

W. T. SMITH & A. A. COX.
Hubs for Vehicle-Wheels.

No. 156,953.

Patented Nov. 17, 1874.

Fig. 1.

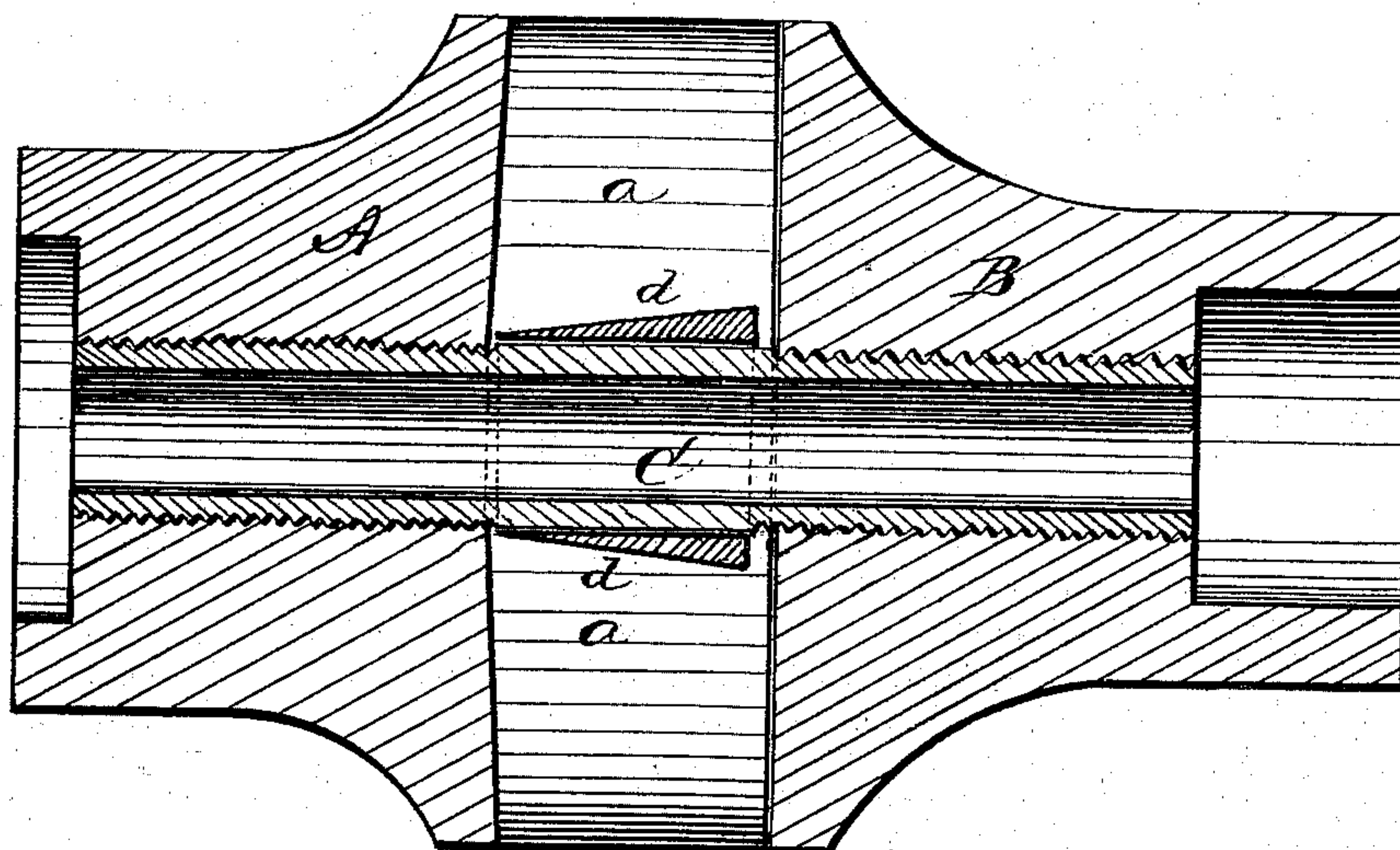
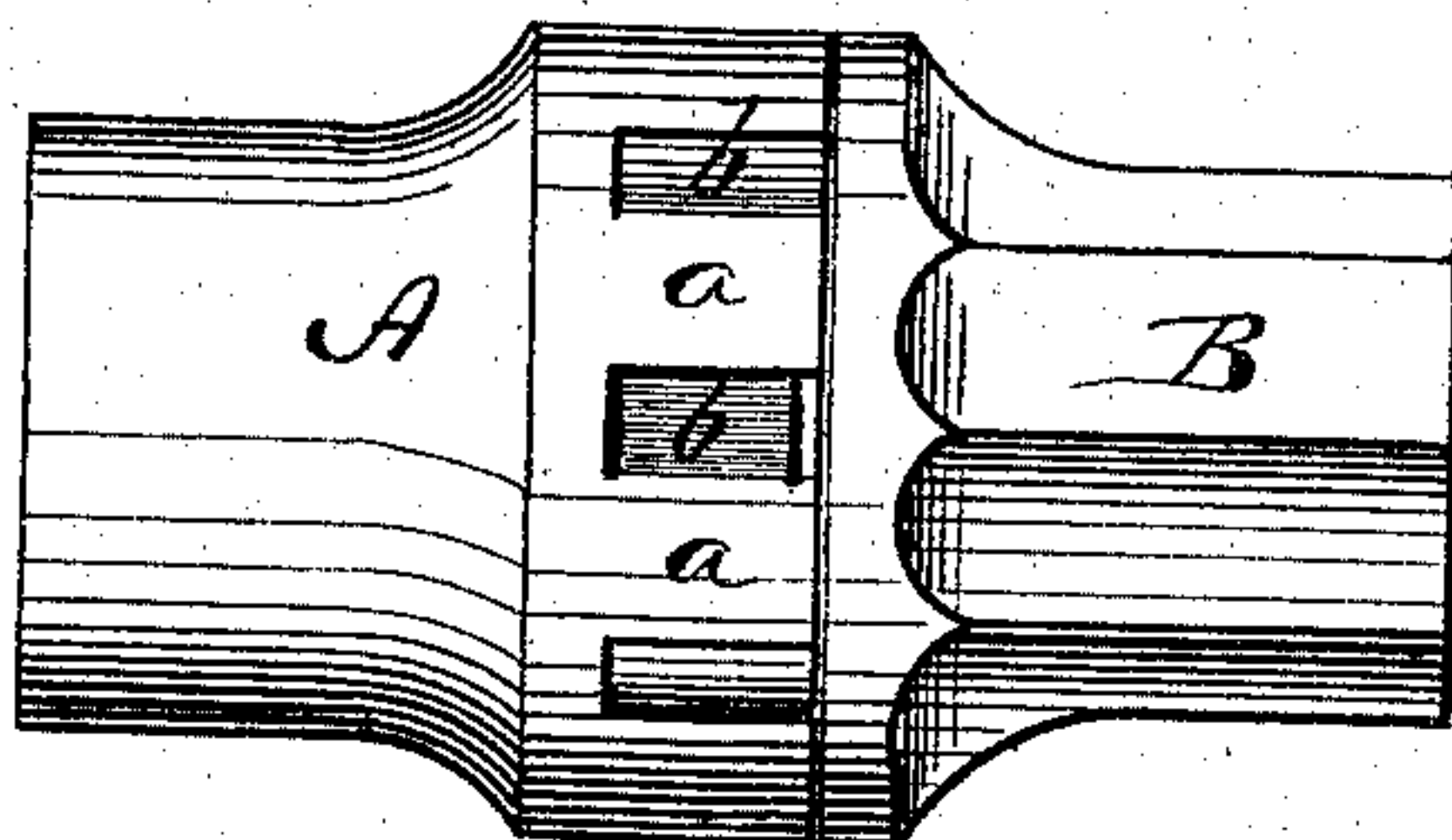


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE,

WILLIAM T. SMITH AND ALSTON A. COX, OF LILESVILLE, NORTH CAROLINA.

IMPROVEMENT IN HUBS FOR VEHICLE-WHEELS.

Specification forming part of Letters Patent No. **156,953**, dated November 17, 1874; application filed October 10, 1874.

To all whom it may concern:

Be it known that we, WILLIAM T. SMITH and ALSTON A. COX, of Lilesville, in the county of Anson and State of North Carolina, have invented certain new and useful Improvements in Carriage-Wheels; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in the construction and arrangement of a wheel-hub for vehicles, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a longitudinal section of our hub, and Fig. 2 is a side view of the same in reduced dimensions.

Our hub is cast in two parts, A and B, which are screwed from opposite ends upon the axle-box C. The part A of the hub is provided upon its inner face with a series of V-shaped projections, *a*, which form the mortises *b* for the spokes to be inserted in the hub. The projections *a* do not extend to the central hole in the hub, but leave a space between it and their points for the admission of a tapering sleeve or band, *d*, which is slipped over the axle-box C.

Accompanying each hub, when manufactured, will be several of these tapering sleeves or bands *d*, of different thickness, for driving under the ends of the spokes when the wheel becomes loose, and thereby tightening it. The spoke-mortises *b* are made slightly tapering from side to side, so that, when it

becomes necessary to tighten the wheel, each spoke is not only driven out toward the rim by the tapering sleeve or band *d*, but also thrown forward in order to make it tighter in the hub, when the front end B of the hub is screwed on again. The axle-box C, in the center, or at that point covered by the sleeve *d*, has a smooth surface without screw-threads, so that the action of screwing up the part B forces the sleeve *d* forward to tighten the spokes.

In tightening a wheel in this manner the joints in the rim will have to be strained open, and afterward filled again by any suitable means.

We are aware that the tapering sleeve is not new, and that a threaded tapering sleeve has been used; and we do not claim such devices; but

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

The axle-box C, having screw-threads opposite the parts of the hub A B, and a smooth surface in the middle, allowing the tapering sleeve *d* to slide, the part B constructed in a form to allow a wrench to be applied, all combined and constructed as and for the purpose specified.

In testimony that we claim the foregoing as our own, we affix our signatures in presence of two witnesses.

ALSTON A. COX.

WILLIAM T. SMITH.

Witnesses:

G. W. WILSON,
F. D. WILLIAMS.