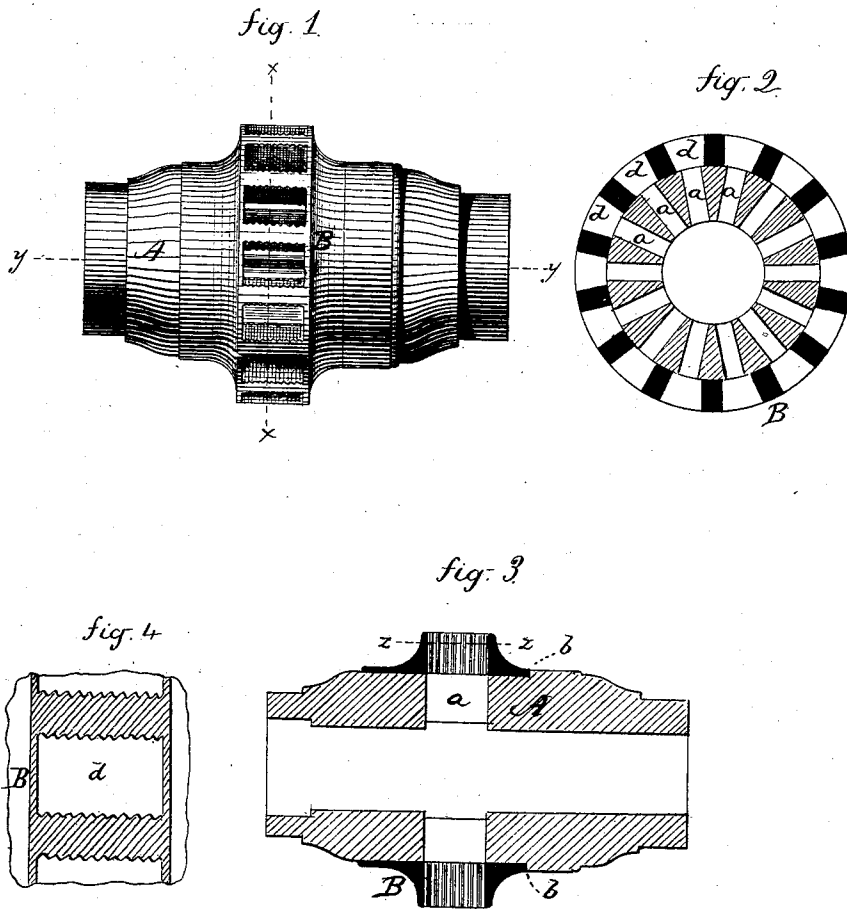


P. JONES.

Improvement in Hubs for Vehicle-Wheels.

No. 128,547.

Patented July 2, 1872.



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UNITED STATES PATENT OFFICE.

PHINEAS JONES, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN HUBS FOR VEHICLE WHEELS.

Specification forming part of Letters Patent No. 128,547, dated July 2, 1872.

To all whom it may concern:

Be it known that I, PHINEAS JONES, of Newark, in the county of Essex and State of New Jersey, have invented a new Improvement in Hub for Carriage-Wheels; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification and represents, in—

Figure 1, a front view; Fig. 2, a transverse section on line *xx*; Fig. 3, a longitudinal section on line *yy*; and in Fig. 4, a section through one of the mortises on line *zz* of Fig. 3, full size.

This invention relates to an improvement in the construction of that class of carriage-hubs which are composed of a wood center, and a metallic band for the support of the spokes.

In the usual construction of this class of wheels the mortises or recesses in the metal band through which the spokes pass are smooth and the spokes made to fit closely into the said recesses, and usually with a tenon on the spoke to extend into a corresponding mortise in the hub. The spoke being driven hard into this smooth recess will stop so soon as it comes to a bearing against the surface of the metal, the extent of the bearing between the wood and metal being so great that the wood will not yield; hence the slightest shrinkage loosens the spoke in the bearing, and the transverse strain—that is, the strain longitudinally in the hub—is brought entirely against the outer end of the recess in which the spoke is placed, and that indenting the spoke allows still more play; hence a little wear loosens the spoke, and the extent of this loosening must unavoidably increase until the spoke is reset. To overcome this difficulty and so construct the mortises that the spoke may be first driven to a more solid bearing and have a greater transverse support, is the primary object of this invention; and my invention consists in constructing the recesses or mortises in the hub with corrugated or serrated surfaces.

A is the wood center of the hub bored out for the box, and mortised, as at *a*, to receive the tenon of the spoke in the usual manner. B is a metallic band in outward form not unlike many other bands used upon carriage-

hubs, and with recesses *d* formed therein corresponding to the mortises in the hub, as seen in Fig. 2, so that the spokes will be driven into the hub through the said band and take their bearing in the usual manner.

In order to accomplish the object of this invention before named I corrugate the sides of the mortises or recesses in the band, as seen in Fig. 4, so that when the spoke is driven into the hub these corrugations will easily embed themselves, or the wood will yield, so as to allow them to embed into the spoke until the shoulder of the tenon reaches the wood center; hence it is always certain that the shoulder comes to a bearing. Each one of these projections in the numerous corrugations forms a support for the spoke against a strain longitudinally on the hub, taking so much of the strain from the outer flange or rim of the band, these corrugations thus accomplishing the two objects designed, as before mentioned.

In order to insure the proper relative position of the band with its recesses to the mortises in the hub I form a shoulder on the wooden hub, as at *b*, in such relative position to the mortises that, when the band is driven on, the edge will strike and rest against the said shoulder when the band has arrived at its proper position, as seen in Fig. 3, thus greatly facilitating the setting of the band. This enables me to bring the wood flush with the band, so that no break appears upon the hub, or, in other words, that the hub thus formed will not in its outline differ from the best wooden hubs.

While this invention is here represented as applied to hubs composed of a wood center and metal band, it will be obvious to those familiar with this class of manufacture that the corrugated surface of the recess to receive the spoke is equally applicable to hubs composed entirely of metal. I therefore do not wish to be understood as confining my invention to any particular class of hubs.

I claim as my invention—

In the hub of a carriage-wheel having a metal support for the spokes, the recesses which form the bearing for the said spokes when formed with vertically corrugated surfaces, substantially as described.

Witnesses: PHINEAS JONES.

A. J. TIBBITS,
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