W. S. ADAMS.

CAR TRUCK.

APPLICATION FILED MAR. 11, 1914.

1,127,716.

Patented Feb. 9, 1915.

3 SHEETS—SHEET 1.

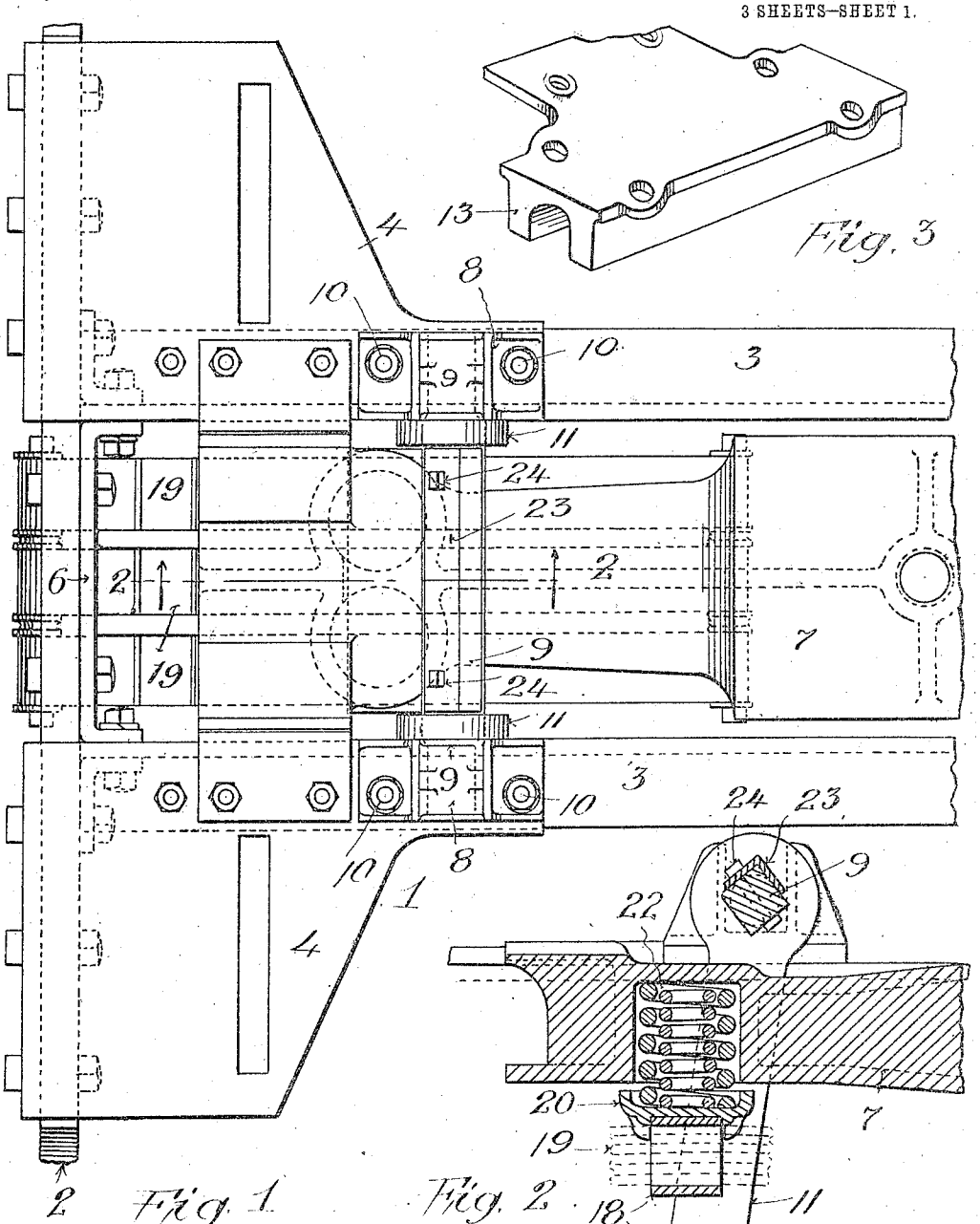


Fig. 3

Fig. 1

Fig. 2

Witnesses:

W. Benjamin

H. Radzinsky

Inventor

Walter S. Adams

By his Attorney

Joseph L. Levy

W. S. ADAMS.

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3 SHEETS—SHEET 2.

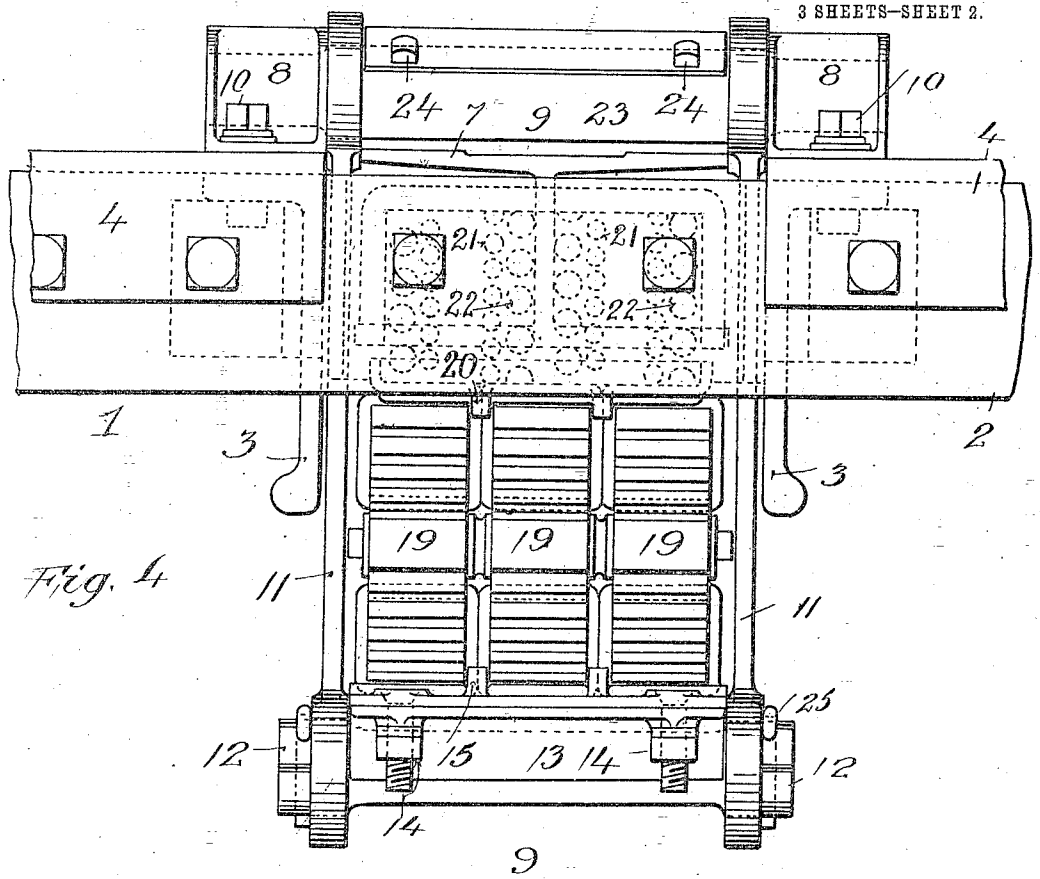


Fig. 4

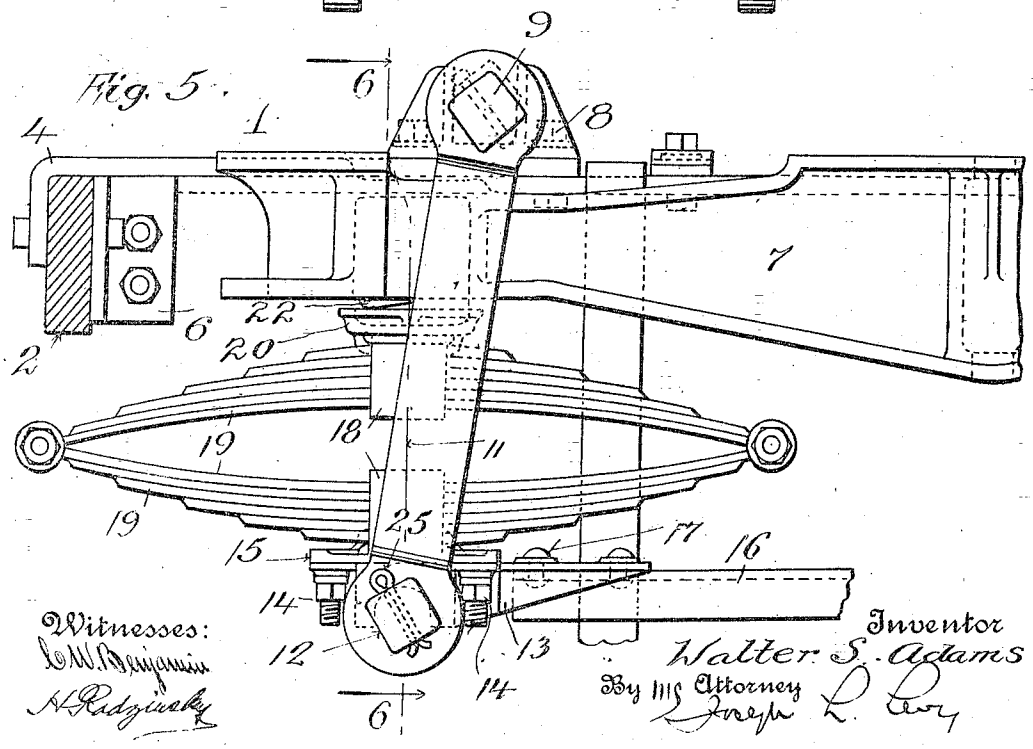


Fig. 5.

Witnesses:
C. W. Benjamin
A. Radzinsky

Inventor
Walter S. Adams
By His Attorney
Joseph L. Levy

W. S. ADAMS.

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3 SHEETS—SHEET 3.

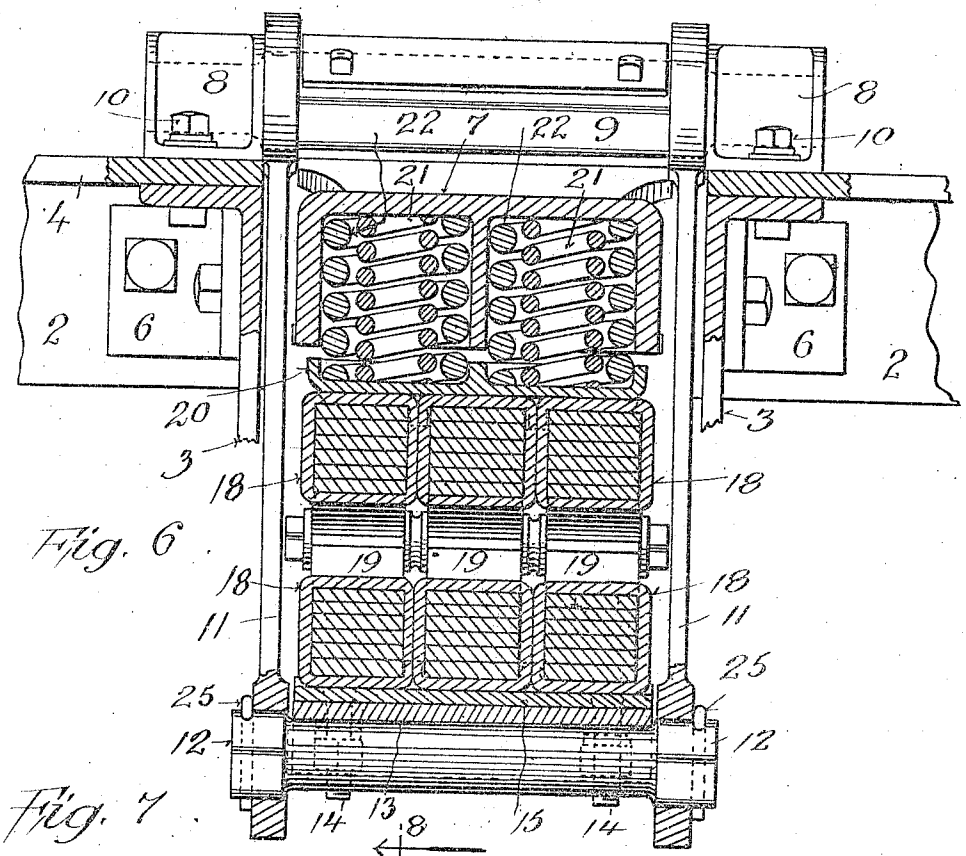


Fig. 6.

Fig. 7.

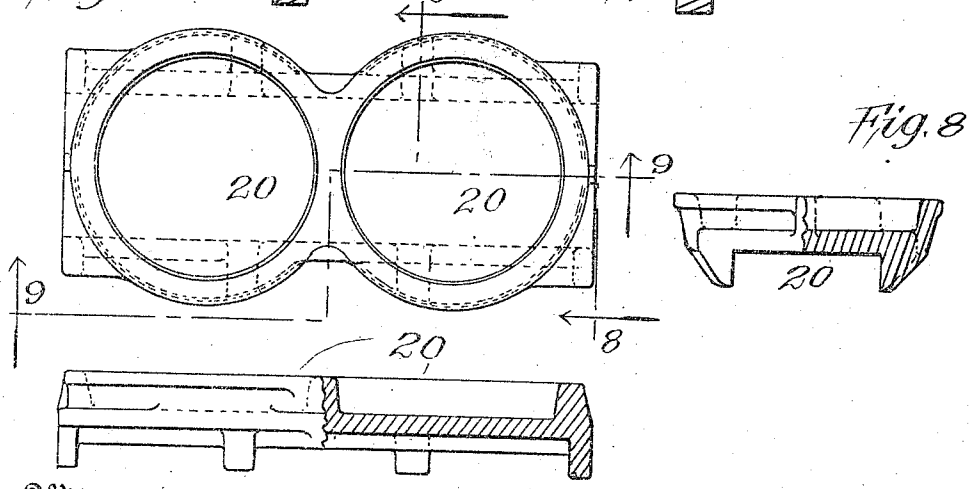


Fig. 8

Fig. 9

Witnesses:
W. W. Benjamin
H. Radzuisky

Inventor
Walter S. Adams
By his Attorney
Joseph L. Levy

UNITED STATES PATENT OFFICE.

WALTER S. ADAMS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE J. G. BRILL CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAR-TRUCK.

1,127,716. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed March 11, 1914. Serial No. 823,906.

To all whom it may concern:

Be it known that I, WALTER S. ADAMS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, and whose post-office address is care of The J. G. Brill Co., at Sixty-second street and Woodland avenue, in said city, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

My invention has for its object to generally improve and simplify the construction of car trucks, and especially those of the Master Car Builders' type.

My improvement consists of supporting the bolster near its ends on nests of coil springs resting on the usual elliptic springs, which rest on the spring plank in the usual manner, the spring plank being suspended by links from the truck transoms in the conventional manner, the combination of coil and elliptic springs permitting of more vertical flexibility in supporting the load and the action of two kinds of springs tending to neutralize the vibrations of each other.

The present invention also resides in certain novel features of construction and combinations of elements, which will be hereinafter described and further pointed out in the claims appended hereto.

A structure embodying my improvements is set forth in the following description and shown in the accompanying drawing, forming part of this specification, in which—

Figure 1 is a plan view of a portion of a truck provided with my improvement. Fig. 2 is a sectional view of the same, the section being taken on the line 2—2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a perspective view of one end of a spring plank. Fig. 4 is a side elevation of the structure shown in Fig. 1. Fig. 5 is an end elevation of this structure, the top chord being shown in section. Fig. 6 is a sectional view, taken on the line 6—6 of Fig. 5, looking in the direction of the arrows. Figs. 7, 8 and 9 show a spring seat, Figs. 8 and 9 being taken as indicated on Fig. 7.

Similar reference characters indicate corresponding parts throughout the several views.

As my invention may be applied to many kinds of trucks, I will not attempt to show any one in particular, but disclose a portion of a truck which may be taken as typical of a number and I show no parts that are irrelevant to my improvements. I do show portions of a frame 1 comprising top chords 2, transoms 3, gusset plates 4, bolts 5 and reinforces 6 all of which may be of the conventional kind.

The bolster 7 is mounted between the transoms 3 and gusset plates 4 by means of suitable bearing blocks 8 which carry suitable spindles 9 and other parts described below. These bearing blocks are fixed in place on the gusset plates 4 by the bolts 10. These spindles 9 are made circular in cross section at their ends, so as to fit said bearings 8 and turn freely therein and they are preferably made of some other than circular form where they support the hangers 11. At the lower ends of these hangers are carried suitable spindles 12, which connect their lower ends, one spindle connecting two hangers. Each spindle 12 is made of circular or other cross section at its ends, so as to fit the corresponding parts of the hangers 11 and not turn therein and between the hangers 11, each spindle 12 is preferably made circular in cross section, so as to receive and support a suitable bearing in a bracket 13, which is fixed by means of bolts 14 to a spring seat 15 and to angle bars 16 by rivets 17; the parts 13, 14, 15, 16 and 17 forming a spring plank. The seats 15 hold the bands 18 of suitable leaf springs 19, which in the embodiment of my invention shown in the drawings, are elliptic springs. As many of these elliptic springs are used as desired, although three are shown at each end of each spring plank. The upper bands 18 of each elliptic spring carry a suitable spring seat 20, on which are mounted suitable coiled springs 21, which enter a corresponding cup 22 in the bolster 7, which cup is preferably so extended as to nearly conceal said springs 21. In the embodiment of my invention herein shown, three elliptic springs 19 are surmounted by a seat 20, which carries two sets of coiled springs, each set being composed of two concentric springs. If desired, the details of construction may be varied substituting more or less coiled springs on the elliptic springs.

When a truck is provided with my improvement, it is apparent from what has been said that the bolster 7 is carried true and without undue jar or vibration by

means of a combined action of the leaf and coiled springs, by which it is supported from the spring plank, but and at the same time, the bolster is not carried any higher from the spring plank than is customary in such structures.

The hangers 11 may be spaced apart in any suitable manner, so as to maintain their parallel relation. In the embodiment herein shown, they are separated at their upper ends by means of a suitable plate 23, held to its spindle 9 by means of suitable cap screws 24, and at their lower ends, they are preferably held against the bearing 13 by means of suitable cotters 25.

While I have shown and described one embodiment of my invention, it is obvious that it is not restricted thereto, but is broad enough to cover all structures that come within the scope of the annexed claims.

Having thus described my invention, what I claim is:

1. In a truck of the class described, a truck frame, hangers supported by said frame, transversely disposed leaf springs supported by said hangers, coiled springs supported by said leaf springs, and a bolster carried by said coiled springs.

2. In a truck of the class described, a truck frame, having hangers and means for supporting the same, a spring plank carried by said hangers, leaf springs carried by said spring plank, coiled springs carried by said leaf springs, and a bolster carried by said coiled springs.

3. In a truck of the class described, a frame, bearings on said frame, spindles in said bearings, hangers carried by said spindles, a spring plank and means connecting said spring plank and hangers, leaf springs on said spring plank, coiled springs carried by said leaf springs, and a bolster carried by said coiled springs.

4. In a truck of the class described, a frame, hangers carried by said frame and means for supporting said hangers, a spring plank carried by said hangers and means connecting said spring plank and hangers, elliptic springs carried by said spring plank, coiled springs mounted on said leaf springs, and a bolster provided with spring seats to receive said coiled springs.

Signed at the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, this 4th day of March, 1914.

WALTER S. ADAMS.

Witnesses:
WM. R. MARTIN,
H. F. MCKILLIP.