



# UNITED STATES PATENT OFFICE.

JOHN D. SMITH, OF SCHUYLERVILLE, NEW YORK.

## IMPROVEMENT IN AXLE-SKEINS.

Specification forming part of Letters Patent No. **166,420**, dated August 3, 1875; application filed June 18, 1875.

*To all whom it may concern:*

Be it known that I, JOHN D. SMITH, of Schuylerville, in the county of Saratoga and in the State of New York, have invented certain new and useful Improvements in Axle-Skeins; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a thimble-skein and axle-box, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a longitudinal section of my invention.

A represents the thimble-skein, which is of cast-iron and made hollow, so as to receive a wooden axle, B, inside. Through the axle B and skein A is passed a vertical tube, *b*, having a porous packing, *a*, at its lower end, which allows the oil to pass through sufficiently to keep the axle well lubricated, and after being filled with oil the tube is closed at the top by a stopper, *d*, or other suitable means. On the skein A are formed the shoulder-band C, to receive the end of the box, and the sand or mud cap D, which latter stands just back of the shoulder-band, and is of sufficient size to fill the back end of the hub E inside of the

back band G of the hub. The outer end of the skein A is closed, and forms a knob, *h*, with exterior screw-threads, to receive the screw washer or nut H, and through the knob *h* is passed a screw, *i*, to fasten the skein to the wooden axle. The hub I is provided with an axle-box, J, which is formed with a bearing, *m*, at each end, leaving an oil-chamber, *n*, around the center of the thimble-skein.

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

1. The combination of the axle B, thimble-skein A, and vertical tube *b*, having packing *a* at its lower end, and a stopper, *d*, at its upper end, substantially as and for the purposes herein set forth.

2. The thimble-skein A, formed with the shoulder-band C and sand or mud cap D, substantially as and for the purposes herein set forth.

3. The combination of the axle B, thimble-skein A, having shoulder-band C and sand-cap D, the oil-tube *b*, and axle-box J, forming bearings *m m* and oil-chamber *n*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 5th day of May, 1875.

JOHN D. SMITH. [L. S.]

Witnesses:

J. T. SMITH,  
S. B. HOWLAND.