

W. M. HOFFMAN.
Wheels for Vehicles.

No. 157,825.

Patented Dec. 15, 1874.

fig. 1

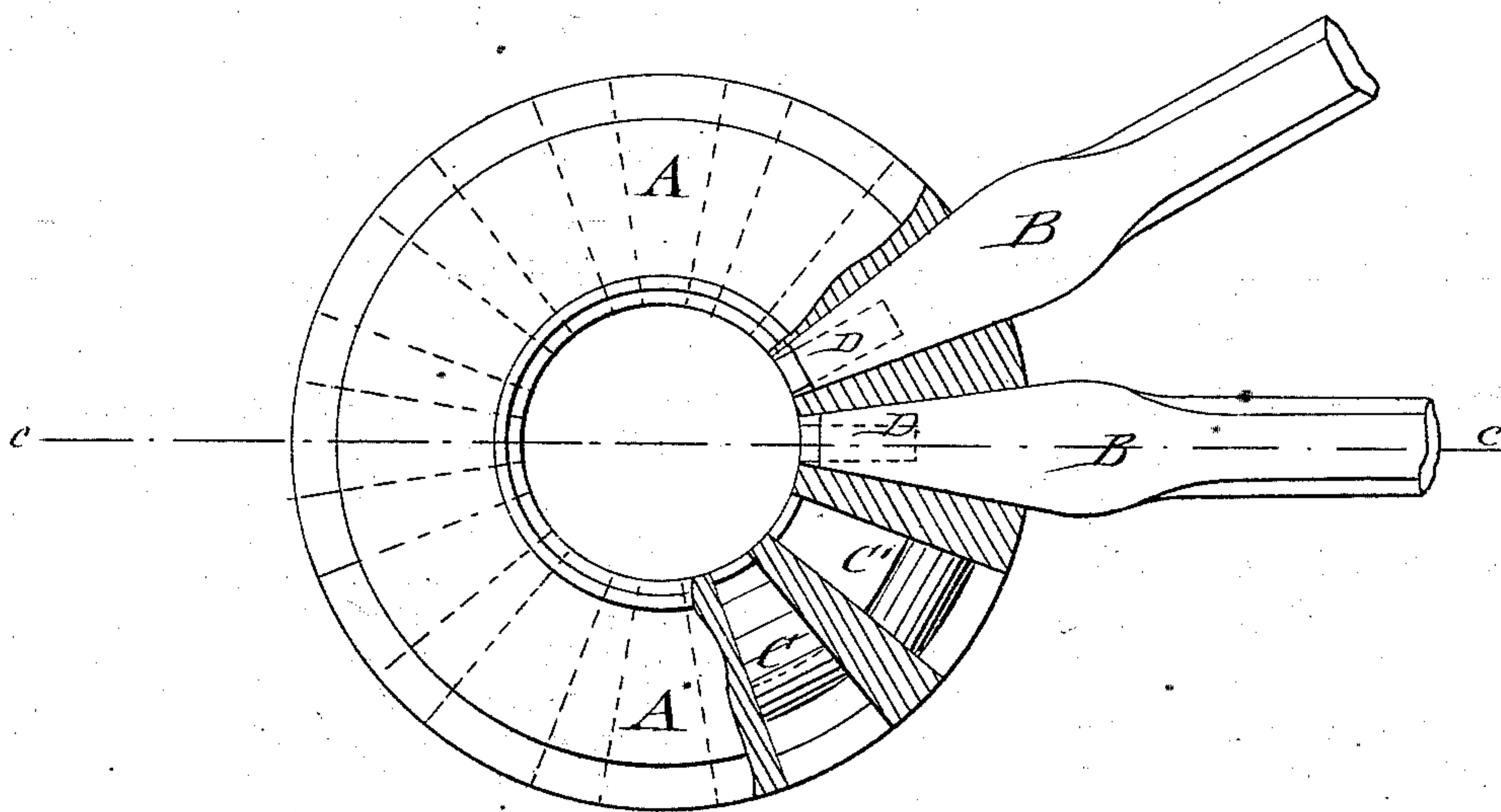
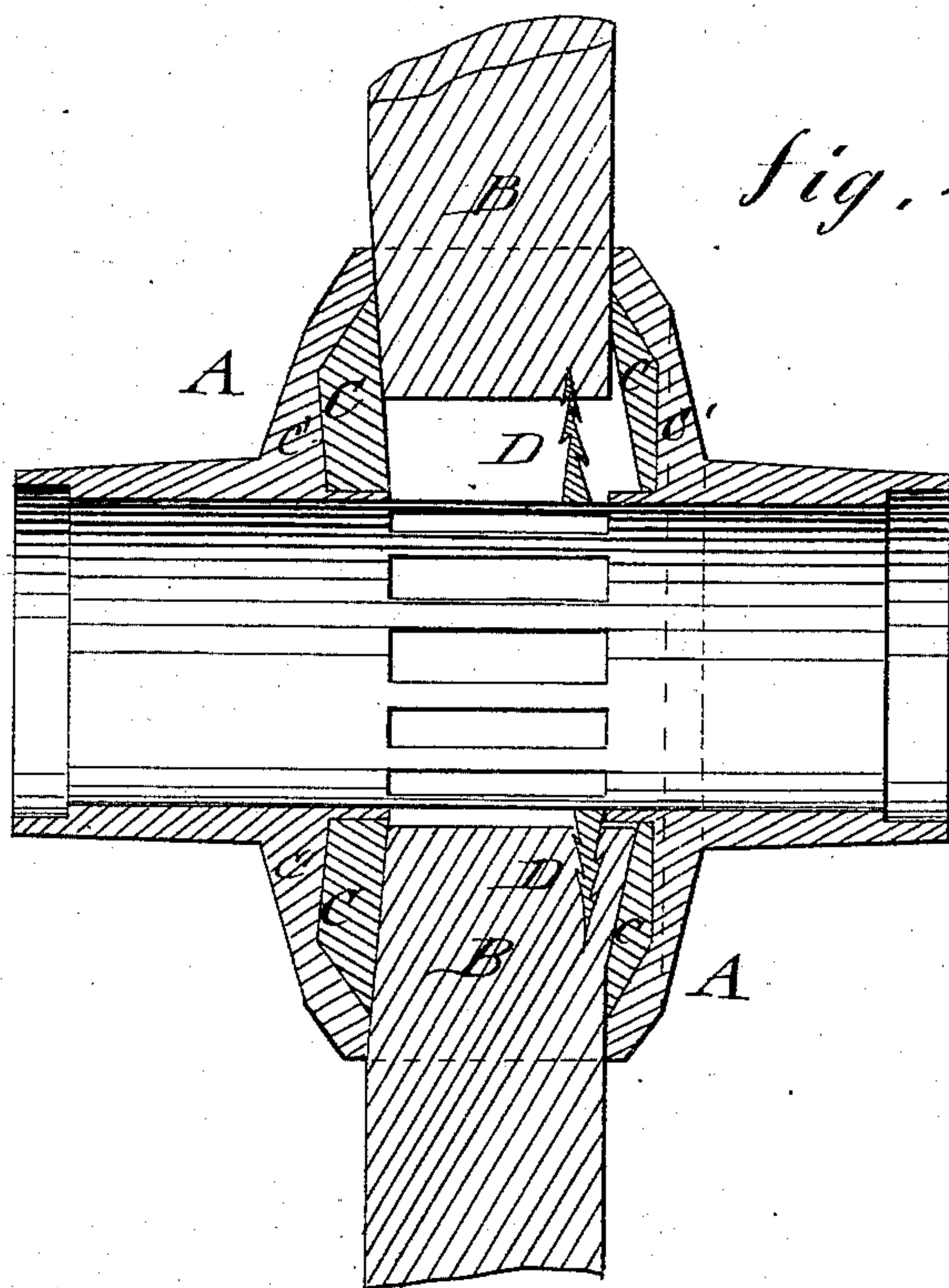


fig. 2



WITNESSES:

C. Neveux
A. J. Terry

INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM M. HOFFMAN, OF TOPTON, PENNSYLVANIA.

IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. **157,825**, dated December 15, 1874; application filed October 10, 1874.

To all whom it may concern:

Be it known that I, WILLIAM M. HOFFMAN, of Tipton, in the county of Berks and State of Pennsylvania, have invented a new and Improved Hub, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a sectional front view of my improved hub; and Fig. 2, a vertical central section of the same on line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention consists in means whereby all play of the spoke, vertically or laterally, is effectually prevented, and the durability of the wheel thereby increased.

In the drawing, A represents the hub, which is made of iron, with bands and rings complete in one piece for larger or smaller wheels. The spokes B are set with their slightly-tapering ends into the corresponding radial mortises of the hub, and cushioned sidewise by wooden blocks C, which are set into side mortises, C', of the hub. The blocks C are shown in section in Fig. 2, having a square base and tapering head, so that they may be readily inserted into the mortises and retained in their position, resting on the inner flanged parts of the hub during the introduction of the spokes. The blocks C at one side of the hub are equal in size to the mortises C', and form one plane with the circumferential outer or head part of the hub. The blocks C of the opposite mortises, however, are made with a bevel by cutting the sides facing the spokes under suitable inclination from the upper part toward the base, so as to

produce a space or recess in the mortise in front of the block, for the purpose of taking up a wedge-shaped part of the tapering spoke end, which is spread sidewise by the action of a wedge-shaped and notched metallic key, D, on driving in the spoke. The key D is applied to the end of the spoke at a point near that side facing the beveled cushioning-block, and is forced into the spoke end on the driving in the spoke by resting on the iron axle-box. When the spoke is set completely in the hub-mortise a sufficient portion of the spoke end is carried sidewise to lock or bind with the beveled block, as shown in Fig. 2, so that a perfectly secure fastening of the spokes is produced, while at the same time, by the wooden cushioning side blocks, a certain degree of elasticity is imparted to the spokes. The spokes are not weakened by recesses, being strongest at the point of greatest strain, where they leave the hub, so that as they are not liable to break or get loose from the hub they are more durable, and produce a superior wheel with the firmly-binding and cushioning hub parts.

I am aware that wooden wedges and side cavities to receive the expressed fiber of spoke end is old; but

What I claim is—

In a wheel-hub, the barbed wedge D, combined with a wooden spoke, as and for the purpose described.

WILLIAM M. HOFFMAN.

Witnesses:

J. P. F. BRUNNER, M. D.,
J. F. SHAVER.