No. 649,819. Patented May 15, 1900.

J. B. DECKER.

AXLE LUBRICATOR.

(Application filed Dec. 7, 1898.)

(No Model.)

Fig. 1

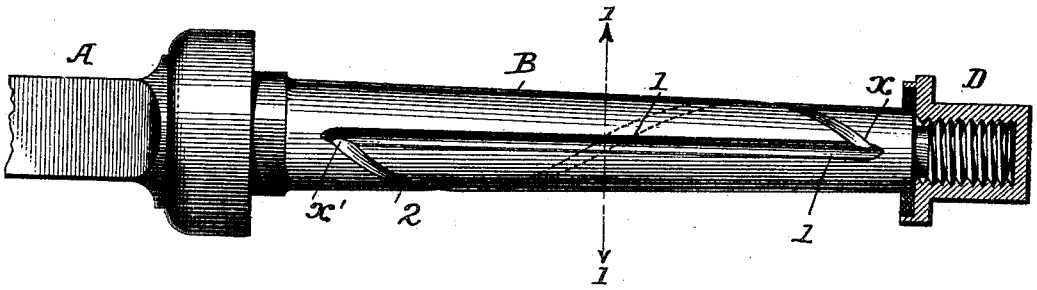


Fig. 2.

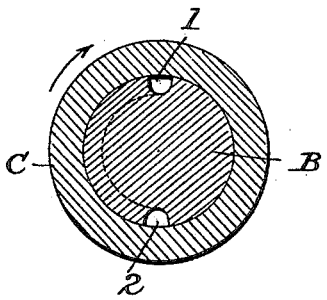
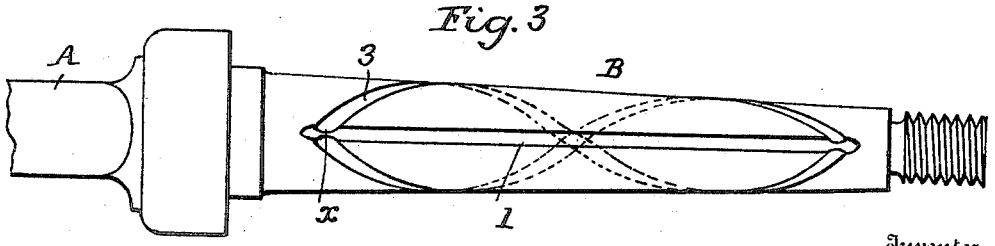


Fig. 3



Witnesses

J. J. McCarthy.

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UNITED STATES PATENT OFFICE.

JACOB B. DECKER, OF WILKES-BARRÉ, PENNSYLVANIA, ASSIGNOR TO THE SHELDON AXLE COMPANY, OF SAME PLACE.

AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 649,819, dated May 15, 1900.

Application filed December 7, 1898. Serial No. 698,551. (No model.)

To all whom it may concern:

Be it known that I, JACOB B. DECKER, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Axle-Lubricators, of which the following is a specification.

My invention relates to that class of axle-journals employed in connection with vehicles, and especially with carriages, carts, &c.; and my invention consists of an axle-journal provided with a longitudinal and a helical groove so arranged as to maintain a constant circulation of the lubricant and a uniform distribution of the same over the contacting faces, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a top view of a carriage-axle and journal, showing my improvement. Fig. 2 is a section on the line 1 1, Fig. 1. Fig. 3 is a side view of a modification.

The axle A is provided with a journal B, which is of any suitable size and proportion, according to the character of the vehicle in which it is used, but as shown is a tapering journal, such as is used in connection with carriage-axles.

To the journal B is fitted a box C, of any suitable character, connected to or forming part of the wheel and secured in place by means of the usual nut D.

Along the top of the journal B extends a deep groove 1, and from the forward end of the latter, beginning at a point x, a second and helical groove 2 winds downward and beneath and back to the beginning of the groove 1 at the top at the point x' nearest the junction with the axle.

The journal is lubricated in the usual manner and the box supplied, and in the operation of the parts as the box turns in the direction of the arrow, Fig. 1, any surplus lubricant is carried upward and upon reaching a position above the groove 1 is deposited therein and then flows outward toward the nut D and to the point where the helical groove 2 joins the groove 1, when it will be carried downward along the said groove and back in consequence of the twisted or helical form of the groove toward the rear of the journal, and thence upward toward the inner end of the groove 1, to be again carried forward, and then around and back as before. By this arrangement the surplus lubricant is kept in a constant circulation, and in its travel from the point x backward toward the point x' it is carried in contact with and distributed over the entire length of the surface of the box.

It will be seen by the arrangement above described that the collection of the lubricant at any local point upon the journal is prevented, because any surplus at any point is carried up to and deposited in the groove 1, and from the latter it flows into the groove 2, through which it cannot pass without traveling the entire length of the box and being therefore uniformly distributed along the face of the latter.

While I have shown a single groove 2, it would be practicable to use two grooves, as shown in Fig. 3 and indicated by the dotted line 3, Fig. 1.

It will be seen that by the arrangement above described the lubricant is distributed wholly along exposed channels, so that there are no openings or perforations which might clog up and interfere with the free and continued distribution.

Without limiting myself to the precise arrangement shown, I claim as my invention—

1. A journal provided with a longitudinal groove, and with a helical groove having its ends in communication with the longitudinal groove, substantially as described.

2. A journal provided with a longitudinal groove extending nearly the entire length thereof, and with helical grooves in communication with the ends of the longitudinal groove, and extending in opposite directions from said longitudinal groove, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB B. DECKER.

Witnesses:

CHAS. H. GILLAM,

J. FRED ARMSTRONG.