(No Model.)

J. C. WANDS.

CAR TRUCK.

No. 554,469. Patented Feb. 11, 1896.

Fig. 1.

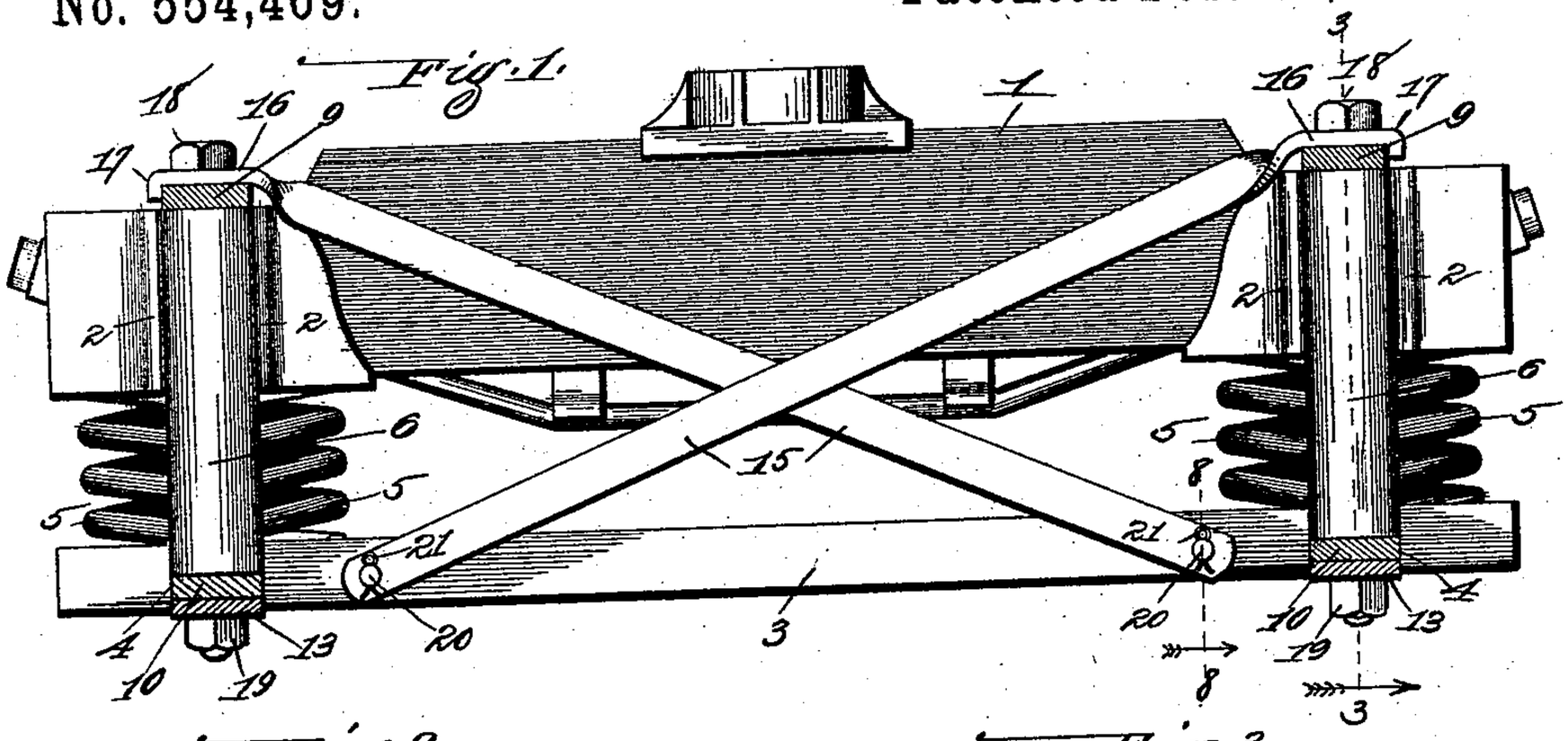


Fig. 2.

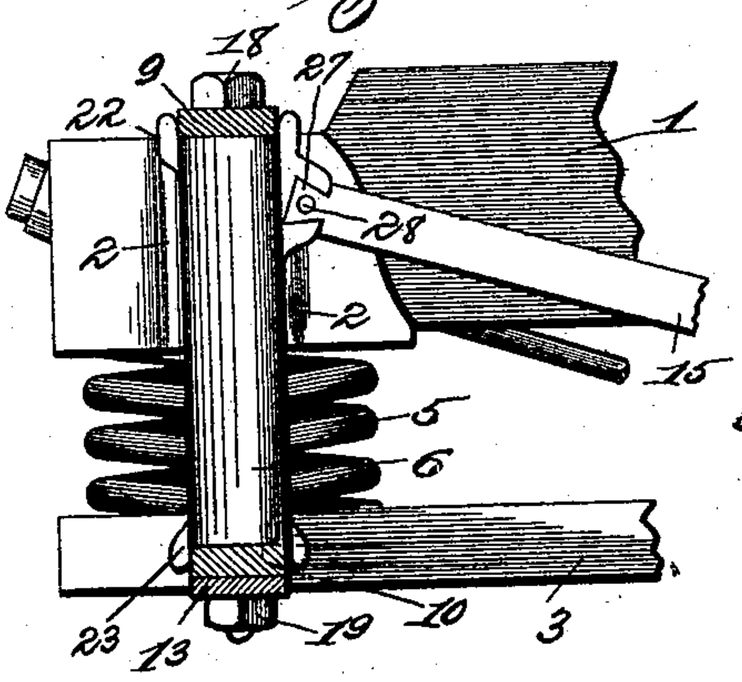


Fig. 3.

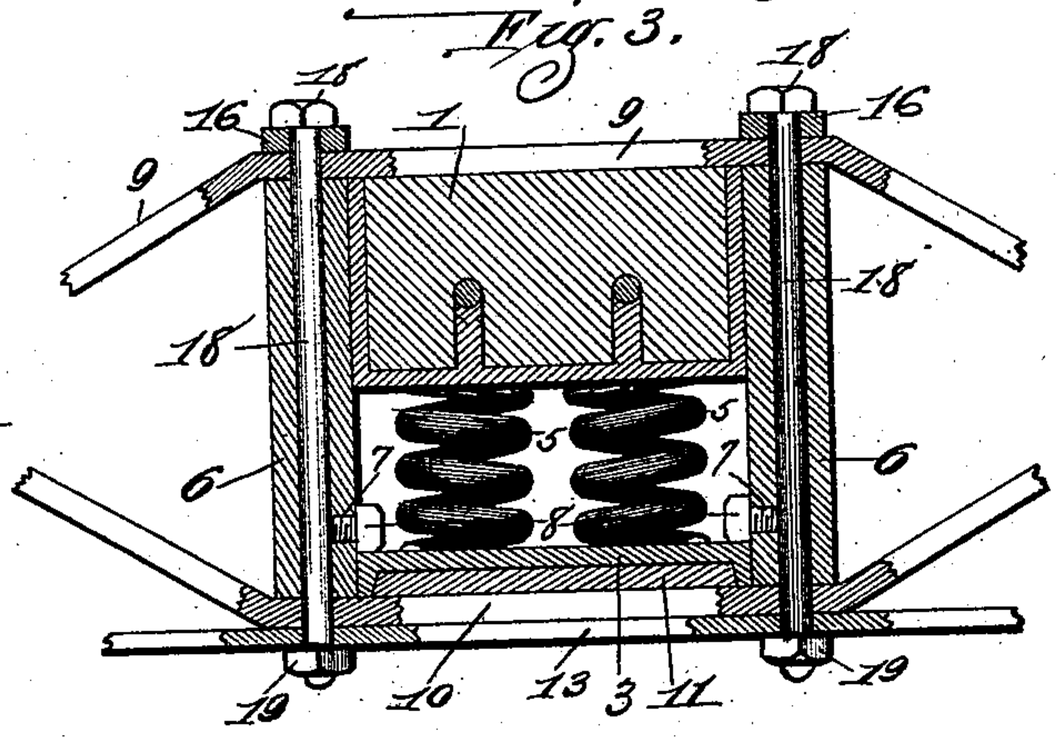


Fig. 4.

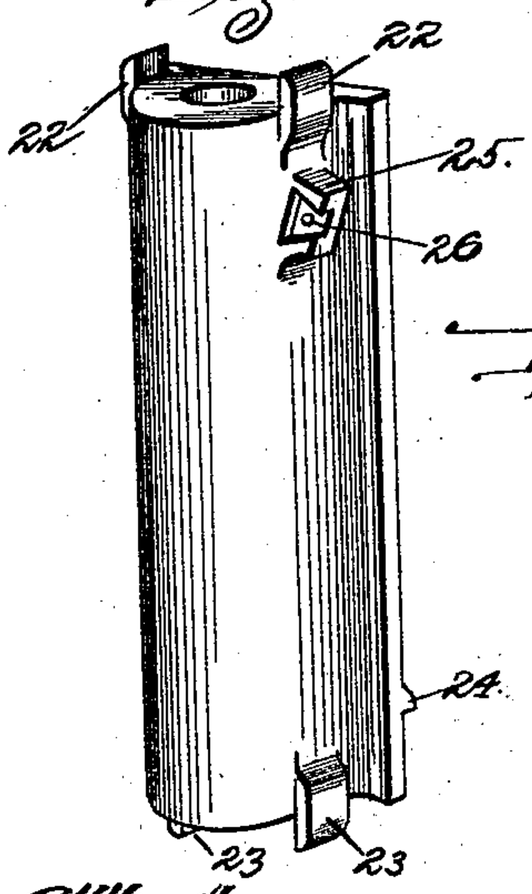


Fig. 5.

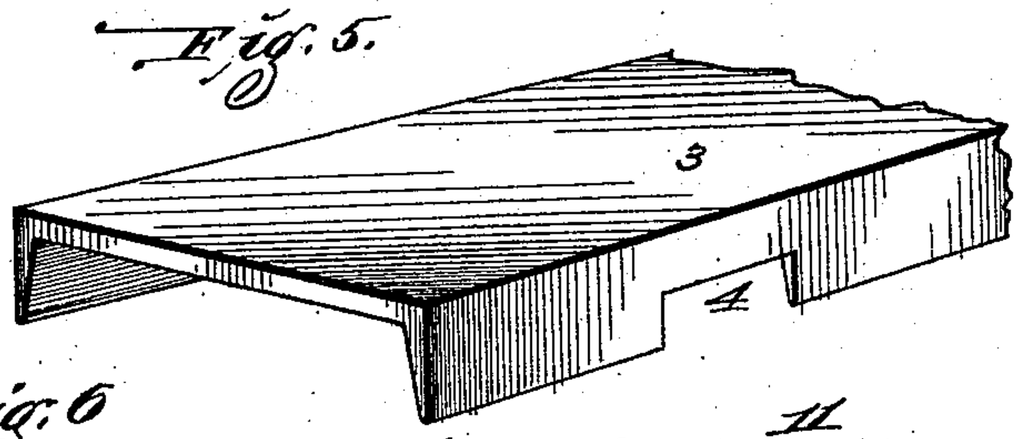


Fig. 7.

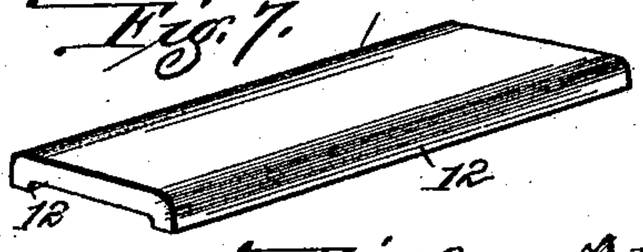
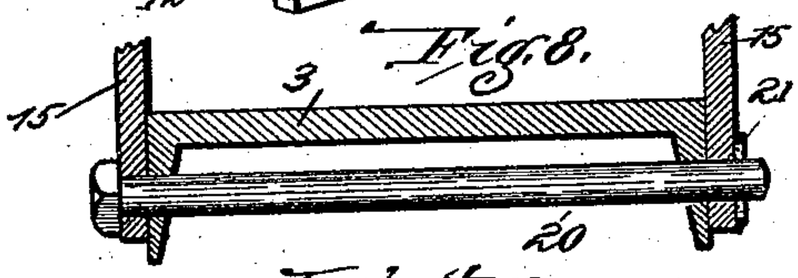


Fig. 8.



Attest

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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 554,469, dated February 11, 1896.

Application filed October 7, 1895. Serial No. 564,917. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved car-truck; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front view of my improved car-truck. Fig. 2 is a front elevation of a portion of a modified form of my improved truck. Fig. 3 is a vertical cross-sectional view taken approximately on the indicated line 3 3 of Fig. 1. Fig. 4 is a view in perspective of a column made use of in the modified form of truck. Fig. 5 is a view in perspective of the end of the spring-plank made use of in carrying out my invention. Fig. 6 is an elevation of the lower end of the preferred form of column of which I make use. Fig. 7 is a view in perspective of a plate that is interposed between the spring-plank and the lower arch-bar. Fig. 8 is a vertical sectional view taken approximately on the indicated line 8 8 of Fig. 1.

Referring by numerals to the accompanying drawings, 1 indicates the bolster, which may be of any construction desired, said bolster having the usual column-guides 2 located on its sides adjacent its ends.

3 indicates the spring-plank, which in my improved construction comprises an ordinary channel-bar approximately as long as is the bolster 1, and formed in the flanges of said channel-bar adjacent the ends are oppositely-arranged and aligned rectangular slots or recesses 4. It is essential that these slots 4 be so located as that when the spring-plank 3 is properly positioned relative the bolster 1 they will be in approximately vertical alignment with the column-guides 2.

Interposed between the ends of the bolster 1 and the ends of the spring-plank 3 are the usual springs 5 and arranged to vertically operate within the column-guides 2 and against the sides of the flanges of the spring-plank are the usual columns 6. Screwed into apertures 7 formed in the flat inner faces of said columns 6 are the shanks of square-headed bolts 8, the heads of said bolts bearing directly onto the top face of the spring-plank 3. The top arch-bars, 9, pass in the usual manner over the ends of the bolster 1 and directly over the top ends of the columns 6. The lower arch-bars, 10, pass beneath the ends of the spring-plank 3 and lie within the rectangular slot or notches 4 formed in the flanges of said spring-plank. Interposed between these lower arch-bars, 10, and the body of the spring-plank 3 are plates 11, the edges 12 of which are turned downwardly to engage the side edges of the lower arch-bars, 10. Passing beneath the lower arch-bars, 10, are the usual brace-bars 13.

15 15 indicate brace-bars, a pair of which is arranged on each side of the bolster and spring-plank, and said bars extend from the flanges of the spring-plank 3 adjacent the notches or slots 4 therein diagonally upward, crossing one another, and the upper ends of said bars 15 are given a quarter of a turn in a horizontal plane, as indicated by 16, and said ends lie directly upon the top arch-bar, and slight hooks 17 are formed around the edges of said top arch-bar. Bolts 18 pass through these horizontally-arranged ends 16, through the top arch-bars, the columns 6, the lower arch-bars and the brace-bars 13, there being nuts 19 located upon the lower screw-threaded ends of said bolts 18.

Passed through the lower ends of each pair of these brace-bars 15 and through the flanges of the spring-plank 3 are bolts 20, the same being locked or held in proper position by cotter-keys 21.

In the modified form of the device shown in Fig. 2, the columns 6 are constructed on their upper ends with integral oppositely-arranged ears 22, between which the top arch-bars engage when in proper position. Similar lugs 23 are formed at the lower ends of the columns, between which lugs the lower arch-bars engage. When this special form of column is used, a lug 24 is cast integral with the inner flat face of said column, said lug 24 performing the function of the headed bolts 8. In this construction, lugs 25 are formed integral with and extend outwardly

and downwardly from the inner side of the columns, and formed in the front faces of said lugs 25 are dovetailed recesses 26. The bars 15 in this construction have their ends dovetailed, as indicated by 27, to engage in the dovetailed recesses 26, and rivets or bolts 28 are passed through said dovetailed ends 27 and through the lugs 25, thereby locking said bars to the columns.

By my improved construction all lateral swinging movement of the columns is very effectually prevented and none of said columns, or parts carried thereby, can swing out of alignment when the car-body abnormally depresses one side of the bolster.

In the preferred form of the construction the ordinary bolsters, columns, and spring-plank do not need to be changed in anywise. Therefore said construction can be applied to the trucks now in common use at a very slight cost and with slight expenditure of time and labor. By slotting the flanges of the spring-plank seats are provided for the lower arch-bars and the same are very effectually locked in said slots or recesses. In turn said spring-plank is more effectually locked in position by providing the headed bolts 8 or the lugs 24.

A car-truck of my improved construction possesses superior advantages in point of simplicity, durability, and general efficiency, and may be expeditiously and cheaply replaced in case of accident or breakage.

I claim—

1. In combination with the spring-plank and columns of a car-truck, pairs of crossed brace-bars having their lower ends fixed to the spring-plank and their upper ends fixed to the upper ends of the columns.

2. In a car-truck, the combination of the bolster, a channel-bar arranged beneath said bolster to perform the function of a spring-plank, said channel-bar having its flanges recessed to receive the lower arch-bars, columns arranged in the usual manner between the upper and lower arch-bars, headed bolts passed into said columns, the same engaging on the top surface of the channel-bar, and pairs of crossed brace-bars having their lower ends fixed to the flanges of the channel-bar and their upper ends bolted to the top arch-bars immediately above the columns.

3. A car-truck, comprising the usual bolster, a channel-bar performing the function of a spring-plank arranged beneath said bolster, said channel-bar being constructed with recesses or slots in its flanges to receive the lower arch-bar, vertically-arranged columns, pairs of ears formed integral with the upper and lower ends of said columns to form seats for the top and bottom arch-bars, and crossed brace-bars having their lower ends fixed to the flanges of the channel-bar, the upper ends of said brace-bars being secured to the upper portions of said columns, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. WANDS.

Witnesses:
JOHN C. HIGDON,
MAUD GRIFFIN.