

W. HUNTINGTON.
Axles for Vehicles.

No. 150,579.

Patented May 5, 1874.

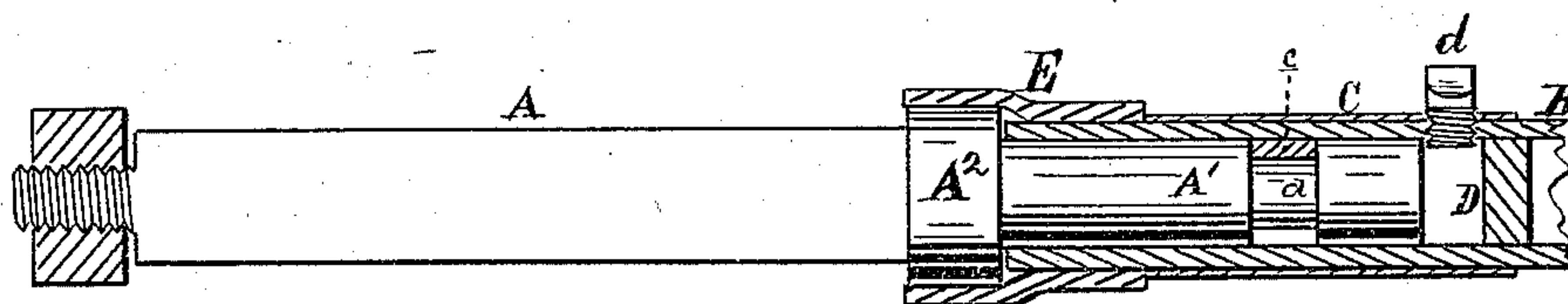


Fig. 1.

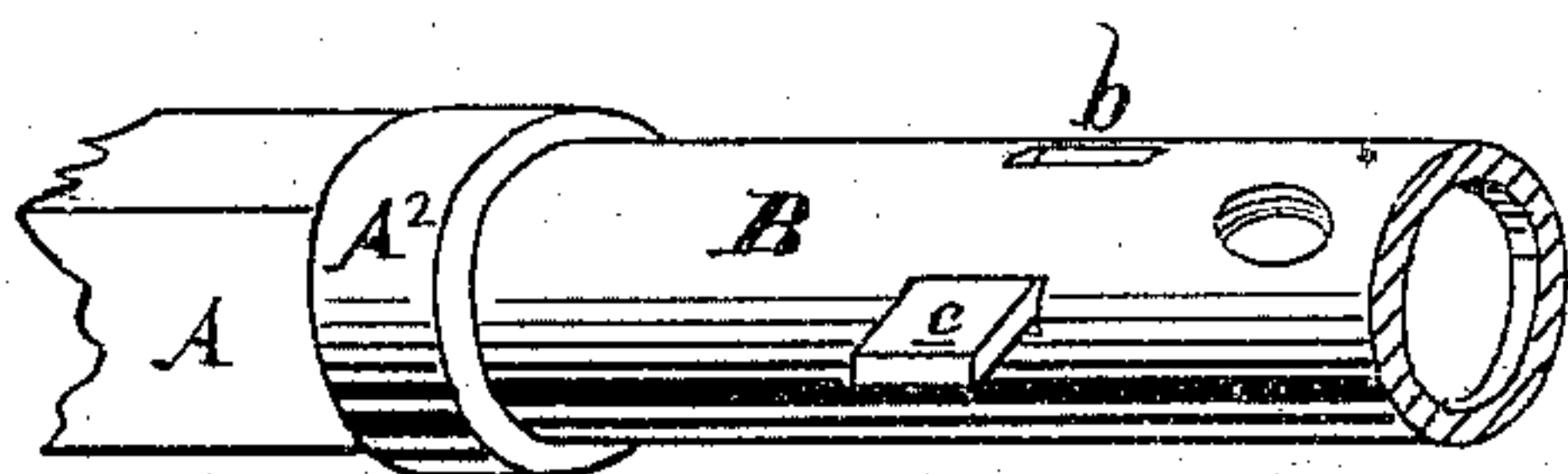


Fig. 3.

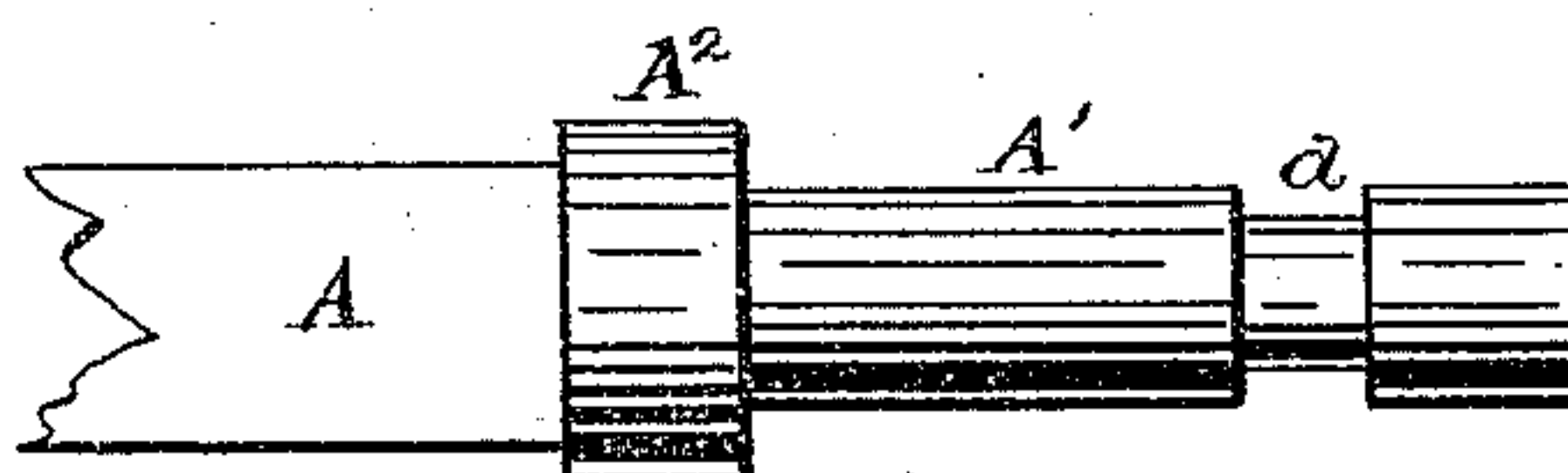


Fig. 2.

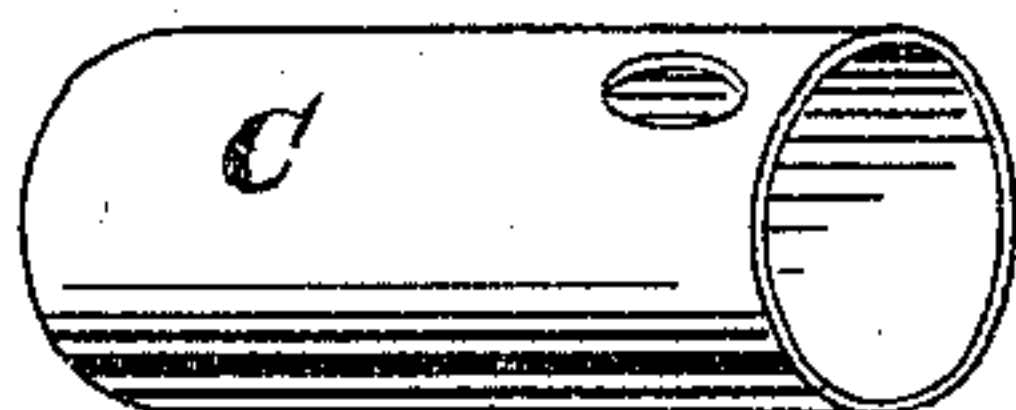


Fig. 4.

ATTEST

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IMPROVEMENT IN AXLES FOR VEHICLES.

Specification forming part of Letters Patent No. **150,579**, dated May 5, 1874; application filed November 4, 1873.

To all whom it may concern:

Be it known that I, WILLIAM HUNTINGTON, of Howell, in the county of Livingston and State of Michigan, have invented an Improvement in Axles for Wheel-Vehicles, of which the following is a specification:

The nature of this invention relates to an improvement in that class of axles or arms for wheel-vehicles wherein the arm is firmly secured in the hub of the wheel, and its projecting end rotates in a tubular axle; and it consists, first, in the manner of securing the arm in the axle; secondly, in the arrangement of the oil-chamber in the axle; and, thirdly, in the general arrangement of the various parts, as more fully hereinafter set forth.

Figure 1 is a longitudinal section through an arm and one end of my improved axle. Fig. 2 is an elevation of the journal end of the arm. Fig. 3 is a perspective view of the same with the tubular axle sleeved on it, and keyed. Fig. 4 is a perspective view of the sleeve.

In the drawing, A represents a square steel arm, which is firmly secured in the hub, having an extension, A¹, at the inner end, turned down to form a journal, in which is turned an annular groove, *a*. B is a metal tube, which forms the axle, through which, at each end, a pair of slots, *b*, are cut in the line of a chord of the arc of a section of the tube, through which to pass a brass key, *c*, tangent to the bottom of the groove *a* of the arm, which it so secures in the tube that it cannot be withdrawn, while it is free to rotate therein. In lieu of the key, a set-screw may be used, but the former is preferable. To secure the key

in the slots a light sheet-metal tube, C, is sleeved over it, which, in turn, is secured by a set-screw, *d*, tapped through it into the arm, beyond the inner end of the arm, which screw forms a plug for the oil-chamber. D is a cork, driven into the axle-tube an inch or two beyond the inner end of the arm, the space between which and said cork forms a receptacle for oil, which only finds exit by flowing through the journal of the arm, thereby affording constant lubrication to it. To prevent a too rapid outflow of oil, and at the same time to prevent the entrance of dust, a collar, A², about three-quarters of an inch in width, is turned down at the shoulder of the arm to the diameter of the axle-tube, over which and said collar is fitted a sole-leather sleeve or sand-guard, E, which effectually accomplishes these ends.

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

1. The combination, with the tubular axle B, provided with the slots *b* of the arm A¹, provided with the groove *a*, and secured therein by the key *c*, substantially as described and shown.

2. In combination with the axle B, the sleeve C, secured to the axle by the screw *d*, and the keys *c*, the arm A¹, having oil-reservoir *a*, all constructed, arranged, and operating substantially as described.

WILLIAM HUNTINGTON.

Witnesses:

E. B. GREGORY,
H. T. BROWNING.