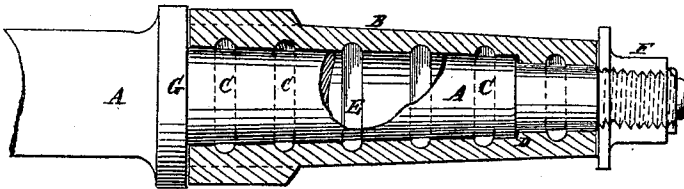


F. HUNSINGER.

Axles and Axle-Boxes for Vehicles.

No. 138,890.

Patented May 13, 1873.



Witnesses:

A. W. Almquist
C. Sedgwick

Inventor:

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Per

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UNITED STATES PATENT OFFICE.

FRIEDERICH HUNSINGER, OF MORRISANIA, NEW YORK.

IMPROVEMENT IN AXLES AND AXLE-BOXES FOR VEHICLES.

Specification forming part of Letters Patent No. **138,890**, dated May 13, 1873; application filed March 15, 1873.

To all whom it may concern:

Be it known that I, FRIEDERICH HUNSINGER, of Morrisania, in the county of Westchester and State of New York, have invented a new and useful Improvement in Axles and Boxes, of which the following is a specification:

The invention consists in the improvement of axle-boxes, as hereinafter described and pointed out in the claim.

The annexed drawing illustrates my invention.

Similar letters of reference indicate corresponding parts.

A is the axle. B is the axle-box. F is the fastening-nut on the end of the axle. C represents grooves or recesses in the bearing-surface of the box. These grooves operate as reservoirs for the lubricating material. They are made when the box is cast, and are formed by the core of the mold, and may be of any form. They are placed one inch, more or less, from each other, and of any desired size. D is an offset or shoulder in the box, which prevents the lubricating material from working to the end of the box. G is the axle-collar.

The box is fitted to the collar G, and the

nut F is so fitted to the axle that when turned up it makes a joint with the end of the box, and confines the oil or other lubricating material. The ends of the box will become worn after a while so that more or less of the material will escape, but the axle will still be lubricated from the material retained in the grooves and retarded by the shoulder or offset D. The axle is formed with a shoulder to fit the box or offset D.

With boxes constructed in this manner the axles of a heavy truck will remain well lubricated for weeks when in constant use.

I am aware that an axle and axle-box with parallel grooves connected by other grooves are not new and of my invention.

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

The box B having the parallel grooves C and offset D, in combination with axle A, as and for the purpose described.

FRIEDERICH HUNSINGER.

Witnesses:

T. B. MOSHER,
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