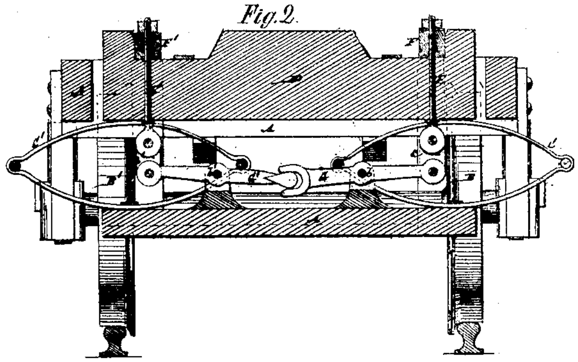
C. GRAHAM.

Car Truck.

No. 111,340. Patented Jan. 31, 1871.

Fig. 2.



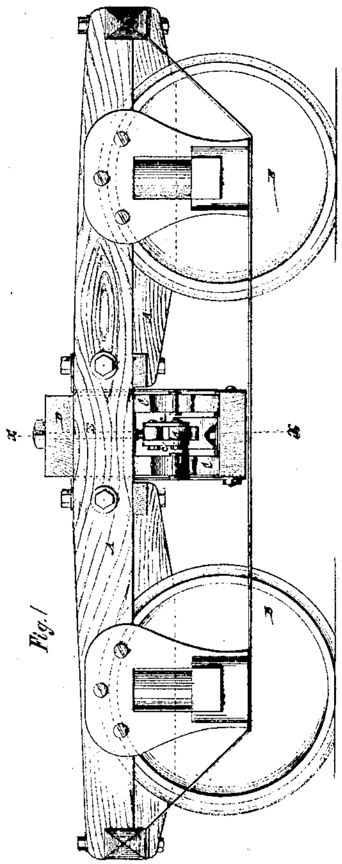
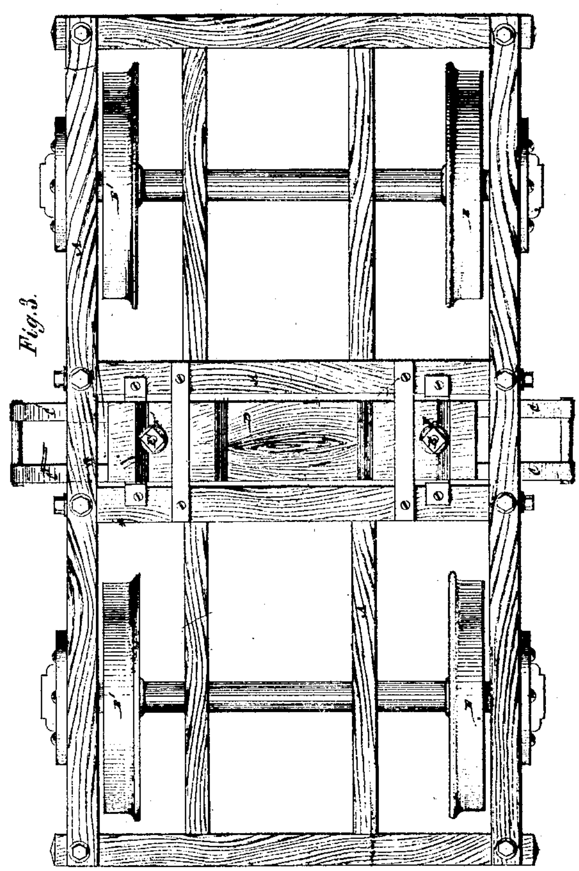


Fig. 1

Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES GRAHAM, OF KINGSTON, PENNSYLVANIA.

IMPROVEMENT IN RAILWAY-CAR TRUCKS.

Specification forming part of Letters Patent No. **111,340**, dated January 31, 1871.

To all whom it may concern:

Be it known that I, CHARLES GRAHAM, of Kingston, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Devices for Preventing the Oscillation of Railroad-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a side elevation of a railroad-car truck with my improvement applied to it; Fig. 2, a transverse section of the same, taken as indicated by the line *x x* in Fig. 1; and Fig. 3, a plan.

Similar letters of reference indicate corresponding parts.

The leading object of my invention is to prevent that oscillation of railroad-cars which takes place by the unequal distribution of the load on the springs—as, for example, in going round curves on the track, when, extra weight being thrown upon the springs that lie over the outside of the curve, the car is unduly depressed on that side and as unduly raised on the opposite side, which not only is attendant with inconvenience and unpleasantness to the traveler, but requires the springs on both sides of the car to be made heavier and stronger than would be necessary were the load equally divided over them.

This invention consists in a connection of the springs on opposite sides of the car by means of a bolster, on which the car-body rests, and a system of levers or other devices, whereby said springs, although independent of each other, are made to act in concert and to an equal extent, or thereabout, irrespective of the pressure of the load, whether central or more to one side than the other of the car-truck, thus keeping the car level and obviating oscillation; also, by the distribution of the strain on the springs, admitting of lighter springs being used.

While not restricting myself to the mechanism here shown by which the springs on opposite sides of the truck are coupled to work in concert through the agency of a bolster or cross-support that has the car-body mounted on it, the means illustrated in the drawing accomplish the desired result in a very effective manner.

Referring to the drawing, A represents the frame of a car-truck, and B B′ its wheels. C C′ are the springs on opposite sides of the truck, and which may be of any suitable description. D is a bolster or cross-piece, on which the car-body rests and swivels, and which is carried by the springs C C′. Connected with the opposite ends of this bolster are vertical rods E E′, sustained by rubber or other springs F F′, to obviate jar in the working of the devices, by which the load, although thrown more upon one side than the other, is transferred or distributed to press equally upon the opposite springs. These devices, as here shown, consist of levers G G′, working on fulcrums *b b′*, carried by the truck-frame, which levers are in jaw or clip gear at their one end, and connected at their opposite end by links *c c′* to the lower ends of the rods E E′, so that when more load is thrown onto the one side of the car than the other, it, by the interposition of said levers, acting through the agency of the bolster D, is transferred or distributed to press equally upon the opposite springs C C′, and so made to effect the desired result or results.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The connection of the springs on opposite sides of the truck by means of the bolster or car-body support carried by said springs, in combination with levers or mechanism arranged to transfer the load from one end of the bolster to the other, for the purpose of equalizing the pressure on said springs, substantially as specified.

2. The combination, with the bolster D, of the springs F F′, the bolts E E′, the springs C C′, and the levers G G′, geared for operation together essentially as shown and described.

CHAS. GRAHAM.

Witnesses:
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