

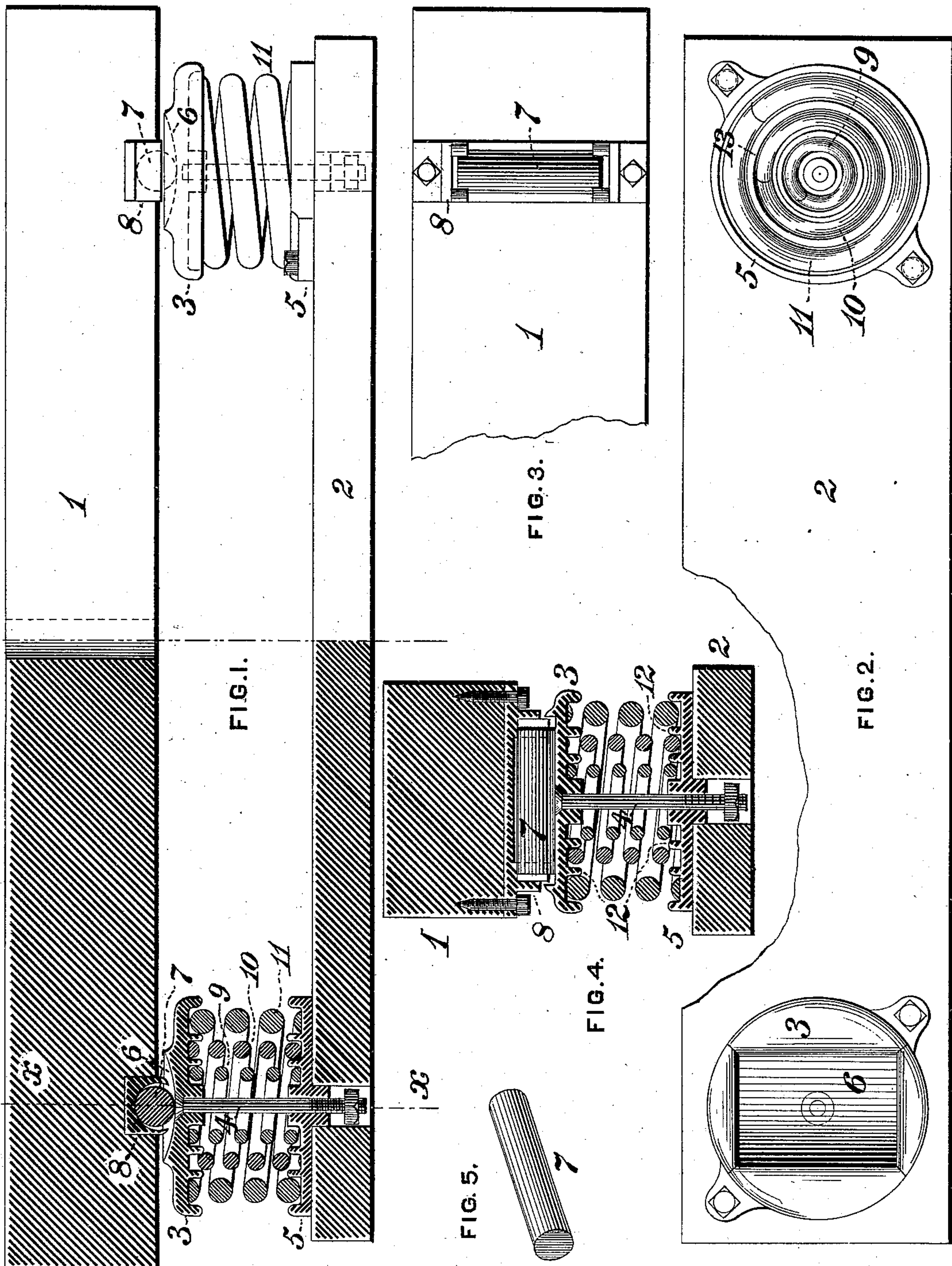
(No Model.)

J. C. BARBER.

CAR TRUCK.

No. 370,758.

Patented Oct. 4, 1887.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN C. BARBER, OF ST. PAUL, MINNESOTA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 370,758, dated October 4, 1887.

Application filed May 11, 1887. Serial No. 237,818. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BARBER, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a certain new and useful Improvement in Car-Trucks, of which
5 improvement the following is a specification.

My invention relates more particularly to swing-beam trucks, or those in which the beam or bolster which carries the center casting
10 bears, through springs, upon a spring-plank suspended from the truck-frame, with the capacity of lateral motion relative thereto and to the car-body.

The object of my invention is to provide a
15 self-adjusting bearing for the bolster upon the springs, thereby obviating the tendency which obtains in the ordinary construction to rack and break the springs and seats, as well as to afford the capacity of easy motion to the bol-
20 ster, and thus relieve the wear of wheel-flanges and ends of journal-bearings and strain of the car-body on the truck.

The improvement claimed is hereinafter fully set forth.

25 In the accompanying drawings, Figure 1 is a side view, half in elevation and half in section, of the swing beam or bolster and spring-plank of a car-truck, illustrating the application of my invention; Fig. 2, a plan view of
30 the spring, showing on the left a plan of the upper spring-pocket, and on the right a plan of the lower spring-pocket and springs; Fig. 3, an inverted plan view of one end of the bolster, showing the roller-bearing and pocket; Fig. 4,
35 a vertical transverse section through the bolster and spring-plank at the line $x x$ of Fig. 1, and Fig. 5 a perspective view of one of the roller-bearings.

In the practice of my invention the swing
40 beam or bolster 1 of the truck is, as in the present known and standard constructions, supported adjacent to each of its ends by springs upon a spring-plank, 2, which is sus-
45 pended in the usual manner by swing-hangers from a truck-frame of any approved and preferred pattern.

In trucks as heretofore constructed it has been the practice to secure the spring-caps
50 rigidly to the bottom of the bolster, which construction involves the substantial objection of subjecting the springs to undue and injurious

strain, as well as of imposing strain upon the truck by the car-body and causing wear of the wheel-flanges and end journals of the axles, due to the jars and shocks induced from the sub-
55 stantially rigid connection of the bolster and springs.

To obviate the objections above stated, as well as to provide self-adjusting side bearings for the bolster, I provide each of the springs
60 or series of springs on which the bolster 1 is supported with an upper spring pocket or cap, 3, which is wholly detached from the bolster, and connected, with the capacity of a proper degree of vertical movement, with the
65 spring-plank by a central bolt, 4, passing freely through the center of the lower spring-pocket, 5, which is secured to the spring-plank. A curved or segmental recess or seat, 6, is formed
70 in the top of each of the upper spring-pockets, 3, each of said seats receiving a cylindrical roller-bearing, 7, upon which bearings the bolster is supported freely on the upper spring-
75 pockets. The roller-bearings 7 are fitted to rotate in roller pockets or boxes 8, each of which is bolted to the lower side of the bol-
80 ster 1, transversely thereto and in line with the centers of the spring-pocket bolts 4. By reason of the curvature of the roller-bearing seats 6 the roller-bearings will always tend to
85 assume the lowest positions therein, and the side bearings of the bolster are hence self-adjusting, while the movements of the bolster and car-body, resultant upon lateral motion of the spring-plank, will, through the free sup-
90 port of the bolster upon the upper spring-pockets, be rendered materially easier and more exempt from jar and shock than under the ordinary construction embodying a rigid connection.

The bolster-springs are each composed of
95 three separate coils, 9 10 11, of different lengths, respectively, and constituting a triple-coil graduated spring, which is of broad base and free from tendency to cant over or rock out of
100 shape. The coils are separated by projecting ribs or division-pieces 12, formed on the faces of the upper and lower spring-pockets, by which the coils are kept properly apart at top and bottom, and chafing and consequent dan-
105 ger of breakage prevented.

I am aware that spherical or ellipsoidal side

bearings fitting in boxes supported upon annular springs on the bolster of a car-truck and interposed between the same and a bolster connected to the car-body were old at the date of my invention, and such construction broadly I therefore distinctly disclaim.

I claim as my invention and desire to secure by Letters Patent—

1. In a car-truck, the combination of a spring-plank, a spring or group of springs supported upon the spring-plank adjacent to each of its ends, a spring cap or pocket resting upon the top of each spring or series of springs and connected to the spring-plank, and a bolster supported upon the spring-caps and unconnected thereto, substantially as set forth.

2. In a car-truck, the combination of a bolster, a spring-plank, a lower spring-pocket secured to the spring-plank adjacent to each of its ends, a spring or group of springs resting in each of said pockets, a spring-cap or upper spring-pocket supported upon each spring or group thereof, said spring-cap having a curved or segmental seat formed in its top transversely to the spring-plank and being connected to the latter, and roller-bearings resting on said seats and supporting the bolster therein, substantially as set forth.

3. In a car-truck, the combination of a spring-plank, a bolster, transverse roller-boxes fixed to the lower side of the bolster, roller-bearings fitting in said boxes, springs supported on the spring-plank, spring caps or pockets resting on the springs and supporting the roller-bearings, and central stems or bolts coupling the spring-caps to the spring-plank, substantially as set forth.

4. In a car-truck, the combination of a spring-plank, a bolster, a lower spring-pocket secured to the spring-plank adjacent to each of its ends and provided with a series of projecting ribs or division-pieces, a graduated spring resting on each of said pockets, caps or upper spring-pockets supported one on each spring and connected to the spring-plank, and having a corresponding series of ribs on their lower faces and segmental seats on their upper faces, and roller-bearings resting on said seats and supporting the bolster thereon, substantially as set forth.

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Witnesses:

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