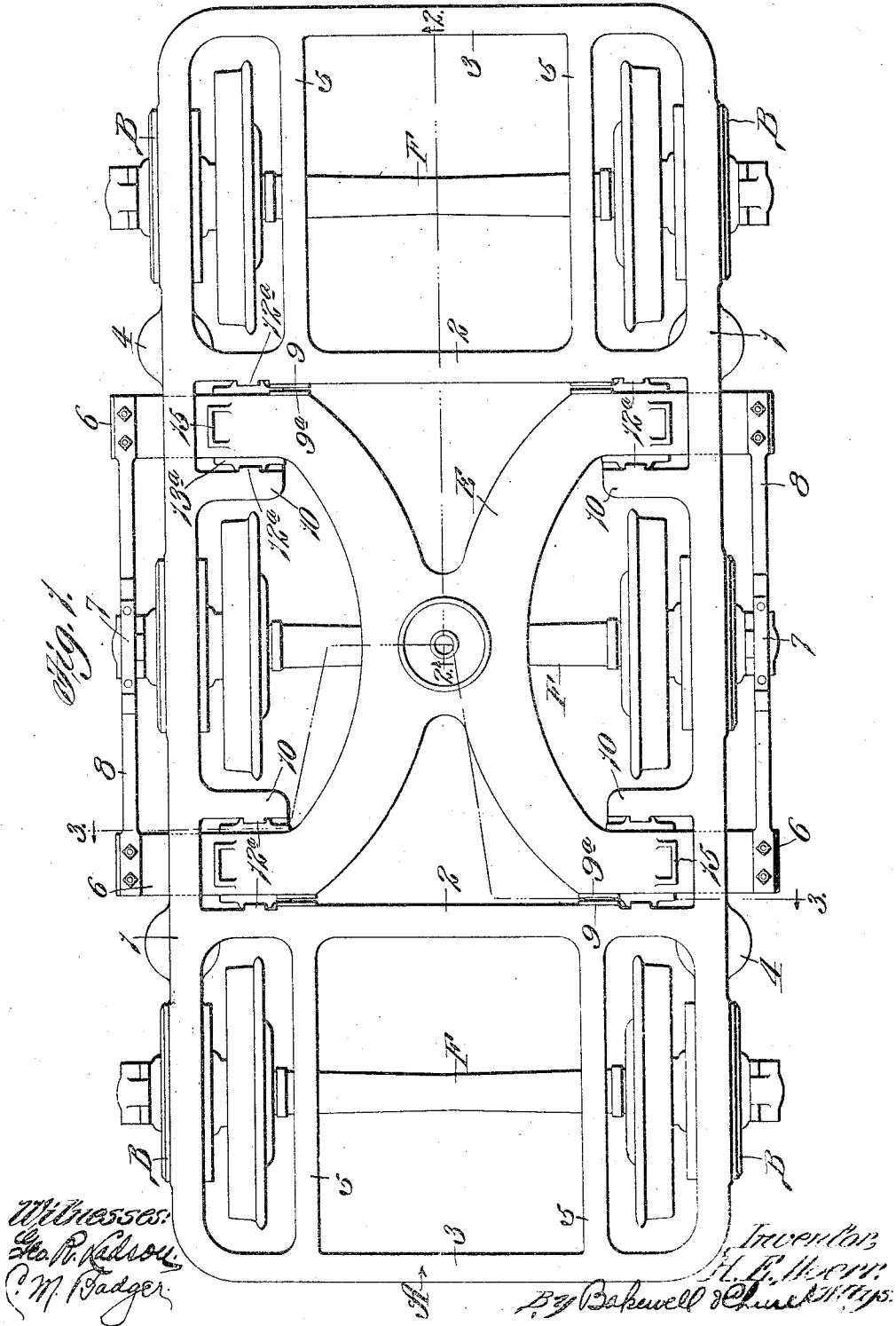


H. E. DOERR.
SIX WHEEL TRUCK.
APPLICATION FILED JULY 29, 1912.

1,046,153.

Patented Dec. 3, 1912

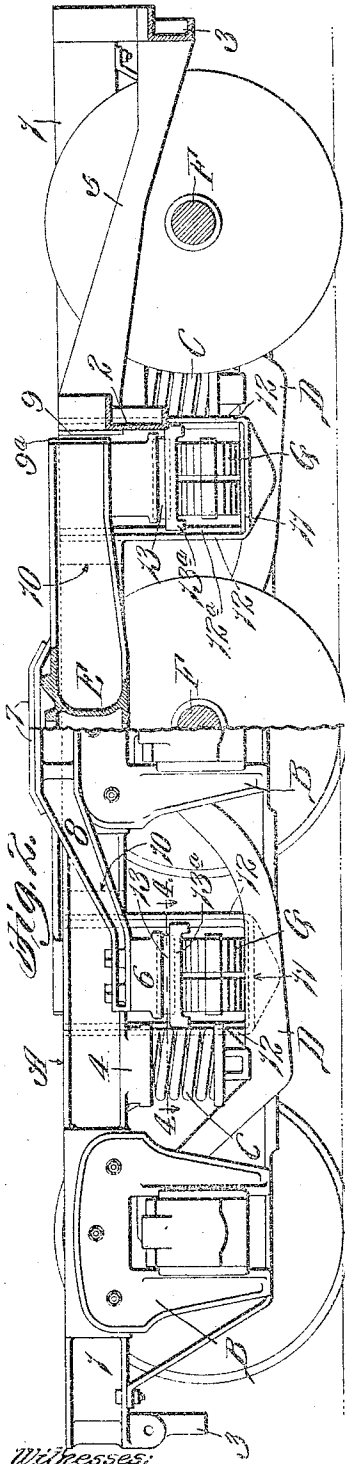
2 SHEETS—SHEET 1.



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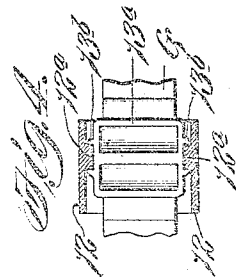
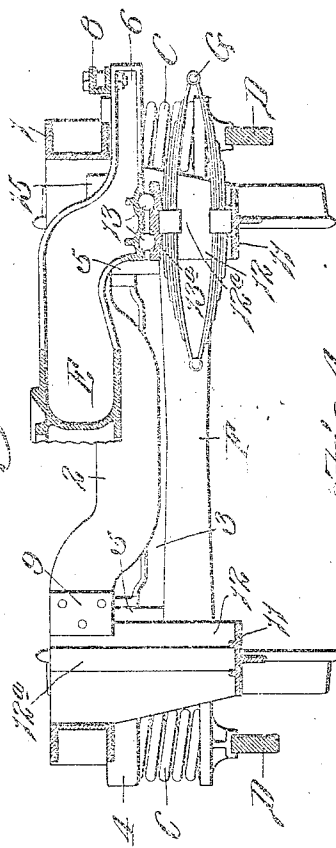
Patented Dec. 3, 1912.
2 SHEETS—SHEET 2.

1,046,153.



Witnesses:
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Fig. 3.



Inventor:
H. E. Doerr.
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UNITED STATES PATENT OFFICE.

HARRY E. DOERR, OF ST. LOUIS, MISSOURI, ASSIGNOR TO SCULLIN-GALLAGHER IRON AND STEEL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

SIX-WHEEL TRUCK.

1,046,153.

Specification of Letters Patent.

Patented Dec. 3, 1912.

Application filed July 29, 1912. Serial No. 712,086.

To all whom it may concern:

Be it known that I, HARRY E. DOERR, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Six-Wheel Trucks, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to car trucks, and particularly to six-wheel trucks of the type in which the wheel-pieces and transoms are integrally connected together and are preferably formed from a one-piece casting.

One object of my invention is to provide a cast metal six-wheel car truck in which the bolster-supporting springs are carried by spring seats connected to the wheel-pieces and to the transoms.

Another object is to provide a six-wheel cast truck of the type referred to that comprises roller devices which provide for the lateral movement of the bolster. And still another object is to provide a strong, serviceable and inexpensive six-wheel car truck that is equipped with a double bolster whose ends project beyond the wheel-pieces so as to support the side bearing carrying members, and combined spring seats and roller bearing guiding members integrally connected to the transoms and to inwardly projecting brackets on the wheel-pieces.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a top plan view of a six-wheel car truck constructed in accordance with my invention; Fig. 2 is a side elevational view of said truck partly in vertical section taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical cross sectional view of said truck taken on the line 3—3 of Fig. 1; and Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 2.

Referring to the drawings which illustrate the preferred form of my invention, A designates a one-piece casting comprising a pair of wheel-pieces 1, two single transoms 2 that connect said wheel-pieces together, and end members 3 integrally connected to the end portions of the wheel-pieces and extending parallel to the transoms 2, as shown in Fig. 1. The wheel-pieces 1 are preferably channel-shaped in cross section and are arranged with their horizontal flanges pro-

jecting outwardly, as shown in Fig. 3, and the pedestals B preferably consist of members that are detachably connected to the wheel-pieces 1. The springs C, which are interposed between the wheel-pieces and the equalizers D, fit in spring seats or pockets 4 on the under sides of the wheel-pieces 1, and the transoms 2 which connect the wheel-pieces together are preferably arranged about midway between the transverse center of the double bolster E and the wheel axles F, as shown in Fig. 1. The transoms 2 are approximately channel-shaped in cross section, as shown in Fig. 2, and the top and bottom flanges thereof are integrally connected to the horizontal flanges of the wheel-pieces 1, the vertical webs of the transoms being also integrally connected at their outer ends to the vertical webs of the wheel-pieces. The end members 3 which extend parallel to the transoms are also channel-shaped in cross section and are dipped downwardly intermediate their ends so that the middle portions of same lie in a lower horizontal plane than the wheel-pieces, as shown in Fig. 2. Longitudinally disposed braces 5 are preferably arranged between the transom 2 and end member 3 at each end of the truck, as shown in Fig. 1, so as to produce a strong and rigid frame, the braces 5 extending parallel to the wheel-pieces a short distance inwardly from the wheels.

The bolster E is a double bolster and comprises a substantially X-shaped center portion whose ends have laterally projecting extensions 6 that extend down underneath the wheel-pieces 1 and project laterally beyond same, as shown in Fig. 3, the side bearings 7 being carried by two members 8 arranged outside of the wheel-pieces, as shown in Fig. 1, and connected to the laterally projecting extensions 6 of the bolster. The end portions of the transoms 2 which lie adjacent the wheel-pieces, act as guides for the bolster, and are provided with wear plates 9 that cooperate with wear plates 9a on the bolster.

The bolster is supported by four sets of springs G which rest on four spring seats that are integrally connected to the end portions of the transoms 2 and to inwardly projecting brackets 10 on the wheel-pieces 1, each of said spring seats comprising a horizontally disposed portion 11 on which its co-

operating springs G rest, and two vertically disposed side portions 12, one of which is integrally connected at its upper end to the end portion of the transom 2 and the other 5 to the integral bracket 10 on the wheel-pieces, as shown clearly in Figs. 2 and 3. Roller bearing devices comprising rollers 13 and roller seat members 13^a are arranged between the bolster E and the springs G so as 10 to provide for the lateral motion of the bolster, and the vertically disposed portions 12 of the spring seats are provided on their inner faces with vertically disposed ribs 12^a that fit between laterally projecting lugs 13^b 15 on the roller seat members 13^a and thus guide said members and hold them in position. Any suitable type of springs and roller devices may be used for supporting the bolster, and any suitable type of double 20 bolster can be used, the one herein shown being provided on its under side with integral seats for the rollers and on its upper side with stops 15 that cooperate with the wheel-pieces to limit the lateral movement 25 of the bolster, and therefore I do not wish it to be understood that my invention is limited to the exact construction illustrated in the drawings.

With a six-wheel truck of the character 30 above-described there is no danger of the bolster dropping down because the members that carry the bolster-supporting springs are integrally connected to the main portion of the frame of the truck. Consequently, a car 35 truck of the construction above-described is a decided improvement on the six-wheel car trucks now in general use in which the bolster is carried by spring planks supported by means of links from the main portion of 40 the frame of the truck. By eliminating the spring planks and the hangers which support same I reduce the weight of the truck and also reduce the cost of manufacture without impairing the efficiency of the truck 45 because the roller devices that are interposed between the bolster and the springs that support the bolster provide for the lateral motion of the bolster.

As previously stated, I prefer to cast the 50 seats or supporting devices for the springs G integral with the transoms 2 and with the wheel-pieces but this is not absolutely essential to the successful operation of my truck as said spring seats could be combined with 55 or connected to the main portion of the frame of the truck in various other ways without departing from the spirit of my invention.

Having thus described my invention, what 60 I claim as new and desire to secure by Letters Patent is:

1. A six-wheel car truck having a frame that comprises wheel-pieces, transoms integrally connected to said wheel-pieces, a 65 double bolster arranged between said transoms and having portions that project laterally beyond the wheel-pieces, spring seats connected to the transoms, bolster-supporting springs carried by said spring seats, and lateral motion devices arranged between the 70 bolster and the bolster-supporting springs.

2. A six-wheel car truck having a frame which comprises wheel-pieces, transoms and transverse end members all integrally connected together, and stationary spring seats 75 forming part of said frame and constructed to support the springs on which the bolster of the truck rests.

3. A six-wheel car truck having a frame which comprises wheel-pieces, transoms and transverse end members all integrally connected together, stationary spring seats 80 forming part of said frame, a double bolster arranged between the transoms, bolster-supporting springs on said spring seats, and roller devices interposed between said 85 springs and bolster.

4. A six-wheel car truck having a frame which comprises wheel-pieces, transoms and transverse end members all integrally connected together, stationary spring seats 90 forming part of said frame, a double bolster arranged between the transoms, bolster-supporting springs on said spring seats, roller devices interposed between said springs and 95 bolster, the bolster having portions that project laterally beyond the wheel-pieces, and members connected to the laterally projecting portions of the bolster for supporting the side bearings.

5. A six-wheel car truck provided with a cast metal frame that comprises transoms, wheel-pieces and brackets that project inwardly from the wheel-pieces, and stationary 100 spring seats connected to said brackets and transoms.

6. A six-wheel car truck having a cast metal frame that comprises transoms, wheel-pieces and brackets that project inwardly 105 from the wheel-pieces, and substantially U-shaped spring seats integrally connected to said transoms and brackets so as to carry bolster-supporting springs.

7. A six-wheel car truck having a cast metal frame that comprises transoms, wheel-pieces and brackets that project inwardly 115 from the wheel-pieces, substantially U-shaped spring seats integrally connected to said transoms and brackets so as to carry bolster-supporting springs, transverse end 120 members integrally connected to the wheel-pieces, and longitudinal braces arranged between the wheel-pieces and connected to the end member and transom at each end of the frame.

8. A six-wheel car truck having a cast metal frame that comprises transoms, wheel-pieces and brackets that project inwardly 125 from the wheel-pieces, substantially U-shaped spring seats integrally connected to 130

said transoms and brackets so as to carry bolster-supporting springs, transverse end members integrally connected to the wheel-pieces, and longitudinal braces arranged between the wheel-pieces and connected to the end member and transom at each end of the frame, the end members being dipped downwardly intermediate the wheel-pieces and said longitudinal braces being inclined downwardly from the transoms.

9. A six-wheel car truck frame comprising wheel-pieces, end members and transoms all integrally connected together, and stationary spring seats for bolster-supporting springs carried by said transoms and wheel-pieces.

10. A six-wheel car truck frame consisting of an integral casting constructed to receive a double bolster, and four substantially U-shaped spring seats integrally connected to and depending from said frame.

11. A six-wheel car truck frame comprising wheel-pieces and transoms integrally connected together, and four substantially U-shaped spring seats depending from the

frame and integrally connected to the wheel-pieces and transoms.

12. A six-wheel car truck provided with a cast metal frame that comprises wheel-pieces, transverse end members and transoms integrally connected together, a double bolster arranged between the transoms and provided with laterally projecting portions that extend downwardly under the wheel-pieces, depending spring seats connected to the wheel-pieces and to the transoms, bolster-supporting springs mounted on said seats, roller devices comprising rollers and roller seats arranged between the bolster-supporting springs and the laterally projecting portions on the bolster, and means on said depending spring seats for guiding said roller seats.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this twenty-fourth day of July, 1912.

HARRY E. DOERR.

Witnesses:

GEORGE BAKWELL,
LENORE WILSON.