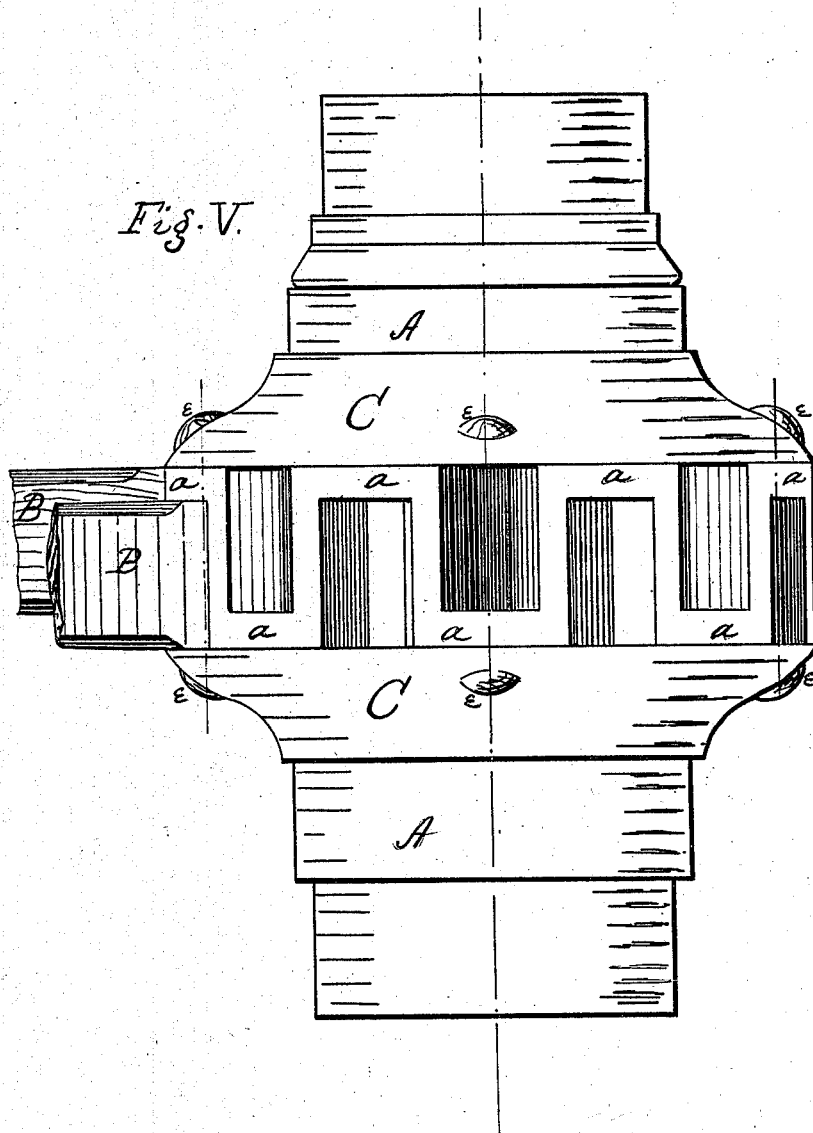


JOHN McCREERY.

Improvement in Carriage Wheels.

No. 115,497.

Patented May 30, 1871.



WITNESSES :-

*D. B. Ellsworth*

*Wm. Briggs*

INVENTOR :-

*John McCreery*

*By -*

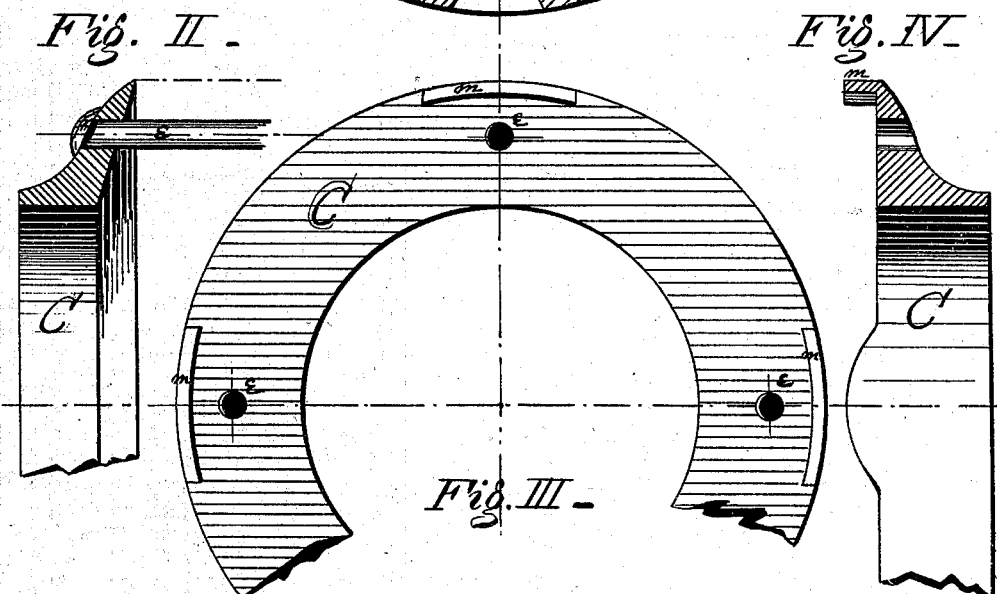
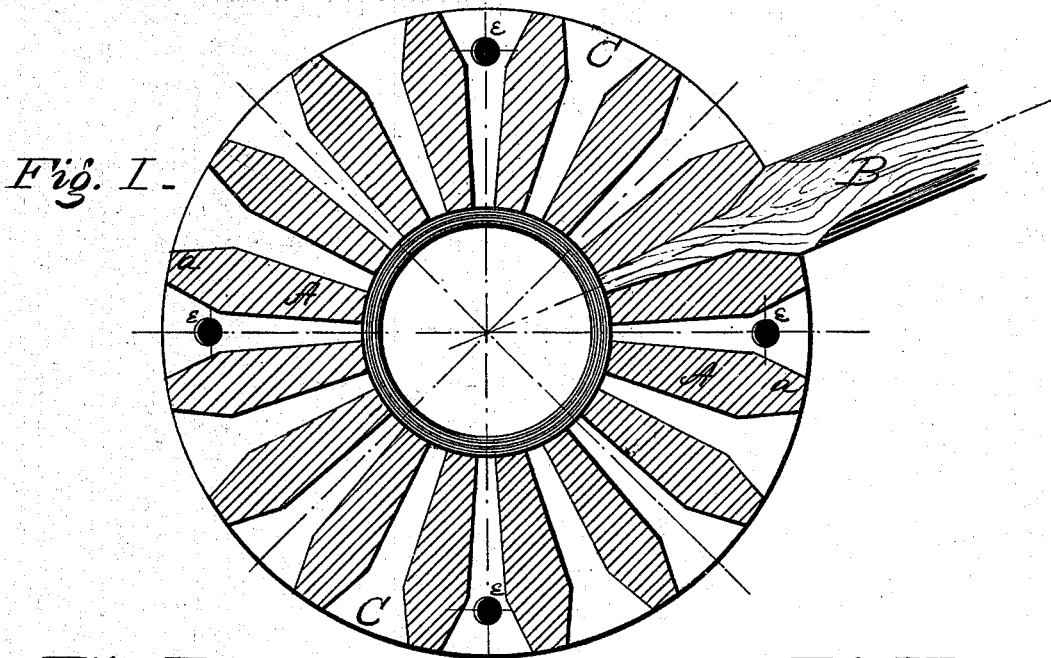
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WITNESSES:

*Dr. H. Ellsworth*  
*H. W. Briggs*

INVENTOR:

*John McCreery*  
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# UNITED STATES PATENT OFFICE.

JOHN MCCREERY, OF SPRINGFIELD, ILLINOIS.

## IMPROVEMENT IN CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 115,497, dated May 30, 1871.

*To all whom it may concern:*

Be it known that I, JOHN MCCREERY, of Springfield, in the county of Sangamon and State of Illinois, have invented an Improved Carriage-Wheel; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a cross-section of the hub; Figs. 2 and 4, sections of the metal bands, showing modifications in construction; Fig. 3, an elevation, showing the inner face of said band, when constructed as represented in Fig. 4; and Fig. 5, a plan of the whole hub, some of the spokes having been removed.

Similar letters of reference in the accompanying drawing indicate corresponding parts.

This invention is an improvement upon the carriage-wheel for which Letters Patent of the United States were granted to Robert W. McClelland, February 8, 1870, No. 99,691, and reissued April 4, 1871, No. 4,322, for the benefit of said Robert W. McClelland and John McCreery, sole owners thereof. The wheel, as patented by said McClelland, consisted in the combination of raised center dodged spokes and metal bands, as described by said reissued Letters Patent.

My present improvement consists in adding another element to the combination, to wit: bolts or rivets connecting the two metal bands, and passing through the wood center and through or between the spokes, as hereinafter set forth.

In the drawing, A represents the hub; B B, the dodged spokes; and C C, the metal bands applied to the hub so as to bear against the raised center *a* on both sides, and to support each spoke on one side, as shown, and as described in the former patent above referred to. The hub, measured diametrically through the raised center, is about as large as ordinary hubs; but the ends are cut away, as clearly represented in Fig. 5, and the rings are applied to strengthen it and to support the spokes laterally, so that the wheel is reduced in size, rendered neat and handsome in appearance, and made exceedingly strong and durable. The rings or bands C C are connected together by metal bolts or rivets *e e*, which pass through or between the spokes or

spoke-tenons, and also through the solid wood *a* of the hub. For the purpose of enabling the rings to prevent the possibility of the chipping or splitting out of any part of the "raised center" as the wood grows dry with age, I make the inner faces of the bands slightly conical, as shown in Fig. 2, or I provide them with projecting lips or flanges *m m*, as seen in Figs. 3 and 4, which bear upon the surface of the raised center between alternate spokes, but do not reach in far enough to come in contact with the side of the spoke. Either method of construction will hold the wood perfectly secure in position, even though it should crack with age or exposure to the weather.

The advantages of the combination of the four elements herein described, viz., the raised center, dodged spokes, metal bands, and bolts connecting them, are of the most important character. In the first place, the raised center gives a larger bearing to the tenons, and, being a solid part of the hub itself through which the bolts pass, holds the bolts, and by means of them, the rings or bands firmly in place, preventing any tendency in those parts to slip around the hub. Secondly, the dodging of the spokes obviates the "dishing" of the wheels, prevents the mortises from coming in line and nearly cutting the hub in two, and interposes on each side of every spoke a solid block of wood forming part of the hub, which supports the tenons and prevents them from breaking away the narrow tongue of wood where the mortises are in line. Thirdly, the iron bands support the spokes and the wood center laterally and bind the wood center down so that it cannot chip up or split off; at the same time they strengthen the hub, prevent it from cracking or splitting, and enable its ends to be greatly reduced in size and improved in appearance. Fourthly, the bolts connect the bands and keep them in place. It is impossible for the bands to turn on the hub while the bolts are in, because the latter pass through the wood of the hub and cannot be moved. Besides, when the bolts pass through the enlarged part of the spokes, as shown, they hold the spokes from longitudinal displacement.

The wood center, bands, and bolts form a clamp, which fastens the spokes as in a vise,

not crushing or compressing them so as to loosen them in their mortises, as is often the case in the Sarven wheel, but clamping them firmly against the walls of the mortises so that they cannot be withdrawn till the bolts are loosened.

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

A carriage-wheel, combining a raised cen-

ter, dodged spokes, metal bands, and bolts or rivets that connect the metal bands and pass through or between the spokes and through the solid wood of the hub, substantially as herein described.

JOHN MCCREERY.

Witnesses:

N. K. ELLSWORTH,

E. A. ELLSWORTH.