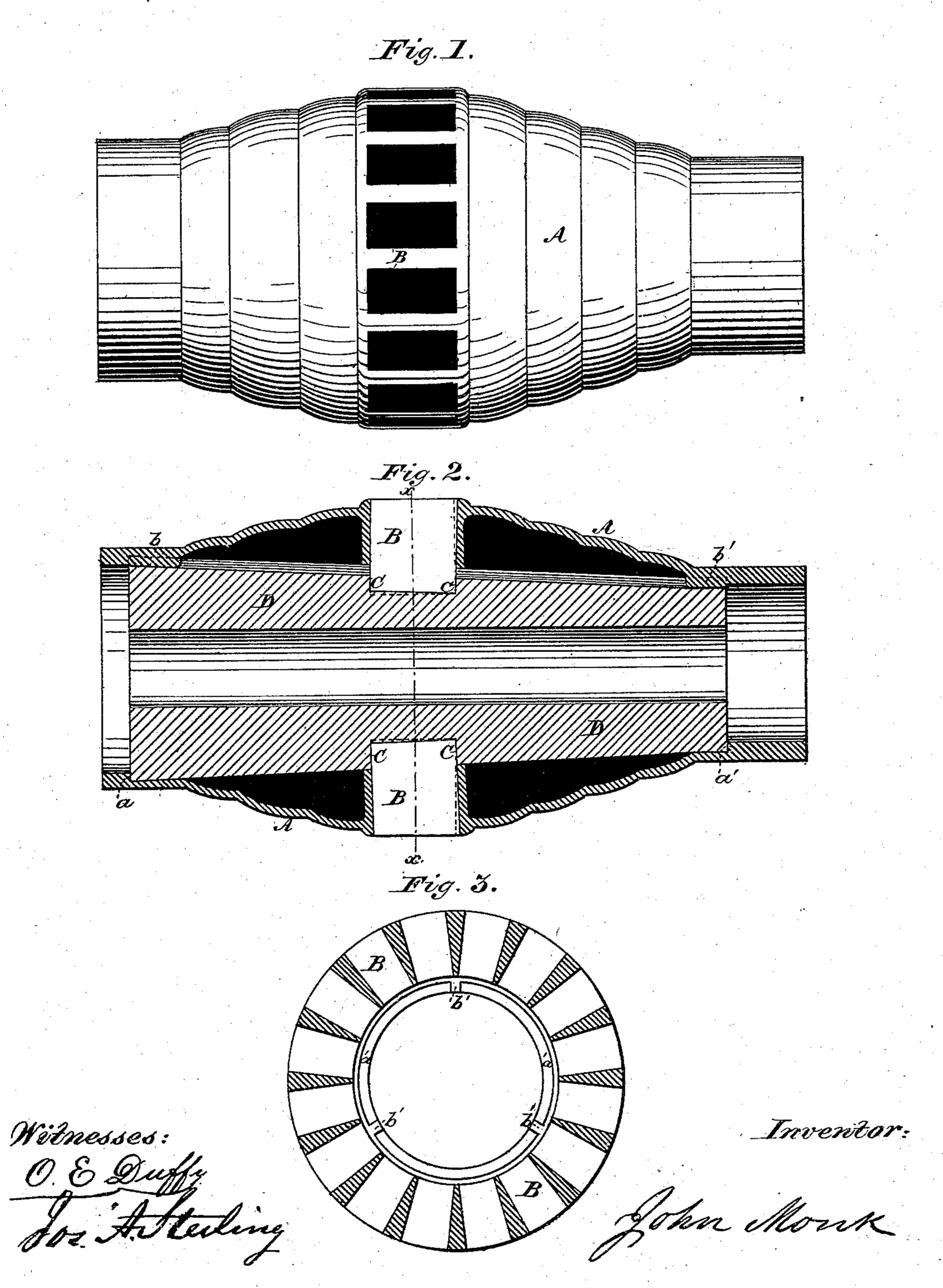
## J. MONK.

## Hubs for Wheels of Vehicles.

No. 137,314.

Patented April 1, 1873.



## UNITED STATES PATENT OFFICE.

JOHN MONK, OF NORWICH, CONNECTICUT.

## IMPROVEMENT IN HUBS FOR WHEELS OF VEHICLES.

Specification forming part of Letters Patent No. 137,314, dated April 1, 1873; application filed November 14, 1872.

To all whom it may concern:

Be it known that I, John Monk, of the city of Norwich, in the county of New London and State of Connecticut, have invented certain Improvements in Metallic Hubs for the Wheels of Vehicles, of which the following is a specification:

This invention relates to the construction of hubs for the wheels of vehicles. The hubshells are made in a single piece, having on their inner surfaces three (more or less) flanges or ribs near their outer and inner ends, by which the wooden center is prevented from turning circumferentially. The sides of the mortises for the spokes are beveled, and the wooden core is turned down in the middle for the spokes to fit into, by which said core is held laterally, all of which will be more fully described in the following specification.

In the drawing, Figure 1 is a side view of my hub. Fig. 2 is a longitudinal section of the same. Fig. 3 is a cross-section on line X

X with the wooden core removed.

In the drawing, A represents a metallic shell extending the entire length of the hub, having the mortises B cast in near its middle. The inner and outer ends of the shell A have a shoulder, a a', and three (more or less) ribs or flanges, b b', cast thereon. The sides of the mortises toward the outer end of the hub are beveled, as shown in Fig. 2, from the bottom or base of the same upward and outward to the top of the mortises, by which bevel the spokes are inclined outward to the extent required, and the lower ends of the tenons of said spokes bear against a groove, C, turned into the wooden core D, having a bearing at right angles to the bevel sides of the mortises

B, as also seen in Fig. 2. The wooden core D is firmly held in place by the shoulders a a' and the tenons of the spokes, which form a solid base when driven in place and glued together. The flanges bb', of a V or other shape, prevent the wooden center D from turning when driven into the sleeve. The flanges  $b \ b'$ penetrate the surface of said center D, thus securing it firmly in place. The mortises B are inclined toward each other transversely, as shown in Fig. 3, so that the tenons of the spokes touch each other, and thus make a solid circumferential bearing, which fills up the groove C in the wooden core D. The cast-iron axle-box is driven into the wooden core in the usual way, and held in position by the nut on the outer end of the axle.

The great advantages of my improved hub are that it is very simple, economical, and

strong.

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

1. The combination of a metallic hub-shell, A, with shoulders a a', flanges b b', and mortises B with a wooden center, D, substantially as shown and described, and for the purpose

herein set forth.

2. The combination of a hub-shell, A, having flanges b b', shoulders a a', and beveled mortises B with a wooden center, D, having a groove, C, substantially as described, and for the purpose set forth.

JOHN MONK.

Witnesses:

Jos. A. Sterling, Edwd. McB. Timoney.