

(No Model.)

N. H. DAVIS.
AXLE LUBRICATOR.

No. 264,251.

Patented Sept. 12, 1882.

Fig. 1.

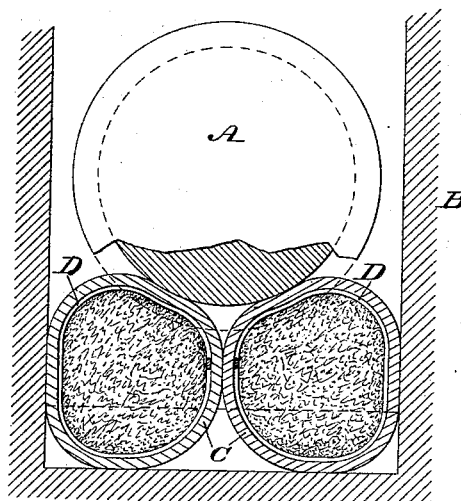


Fig. 2.

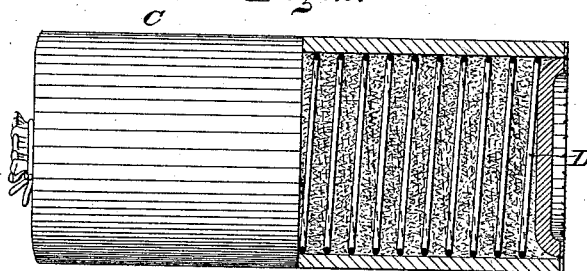
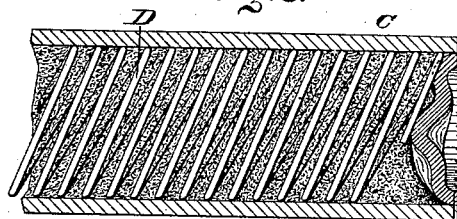


Fig. 3.



WITNESSES:

L. Bouville
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INVENTOR:

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UNITED STATES PATENT OFFICE.

NATHAN H. DAVIS, OF PHILADELPHIA, PA., ASSIGNOR OF TWO-THIRDS TO
LOUIS C. GRATZ AND A. B. DAVIS, BOTH OF SAME PLACE.

AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 264,251, dated September 12, 1882.

Application filed June 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, NATHAN H. DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Lubricators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an end view of a journal or axle partly broken away and the lubricator embodying my invention in vertical section. Fig. 2 is a side elevation of the lubricator partly broken away. Fig. 3 is a longitudinal section of the lubricator as originally in operation.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a lubricator constructed of a horizontally-arranged bag or sack of absorbent material and an inclosed horizontally-arranged coiled spring, which holds the bag uniformly distended, the bag and sack being compressed between the journal and box, and the coils of the spring are compressed on their sides in the vertical direction of the bag, whereby the bag is firmly pressed against the journal or axle and feeds it with the lubricant, within which said bag is immersed or partly immersed, and as the bag wears the coils of the spring are correspondingly relieved of compression and so gradually rise sidewise, thus continuing to press the bag as worn against the journal or axle.

Referring to the drawings, A represents a journal or axle, and B the box thereof, both of usual construction.

C represents a bag, which is formed of fibrous or other suitable absorbent material, closed at both ends, and containing a coiled spring, D, the coils of which are of sufficient diameter to hold the bag distended, the interior of the bag being properly packed with wool, cotton, or other material.

The bag with its inclosures is placed horizontally in the box B in the space between the journal or axle and bottom of the box and

compressed into said space, the effect of which is to make the coils of the spring more acute, as shown in Fig. 3, thus increasing their tension against the sides of the bag, thereby firmly pressing the bag against the journal or axle. The lubricant is absorbed by the bag and fed to the journal or axle by capillary attraction in uniform and constant quantities, thus reliably lubricating the journal or axle. As the outer surface of the bag wears the coils of the springs are correspondingly relieved of vertical pressure, and thus rise sidewise in their endeavors to assume their normal shape and position and continue their pressure on the bag, whereby the contact of the bag and journal or axle is preserved and the lubrication effected regardless of the thickness of the material of the bag where it bears against the journal or axle.

When the bag is worn it may be turned or shifted in order to present a fresh place of contact with the journal or axle.

In lieu of a bag, I may roll a strip or strips of fabric around the spring D, and close the ends of the roll either by the fabric itself or pieces of cord, wire, &c., the closed ends in all cases preventing displacement of the spring. The spiral spring holds the bag always against the bottom of the box and insures a supply of lubricant, however little of the latter may remain.

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

A horizontal absorbent bag, C, in combination with a spiral spring, D, contained within said bag, and serving to hold the same against the journal which it lubricates, and against the bottom of the box, substantially as set forth.

NATHAN H. DAVIS.

Witnesses:

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W. F. KIRCHER.