L. D. COOK.

Improvement in Carriage-Wheels.

No. 128,212. Patented June 25, 1872.

Fig. 1.

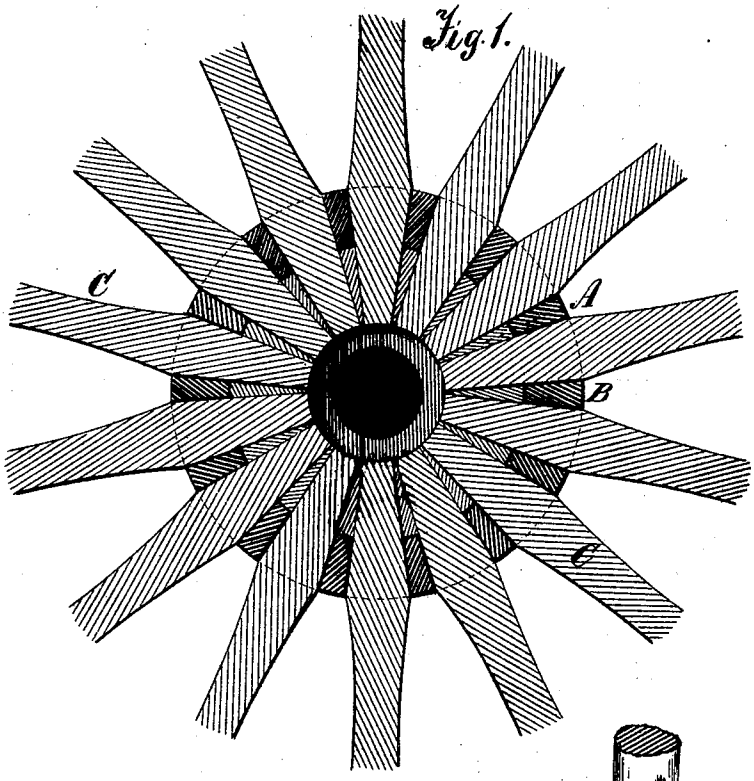


Fig. 2.

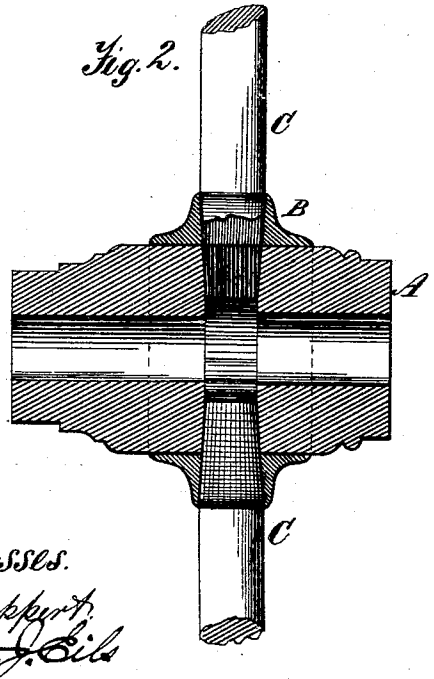
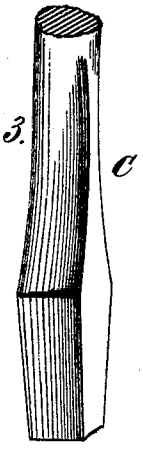


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

LYMAN D. COOK, OF WEST LIBERTY, OHIO.

IMPROVEMENT IN CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 128,212, dated June 25, 1872.

Specification of Improvements in Carriage-Wheels, invented by LYMAN D. COOK, of West Liberty, in the county of Logan and State of Ohio.

This improvement relates to that class of carriage-wheels in which a wooden hub is used in combination with wooden spokes and a socketed iron band to receive the base of the spokes and prevent the wooden hub from splitting.

In the wheels of this class heretofore in use tenons have been cut on the inner ends of the spokes, leaving shoulders which rested against the surface of the hub adjacent to the mortises which received the tenons, and the spokes adjacent to such shoulders were received in sockets in a metallic band which surrounded the hub, such sockets being formed by thin pins of metal connecting two parallel flanges.

In another class of wheels the ends of the spokes are made wedge-form, or in the form of the frustum of a wedge, the ends of the spokes being enlarged so that when the wedge-formed ends were brought together they would form a solid ring of wood extending around the axle-box, supported upon both sides by metallic flanges or plates. This construction gave wheels of great strength, but subject to the disadvantage that if the wood shrank the ends of the spokes would become loose, the metallic plates of course not accommodating themselves to the shrinkage of the wood.

The object of my present invention is to combine in a single wheel the advantage of both systems of construction, to obtain the benefit of the elasticity of a wooden hub, and the strength incident to the use of the wedge-formed spokes.

In the annexed drawing, Figure 1 is a central transverse section of a wheel. Fig. 2 is a longitudinal section through the hub, and Fig. 3 is a perspective view of the end of a spoke.

The hub A is made of wood having cut around that part designed to receive the spokes a series of tapered mortises of the size of the ends of the spokes. The metallic ring B is to be driven on to the hub. It is formed with inclined sockets or mortises corresponding in inclination with those of the hub and with the inclined faces of the ends of the spokes C, which are cut into the form of frustums of wedges extending from the outer edge of the band B to the interior of the hub where the points of the spokes should bear upon one another, the object being to give to the wheel a sufficient number of spokes, and at the same time, to give to that part of the spoke which is inserted into the hub the greatest amount of strength, the part of the spoke where cut away for insertion into the hub being the weakest part of the spoke.

I do not claim the wedge-formed spoke, nor broadly for the combination of the spokes with a socketed metallic band and mortised wooden hub, for these I am aware have been used; I am also aware that wooden hubs have been used in combination with mortised metallic bands, having recesses or cavities formed in their inner faces, as shown in the patent of W. C. Pearsell of February 15, 1870; and my claim is limited, therefore, to bands and hubs having mortises, the faces of which are in the same plane from the circumference toward the center, to receive spokes of an uniform taper and without swells or shoulders.

What I claim as my improvement in wheels, and desire to secure by Letters Patent, is—

In combination with a mortised wooden hub and socketed metallic band, constructed substantially as described, wooden spokes having an uniform taper from the periphery of the band to the interior of the hub, substantially as set forth.

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

LYMAN D. COOK.

Witnesses:
R. N. JORDAN,
B. B. LEONARD.