T. T. LUCAS.

Hubs for Vehicle-Wheels.

No. 148,967. Patented March 24, 1874.

Fig. 1.

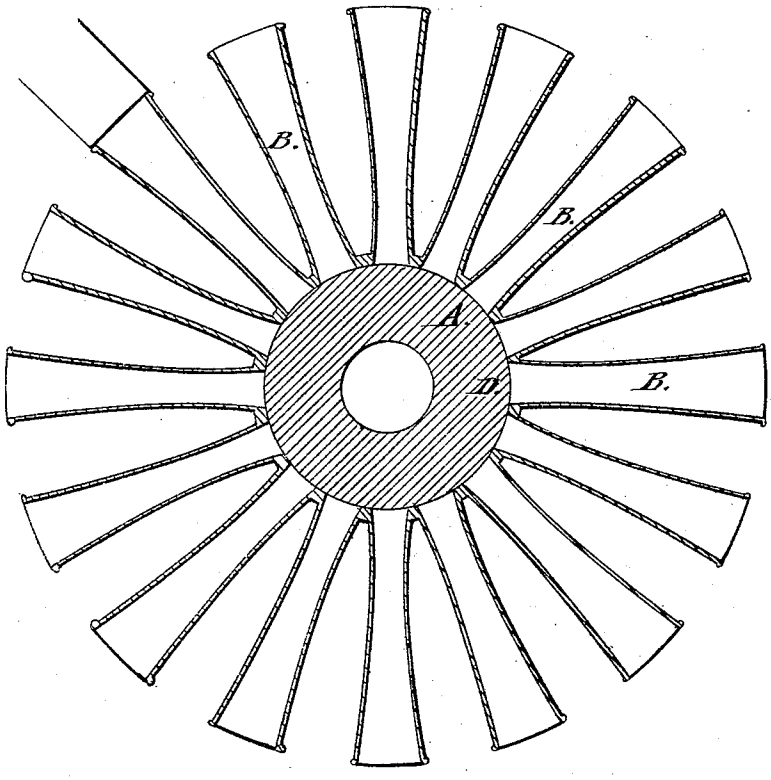
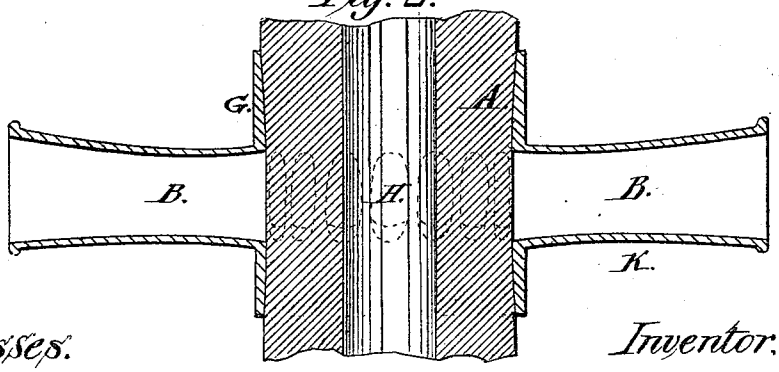


Fig. 2.



Witnesses.

Eugene Langenberg

Henry Orth.

Inventor.

Thomas T. Lucas

UNITED STATES PATENT OFFICE.

THOMAS T. LUCAS, OF BRIDGETON, ASSIGNOR OF ONE-HALF HIS RIGHT TO HENRY PILZ, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN HUBS FOR VEHICLE-WHEELS.

Specification forming part of Letters Patent No. **148,967**, dated March 24, 1874; application filed August 11, 1873.

To all whom it may concern:

Be it known that I, THOMAS T. LUCAS, of Bridgeton, county of St. Louis and State of Missouri, have invented a Wheel for Vehicles, of which the following is a specification:

This invention relates to vehicle-wheels, and especially to the hub-band, spoke-sockets on the band, hub-core, and the spokes; and it consists in improvements hereinafter set forth.

In the accompanying drawing, Figure 1 is a vertical transverse section, and Fig. 2 a vertical longitudinal section of the central portion of a vehicle-wheel embodying this invention.

A represents the hub-band; B, the spoke-sockets thereon; C, the outer ends of the spoke-sockets; D, the inner portions of the spoke-sockets; E, the hub-core, and F the spokes. The interior of the hub-band is made full in the middle, as at G, and thus the opening for the hub-core is contracted, so that when the hub-core is driven into the band it will be tightly compressed around the middle portion and securely held in the band, while the enlarged openings toward the ends of the band permit the core to be readily driven. The band may be otherwise tapered, so as to have the inner end of the hub larger than the outer end. The band has mortises H for the spoke-tenons, and radially-projecting sockets elongated to receive and support the spokes. The sockets are contracted about the middle, as at K, and enlarged or flaring from the contracted portion toward the outer ends, and also toward the inner ends, so that when the spokes are driven into the sockets the tenons will be compressed in passing the contracted portions, and their inner ends permitted to expand to fill the inner enlarged portions of the sockets. The outer enlarged portions of the sockets will be strained and firmly filled by the spokes. The sockets, mortises, and tenons may be made oval or otherwise. The spokes may have tapering tenons and shoulders to cover the outer ends of the sockets. The hub-band and sockets may be made of malleable metal, so that not only may the wood, on being forced in, adapt itself to the form of the metal, but also the metal yield to the wood. A portion or all of the spokes may pass into mortises in the hub-core, or they may all rest upon its surface. The sockets on the band may be so projected as to form a slight "dish," or set straight in a double row. The band may partly cover the hub-core, or extend to the ends thereof.

What I claim is—

1. A hub-band having the interior of the band made full or contracted about the middle, substantially as and for the purpose set forth.

2. A metallic hub-band having the interior of the band made full or contracted about the middle, and having projecting elongated spoke-sockets, with the interior of the sockets made full or contracted about the middle, substantially as and for the purpose set forth.

3. A combined hub-band and spoke-sockets, the interior of the band and the interior of the spoke-sockets being made full or contracted about the middle and flaring toward the ends, substantially as and for the purpose set forth.

4. The combination of the contracted band A, having contracted sockets B, the wooden hub-core C, and the spokes F, all constructed substantially as and for the purpose set forth.

THOMAS T. LUCAS.

Witnesses:

EUGENE SPANGENBERG,

HENRY PILZ.