L. ESPENSCHIED.

Vehicle-Axle Lubricator.

No. 203,821. Patented May 21, 1878.

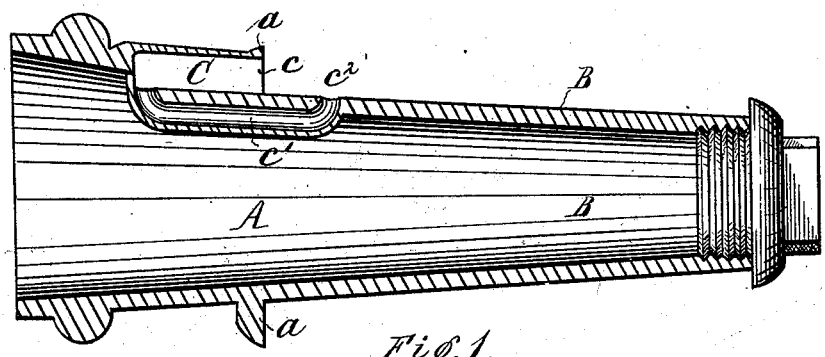

Fig. 1.

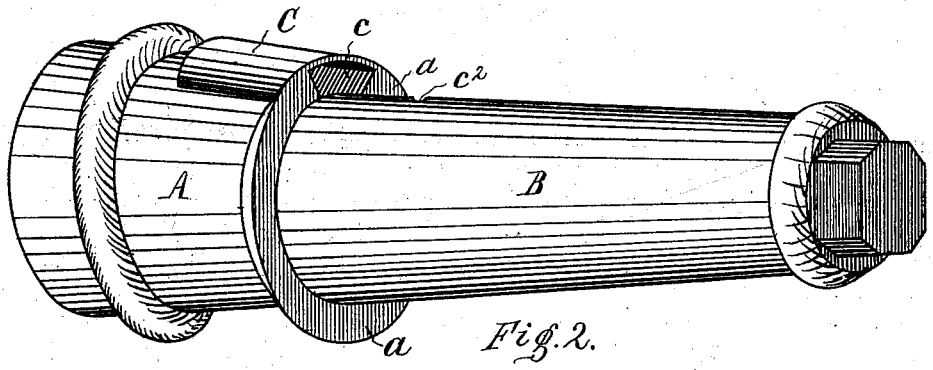

Fig. 2.

Witnesses:

L. Cuelius

Theo. E. Cuelius.

Inventor:

Louis Espenschied

per. Chas. F. Meisner

Atty.

UNITED STATES PATENT OFFICE.

LOUIS ESPENSCHIED, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN VEHICLE-AXLE LUBRICATORS.

Specification forming part of Letters Patent No. **203,821**, dated May 21, 1878; application filed April 10, 1878.

To all whom it may concern:

Be it known that I, LOUIS ESPENSCHIED, of St. Louis, Missouri, have invented an Improved Grease-Reservoir for Wagon-Spindles, of which the following is a specification:

This invention is an improved mode of lubricating the thimbles of wagons through the knocking action of the wheels in their playing on the spindles; and consists in a grease reservoir or box constructed to have its opening through the hurdle or collar of the thimble, and coming flush against the hub of the wheel. The play that the wheel has longitudinally on its spindle when in motion causes its hub to knock against the collar or hurdle, thus thereby forcing the grease before it through an opening communicating with it, and coming out at top of the spindle to be distributed over same and the box of the hub.

Of the drawing, Figure 1 is a longitudinal section through a thimble, showing my improvement attached. Fig. 2 is a perspective view of my improved thimble.

A is the thimble, and B is its spindle. Immediately back of the spindle, and under the hurdle or collar *a*, is my grease-reservoir C, cast or otherwise formed in the thimble. The shape of this grease-reservoir is as shown in the drawing, Fig. 1, having its supply-opening *c* in the hurdle or collar *a*, through which the grease is inserted.

The opening *c* of the grease-reservoir comes flush with the face of the collar *a*, as shown in the drawing, and the hub of the wheel, playing on the spindle longitudinally, knocks against this collar, forcing air into the reservoir C, causing the grease to be forced through the pipe or spout c^1 and out at its opening c^2 on top of the spindle.

The spindle, resting with its under face in the box of the hub, thus leaves a space above, thereby giving the grease free passage out of its discharge-opening c^2.

Inasmuch as the usual wagon-grease will not flow, being too stiff, the reservoir is inactive when the wagon stands still, but begins to operate and discharge the grease when the wagon is in motion, thereby economizing its use and lasting a much longer time.

In case the grease, through whatever cause, should become too stiff to be forced through the action of the compressed air, the spindle, becoming dry, would become heated, and usually at or near the shoulder, where the bearing is the greatest, thereby warming up the grease and causing it to flow out.

In greasing the spindle, the wheel is taken off and greased in the usual way, and the reservoir then filled, thus, having a large reserve of grease, allowing the wagon to run a greater length of time without again greasing.

As the spindle at the shoulder is the most delicate part of the spindle, and also resisting the most bearing strain, it consequently is the most liable to become dry. The peculiar position of my reservoir gives this particular part of the spindle an extra supply of grease.

It is calculated that the action or knocking of the hub of the wheel against the opening *c* will bring out the grease at c^2 in small quantities and only at long intervals, thus many licks or knocks failing to discharge any.

I do not limit myself to the number of grease-reservoirs, as one or more can be applied, or one on each side; but their position in the thimble immediately back of the hurdle or collar *a*, having the opening *c* flush with the front face of said collar, is wherein I lay great stress.

The position of the grease-box, together with the spout below, also strengthens the spindle at the shoulder, at the same time the whole being well hid and out of the way.

Having thus fully described my invention, what I claim is—

A thimble, A, having a grease-reservoir, C, cast or otherwise formed in the same, with supply-opening *c* and communicating-spout c^2, as herein shown and described, in combination with the wheel-hub, forming a compressed-air grease-reservoir, whereby, through the action of the compressed air, the grease is forced out automatically, as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand in presence of two witnesses.

LOUIS ESPENSCHIED.

Witnesses:

CHAS. F. MEISNER,

D. J. CRECELIUS.