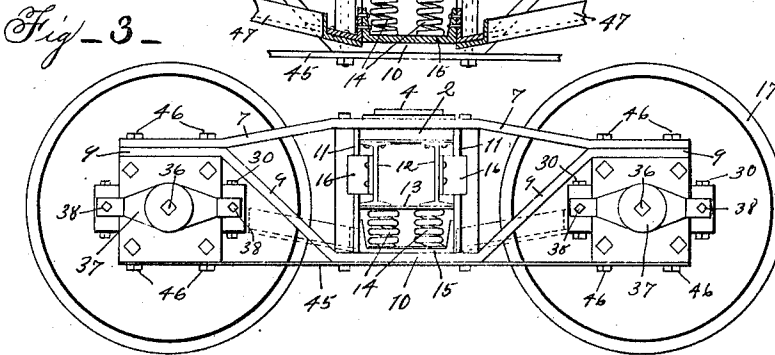
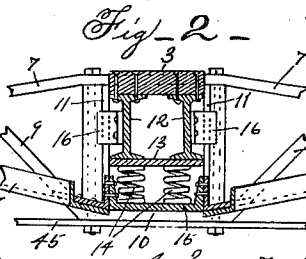
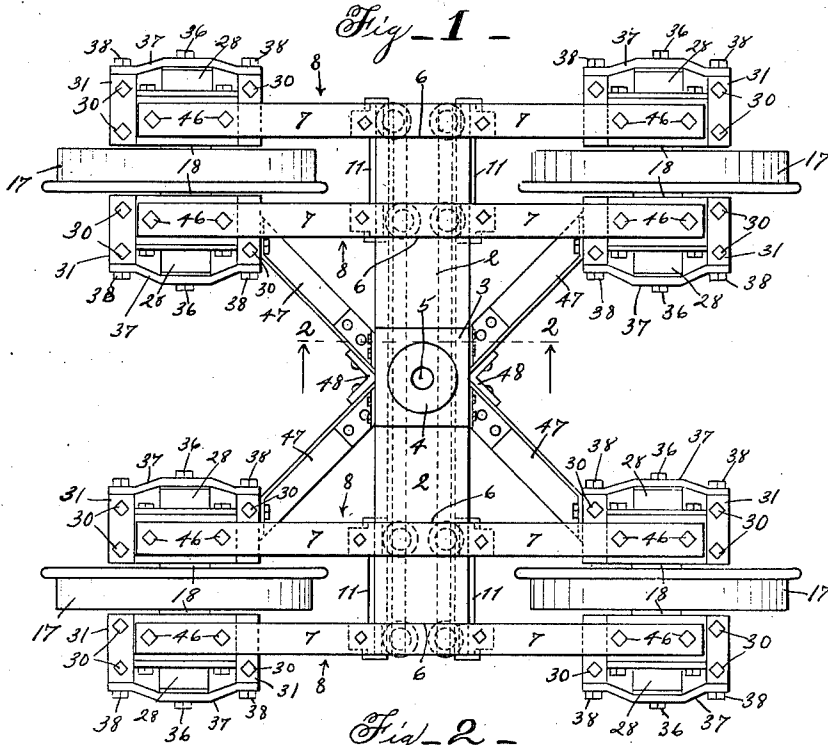


W. H. ARMSTRONG.
RAILWAY CAR TRUCK.
APPLICATION FILED MAR. 4, 1912.

1,036,952.

Patented Aug. 27, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

W. H. Armstrong
J. Mastella & Co.

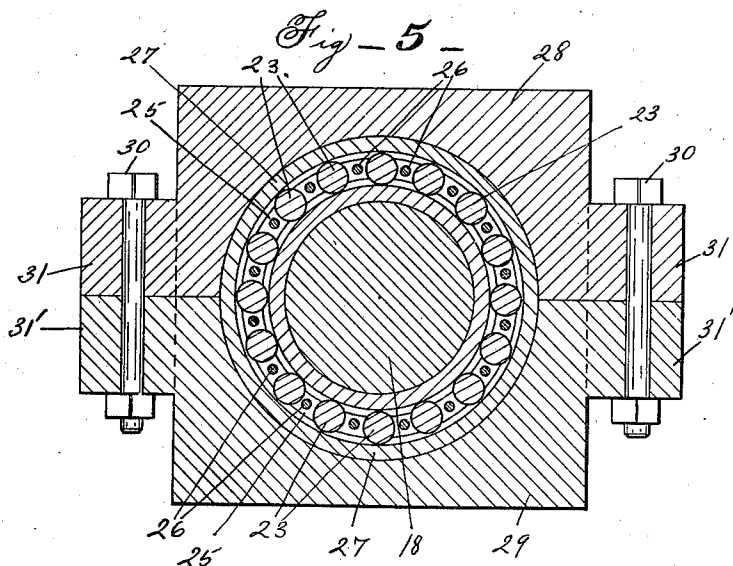
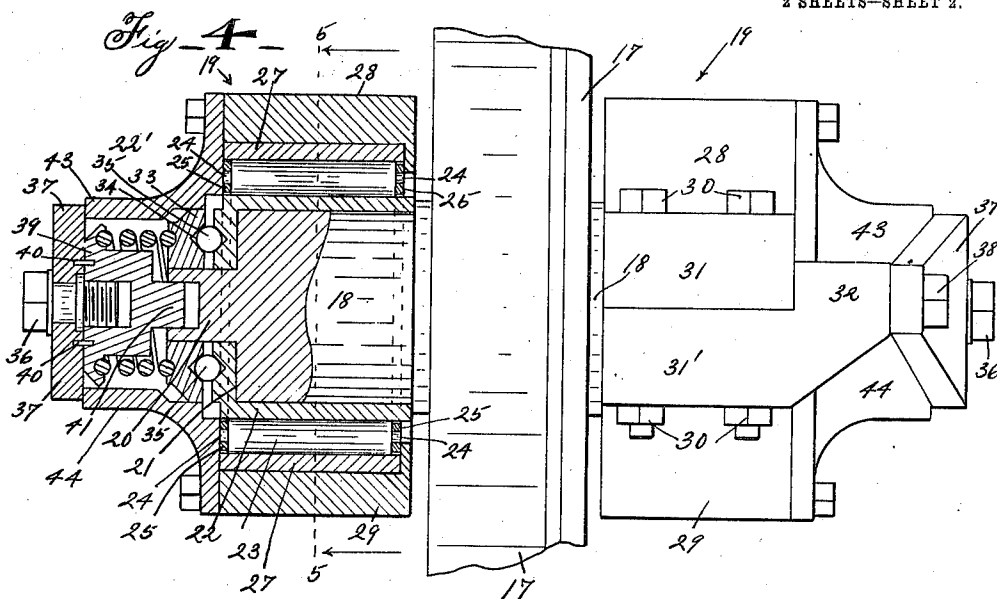
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2 SHEETS—SHEET 2.



WITNESSES:
W. H. Grand
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UNITED STATES PATENT OFFICE.

WILLIAM H. ARMSTRONG, OF LOS ANGELES, CALIFORNIA.

RAILWAY-CAR TRUCK.

1,036,952.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed March 4, 1912. Serial No. 681,660.

To all whom it may concern:

Be it known that I, WILLIAM H. ARMSTRONG, a citizen of the United States of America, residing at Los Angeles, in the county of Los Angeles, State of California, have invented a certain new and useful Railway-Car Truck; 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.

This invention relates to improvements in railway-car trucks, and it may be said to consist in the provision of the novel features and in the novel and improved construction, arrangement and combination of parts therein as will appear from the description and claims which follow.

One object of the invention is to provide a novel and improved construction whereby the wheels are mounted on the frame of the truck to rotate independently of each other.

Another object of the invention is to provide a novel and improved construction whereby the shaft of each wheel is mounted in roller bearings disposed at each side of the wheel.

Another object of the invention is to provide a novel and improved construction for the wheel shaft and the bearing therefor.

Further objects of the invention are to provide a construction for the truck which renders it simple and efficient in character, economical to manufacture, strong and durable, easy running both on straight and curved tracks, adapted to avoid excessive heating of the shafts or their bearings in operation, and in which the parts may be readily assembled or demounted.

Other objects and the advantages of the invention will be apparent to those skilled in the art from a consideration of the following description of the preferred form of construction embodying the invention, taken in connection with the accompanying drawings in which—

Figure 1 is a top plan view of a car truck having the invention applied thereto; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a side elevation of the car truck; Fig. 4 is an enlarged, partially sectional, elevational view of the shaft and its bearings, and Fig. 5 is a sectional view taken on the line 5—5 of Fig. 4.

The bolster 2 may be provided centrally thereof with a raised portion 3 having

thereon a boss 4 and provided with a central opening 5 for the king bolt—not shown. At its ends the bolster 2 is provided with cut away portions 6 in which are freely disposed the central portion of the arch bar 7 of the spaced supporting frames 8 which are arranged in pairs at right angles to the bolster 2. The other arch bar 9 in each of the frames 8 has its end portions in contact with the bar 7 and is formed to have its flat central portion 10 offset from the central portion of the bar 7 and arranged below the bar 7. Oppositely disposed guide plates 11 for the end portions of the bolster 2 are arranged between and suitably secured to the central portions of the bars 7 and 9 of the pairs of supporting frames 8, and the bolster 2 may be yieldably supported between the guide plates 11 by being mounted on I-beams 12, which may rest on a plate 13 supported by springs 14 arranged on a channel plate 15 disposed between the guide plates 11 and resting on the bars 10 of the supporting frames 8. Guides 16 may be suitably affixed to the I-beams 12 and adapted to contact with the edge portions of the guide plates 11.

As seen in Fig. 1, the wheels 17 are disposed between adjacent portions of the supporting frames 8 and are each arranged on its separate shaft 18 which has its end portions mounted in bearings 19 at the ends of each of said supporting frames 8. The end portions of each of the shafts 18 and each of the bearings 19 may be formed constructed and arranged in the manner to be now described. The end portions of each shaft 18 terminate in a reduced portion 20 to provide an annular shoulder 21, and a wear-resisting piece 22 may be affixed on the shaft and have a portion 22' thereof extending over the shoulder 21. Rollers 23 adapted to bear on the wear resisting piece 22 may have on the ends thereof pintles 24 bearing in rings 25 connected together by rods 26. A cylinder 27 of wear resisting material may be arranged adjacent to and surround the rollers 23. Blocks 28 and 29 may be fitted over the cylinder 27 and be fastened together by any suitable means, for instance by bolts 30 passing through lugs 31 on the blocks. The lug 31' on the block 29 is preferably formed with an upward and outward extension 32 which abuts against the outer face of the lug 31 on the block 28. Over the end portion 20 of shaft 18 may be

freely fitted a part 33 between which and the portion 22' of wear resisting piece 22 may be arranged in a raceway 34 the balls 35 to provide a thrust bearing for the shaft 18 and said thrust bearing may be adjustable by turning a screw 36 which is rotatably mounted in a face plate 37 which may be secured at its ends to the extensions 32 by tap bolts 38; the screw 36 being threaded in a part 39 which has one end thereof slidably mounted on pins 40, carried by the face plate 37, and has the other end thereof formed to fit in a recess 41 in the portion 21 of shaft 18, a spring 42 being interposed between the part 39 and the part 33. Suitably formed plates 43 and 44 may be fitted between the face plate 37 and the blocks 28 and 29 respectively. A strap 45 may extend between the blocks 29 on each of the supporting frames 8 and bolts 46 may pass through the bars 7 and 9, blocks 28 and 29, and strap 45. Diagonal braces 47 may be suitably connected between the inner of the bearings 19 and the central portion of the channel plate 15 and at their juncture the braces 45 may be suitably connected together by angle plates 48. It will be understood that hard grease or other suitable lubricating material may be placed between the rollers 23.

While one form of construction in which the invention may be embodied has been particularly illustrated and described there are many changes and modifications thereof that will readily occur to those skilled in the art, wherefore the right is reserved to all such changes and modifications as do not depart from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. In a railway-car truck, the combination of frames arranged in pairs, wheels, and means for mounting said wheels separately on each of the pairs of frames, said means including a shaft for each wheel, pairs of rings surrounding the end portions of each of the shafts, rollers adapted to bear in the rings, and blocks fitted over said rollers and secured to said frames.

2. In a railway-car truck, the combination of supporting frames, a wheel, and means for rotatively mounting said wheel on said frames, said means including a shaft having reduced end portions with recesses therein, and bearings for the shaft arranged on said frames and including rings sur-

rounding said shaft, rollers bearing in said rings and adapted to contact with said shaft, parts fitted over the reduced end portions of the shaft, balls arranged between said parts and the shaft, face plates, members movably carried by the face plates and having a part thereof fitted in said recesses, screws rotatively mounted in said face plates and threaded into said members, and springs interposed between said members and said parts.

3. In a railway-car truck, a bolster, supporting frames arranged in pairs at the ends of said bolster, means for yieldably mounting the bolster on said frames, wheels disposed between adjacent portions of the supporting frames, separate shafts for the wheels, said shafts having reduced end portions with recesses therein, and bearings for the shafts arranged on said frames and including rings surrounding the shafts, rollers bearing in the rings and adapted to contact with said shafts, parts fitted over the reduced end portions of the shafts, balls arranged between said parts and the shafts, face plates, members movably carried by the face plates and having a part thereof fitted in said recesses, screws rotatively mounted on said face plates and threaded into said members, and springs interposed between said members and said parts.

4. In a railway car truck, the combination of a bolster, supporting frames arranged in pairs at each end of said bolster, bearings on said frames, shafts having reduced end portions with recesses therein, said shafts mounted in said bearings, wheels on said shafts, parts fitted over the reduced end portions of the shafts, balls arranged between said parts and the shafts, face plates, members movably carried by the face plates and having a part thereof fitted in said recesses, screws rotatively mounted in said face plates and threaded into said members, and springs interposed between said members and said parts.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 21st day of February A. D. 1912.

WILLIAM H. ARMSTRONG.

Witnesses:

CLINTON F. SECCOMBE,
ALEX. H. LIDDERS.