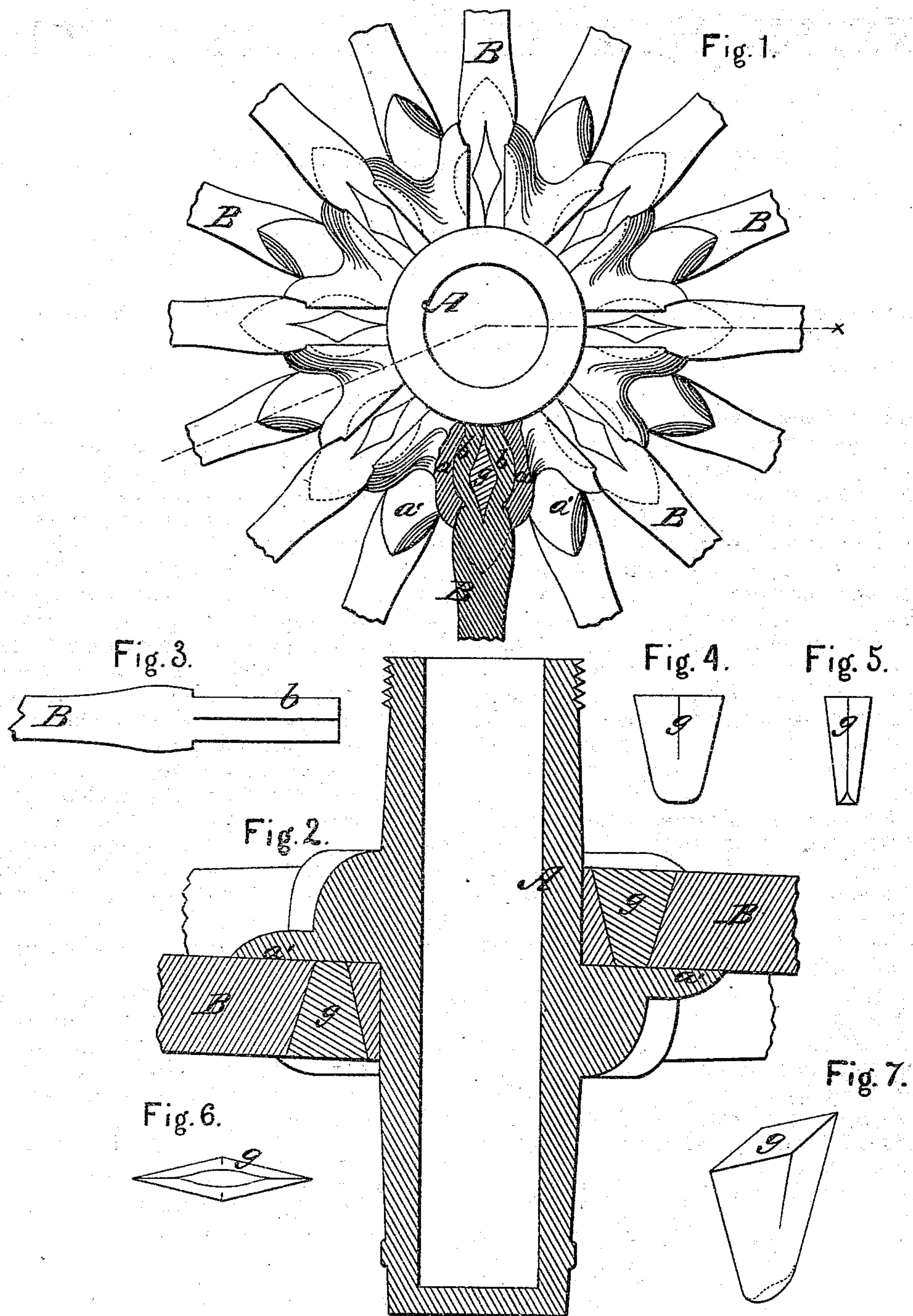


H. NYCUM.
Wheels for Vehicles.

No. 153,842.

Patented Aug. 4, 1874.



WITNESSES
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BY

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UNITED STATES PATENT OFFICE.

HENRY NYCUM, OF UNIONTOWN, PENNSYLVANIA.

IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. **153,842**, dated August 4, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, HENRY NYCUM, of Uniontown, in the county of Fayette and State of Pennsylvania, have invented a new and valuable Improvement in Carriage-Hubs; 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 drawing is a representation of a front view of my device, showing section of one spoke. Fig. 2 is a sectional view of my device, and Figs. 3, 4, 5, 6, and 7 are detail views.

This invention has relation to novel means for inserting spokes into metallic hubs for vehicles; and it consists in the use of split tenons on the spokes, in combination with wedges and mortises of a peculiar shape, whereby, when the spokes are inserted into the mortises in the hub, and the said wedges are driven into the split tenons, the latter will be forcibly spread out into the mortises, and prevented from withdrawal or casual detachment. At the same time, should any one or more of the spokes become loose, the same can be readily tightened by a few strokes of a hammer on the wedges of such loose spokes, as will be hereinafter explained.

In the annexed drawings, A designates a metal hub, and B the spokes, which are inserted into mortises formed therein. The hub

shown in the drawings is constructed with mortises arranged in a zigzag manner. Each one of the mortises presents three walls, two of which have concave surfaces *a a*, into which the broad sides of the tenons *b* of the spokes are forced, as shown in Fig. 1. The flat and narrowest wall *a'* of each mortise is extended out, so as to afford a good bearing for the spoke, and support it against lateral strain. The tenons *b* are split longitudinally, and after they are inserted into the mortises the split portions are forcibly driven into the concavities by means of wedges *g*, which, in cross-section, are diamond shape.

These wedges may be made of metal, though I prefer to make them of some hard wood.

I am aware that split-tenon spokes, and also hub-bands having radial wedge-shaped partitions, as shown in patents dated December 24, 1872, No. 134,152, and January 21, 1873, No. 135,119, are not new.

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

A metal hub with mortises having concave walls *a a*, in combination with split tenons *b* and wedges *g*, substantially as specified.

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

HENRY NYCUM.

Witnesses:

MARSHALL N. LEWIS,
FRANK L. BROOKS.