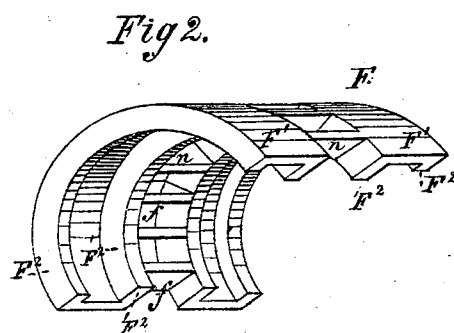
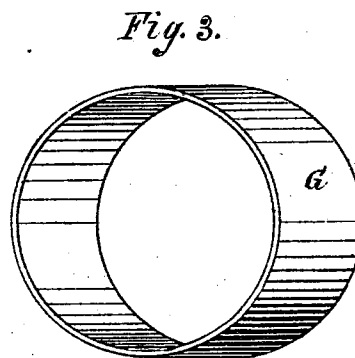
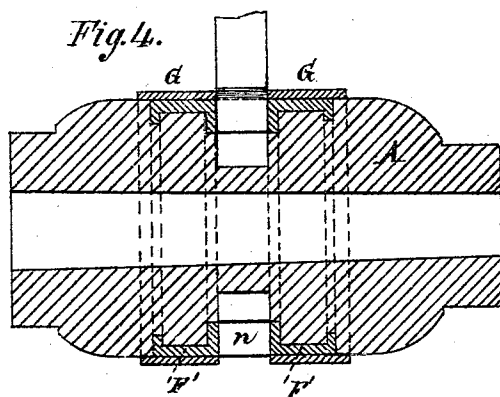
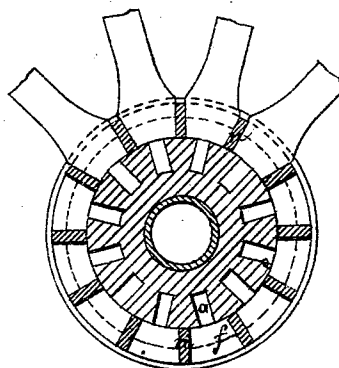
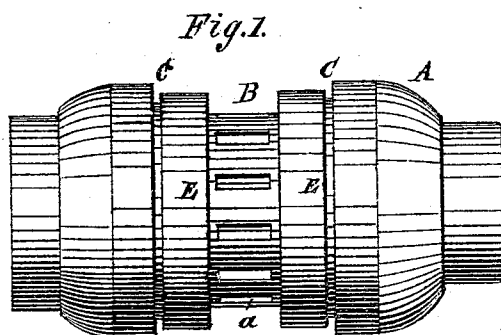


CHARLES W. FILLMORE.
 Improvement in Carriage Wheels.
 No. 123,468. Patented Feb. 6, 1872. *Fig. 5.*



Witnesses:
 G. Mather.
 John H. Simon

Inventor:
 Charles W. Fillmore
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 Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES W. FILLMORE, OF MARENGO, ILLINOIS.

IMPROVEMENT IN CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 123,468, dated February 6, 1872.

Specification describing a new and useful Improvement in the Construction of Carriage-Wheels, invented by CHARLES W. FILLMORE, of Marengo, in the county of McHenry and State of Illinois.

The invention will be first fully described and then clearly pointed out in the claims.

Figure 1 is a plan view of wooden hub. Fig. 2 is a perspective view of a clamp; Fig. 3, of a band that goes round the said clamp. Fig. 4 is a vertical longitudinal section of the hub with clamp and band applied. Fig. 5 is a cross-section, broken away to show how the parts come together.

A is a wooden hub, having middle recess B, recess C on each side, and mortises *a*. E E are annular projections on each side of recess B. F is a metal clamp, made preferably in two or more sections, with sides F¹ flanged downward at F², and constructed to fit upon the ring projections E E of hub. *f* are mortises formed by bars *n* between the side pieces F¹ F¹, which are placed at such intervals as to allow the entrance of a spoke between each two. G G are bands which pass over the section of clamp after they are applied to wheel, and are preferred by me, although other fastening devices may be employed with good effect.

The mode of application is as follows: The metallic clamp F is placed upon the wooden hub A so that the flanges F² F² shall rest, one in a recess, C, and the other upon the side of mortises *a*. The mortises *a* of the hub and those of the clamp register, and thus admit the

series of spokes. The effect of metallic flanges F² and bars *n* is to relieve the upper part of the hub from all strain. The bands G G are now shrunk, or forced on while cold, over the clamp F and on each side of the spokes.

Wheels are always liable to give way at the junction of spoke with wooden hub, because either the tenon is weakened by being made too small, or the hub by having the mortises too much enlarged. This is the difficulty which I have sought to overcome, and in which I believe myself to have practically succeeded.

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

1. The wooden hub A, recessed at B and combined with a clamp made in sections, substantially as and for the purpose set forth.

2. A clamp, F F¹ F² *n*, made in two or more sections, and applied as described.

3. The wooden hub, the band G, and the clamp F, combined, constructed, and applied as and for the purpose described.

4. The strengthening and supporting bars *n* passing between the spokes of the wheel below the surface of the wooden portion of the hub and united at their ends, on opposite sides of the spokes, to sectional bands, substantially as set forth.

CHARLES W. FILLMORE.

Witnesses:

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