(No Model.)

W. J. ORMSBY.

LOOSE PULLEY LUBRICATOR.

No. 307,066. Patented Oct. 21, 1884.

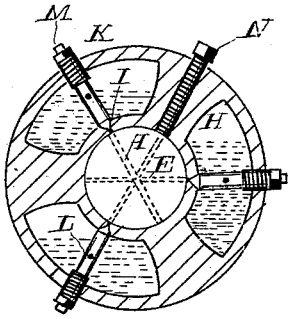

Fig. 2.

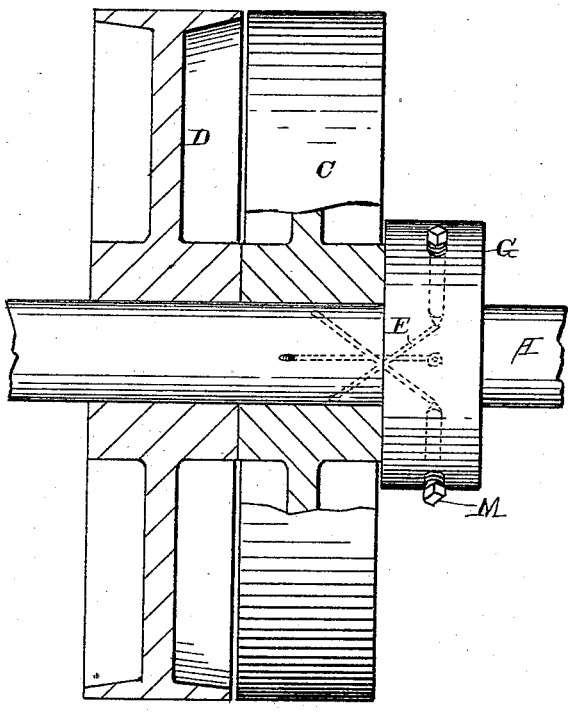

Fig. 1.

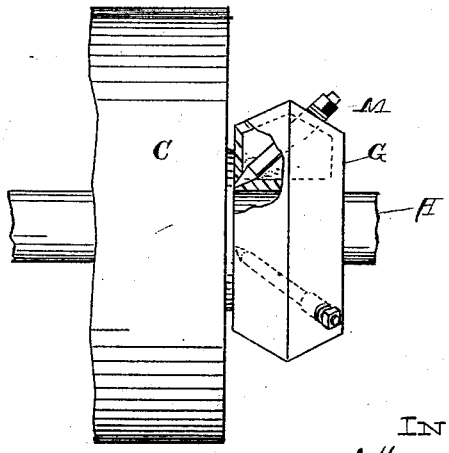

Fig 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM J. ORMSBY, OF CINCINNATI, OHIO.

LOOSE-PULLEY LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 307,066, dated October 21, 1884.

Application filed August 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. ORMSBY, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Loose-Pulley Lubricators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a view, partly in section, of my improved loose-pulley lubricator. Fig. 2 is a transverse vertical central section of the same. Fig. 3 is a modified form of the lubricator.

The present invention relates to a pulley-lubricator, the novelty of which consists in providing a series of veins extending somewhat longitudinally through the shaft, the inner ends communicating with a pulley, while the outer ends are in communication with a collar placed upon a shaft having therein oil-reservoirs, oil being fed into said veins from the reservoirs through openings and regulated by means of set-screws. In this manner, when two or more pulleys are placed upon the shaft, the inner one connecting with the veins may be oiled without the trouble of stopping the shaft, all of which will now be set forth in detail.

In the accompanying drawings, A is an ordinary shaft, having thereon a series of pulleys, C and D. The outer pulley, C, is designed to be loose upon the shaft, while the other pulley, D, is designed to be secured thereon in any suitable manner. The periphery of the shaft beneath the loose pulley C is provided with a series of openings or veins, E, triangularly disposed through the shaft, with the openings at the other end appearing on the surface of the shaft outwardly from the loose pulley C. Outwardly from this loose pulley C, and adjoining the hub F, I provide a loose collar, G, of any suitable size, and preferably metallic, having therein triangularly-disposed reservoirs H. The bottom of each of these reservoirs is provided with a smaller opening, I, so disposed as to communicate with the ends J of the veins E outwardly from the pulleys. Outwardly from the openings I, through the periphery of the said collar G, I provide a threaded opening of sufficient size, within which I place a set-screw, K, the inner end of which is cone-shaped and rests within the opening I at the inner part of the reservoir. A transverse opening, L, in this set-screw communicates with the outer end of the said screw, and has therein on its outer end a cap-screw, M, by means of which the said opening is closed when the said opening is designed for the purpose of introducing oil into the reservoir through the opening L, as occasion requires. The set-screw K on being screwed inwardly or outwardly opens or closes the aperture I, which permits of the oil flowing through the said opening or not, as desired. The collar G is designed to be secured upon the shaft A by means of an adjustable set-screw, N. As will be noticed, I do not limit myself in the number of these veins through the shaft, as it is obvious that any number may be provided without interfering with the spirit of my invention, and also the same may be said of the number of reservoirs and set-screws within the collar; but whatever the number of veins that may be used it is designed that the reservoirs in the said collar shall correspond with the veins within the shaft.

I design to use this device in cases where a loose pulley is placed next to a fixed one, as in that position it is a difficult matter to oil it without stopping the shaft A. When the belt is upon the pulley D, there is no friction of the pulley C upon the shaft A, and consequently will not require oiling. The shaft being then in rapid revolution, the oil within the reservoirs H of the collar is, by the centrifugal motion, thrown outwardly within the said reservoirs, and the oil is not in consequence drawn off through the veins; but when the belt is upon the pulley C, and the shaft and fixed pulley stationary, the oil in reservoir of the collar is drawn off through the veins and oils the said pulley C in the place where it is most needed. It makes but little difference in what position the shaft may stop, one of the reservoirs will be near or at the upper part of the shaft.

Fig. 3 shows a modification of my device where I desire to use the collar without the use of the veins. In this case the set-screw within the reservoir is placed at an angle, so that the opening inwardly of the shaft from the reservoir may be at the part of the collar adjoining the pulley.

What I claim is—

1. In a loose-pulley lubricator, the collar adjustable upon the shaft by means of a set-screw, and having therein reservoirs triangularly disposed, communicating with the shaft by means of openings, the periphery of the reservoirs provided with a threaded opening, having therein an adjustable screw for regulating the flow of oil through the inner openings of the collar, substantially as herein set forth.

2. The combination, in a pulley-lubricator, of the collar adjustable upon the shaft by means of a set-screw, having therein reservoirs communicating with the shaft, with the set-screw, the inner end cone-shaped, and having an opening extending to the outer end, within which is a cap-screw, substantially as herein set forth.

3. The combination of a collar adjustable on a shaft, having therein openings, and outwardly reservoirs, having therein set-screws for regulating the flow of oil, with the shaft having therein veins triangularly disposed, connecting at one end with the openings to the reservoirs, the opposite ends communicating with the loose pulley, substantially as herein set forth.

4. The combination of the loose pulley having inwardly upon the shaft veins communicating outwardly with a collar, having therein openings and reservoirs, with set-screws for regulating the flow of the oil, and the adjustable set-screw, as and for the purposes substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 19th day of August, 1884, in the presence of witnesses.

WILLIAM J. ORMSBY.

Witnesses:

WILLIS H. WIGGINS,

HARRY C. HEY.