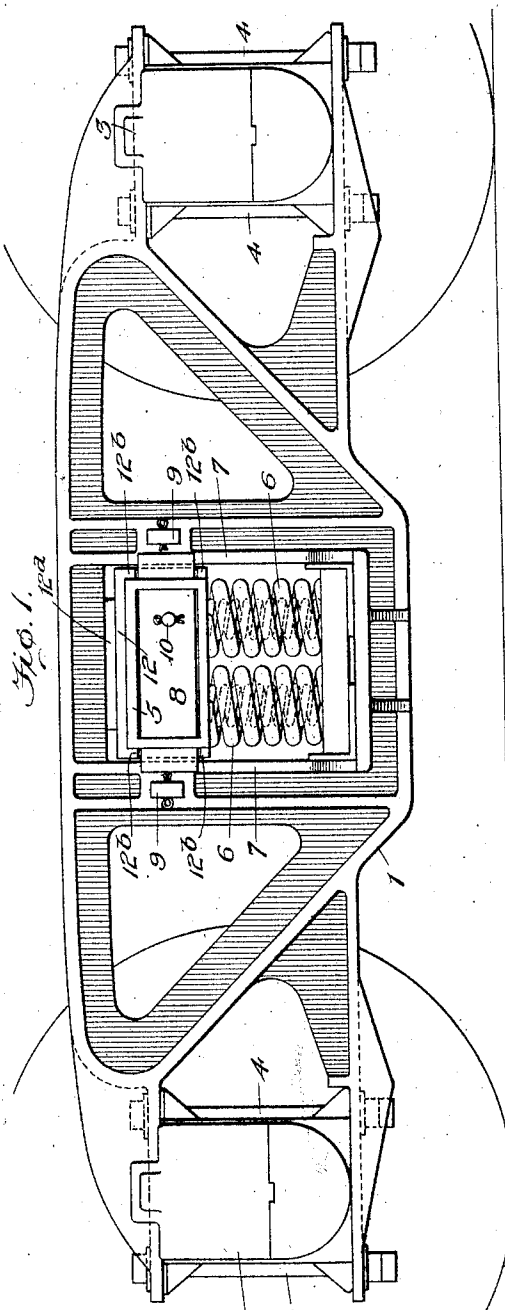
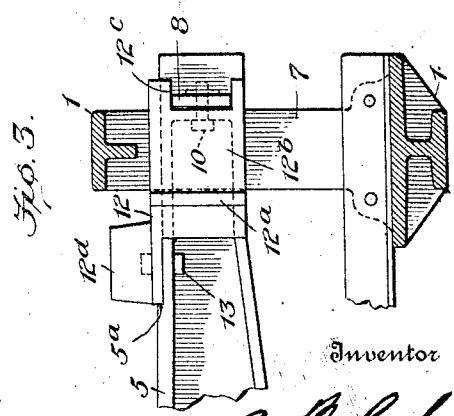
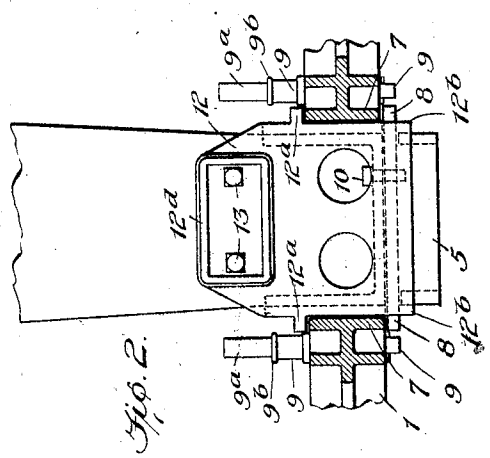
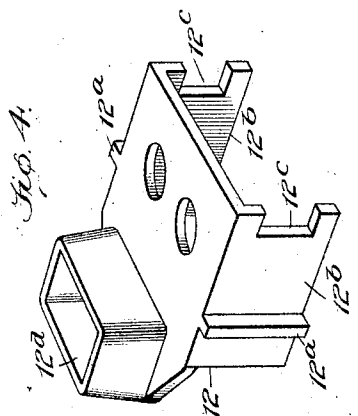


977,707.



Witnesses
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CAR TRUCK.

APPLICATION FILED MAR. 23, 1910.

Patented Dec. 6, 1910.

3 SHEETS—SHEET 2.

977,707.

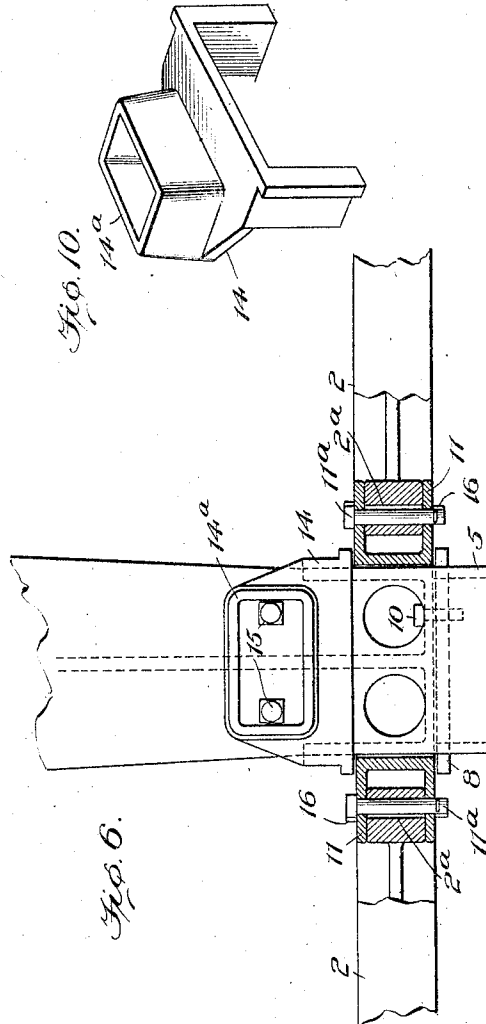
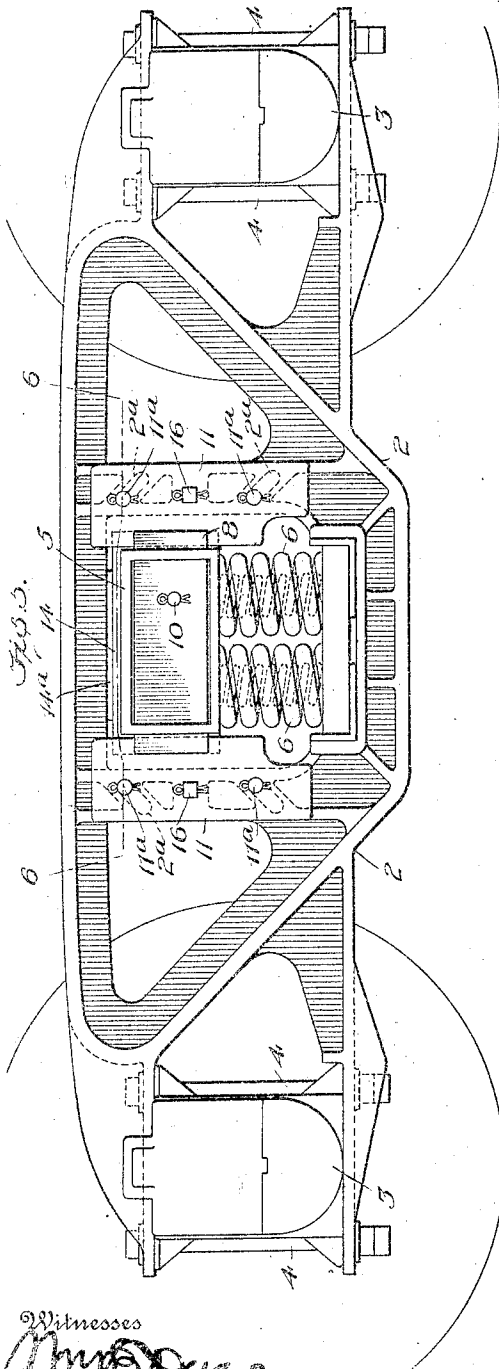


Fig. 10.

Fig. 6.

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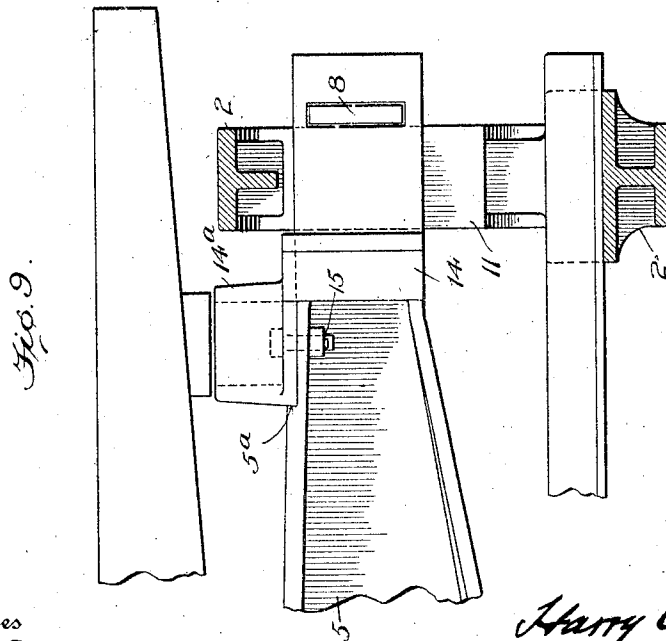
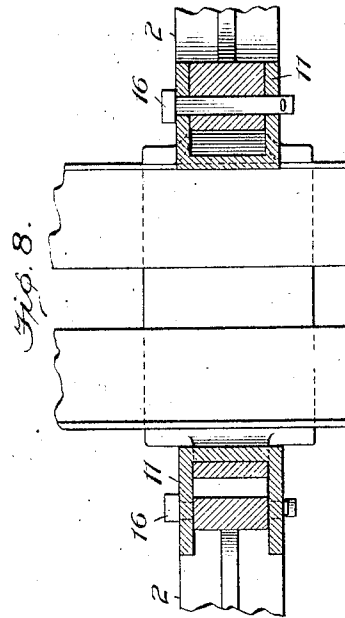
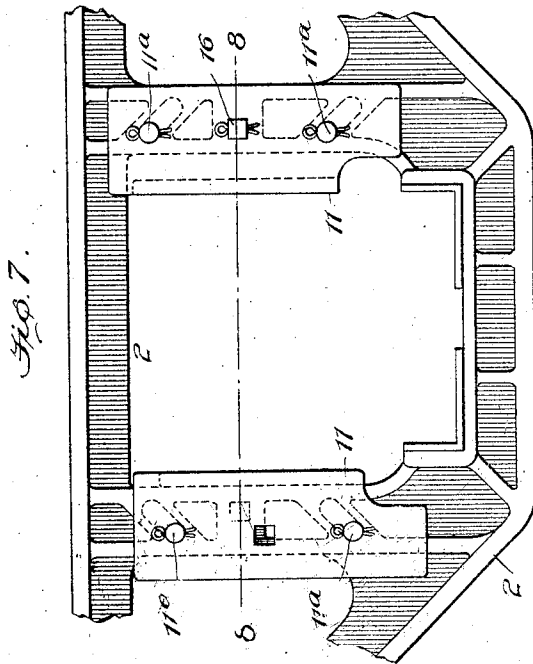
CAR TRUCK.

APPLICATION FILED MAR. 28, 1910.

Patented Dec. 6, 1910.

3 SHEETS-SHEET 3.

977,707.



Witnesses
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UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

977,707.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed March 28, 1910. Serial No. 552,009.

To all whom it may concern:

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction of trucks for railway vehicles, and is particularly directed to such a combination and arrangement of parts as will permit bolsters of various dimensions to be employed with a single form of side-frame and will also permit the facile replacement of damaged truck-bolsters without the necessity of dismantling the truck.

There are other, minor, objects of invention involving particular combinations and features of elemental construction, all as will hereinafter more fully appear.

In the drawings chosen for the purpose of illustrating my invention, the scope whereof is pointed out in the claims, Figure 1 is a side view of a car truck embodying my invention; Fig. 2 is a detail view of a portion of the truck illustrated in Fig. 1, the side frame being in horizontal section and the adjacent end of the bolster and associated parts being in plan; Fig. 3 is a detail view of the construction shown in Fig. 1, the bolster and associated parts being in elevation and the side frame being in vertical, central section; Fig. 4 is a detail perspective view of the combined side-bearing, bolster-guide and filler illustrated in the preceding views; Fig. 5 is a side elevation of a truck embodying a modified form of my invention; Fig. 6 is a detail view taken in the plane of the line 6-6, Fig. 5; Fig. 7 is a detail side elevation of the side-frame and adjustable columns shown in Fig. 5, one of the columns being shown in the position it occupies when the truck is assembled, and the other column being illustrated in the position it occupies when the bolster is to be placed in position or withdrawn; Fig. 8 is a horizontal section taken in the plane of the line 8-8, Fig. 7; Fig. 9 is a detail view of the construction illustrated in Fig. 5, showing the relation of the body bolster thereto, the bolster and associated parts being in elevation and the

side-frame being in vertical central section; and Fig. 10 is a detail perspective view of the combined side-bearing and bolster guide employed in the modified form of my invention.

Like symbols refer to like parts wherever they occur.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

Only one half of each form of truck illustrated in the drawings will be described, since both sides of each truck structure are identical.

In the construction illustrated in the drawings, 1 indicates the side frame shown in Figs. 1 to 4, inclusive, while 2 indicates the side frame of the modified form of construction shown in the remaining figures of the drawings. The journal boxes 3, which may be of any well known or desired type, may be secured to the side frames in any suitable manner, journal-box bolts 4 such as are ordinarily employed being here illustrated. It will be understood, however, that the form of the journal-boxes and the manner of their application to the side frames is wholly immaterial so far as my present invention is concerned.

Generally speaking, any type of body bolster may be employed with either form of side frame; but as my invention is especially directed to the production of a structure in which repairs may be readily effected when the truck is in service, I have chosen for purposes of illustration a bolster 5 which is of a type that is wider and deeper at its center than at its ends, since, as hitherto constructed, trucks employing bolsters of such relative dimensions have had to be dismantled in order to remove and replace the bolster.

Each of the side frames 1 and 2 is formed with a centrally located bolster opening which exceeds in width and depth the greatest corresponding dimensions of the bolster employed therewith. The ends of the bolster which project into these bolster openings rest upon bolster-springs 6 that transmit the load of the car body to the side-frames.

In the form of construction illustrated in Figs. 1 to 4, inclusive, the side-frame 1 is shown as formed with integrally connected, vertically extending columns 7 which border the sides of the bolster opening and which are adapted to be slidably engaged by a

bolster guide member 8 that is detachably secured to the outer end of the bolster 5. The columns 7 of this form of side frame may be, and preferably are, provided with apertures or sockets which are adapted to receive removable brake-beam hanger supports 9 that extend inwardly upon each side of the bolster 5. When thus arranged these hanger supporting members 9, which are preferably formed with journal ends 9^a to receive the hangers and with shoulders 9^b for maintaining said hangers in proper position with respect to the side frames, afford efficient supports for the brake beams, maintaining them in proper position with respect to the wheels and thus increasing the efficiency of the brakes by eliminating any twisting strains upon the brake beams such as would result in uneven wear of the brake shoes.

The bolster guides 8, which, as shown, may be conveniently mounted in slots formed in the ends of the bolster and secured in proper position therein by suitable means, such, for example, as the bolt 10, are arranged to slidably engage the outer faces of the side-frame columns, said columns being either formed as integral portions 7 of the side-frame 1, or consisting of adjustable columns 11 movably mounted on the side-frame 2, as shown in the modified form of construction illustrated in Figs. 5 to 10, inclusive, of the drawings.

The inner bolster guides 12 employed in connection with the side-frames 1 are preferably formed as saddle members which straddle the ends of the bolster 5 and are secured thereto by means of bolts 13, it being desirable to form the bolster with shoulders, such, for example, as those shown at 5^a, in order to provide thrust bearings for the guides 12 to thus relieve the bolts 13 of shearing strains. Each of these inner bolster-guides 12, which, as indicated at 12^a, 12^b, extend laterally for a sufficient distance to engage the inner faces of the columns 7 of the side-frame, is preferably provided with integrally connected fillers 12^b which, when the truck is assembled, extend into the bolster-openings in their respective side-frames 1 and fill or substantially fill the spaces between the bolster 5 and the truck columns 7.

In order to assist in maintaining the inner bolster-guides 12 in proper position on the bolster, the outer ends of the fillers 12^b are preferably formed with notches or recesses 12^c which are adapted to receive and conform to the adjacent outer bolster-guide 8. By this means also the inner and outer bolster-guides are maintained in proper spaced relation, as will be readily understood. In order to further insure the integrity of the connection between the bolster 5 and the inner bolster-guides 12 it is preferred to mount upon each of the latter a side-bearing 12^d which is adapted to cooperate with the body side-bearing (see Fig.

9) to assist in maintaining the saddle 12 in place when the truck is in service. As shown in the drawings, the side-bearings 12^d may be of simple box-form cast integral with the bolster-guide saddles 12.

The inner bolster-guide member 14 shown in Figs. 5 to 10, inclusive, is identically the same in construction as the inner bolster-guide 12 just described, except that the fillers 12^b are omitted. It is preferably provided with a side-bearing 14^a corresponding in structure and function to the side-bearing 12^d of the saddle 12, and it may be maintained in position on the end of the bolster 5 by means of bolts 15 corresponding to the bolts 13. In this modified form of construction, instead of interposing fillers 12^b between the bolster 5 and truck columns 7 formed integral with the side-frame, the side-frame 2 is provided with adjustable columns 11 which may be moved toward each other to extend between the outer bolster-guide 8 and the inner bolster-guide 14 to thus maintain the connection of the bolster and side-frames, or which may be separated to permit the bolster to be placed in position or withdrawn. To permit the adjustment of the vertically extending columns 11 the side-frame 2 is preferably provided with inclined slots 2^a for the reception of bolts or pins 11^a which pass through holes in the adjustable columns 11 and are secured in place by means of cotters. When the truck is assembled the columns 11 may be conveniently maintained in adjusted position by means of pins 16 which are adapted to pass through registering holes formed in the columns 11 and the side-frame, as will be readily understood.

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

1. In a car truck, the combination with side-frames each having a bolster opening therein and columns adjacent to said opening, of a bolster, a bolster guide at each end of and removably secured to said bolster and adapted to overlap the outer faces of the columns of the respective side-frames, and a bolster guide at each end of and removably secured to said bolster and adapted to overlap the inner faces of the columns of the respective side-frames.

2. In a car truck, the combination with side-frames each having a bolster opening therein and columns adjacent to said openings, of a bolster which is wider intermediate of its ends than at its ends, inner and outer bolster guides mounted on each end of said bolster, and side bearings mounted upon said inner bolster guides.

3. In a car truck, the combination with side-frames, of a bolster having slotted ends, bolster guides fitting in the said slotted ends of the bolster and overlapping their respec-

tive side-frames, and bolster guides mounted on said bolster and overlapping their respective side-frames.

4. In a car truck, the combination with
5 side-frames each of which is provided with
columns, of a bolster, outer bolster-guides
overlapping the outer faces of the columns
of their respective side-frames, and inner
bolster-guides which are secured to and
10 straddle the bolster and overlap the inner
faces of the columns of their respective side-
frames.

5. In a car truck, the combination with
side-frames each of which is provided with
15 columns, of a bolster, outer bolster-guides
overlapping the outer faces of the columns
of their respective side-frames, inner bolster-
guides which are secured to the bolster and
overlap the inner faces of the columns of
20 their respective side frames, and a side bearing
mounted on each of said inner bolster-
guides.

6. In a car truck, the combination with
side-frames each of which is provided with
25 columns, of a bolster, outer bolster-guides
overlapping the outer faces of adjacent
columns, inner bolster-guides which are secured
to and straddle the bolster and overlap
the inner faces of the columns of their
30 respective side-frames, and a side-bearing
mounted upon each of said inner bolster-
guides.

7. In a car truck, the combination with
side-frames each of which is provided with
35 columns, of a bolster, bolster-guides mounted
on each end of the bolster and overlapping
their adjacent columns, and bolster-guides
mounted on the bolster and provided with

fillers interposed between the said bolster
and adjacent columns.

8. In a car truck, the combination with
side-frames, of a bolster, bolster-guides
mounted on said bolster and overlapping
their respective side-frames, bolster-guides
45 mounted on the bolster and provided with
fillers extending between the bolster and
their respective side-frames, and a side-
bearing mounted on each of the last-named
bolster-guides.

9. In a car truck, the combination with
side-frames, of a bolster, bolster-guides
50 mounted on said bolster and overlapping
their respective side-frames, and side-bear-
ings, some of said bolster-guides and side-
bearings being integrally connected.

10. In a car truck, the combination with
side-frames each of which is provided with
columns, of a bolster having slotted ends,
outer bolster-guides mounted in the slotted
ends of said bolster and overlapping the
60 outer faces of their adjacent columns, inner
bolster-guides mounted upon and straddling
the bolster, and side-bearings mounted upon
said inner bolster-guides, said inner bolster-
guides being provided with fillers which extend
65 between the bolster and adjacent columns
and which are provided with recessed
ends receiving the adjacent outer bolster-
guide.

In testimony whereof I affix my signature, 70
in presence of two subscribing witnesses.

HARRY C. BUHOUP.

Witnesses:

HARRY W. STANNARD,
D. B. MASON.