No. 672,949. Patented Apr. 30, 1901.

A. C. MASSEY.

AXLE FOR RAILWAY CARS OR OTHER VEHICLES.

(Application filed July 2, 1900.)

(No Model.)

Fig. 1

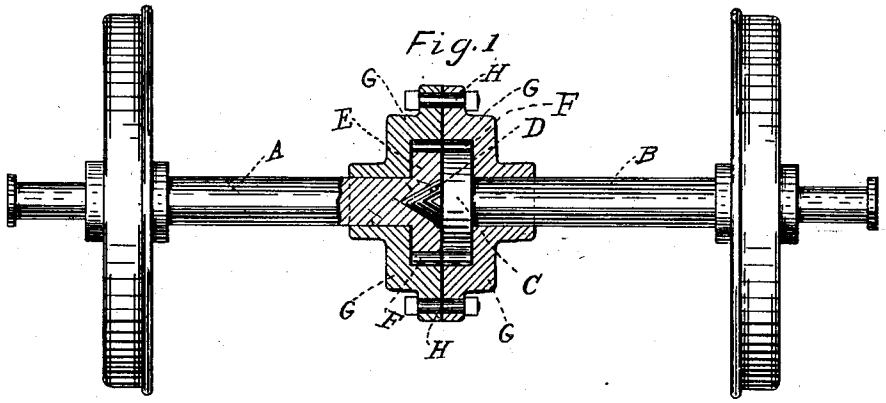


Fig. 4

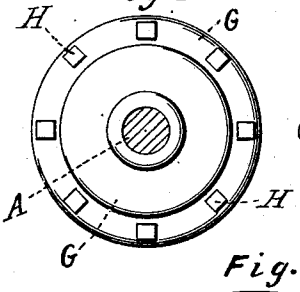


Fig. 2

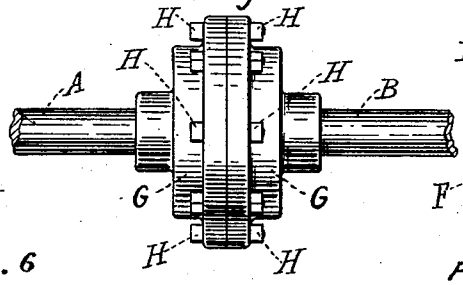


Fig. 3

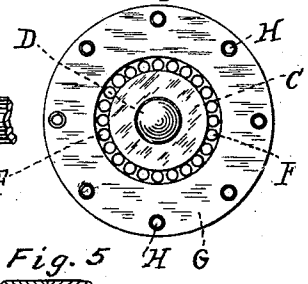


Fig. 6

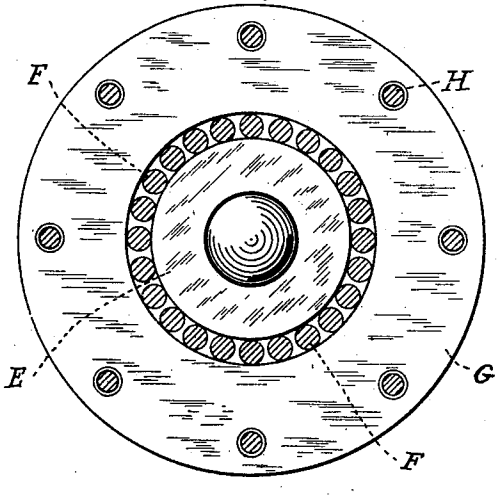
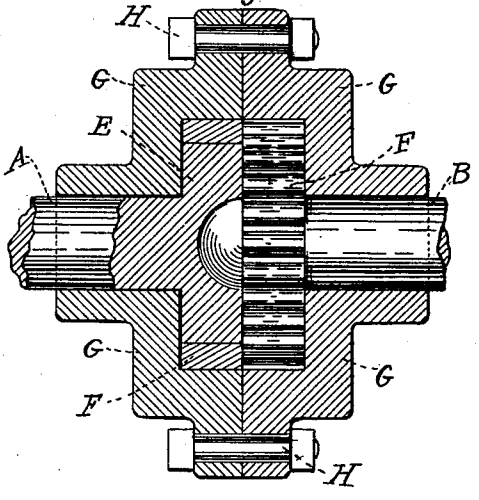


Fig. 5



Witnesses
S. O. Hood.
V. L. Steward

Inventor
Augustus Casner Massey
By Sr. John Day.
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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

AXLE FOR RAILWAY-CARS OR OTHER VEHICLES.

SPECIFICATION forming part of Letters Patent No. 672,949, dated April 30, 1901.

Application filed July 2, 1900. Serial No. 22,384. (No model.)

To all whom it may concern:

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

My present invention is a further development of another invention relating to axles for railway and road vehicles, for which an application for Letters Patent has been allowed to me; and my present improvements have the same object in view which is set forth in the specification of the invention for which the aforesaid application for Letters Patent has been allowed to me; and my present improvements relate in part to another mechanical arrangement whereby the objects described in the specification of the aforesaid allowed application for Letters Patent are also obtained—namely, to enable the wheels of cars or other vehicles used on railways and other roadways to be rolled upon a curved track without straining the axles torsionally.

Under my present improvements the axles on which the wheels are carried are constructed in two portions, upon each of which one of the wheels of each pair of wheels is carried and keyed or otherwise fastened, so as to rotate with the portion of the axle to which it is fastened.

On the annexed sheet of drawings, Figure 1 is an elevation, partly in section, of the axle constructed in accordance with my present improvements, 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 joint and the antifriction-rollers. Fig. 3 is an end elevation of that half of the axle upon which the nose of the joint is formed, also showing antifriction-rollers and the box or yoke inclosing the same on the plane of the joint of the box or yoke. Fig. 4 is an end elevation of the box or yoke, showing an axle in section. Fig. 5 is an enlarged view, partly in vertical section, showing an axle-joint and antifriction-rollers and the box or yoke inclosing the same and having a hemispherical nose at the center. Fig. 6 is an enlarged elevation, corresponding to Fig. 5, of the box or yoke and axle, showing the antifriction-rollers and the uniting-bolts in section.

In the drawings one half of the axle is marked A and the other half is marked B. The half of the axle marked B is formed with a flange C, having a conical nose D at its center, and the other half of the axle marked A is formed with a flange E, having a conical recess at its center, whereinto the conical nose D enters when the axle is in working order. A series of antifriction-rollers F surround the periphery of the flanges D and E, and these antifriction-rollers are inclosed and kept in their places around about the flanges D and E by the yoke G, as shown. The yoke, unlike the yoke shown in the aforesaid specification of my former invention, for which Letters Patent have been allowed to me, is in this case formed with a vertical joint at or about the plane where the two flanges D and E meet, as shown, and the two halves of the yoke G are held together by the bolts and nuts H. By means of this arrangement and construction of the axle-joints it is obvious that the two wheels and corresponding parts of the axles can rotate independently of each other and with a minimum of friction without producing any strain upon the axles or wheels when running around a curve on a railway or other roadway, while the parts of the joint may be easily taken asunder whenever required.

In the enlarged views, Figs. 5 and 6, the only difference in the joint from that shown at Figs. 1 to 4, inclusive, is that the nose and recess at the center of the flanges are made hemispherical.

Having now described the nature of my said 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 improved axle-joint wherein two flanges of larger diameter than the axle itself and having a nose at the center of one flange entering a corresponding recess in the center of the opposite flange are held together by a box or yoke consisting of two halves united or joined together in a plane at or about the plane whereat the flanges meet, the two halves of the box or yoke being united by bolts and inclosing cylindrical antifriction-rollers surrounding the periphery of the disks, substantially as hereinbefore described.

In testimony whereof I have hereunto set my hand and seal, this 11th day of June, 1900, in the presence of two subscribing witnesses.

AUGUSTUS CASNOR MASSEY. [L. S.]

Witnesses:
ST. JOHN DAY,
ARTHUR J. GARFIELD.