

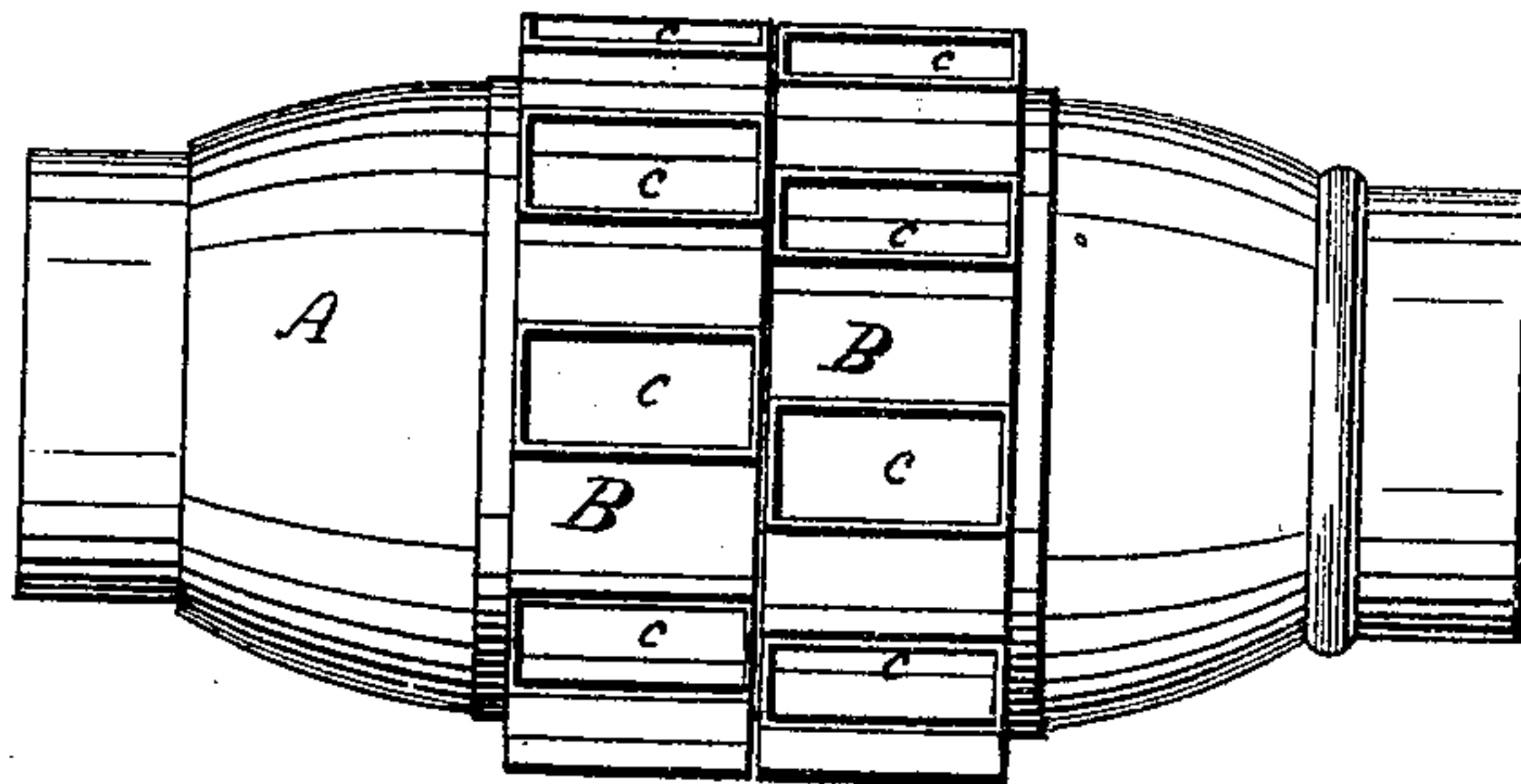
O. VANORMAN.

Improvement in Wheels for Vehicles.

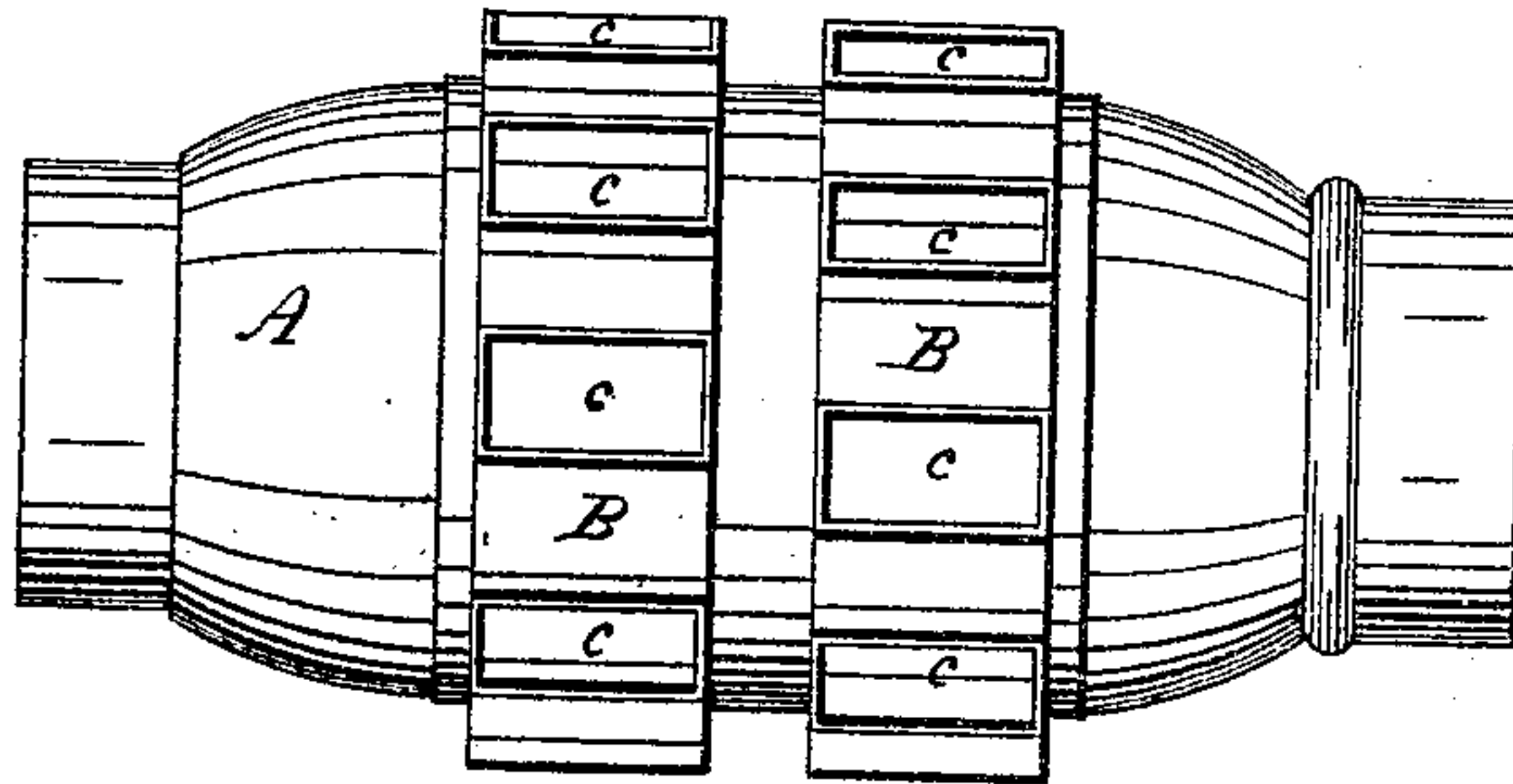
No. 130,394.

Patented Aug. 13, 1872.

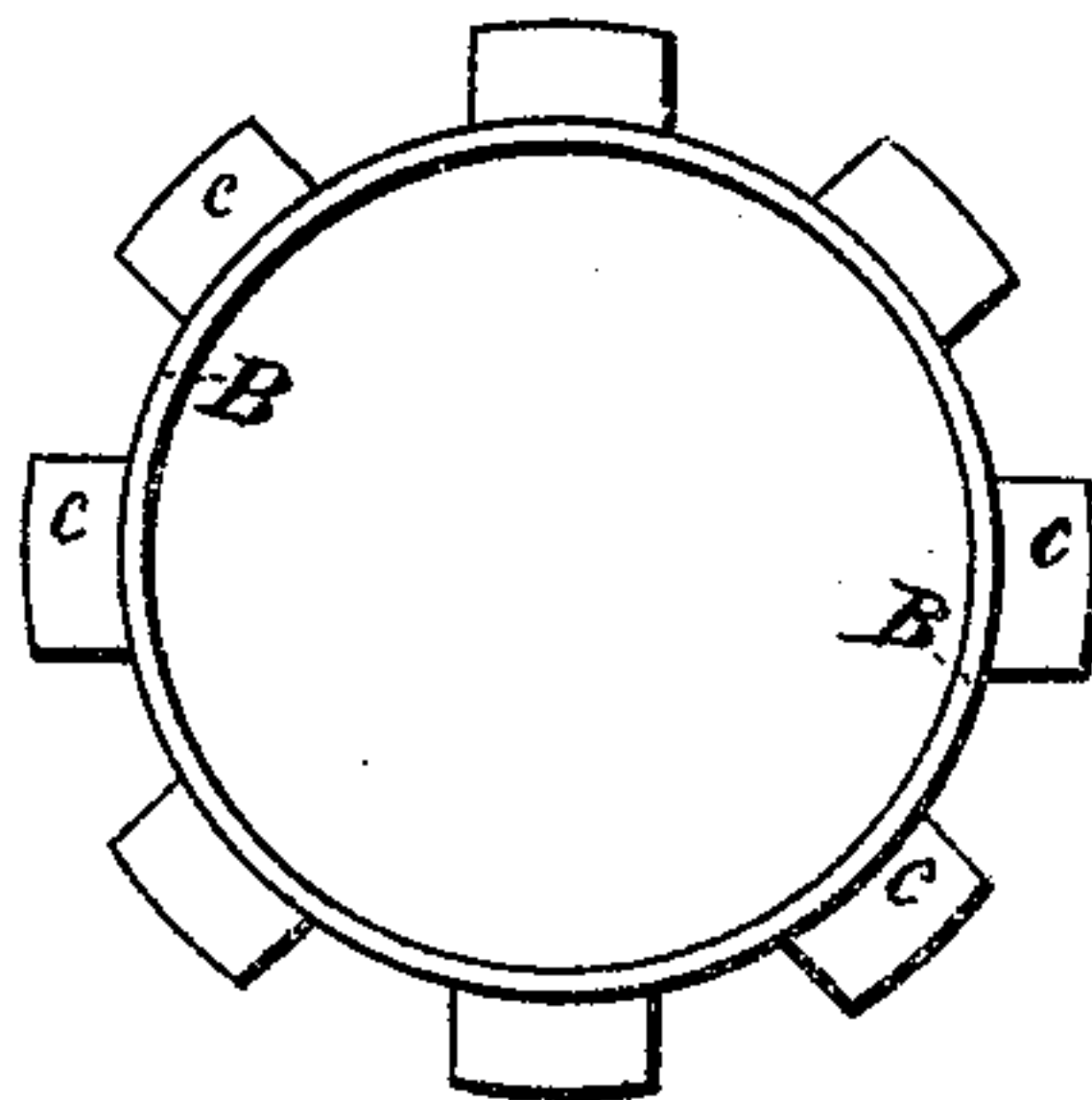
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



Witnesses:

*J. W. Bass*  
*J. M. Gill*

Inventor:

*Oliver Vanorman*

# UNITED STATES PATENT OFFICE.

OLIVER VANORMAN, OF FOND DU LAC, WISCONSIN, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHAUNCEY DAVIS, OF SAME PLACE.

## IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. 130,394, dated August 13, 1872.

### SPECIFICATION.

I, OLIVER VANORMAN, of the city and county of Fond du Lac and State of Wisconsin, have invented certain Improvements in Buggy-Hubs, of which the following is a specification:

#### *Nature and Object of the Invention.*

My invention relates to the combination of two entire or separate bands or rims of spoke-sockets, shrunk upon the hub in such a manner as to give the required dish in the wheel, and, at the same time, stand straight on the face of the wheel, thus doing away with the tremble of the wheel, so disagreeable to the operator. Said bands are each a separate and complete rim of spoke-sockets, and may be placed upon the hub close together; or, in very light wheels, should be from one-half to one inch apart, thus gaining the same strength in three-fourth spokes that there is in one-and-an-eighth-inch spokes; and, at the same time, it saves the hub, as, in the common wheel, the spoke mortises come in one row around the hub. They have to be very small, but in this, being one in front of the other, they can be made larger and not cut away the hub as much.

#### *Description of Accompanying Drawing.*

Figure 1 represents a hub with my improvement, the bands or spoke sockets being close together. Fig. 2 shows a hub with the bands set apart. Fig. 3 shows one of the bands, end view.

### *General Description.*

A is the hub; B B, the bands or spoke-socket rims; c, the sockets for the spokes.

In using these bands or sockets for heavy work they should be put on the hub close together, to avoid looking clumsy, but in light work, such as three-fourths ( $\frac{3}{4}$ ), seven-eighths ( $\frac{7}{8}$ ), or one (1) inch spokes the bands should be placed upon the hub from one-half ( $\frac{1}{2}$ ) to three-fourths ( $\frac{3}{4}$ ) inch apart. By this means it gives a chance to use larger tenons on the spokes and not cut away the hub as much as is done in the common hub with a much less tenon, for the reason that, with these bands or spoke-sockets, the spokes may be placed further apart, thus leaving the timber in the hub solid, whereas in the others the spokes are all in one row around the hub, and, consequently, have to be made much smaller than is necessary in this way.

### *Claim.*

I claim as my invention—

The bands B B, each band having sockets c, complete without interlocking, to admit of the adjustment of the spokes, said bands being shrunk upon the hub A, the parts being arranged substantially as and for the purpose specified.

OLIVER VANORMAN.

Witnesses:

J. W. BASS,  
J. M. GILLET.