2 Sheets--Sheet 1.

ROBERT W. McCLELLAND.

Improvement in Wheels for Vehicles.

No. 114,458. Patented May 2, 1871.

fig. 1.

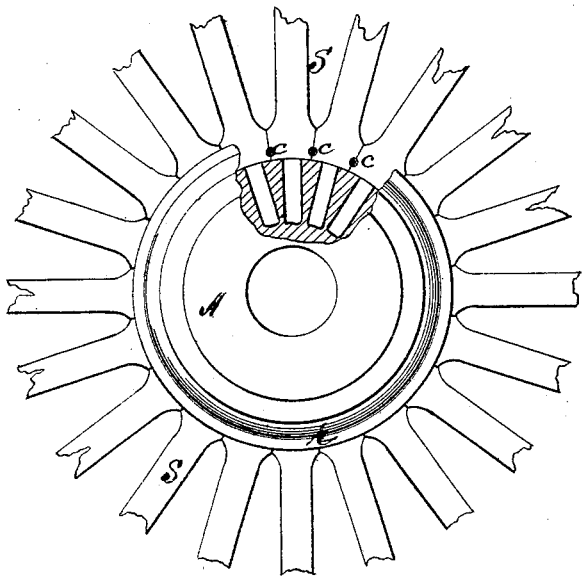
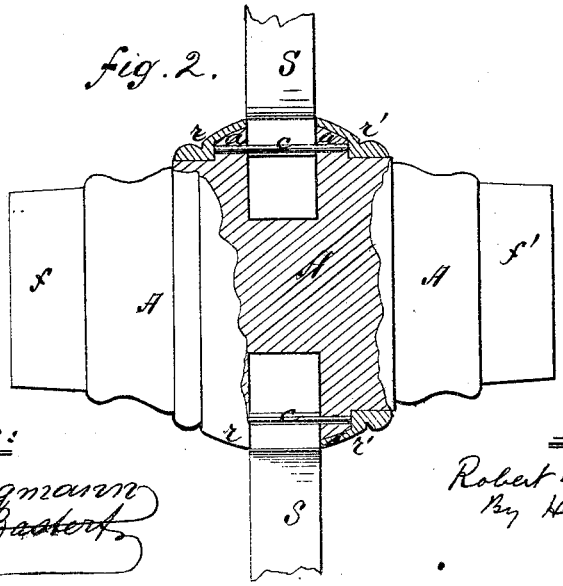


fig. 2.



Witnesses:

Victor Hagmann

August Baskert

Inventor:

Robert W. McClelland

By Hill & Ellsworth

attys.

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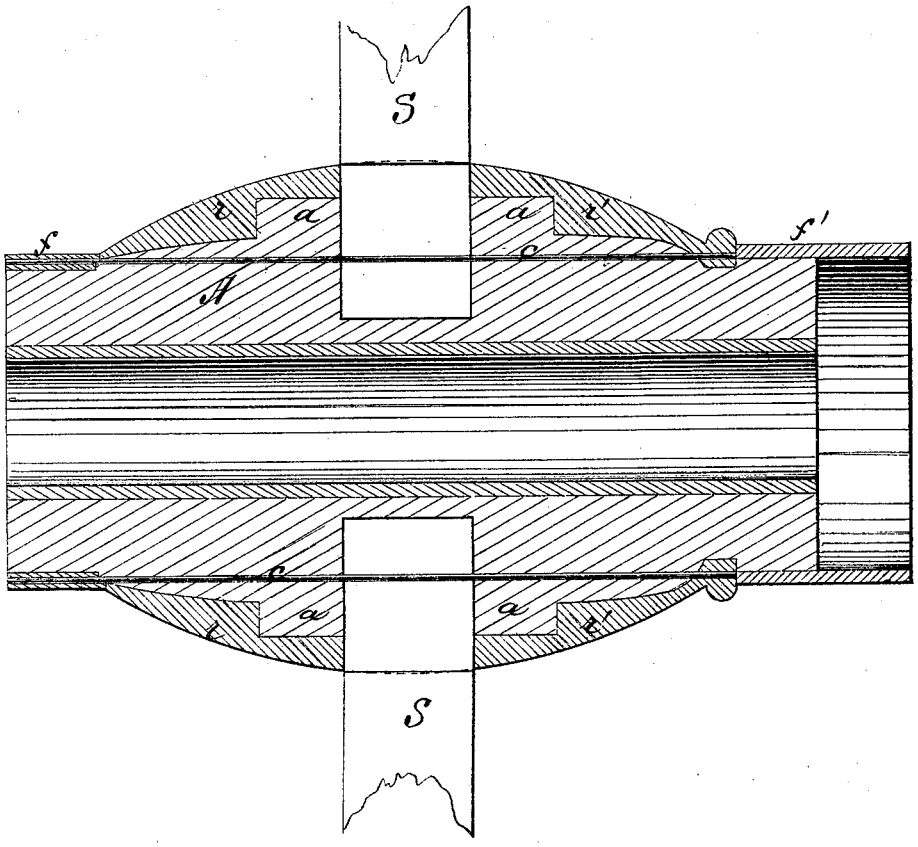
Fig. 3.



Witnesses:

Victor Hagmann.
August b Bastert

Inventor:

Robert W. Mc Clelland
By Hill & Ellsworth
attys.

UNITED STATES PATENT OFFICE.

ROBERT W. McCLELLAND, OF SPRINGFIELD, ILLINOIS, ASSIGNOR TO HIMSELF AND JOHN McCREERY, OF SAME PLACE.

IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. **114,458**, dated May 2, 1871.

To all whom it may concern:

Be it known that I, ROBERT W. McCLELLAND, of Springfield, in the county of Sangamon and State of Illinois, have invented certain Improvements in Carriage-Wheels; and I declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is an end view of the hub, a portion being shown in section. Fig. 2 is a side view of the same, a portion being shown in section; and Fig. 3 is an axial section of the hub.

Similar letters of reference indicate like parts.

This invention relates to that class of carriage-wheels in which a wooden center and wooden spokes are employed in combination with metallic flanges bearing laterally against the spokes, and bolts passing through or between the spokes to fasten them into the hub; and my improvement consists in the formation upon the hub of two flanges or ribs of wood, which bear against the sides of the spokes, in combination with metal bands, which cover the ribs and likewise bear against the spokes, and with bolts passing through or between the spokes, and either connecting the ribs, as shown in Fig. 2, or extending from end to end of the hub, as shown in Fig. 3.

In the drawing, A is the wooden center or hub, into which are mortised the spokes S S. *a a* are wooden flanges or ribs, formed upon the wood center in such a manner that they bear against each side of all the spokes. *c c* are bolts passing through or between the spokes, and either connecting the wooden flanges, as shown in Fig. 2, or extending from the outer end of the inner ferrule, *f*, to the inner end of the outer ferrule, *f'*, upon the hub, as shown in Fig. 3, in either case the bolts being completely hidden from view, so as not to mar the beauty of the hub; and *r r'* are metal bands, constructed to fit closely over the wooden flanges *a a* and to bear against the sides of the spokes, for the purpose of assisting in their support.

When constructed as shown in Fig. 2, the metallic rings may be shrunk on or riveted to the hub, or connected by the bolts *c c*. When constructed as shown in Fig. 3, they are held in place by the ferrule *f* and bolts *c c*, the latter passing through each of said parts, as shown, and being confined by means of screws, nuts, or heads formed upon the bolts, and bearing against the end of the ferrule and band.

I do not confine myself to the precise arrangement or construction of spokes herein shown, as they may be arranged in a variety of ways without departing from the principle of my invention, which consists mainly in the employment of the wooden supports *a a* for the spokes, when covered, protected, and strengthened by the metal bands, as described.

I am aware that metal bands have been employed for many years to support the spokes of a carriage-wheel, and that they, as well as the connecting-bolts, have long been public property. When the bands are made wholly of metal, however, they are either necessarily heavy or unshapely in appearance, or they do not sufficiently support the spokes.

My object in providing the wooden flanges inside of them is to push them out from the center of the hub, and thus increase the surface that supports the spokes without necessitating the employment of thick heavy bands of metal, and without detracting from the beauty of the hub.

In my wheel the spokes are supported firmly by deep sockets of wood and by light iron bands, which bear against their sides at a point as remote as possible from the center of the hub, and yet there is no appearance of a supporting-flange on the outside of the hub, but the latter is of fine symmetrical proportions and beautifully rounded in graceful curved lines, as shown in the drawing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The carriage-wheel herein described, consisting essentially of the wooden hub A, the straight row of spokes S S, the bolts *c c*, the raised wood flanges *a a* around the center of the hub, and the metal bands *r r'*, bracing the ends and covering the whole convex surface of said flanges, all being arranged substantially as and for the purposes set forth.

ROBERT W. McCLELLAND.

Witnesses:

T. C. MATHER,

TURNEY ENGLISH.