

A. E. SMITH.
Carriage Axle.

No. 98,436.

Patented Dec. 28, 1869.

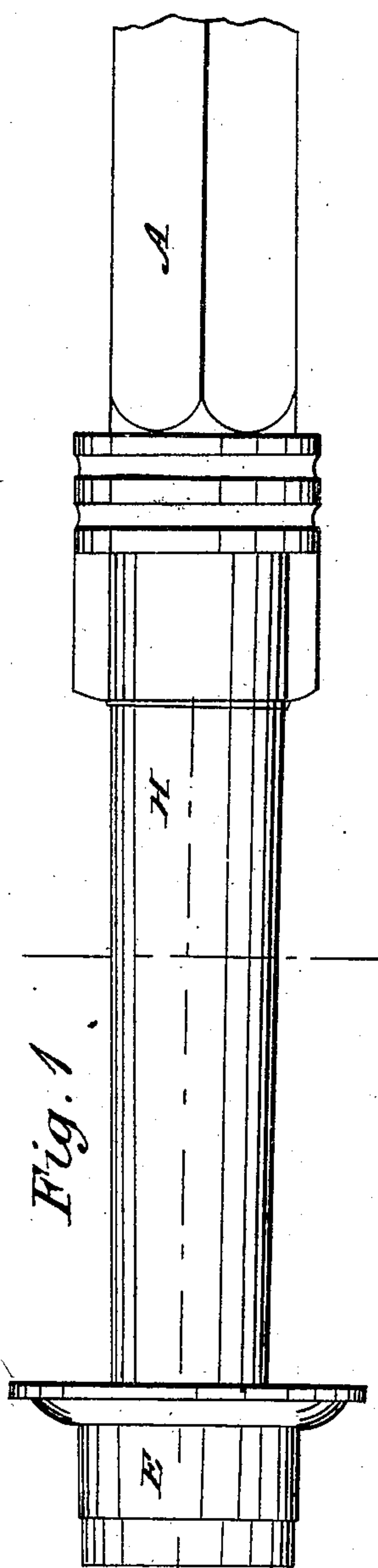


Fig. 1.

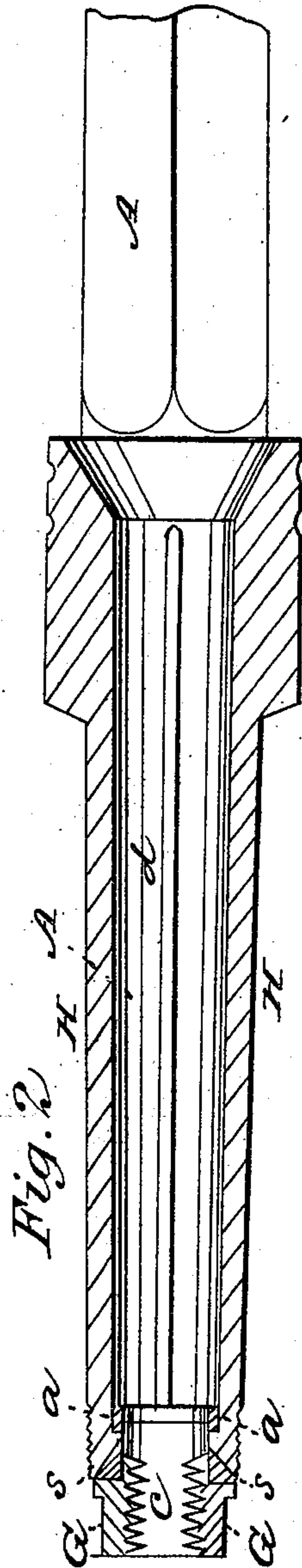


Fig. 2.

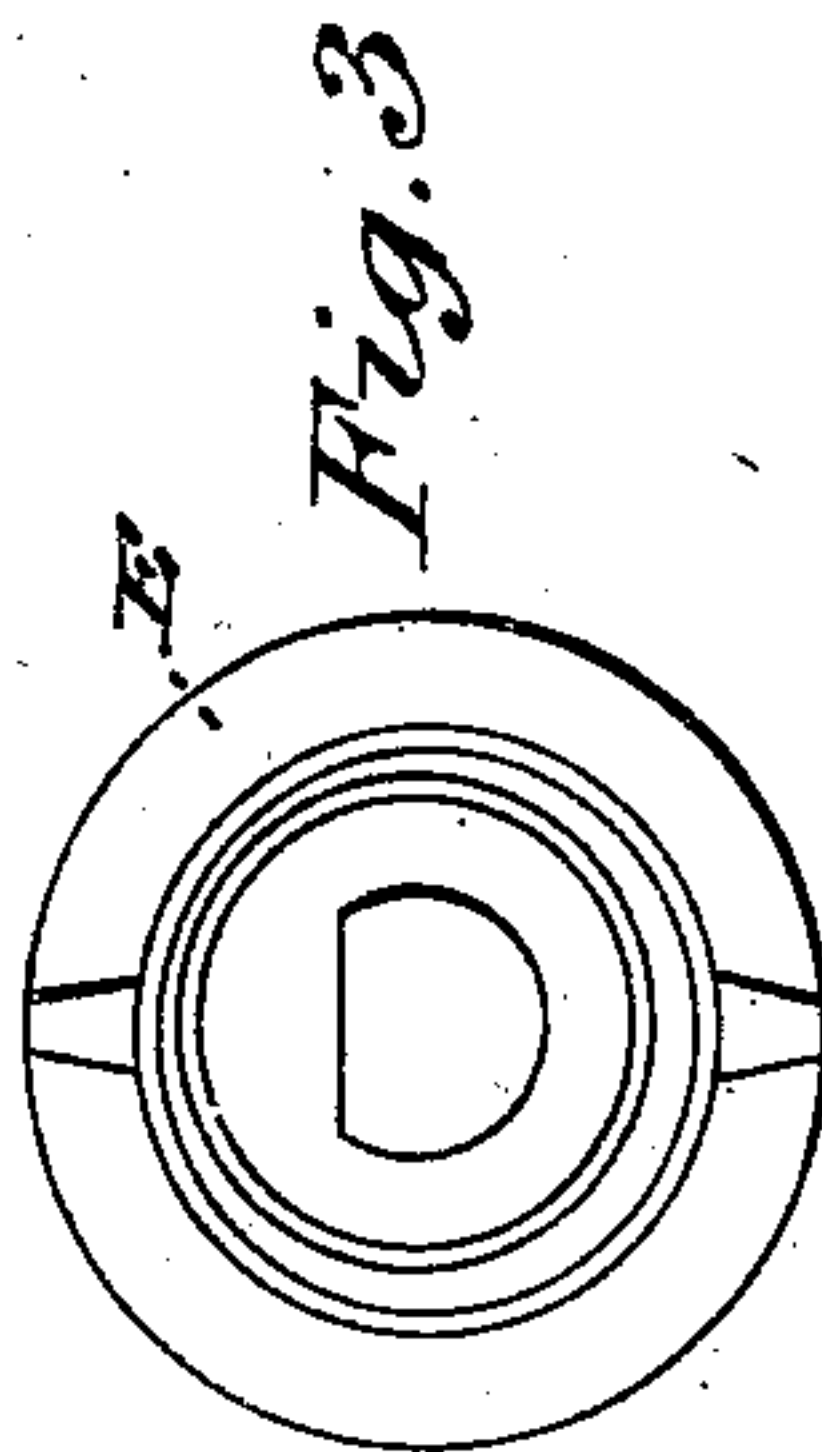


Fig. 3.

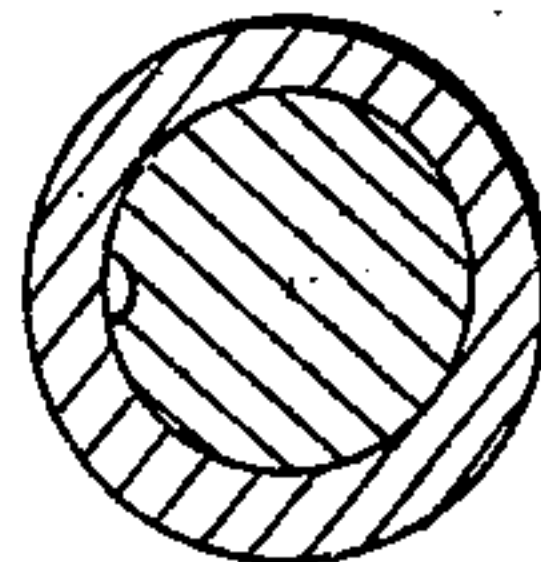


Fig. 4.

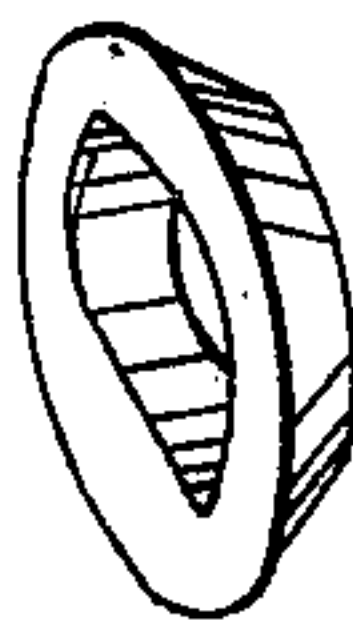


Fig. 5.

Witnesses:
E. W. Anderson
James P. Graves

Inventor:
Alfred E. Smith
Chapman, Norton
att'y

United States Patent Office.

ALFRED E. SMITH, OF BRONXVILLE, NEW YORK.

Letters Patent No. 98,436, dated December 28, 1869.

IMPROVED CARRIAGE-AXLE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALFRED E. SMITH, of Bronxville, in the county of Westchester, and State of New York, have invented a new and valuable Improvement in Axles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1, of the drawings, is a side view of my invention.

Figure 2 is a vertical longitudinal section of the same.

Figure 3 is an end view, with the cap removed.

Figure 4 is a cross-section thereof.

Figure 5 is a perspective of washer.

My invention relates to axles and skeins for wagons; and

It consists, mainly, in a novel arrangement of devices, intended to serve as efficient means for the purpose named.

The letter A, of the drawings, represents my axle, constructed in the usual form, except that I make a recess therein, as shown at *d*, for lubricating-purposes, and also that I cut off one side of the thread that holds the nut, until it assumes the form shown at *c*, on fig. 2. This form is given to the thread for the purpose of holding the washer thereon with great firmness, as hereinafter mentioned.

The letter H represents my box or skein. It is constructed in the usual manner, except that I make a recess therein, at its front end, of a concave form, as shown on the the drawings, to adapt it to receive and hold the washer, next mentioned.

The letter *s* represents a metallic washer, having a bevelled periphery, adapted to fit in the concave end of the skein, and also having one side of its interior made straight, as shown, to adapt it for setting firmly upon the thread of the axle.

Between the bevelled point of this washer and the shoulder of the axle is a recess, to which the lubricating-substance is conducted by the channel *d*, the object being to provide thorough lubrication for said washer, and the front end of the skein that rotates thereon. This recess is marked *a*, on the drawings.

The letter G represents a nut, fitted to the thread of the axle, and letter E, a cap, fitted to the thread, on the outside of the skein.

The above-described arrangement serves an efficient purpose, in keeping sand, or other injurious substances, from the thimble of the axle, and also in promoting thorough lubrication.

As an improvement upon the patent of ALFRED E. SMITH, numbered 72,555—

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement, herein described, of the axle A, skein H, thread *c*, nut G, conical washer *s*, grooved channel *d*, and recess *a*, when the same are constructed substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name, in the presence of two witnesses.

ALFRED E. SMITH.

Witnesses:

CHAS. L. MORGAN,
JAS. D. FERGUSON.