(No Model.)

J. J. TUNNEY.

LUBRICATOR FOR LOOSE PULLEYS.

No. 455,368. Patented July 7, 1891.

Fig. 1.

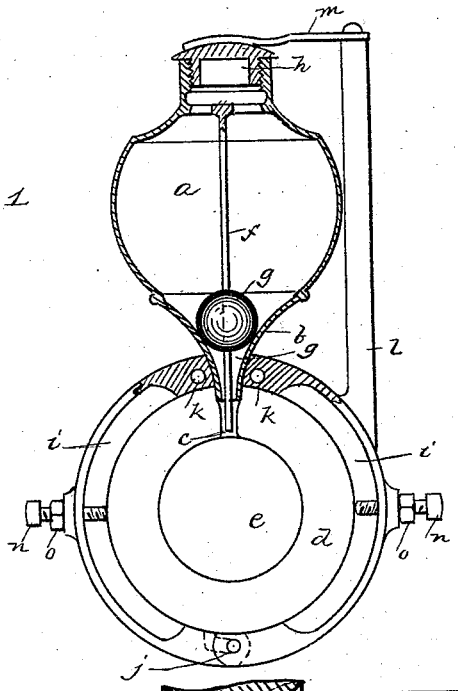


Fig. 3.

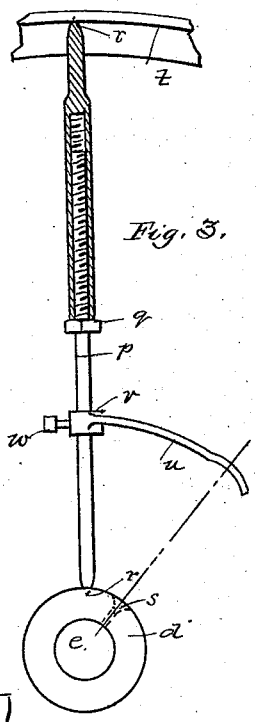
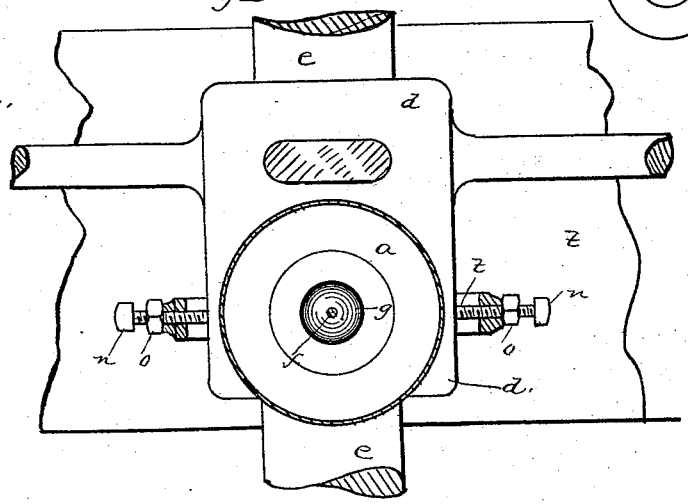


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN J. TUNNEY, OF PITTSBURG, PENNSYLVANIA.

LUBRICATOR FOR LOOSE PULLEYS.

SPECIFICATION forming part of Letters Patent No. 455,368, dated July 7, 1891.

Application filed August 7, 1890. Serial No. 361,358. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. TUNNEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators for Loose Pulleys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved lubricator for loose pulleys; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a side sectional elevation of my improved lubricator, showing the same attached in position on the hub of an ordinary loose belt-pulley. Fig. 2 is a sectional plan view of the same. Fig. 3 is a side elevation of an adjustable post, being a modified means for attaching the lubricating-cup to the hub of a pulley.

To put my invention into practice with the hub of a loose pulley of ordinary construction, I provide a vessel *a*, spherical in shape and having a hollow conical extension *b* at its base, which extends downward and projects into an opening *c*, formed in the hub *d* and leading to the shaft *e*, on which the pulley operates.

f designates a rod attached to suitable braces or cross-rods in the upper portion of the vessel *a*, and a ball or sphere *g* is loosely fitted thereon, so as to be free to move along the rod, and it is adapted to close the orifice *g'*, formed by the conical extension *b*.

Fitted in the top of the vessel *a* is a screw-cap *h*, which may be removed to supply the same with oil or other lubricating-fluid.

Secured about the hub *d* is an annular sectional ring *i*, which is hinged at the base *j* and attached by short bolts *k* at the top. This sectional ring *i* is provided with an opening which neatly fits about the conical base *b*, and with an upwardly-extending post *l*, formed integral with one of the sections of the ring *i*. Rigidly attached on the top of this post *l* is a strong spring *m*, which projects over and is in close contact with the screw-cap *h* of the vessel *a*. This sectional ring *i* is provided with set-screws *n*, having lock-nuts *o*, which afford a means of rigidly securing the ring *i* and apparatus connected thereto to the hub *d* of the pulley.

In operation the lubricant is placed in the vessel *a* and the screw-cap *h* placed in position, the sectional ring *i* being placed on the hub *d*, and secured thereto and allowed to remain a permanent fixture. The point or apex of the conical portion *b* is inserted into the openings of the ring and hub *d* and the cap *h* pressed beneath the spring *m*, which secures the same in position. The rotary movement of the pulley will operate the ball-valve *g* by gravity and permit a small quantity of oil to flow to the axle at each revolution. This ball-valve *g* may be rigidly attached to the stem *f*, and the said stem *f* placed in bearings and capable of a slight movement in the direction of its length.

At Fig. 3 on the drawings I have shown a modified means for attaching the above-described lubricator in position, in which the sectional ring *i* is dispensed with and in its place a sectional bar *p* is used, which may be elongated by means of a threaded telescopic portion and locked at any desired length by a jam-nut *q*. This rod *p* is provided with sharpened points *r*, one of which is slightly sunk into the hub *d* and the other into the inner surface of the rim *t* of the wheel.

To secure the vessel *a*, a spring *u*, having a collar *w*, is loosely attached to the lower section of the rod *p* and held in position by a set-screw *w'*.

Having thus described my invention, I claim—

1. In a lubricator for loose pulleys, the combination of a fixed rod attached to the hub of a pulley and provided with an arm, and the lubricant-containing vessel arranged between the hub of the pulley and said arm, substantially as shown and described.

2. In a lubricator for loose pulleys, the combination of a sectional ring adapted to be se-

cured to the hub of a pulley, a fixed rod carried by said sectional ring and provided with an arm, and the lubricant-containing vessel secured between the hub of the pulley and said arm and provided with means for admitting a limited quantity of lubricant to the hub of the pulley at each revolution thereof, substantially as shown and described.

3. A lubricator for loose pulleys, comprising the sectional ring provided with a hinge connection on one side and means for attaching said ring to the hub of a pulley, the rod attached to the sectional ring, the spring-arm secured to the upper end of said rod, and the valved lubricant-containing vessel arranged between the hub of the pulley and said spring-arm, substantially as shown and described.

4. A lubricator for loose pulleys, comprising an attaching-ring, a rod rigid with said ring, and a valved lubricant-vessel held in position by spring-pressure between said rod and the attaching-ring, substantially as described.

In testimony that I claim the foregoing I hereunto affix my signature this 19th day of July, A. D. 1890.

JOHN J. TUNNEY. [L. S.]

In presence of—
C. C. LEE,
M. E. HARRISON.