

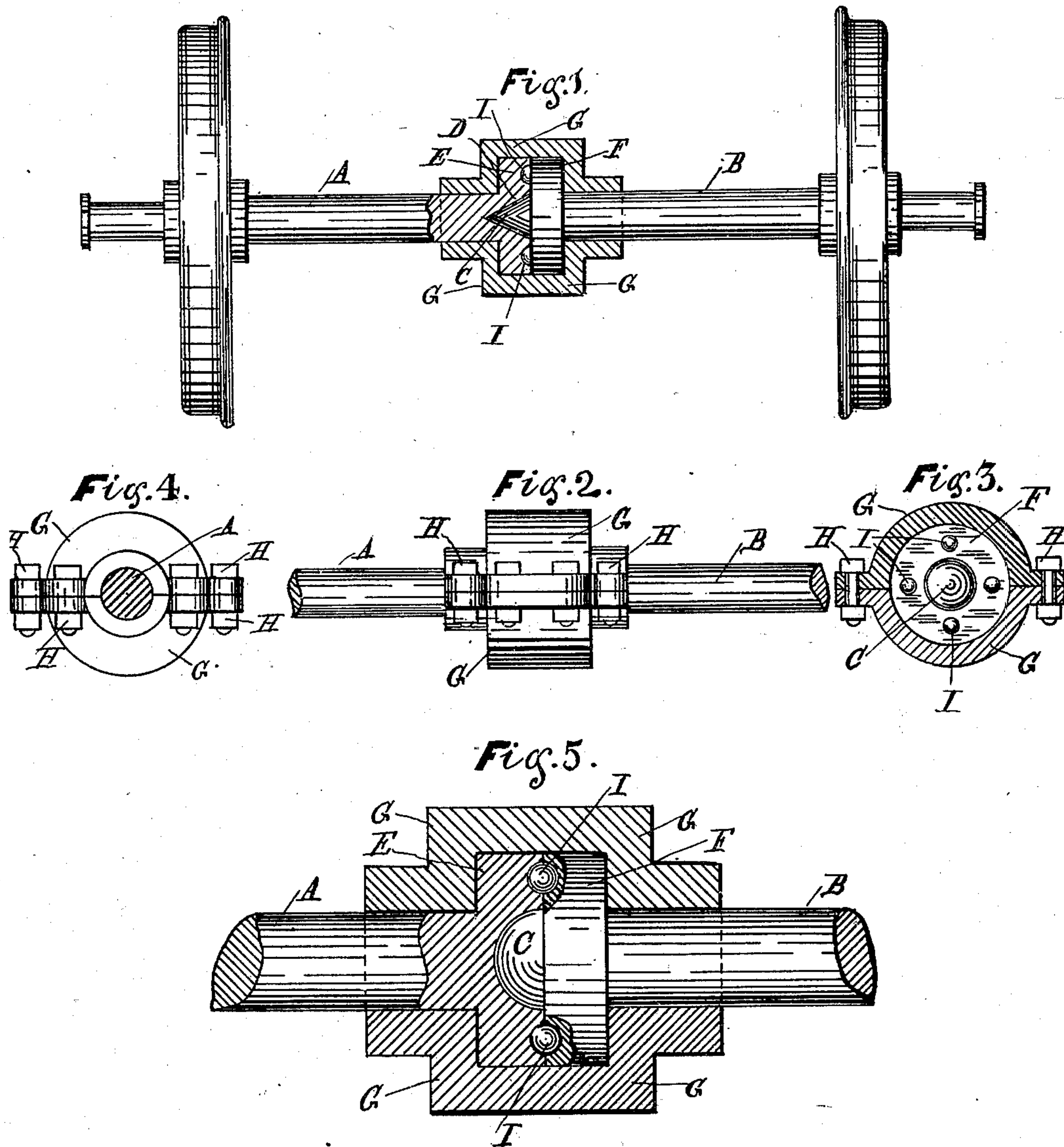
No. 662,540.

Patented Nov. 27, 1900.

A. C. MASSEY.
AXLE FOR RAILWAY OR ROAD VEHICLES.

(Application filed May 29, 1899.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

AUGUSTUS C. MASSEY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO MALCOLM McDONALD, OF SAME PLACE.

AXLE FOR RAILWAY OR ROAD VEHICLES.

SPECIFICATION forming part of Letters Patent No. 662,540, dated November 27, 1900.

Application filed May 29, 1899. Serial No. 718,788. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS CASNER MASSEY, of Los Angeles city, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Axles for Railway and Road Vehicles, of which the following is a full, clear, and exact description or specification, reference being had to the annexed drawings and to the letters marked thereon.

My invention has for its object to enable the wheels of vehicles used on railways and other roadways to be rolled upon a curved track without straining the axles torsionally; and it consists in constructing the axles on which the wheels are carried in two portions, on each of which one of the wheels of each pair of wheels is carried and keyed, so as to rotate with that portion of the axle. The portions of the axles where they meet at the center of length of each are formed with a nose and recess, the nose being on one half of the axle and the recess in the other half of the axle, the dimensions of the nose and recess, respectively, being such that they fit accurately into and upon each other. The parts of the axles adjacent to the nose and recess are formed with a deep flange, having antifriction-rollers between the flanges, and the several parts are held in such operative connection by means of a box or yoke which incloses them.

On the annexed drawings, Figure 1 is an elevation, partly in section, of an axle constructed in accordance with my present improvements and showing a railway-vehicle wheel mounted near the outer end of each half of the axle. Fig. 2 is an elevation of the central part of such axle, showing the box or yoke which incloses the nose, recess, and flanges, respectively. Fig. 3 is an end elevation of that half of the axle on which the nose is formed, also showing the flange and the box or yoke inclosing the same in section. Fig. 4 is an end elevation of the box or yoke, showing the axle in section. Fig. 5 is an enlarged view showing my improvements in section.

In the drawings one half of the axle is marked A and the other half B. On that half of the axle marked B the nose C is formed, and in the other half of the axle (marked A)

the recess D is formed, the nose C and recess D fitting accurately to each other. On the adjacent parts of the axle the flanges E and F, respectively, are formed, so that they bear against each other when inclosed by the box or yoke G. This box or yoke G is constructed in two portions, as shown, which are held together by bolts and nuts H.

In Fig. 5 the nose C is shown hemispherical and it may be cylindrical, the shape of the nose not being an essential part of my invention, the essential feature in this respect being that the nose accurately fits into the recess in the other half of the axle and that the antifriction-rollers I are placed in the recesses between the flanges, as shown in Figs. 1, 3, and 5.

Now from the construction of the central portion of axles after the manner herein described and shown upon the annexed drawings it is obvious that when any strain tending to twist the axle takes place instead of the axle being thereby strained it is enabled to yield rotatively to such strain, and thereby the tendency to fracture such axle by reason of such torsional strain is thus gotten rid of, while the antifriction-rollers enable this rotative yielding to take place with the minimum of frictional resistance.

Having now described my invention and the best system, mode, or manner I am at present acquainted with for carrying the same into practical effect, I desire to observe in conclusion that what I consider to be novel and original, and therefore claim as the invention to be secured to me by Letters Patent, is as follows:

The combination with a divided axle having a central nose, a central socket, flanges on each division of the axle and box inclosing said parts, of the antifriction-rollers between the flanges, substantially as described and shown upon the annexed drawings.

In testimony whereof I have hereunto set my hand and seal, in the presence of two subscribing witnesses, this 7th day of April, 1899.

AUGUSTUS C. MASSEY. [L. S.]

Witnesses:

ST. JOHN DAY,
JOHN SATTERWHITE.