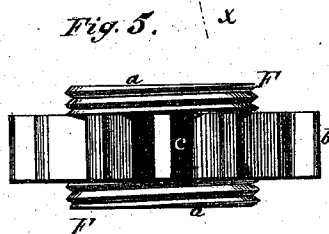
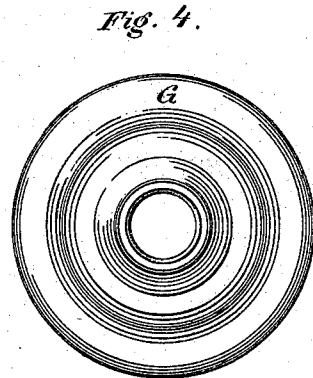
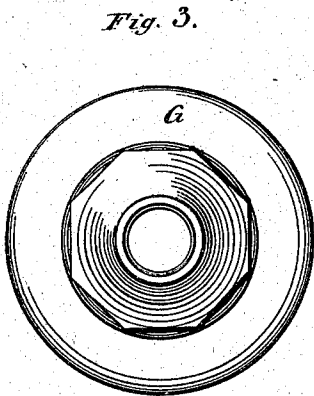
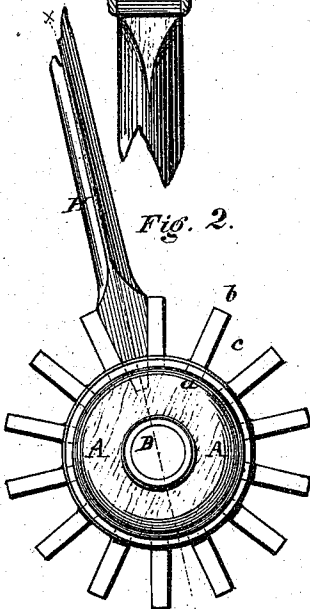
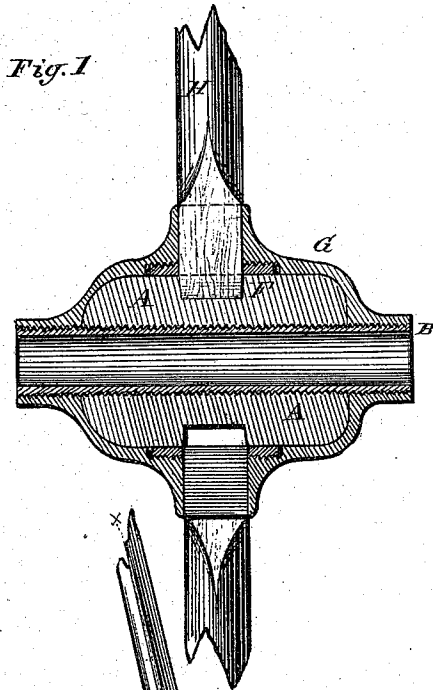


C. P. WHITMAN.
 Wheel Hub.

No. 102,998.

Patented May 10, 1870.



Witnesses:
L. Hailer
Phil. T. Dodge

Inventor
C. P. Whitman
 by *Dodge & Munn*
 his atty.

United States Patent Office.

CHARLES P. WHITMAN, OF CHARLEMONT, MASSACHUSETTS.

Letters Patent No. 102,998, dated May 10, 1870.

IMPROVEMENT IN WHEEL-HUBS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, CHARLES P. WHITMAN, of Charlemont, in the county of Franklin and State of Massachusetts, have invented certain Improvements in Wheel-Hubs, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to hubs for spoke-wheels, and consists in a novel construction, arrangement, and combination of wood hub, metallic axle-box, metallic spoke-receiver, and metallic caps, so as to form a complete hub, as hereinafter described.

In the drawings—

Figure 1 is a longitudinal cross-section on the line $x x$ of fig. 2;

Figure 2 is an end view with cap removed;

Figures 3 and 4 are end views of the caps; and

Figure 5 is an edge or side view of the spoke-receiver

In constructing my hub I make a wooden hub, A, of any suitable size and form, but preferably of the shape shown in fig. 1, and screw it upon an axle-box, B, provided on its exterior with a thread for that purpose.

The relative length of the wood hub and the axle-box is such as to allow the ends of the box to project a short distance beyond the ends of the hub, as shown in the same figure.

Upon this wood hub A I shrink a cast metallic spoke-receiver, F, consisting of a ring, a , with a series of radial projections b arranged so as to be equidistant from each other, and form socket c for spokes H, and also with openings at the bottom of the sockets, to allow the tenons of the spokes to enter a mortise in the wood hub, as shown in figs. 1, 2, and 3.

The ring a of the spoke-receiver is made so as to extend a short distance on each side of the radial projections b , and is provided on its outer surface with a screw-thread, as shown in the same figure.

On each end of the axle-box I screw a cap, G, provided on the inner surface of its outer end with a screw-thread corresponding with that on the axle-box

B; and on the inner surface of its inner end with a thread corresponding with that on the ring a of the spoke-receiver, as clearly shown in fig. 1, the caps being so constructed that, when in position, their inner face will bear against the projections b and completely hide them, and their outer ends be flush with the ends of the axle-box or not, as desired.

The form, outwardly, of the caps may be shaped to suit the fancy, the one on the outer end of the hub being shaped as shown in fig. 3, and one on the inner end as shown in fig. 4.

The spokes H are then driven into the sockets c , their ends being suitably shaped for that purpose, and provided with a tenon to enter a mortise in the wood hub, as shown in figs. 1 and 2, and to shoulder upon it.

In a hub constructed in this way it will be seen that the parts of which it is composed fit compactly together, and should any of these parts become injured or broken, it can be replaced by another, and the whole be as strong as it was in the first instance.

It is obvious that my spoke-receiver may be used on wooden hubs without the caps, if desired, and that by means of it a strong and durable connection between the hubs and spokes can be made.

When the caps are on it will be seen that their inner faces form flanges that bear against the sides of the spokes, and aid materially in holding them securely in position.

Having thus described my invention,

What I claim is—

1. A hub for carriages or wagons, consisting of the wooden body A, having the box or tube B inserted therein, and protruding at each end, with the caps G screwed thereon, substantially as described.

2. The combination of the body A, box B, spoke-receiver F, and caps G, when constructed and arranged substantially as herein described.

CHARLES P. WHITMAN.

Witnesses :

J. R. RANKIN,
HENRY M. PUFFER.