

H. BENDIR.
Wheels for Vehicles.

No. 155,918.

Patented Oct. 13, 1874.

Fig. 1.

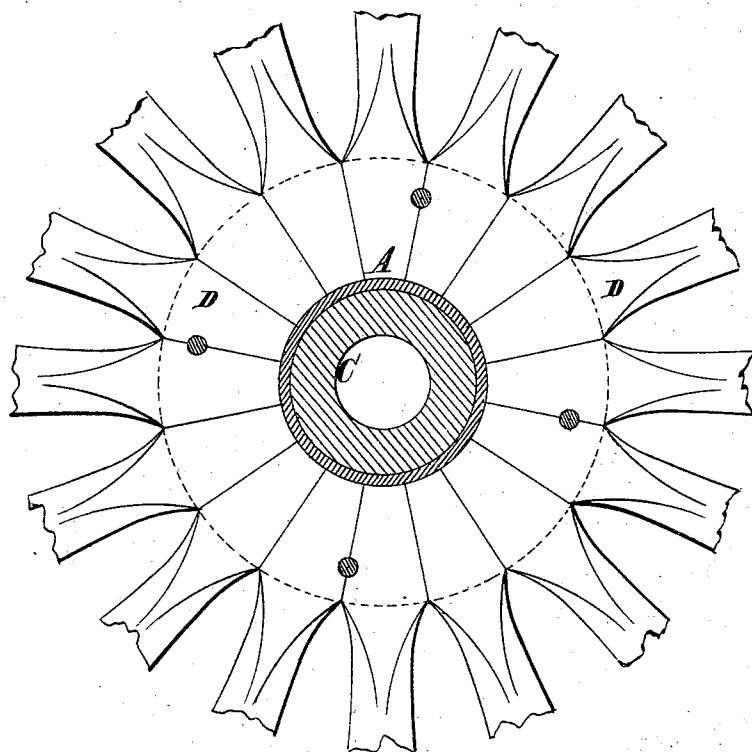
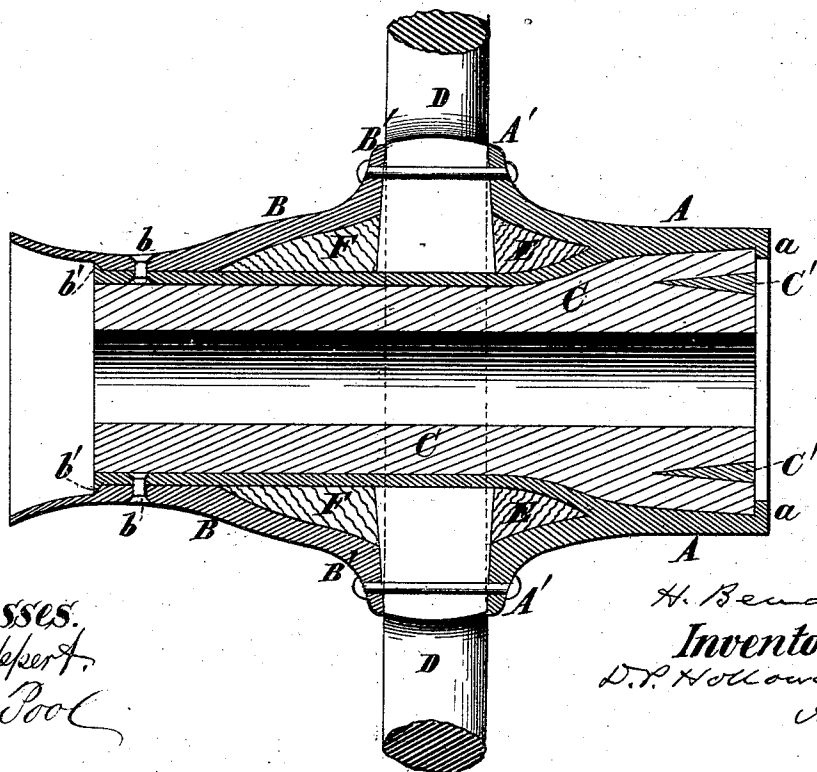


Fig. 2.



Witnesses.
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IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. **155,918**, dated October 13, 1874; application filed July 7, 1874.

To all whom it may concern:

Be it known that I, HENRY BENDIR, of Peru, in the county of Miami and State of Indiana, have invented a certain Improvement in Wheel-Hubs, of which the following is a specification:

This invention relates to wheel-hubs, consisting of a metallic sleeve or sleeves, and a wooden core, in which the axle-box is secured, the sleeves being provided with flanges to form an annular groove around the hub in which to secure the spokes.

My improvement consists in forming annular cavities in the metallic portion of the hub, opening on either side of the spoke-groove, and filling the same with wood, so as to combine the strength of a metallic with the elasticity and lightness of a wooden bearing for the spokes. It further consists in securing the wooden core in the metallic portion by enlarging the latter at the inner end, and expanding the core there correspondingly by driving wedges into it, and, finally, upsetting the metal sleeve over the end of the core.

In the annexed drawings, Figure 1 is a sectional front elevation of my improved hub. Fig. 2 is an axial section thereof.

The same letters of reference are used in both figures in the designation of identical parts.

The metallic portion of the hub consists of two parts, A and B, the wooden core C being secured within the part A, which has a corresponding length. The bore of this sleeve A is somewhat enlarged at the inner end, as clearly shown in Fig. 2, and the wooden core, which, when first inserted, is of uniform diameter, or, if tapering, of uniform taper, is expanded to fit this enlargement of the sleeve by driving a series of wooden wedges, C' C', into it. Thus secured the core cannot be removed outwardly through the sleeve.

To prevent its endwise motion in the opposite direction, the inner end of the sleeve may be provided with an inwardly-extending collar, *a*, behind which the core is forced in expanding it, or its ends may be formed without this collar, and upset over the end of the core to effect the same result.

The sleeve B is fitted on the outer end of sleeve A, and secured thereto by rivets *b*, besides which the end of sleeve A is upset against an offset upon the interior surface of sleeve B, as at *b'*, Fig. 2.

The projecting end of sleeve B constitutes the point-band of the hub. Its other end terminates in an annular flange, B', which, when the sleeves or tubes have been suitably fastened together, stands the required distance from the similar annular flange A' on the sleeve A, so as to form an annular groove between them for the reception of the tenons of the spokes D.

An annular cavity is formed in the sleeve A, opening onto the spoke-groove, and filled with wood E; and a similar wood filling, F, is driven or placed in a like annular cavity formed between the sleeve A and the flaring flanged end of sleeve B.

The tenons of the spokes, forming a complete arch around the hub, reach from the outer circumference of the flanges A' and B' down to the bottom of the spoke-groove, and have thus a partly-metallic and partly-wooden bearing, the faces of the wooden fillings E and F being made to closely hug the tenons.

The flanges may be riveted together at suitable intervals, if desired.

The tenons of the spokes are dovetailed in the line of the axis of the wheel, and the spoke-groove is correspondingly formed.

In constructing the wheel, the arch of spokes is formed around the tube A, the dovetailed edges of the tenons on one side bearing against the flange A' and wood filling E, then the sleeve B, with its wood filling F, is forced firmly up against the other side, and secured in the manner explained.

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

1. A wheel-hub composed of the wooden core C, metallic flanged sleeves A A' and B B', and wood fillings E and F, all combined substantially as specified.

2. The sleeve A, enlarged at its inner end, in combination with the wooden core C, expanded by wedges C', and retained behind an offset on the end of the sleeve, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY BENDIR.

Witnesses:

JAMES M. BROWN,
J. W. ELLIS.