(No Model.)

W. H. ALLEN.

METALLIC HUB FOR VEHICLES.

No. 458,992. Patented Sept. 8, 1891.

FIG. 1.

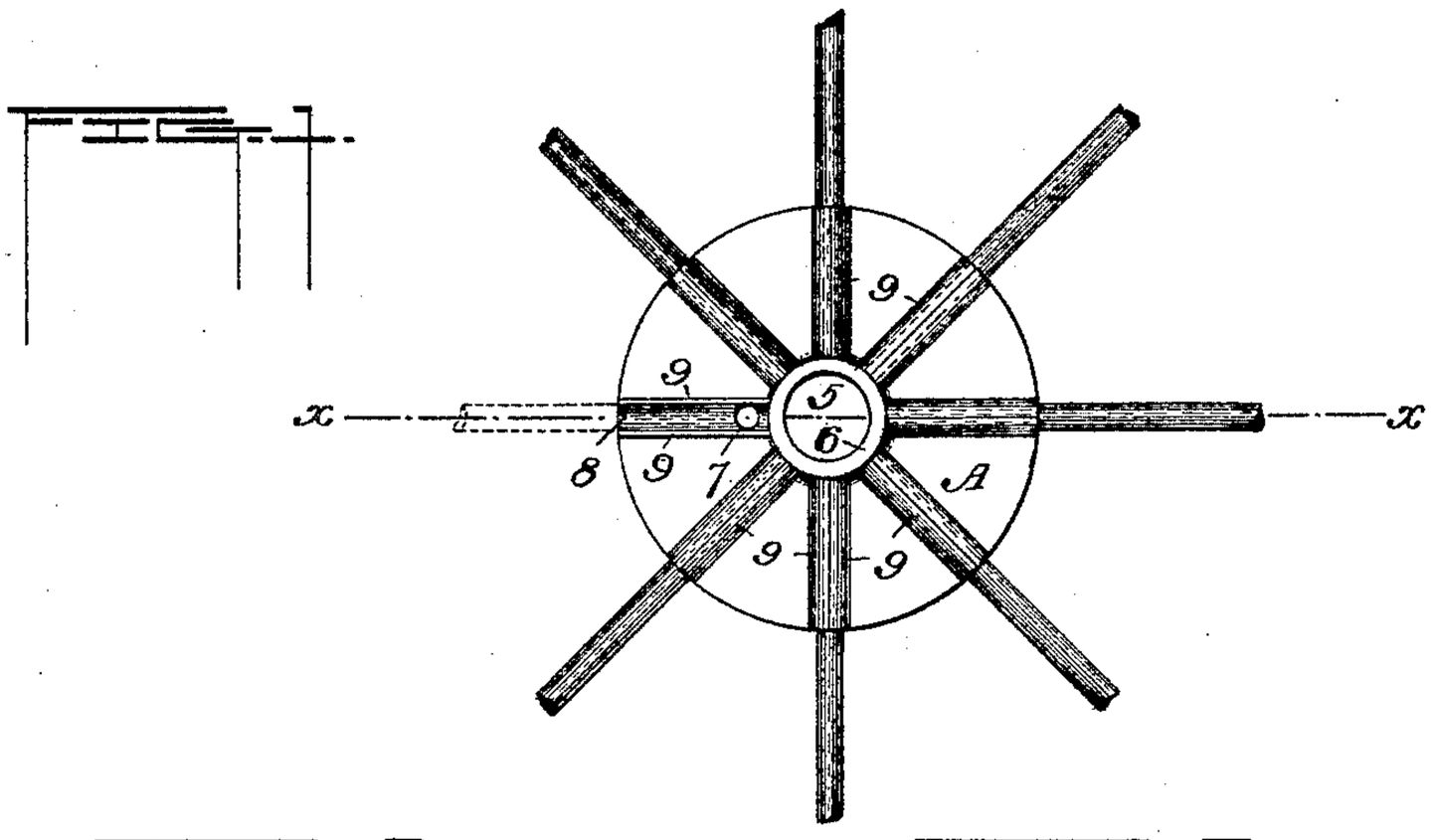
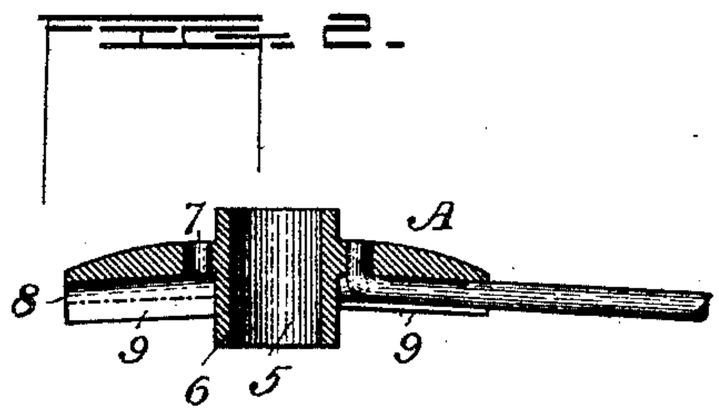


FIG. 2.



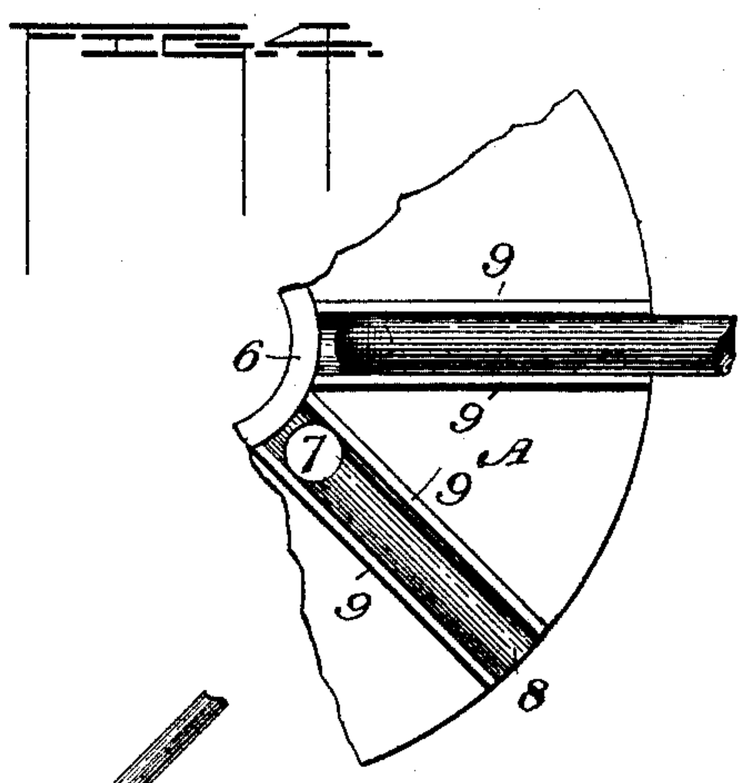
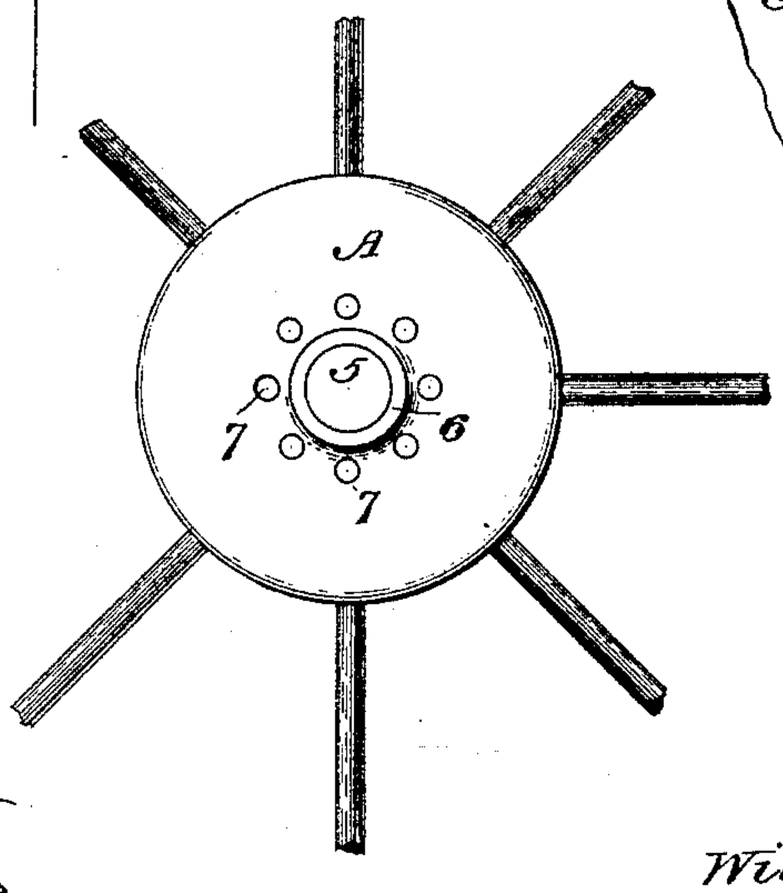


FIG. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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METALLIC HUB FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 458,992, dated September 8, 1891.

Application filed February 6, 1891. Serial No. 380,404. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ALLEN, a citizen of the United States of America, residing at Zanesville, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Metallic Hubs for Vehicles, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to provide an inexpensive metallic hub with metallic spokes attached thereto for vehicles which will be simple in construction, strong, and durable.

In the drawings, Figure 1 is a plan view of the inner side of my hub, one spoke unattached. Fig. 2 is a section view of the same through the line *x x* of Fig. 1. Fig. 3 is a plan view of the outer side of the hub. Fig. 4 is a plan view of the hub and spoke in place ready for swaging.

Like letters and figures refer to the same parts throughout the several views.

The hub consists of a single metallic piece A, the axle-box 5, flange 6, and ribs 9 9 being cast integral. Abutting the axle-box there are as many perforations 7 in the flange as there are spokes. A channel 8, sunk below the surface of the inner side of the flange, adapted to receive half the circumference of the spoke, extends from each perforation to the outer edge of the flange; but this channel is not essential to the construction. On either side of the perforations 7, and extending radially from the axle-box to the edge of the flange, are the parallel ribs 9 9 in pairs to snugly admit a spoke between each pair. The heads of the spokes are bent preferably at right angles to enter perforations 7 and pass through the flange, the bent end appearing flush with the outer side thereof. The spokes being in place, as shown in the drawings, Fig. 4, between the ribs 9 9, the edges of the ribs are swaged over the spokes by means of pressure applied to the ribs, and the spokes are thus rigidly held in place.

The swaging may be accomplished in any of the well-known methods; but it is more rapidly performed by a special tool designed for the purpose.

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

1. In a vehicle-hub, the integral axle-box and flange with radial parallel ribs in pairs, in combination with the herein-described spokes having the bent ends thereof inserted in perforations in the flange, the ribs being swaged over the spokes to hold the spokes in place, as and for the purposes specified.

2. In a vehicle-hub, an axle-box and flange integral with radial ribs in pairs to hold the spokes by swaging, in combination with the herein-described metallic spokes having bent heads and hooked in perforations in the flange, as and for the purposes specified.

3. The herein-described method of attaching metallic spokes to the metallic hubs of vehicles by inserting the bent end of the spoke in a perforation in the flange and then fastening the spoke between two parallel ribs integral with the flange and axle-box of the hub by swaging, as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. ALLEN.

Witnesses:
HOMER WHITE,
H. F. ACHAUER.