

(No Model.)

N. LEIDGEN.
LUBRICATOR.

No. 529,393.

Patented Nov. 20, 1894.

Fig.1.

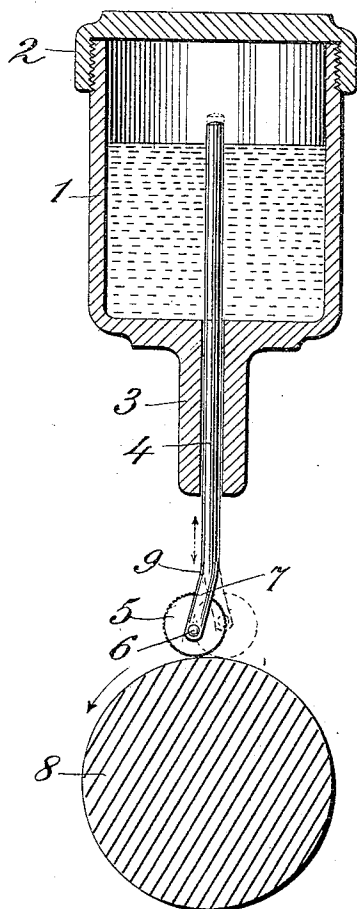


Fig.2.

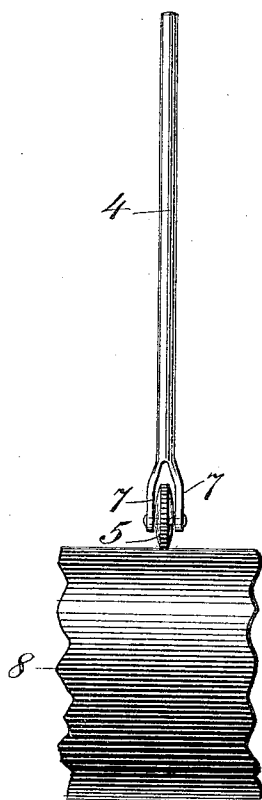
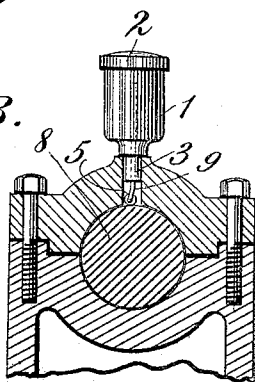


Fig.3.



Attest:

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UNITED STATES PATENT OFFICE.

NICOLAUS LEIDGEN, OF MILWAUKEE, WISCONSIN.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 529,393, dated November 20, 1894.

Application filed March 8, 1894. Serial No. 502,858. (No model.)

To all whom it may concern:

Be it known that I, NICOLAUS LEIDGEN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Lubricators; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to lubricators, and more particularly to that class of lubricators wherein the feed of the lubricant is controlled to a greater or less extent by the reciprocation of a rod operating in the lubricant chamber or cup and having a part thereof in contact with the shaft or part to be lubricated.

The invention has for its object to provide an eccentric, preferably in the form of a disk or roller, between the rod and the part to be lubricated so that the eccentric will impart a positive throw or movement to the rod thereby causing a better feed of the lubricant.

It has further for its object to so form the lower part of the rod, or to so locate the eccentric in relation to the rod, that when the direction of rotation of the shaft to be lubricated is reversed, the rod, or the eccentric, will be automatically turned or shifted so that the lower end of the rod, or the eccentric, will be brought into such a position that it will in operation be in line with the shaft, that is, lie on the opposite side of the center of the shaft.

To the accomplishment of the foregoing objects the invention consists in the construction and the arrangement substantially as hereinafter described and then sought to be specifically defined by the claims, reference being had to the accompanying drawings forming a part hereof, and in which—

Figure 1 is a vertical section through an oil cup and its shaft showing in full lines the reciprocating feed rod with my invention applied thereto, and illustrating in dotted lines the reversed position of the rod and eccentric. Fig. 2 is a view at right angles to Fig. 1 show-

ing the feed rod and eccentric in full lines and a side view of a portion of the shaft to be lubricated, and Fig. 3 is a sectional view with lubricator in full lines, on reduced scale, 55 showing lubricator applied through a pillow block.

In the drawings the numeral 1 designates a lubricant cup of any approved pattern which may have a screw threaded cap 2 and a pend- 60 ent sleeve 3.

The numeral 4 designates the feed rod which enters the lubricant cup and projects below the sleeve 3, while 8 designates the part to be lubricated, which, in this instance 65 is illustrated as a shaft. Between the rod and the shaft is placed the eccentric which is to impart the positive throw or movement to the feed rod, the eccentric preferably being a disk or roller 5 which is preferably mounted 70 on the lower end of the feed rod. The preferable mode of mounting the eccentric is by a pin 6 which is passed through the roller out of its center and on which the roller preferably turns, the end of the rod preferably being bifurcated so that the roller will lie between the forks 7 of the rod and the axle pin 6 will lie in the two ports. It is preferred to 75 so mount the roller eccentrically that it will impart to the feed rod a throw of one sixteenth of an inch, more or less; but I do not confine myself to any particular degree of eccentricity nor to any particular dimensions of the feed rod. 80

It is apparent that with an eccentric between the lower portion of the feed rod and the part to be lubricated and the eccentric in contact with that part, for instance, in contact with the shaft 8, the feed rod will have a positive throw or movement imparted thereto 85 during the period of rotation of the shaft, and that so long as the shaft continues to be rotated there will be a feed of the lubricant from the cup to the shaft, the lubricant passing down the rod, which may fit snugly in the 90 sleeve 3, and from the rod onto the shaft to be lubricated, while when the rotation of the shaft ceases the feed rod will remain at rest and there will practically be no feed of the lubricant. This insures a positive feed of the 100 lubricant, which as is obvious to the skilled is far more advantageous than where the

movement of the feed rod is dependent on the slight movement that would be imparted thereto by the mere vibration or jar of the shaft which would be the case if the end of the feed rod bore against the shaft without the interposition of an eccentric between the two parts, or at the point of contact between the rod and the shaft. I prefer to mill the edge or periphery of the eccentric disk or roller as illustrated but such is not absolutely necessary.

The other feature of my invention consists in deflecting the lower portion of the feed rod, or in other words so mounting or attaching the eccentric thereto, that the lower end of the rod, or the point of contact between the eccentric and the shaft will be to one side of the center of the shaft so that the point of contact will be on that side of the center of the shaft in the direction of rotation of the shaft. The effect of this is that when the direction of rotation of the shaft is reversed the feed rod will be automatically turned or shifted so as to bring the lower end of the rod, or the eccentric, in line with the shaft, that is, will bring it to the other side of the center of the shaft or on the side in the direction of rotation of the shaft, the two positions being indicated respectively by full and dotted lines in Fig. 1 of the drawings. This avoids the possibility of binding between the parts and affords a better feed than otherwise. The preferred mode of carrying out this feature of the invention is by deflecting the lower portion of the feed rod as indicated at 9 in Fig. 1 of the drawings and mounting the eccentric roller in the lower part of the deflected portion which will bring the lower end of the feed rod and the eccentric roller to one side of the central line of the feed rod and consequently to one side of the center of

the shaft if it be a shaft that is to be lubricated.

I have illustrated and described what I consider to be the best form of the two features of my invention, but I do not confine myself to this particular form or embodiment of my invention as it is obvious that departures may be made from such form and yet the essentials of my invention be employed.

Having described my invention and set forth its merits, what I claim is—

1. In a lubricator having a feed rod working in the lubricant chamber, an eccentric located at the lower end of said rod and adapted to be operated by contact of a moving part with the eccentric whereby a positive throw or movement in the direction of the length of the rod is imparted to the rod for feeding the lubricant along said rod to the part to be lubricated, substantially as and for the purposes described.

2. In a lubricator, the combination with the lubricant cup, of a feed rod having its lower portion deflected out of line with the other portion of the rod, and provided with an eccentrically mounted roller at its lower end whereby said rod is reciprocated in the direction of its length by contact of the eccentric with the object to be lubricated and the eccentric shifted from one point of contact to another point of contact with the object to be lubricated when the direction of movement of the object to be lubricated is changed, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

NICOLAUS LEIDGEN.

Witnesses:

F. B. RICE,
JOHN H. MANSCHOT.