

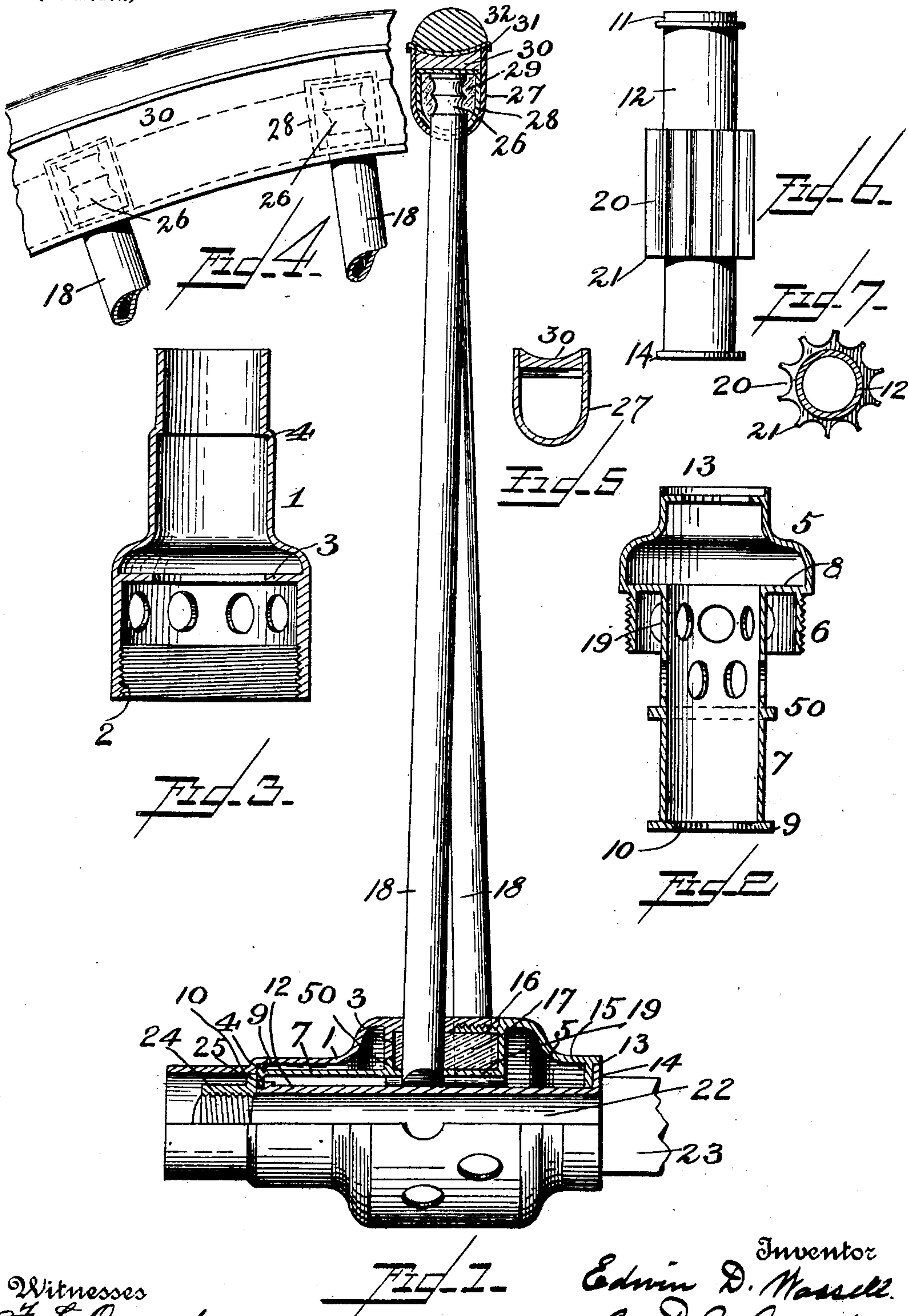
No. 679,522.

Patented July 30, 1901.

E. D. WASSELL.
METALLIC VEHICLE WHEEL.

(Application filed May 17, 1900. Renewed Dec. 27, 1900.)

(No Model.)



Witnesses
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METALLIC VEHICLE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 679,522, dated July 30, 1901.

Application filed May 17, 1900. Renewed December 27, 1900. Serial No. 41,213. (No model.)

To all whom it may concern:

Be it known that I, EDWIN D. WASSELL, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Vehicle-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to vehicle-wheels, has especial reference to metallic wheels, and has for its object certain improvements in construction which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a vertical longitudinal section of my improved wheel, the spokes and the lower half of the hub being shown in side elevation; Fig. 2, a longitudinal section of one section of the hub; Fig. 3, a like view of the opposite section of the hub; Fig. 4, an enlarged side elevation of a section of the felly and tire; Fig. 5, a vertical section of the felly; Fig. 6, a side elevation of the axle-box, and Fig. 7 an end or plan view thereof.

Reference being had to the drawings and the numerals thereon, 1 indicates the outer section of the hub, which is provided with an internally-screw-threaded extension 2, a concentric flange 3, which forms one end or wall of the spoke-chamber, and with an annular seat 4.

5 is the inner section of the hub, having an externally-screw-threaded extension 6, a tubular sleeve 7, integral therewith, joined to the concentric flange 8, which forms the opposite end or wall of the spoke-chamber, and with oppositely-extending concentric projections 9 10, the former engaging the seat 4 in section 1 and the latter engaging an annular seat 11 in the axle-box 12 and by which the outer end of the axle-box is supported concentrically in the hub, and a collar 50, which engages the flanges or end 3 of the spoke-chamber 16, and on the extreme inner end of the section 5 is an annular seat 13 to receive the collar 14 on the inner end of the axle-box,

and adjacent thereto is a concentric collar 15, against which the collar 14 rests, as shown in Fig. 1.

The spoke-chamber 16 is filled with wood, vulcanized rubber, or other suitable material 17, which engages the inner ends of the spokes 18 within the spoke-chamber, and the spokes extend through the inner concentric wall 19 of the spoke-chamber and engage grooves 20 in the axle-box, thus securing the spokes in the hub and preventing the axle-box turning in the hub.

The axle-box 12 is thickened or reinforced at 21, so that its periphery engages the inside of the wall 19 of the spoke-chamber and makes a rigid hub, the end thrust of the spokes being sustained by the spindle 22 of the axle 23.

The spindle 22 is provided with a nut 24, having a flange 25, which engages the outer end of the axle-box and the projection 10 on the sleeve 7 and secures the wheel on the axle.

The outer end of the spokes 18 is corrugated at 26 and is secured in the felly 27 by means of a felly spoke-box 28, in which the spoke is embedded in rubber or soft metal 29, preference being given to the former, and to brace the felly spoke-boxes and impart rigidity to the felly a capping 30, of wood, is interposed between the felly spoke-boxes with their ends abutting in the center of the boxes, as shown in Fig. 4, or the capping may be made in one piece to extend around the felly.

The capping 30 is within the felly and is provided with a concave outer surface to receive a steel tire 31, concavo-convex in transverse section, which in turn is surrounded by a rubber tire 32, seated and secured in the metal tire 31, as shown in Fig. 1.

Having thus fully described my invention, what I claim is—

1. A vehicle-wheel having a hub made in two sections connected by inwardly-extending screw-threaded members, and having a spoke-chamber formed within said members at the adjacent ends of said sections; in combination with spokes extending into said chambers.

2. A vehicle-wheel having a hub made in two sections connected by inwardly-extended

and overlapping screw-threaded members, and having a spoke-chamber formed within said members at the adjacent ends of said sections; in combination with spokes extending into said chambers.

3. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions, and having an annular spoke-chamber formed by the walls of said section, and a sleeve; in combination with spokes extending through said chamber into said sleeve.

4. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions, and having a spoke-chamber formed in the adjacent end of said sections; in combination with spokes extending into said chamber, and an axle-box having longitudinal grooves with which said spokes engage.

5. A vehicle-wheel having a hub made in two sections connected by inwardly-extended screw-threaded members and having a spoke-chamber formed within said members at the adjacent ends of said sections; in combination with spokes extending into said chamber, and a suitable filling in the chamber surrounding the inner ends of the spokes.

6. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions and having a spoke-chamber formed in the adjacent ends of said sections; in combination with spokes extending into said chamber, a suitable filling in the chamber surrounding the inner ends of the spokes, and an axle-box having longitudinal grooves with which the spokes engage.

7. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions and having an annular spoke-chamber formed by the walls of said sections and a sleeve on one section extending into the opposite section; in combination with spokes extending into said chamber and an axle-box whose ends are engaged by one of the hub-sections.

8. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions and one of the sections provided with

means for supporting an axle-box; in combination with an axle-box.

9. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions, one of the sections having a sleeve thereon and extending into the opposite section, and the latter section having a seat for the end of said sleeve; in combination with an axle-box.

10. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions, one of the sections having a sleeve thereon provided with a concentric bearing at its free end and an annular bearing at the opposite end of the section, and the opposite section having a seat for the end of said sleeve; in combination with an axle-box engaging both ends of one of said hub-sections.

11. A vehicle-wheel having a hub made in two sections connected by screw-threaded extensions, one of said extensions having a bearing at each end to receive an axle-box; in combination with an axle-box having bearings at each end engaging the bearings on the aforesaid section.

12. A vehicle-wheel having a hub made in two sections, one of which is provided with a sleeve extending into the opposite section and supports an axle-box; in combination with an axle-box, and a spindle having a nut engaging the end of said sleeve and the inner end of the axle-box.

13. A vehicle-wheel having a felly and felly spoke-boxes, and braces between said boxes; in combination with a tire surrounding said felly, and felly spoke-boxes and braces.

14. A vehicle-wheel having a felly and felly spoke-boxes, and braces between and over the outer ends of said boxes; in combination with a tire surrounding said felly, felly spoke-boxes and braces.

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

EDWIN D. WASSELL.

Witnesses:

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