is a hollow shaft or cylinder of metal, supported by the hanger B, bolted to lower side of sewing-machine bench or table C. The shaft supports the two loose cone-pulleys *a b* and the lubricating-reservoirs *c d*. When in use the loose pulley *a* travels continuously, being impelled by a power-belt, (not shown in drawings,) and from it power is intermittingly transferred by friction through pulley *b* to the sewing-machine, the friction being obtained through lever F, pivoted to the hanger and provided with the arms G and H. The lever may be operated by a treadle, the arms G serving to force pulley *a* firmly against pulley *b* and to withdraw it again through sliding guide *g* running in grooved boss of pulley *a*. The arm H carries a brake, *e*, which descends upon pulley *b* to stop it the moment the power transferred through pulley *a* is withdrawn. The lever is provided with a controlling-spring, S, which operates to separate the pulleys when the treadle-power is withdrawn.

In large factories, where sewing-machines are run by steam-power and operated by constantly changing employés, it is wholly unsafe to rely upon the skill and discretion of the operator to keep a constantly-moving pulley properly lubricated. Liquid lubricants cannot be used without soiling the clothing of the operator and frequently doing great injury to the goods being operated upon.

By employing my improved device the tallow is fed to the bearing-surface as it is needed without waste and without injury to surrounding objects, as the lubricant is never fed to the bearing-surfaces in quantities sufficient to permit any part to escape therefrom, and it cannot escape "in transition." No attention whatever to its lubrication is required. I have operated one continuously for more than a year without renewing or disturbing the solid lubricant during the whole period, and without the least injury to the bearing-surfaces. As the lubricant is required it is drawn out through the openings *m* in the shaft upon the bearing-surface of the pulley, and the remainder flows forward to take its place. The consumption is so slow the solid mass will easily flow to supply it, as frozen glaciers flow down mountain ravines. If for any reason the flow should stop or be insufficient, it can be started or increased by pressure upon the stoppers or pistons *n n'* or *i i'*.

In Fig. 1 the stopper *n'* is shown pressed farther into its reservoir than stopper *n* in its, and in Fig. 2 stoppers *i* and *n'* are removed. There may be a reservoir up through the hanger B, as shown by dotted lines in Fig. 2. The bore in shaft A need not extend entirely through, as a solid space shown between dotted lines in Fig. 2 may be left unbored, thereby making the lubrication of one pulley independent of that of the other.

What I claim as new, and desire to secure by Letters Patent, is—

1. A hollow shaft adapted to form a bearing on its exterior surface for one or more loose pulleys and provided with one or more small apertures connecting said bearing-surface with the interior cavity in the shaft, in combination with a lubricating-reservoir fixed thereon and provided with a feeding-stopper and interiorly connecting with the interior cavity of said shaft, and a continuous line of tallow or similar lubricant in a solid state extending from said reservoir through said shaft to the bearing-surface of said pulley, substantially as described, and for the purposes set forth.

2. A hollow shaft adapted to form a bearing on its exterior surface for a loose pulley, and provided with one or more small apertures connecting said bearing-surface with the interior bore, in combination with a plunger or piston adapted to fit said bore or another bore connecting therewith for the purpose of forcing a lubricant through said bore and aperture to said exterior bearing-surface, substantially as described, and for the purposes set forth.

In testimony whereof I have hereunto set my hand this 4th day of September, 1884.

RICHARD E. THOMPSON.

Witnesses:
GEO. A. MOSHER,
C. D. KELLUM.