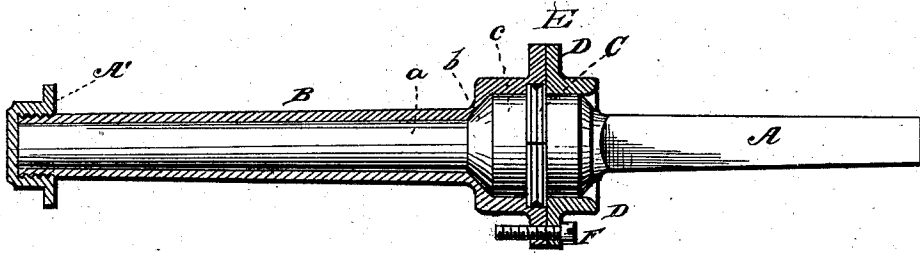


A. E. SMITH.
Carriage Axle.

No. 240,616.

Patented April 26, 1881.



Witnesses:
Robert Smith
Edward Siggers

Inventor:
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Attorney.

UNITED STATES PATENT OFFICE.

ALFRED E. SMITH, OF BRONXVILLE, NEW YORK.

CARRIAGE-AXLE.

SPECIFICATION forming part of Letters Patent No. 240,616, dated April 26, 1881.

Application filed September 19, 1879.

To all whom it may concern:

Be it known that I, ALFRED E. SMITH, of Bronxville, Westchester county, New York, have invented certain new and useful Improvements in Carriage-Axles and the Mode of Securing the Hub of a Wheel thereto; and I do hereby declare that the following specification, taken in connection with the accompanying drawing, is a full and clear description thereof.

This invention relates to axles provided with three bearings; and it consists in the peculiar construction and combination of the parts, as hereinafter set forth.

The accompanying drawing represents a side view of my improved axle, partly in section.

A designates the axle, which is formed with a terminal spindle, *a*, a cylindrical enlargement, *c*, and an interposed beveled portion, *b*. These parts *a b c* form three bearings for a correspondingly-shaped box, B. The outer end of said box is screw-threaded and receives a similarly-threaded cap, A'. The inner end of said box is provided with an annular flange,

E, to which an annular moon-plate, D, is attached by a screw or screws, F. The rear end of the box B has an internal annular groove, which receives the outer part of the collar C. Said collar sets partly into a groove in enlarged bearing *c*. Moon-plate D abuts against the rear end of said collar, and thus holds the box on the axle. The said collar is divided into two sections, so that it may be easily removed.

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

The combination of an axle having three bearings, substantially as described, with an axle-box, B, collar embedded partly in the axle and partly in the box, and a moon-plate detachably secured to the box and bearing against the rear end of the collar, as set forth.

ALFRED E. SMITH.

Witnesses:

JOHN DANE, JR.,
JOSEPH M. CRANE.