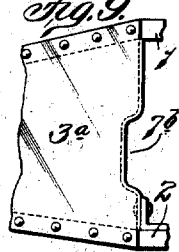
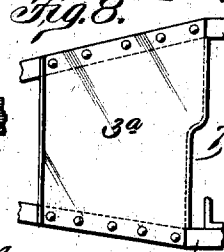
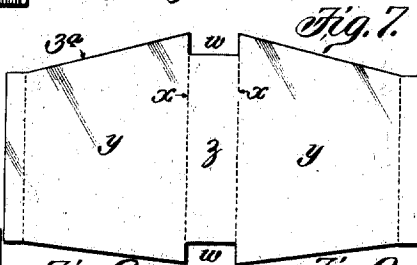
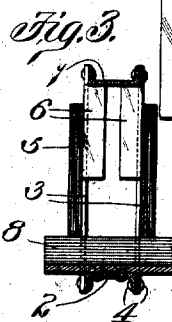
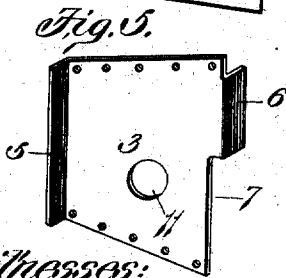
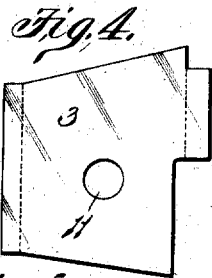
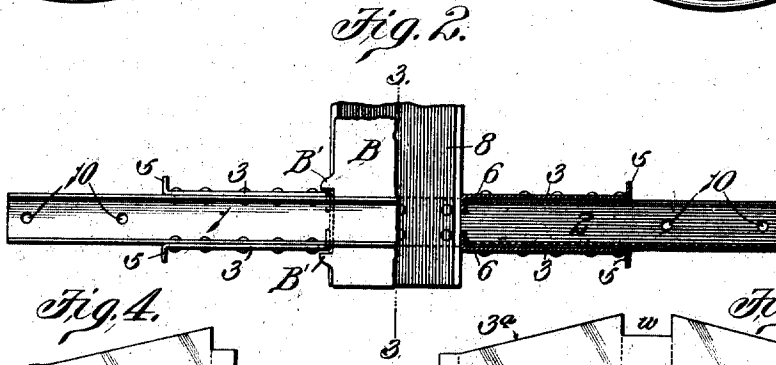
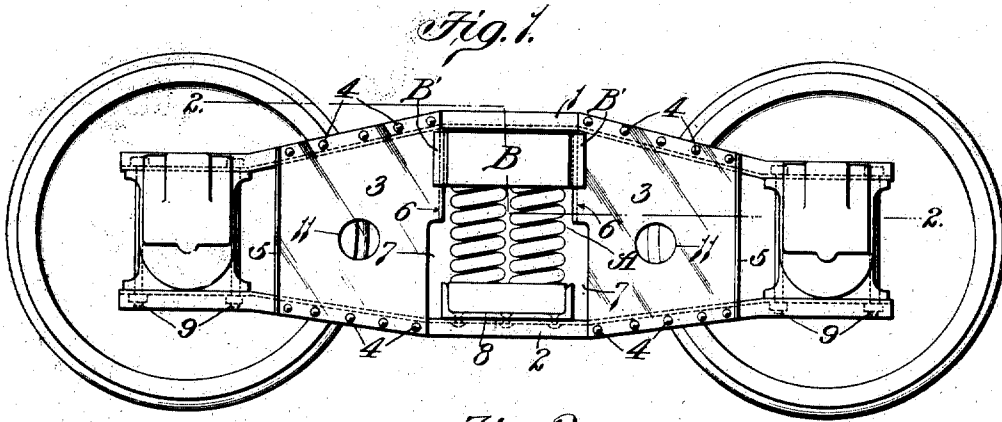


V. M. SUMMA.
CAR TRUCK SIDE FRAME.
APPLICATION FILED FEB. 3, 1911.

1,002,335.

Patented Sept. 5, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

VICTOR M. SUMMA, OF WEBSTER GROVES, MISSOURI.

CAR-TRUCK SIDE FRAME.

1,002,335.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed February 3, 1911. Serial No. 606,376.

To all whom it may concern:

Be it known that I, VICTOR M. SUMMA, a citizen of the United States, residing at Webster Groves, Missouri, have invented a certain new and useful Improvement in Car-Truck Side Frames, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to side frames for car trucks.

The main object of my invention is to provide a strong and serviceable truck side frame that can be manufactured at a low cost.

Another object is to provide a side frame that can be built from commercially-rolled members or pressed members and metal plates. And still another object is to provide a strong and inexpensive side frame of girder construction that is constructed to receive a bolster provided with integral column guides.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a side elevational view of a car truck side frame constructed in accordance with my invention; Fig. 2 is a top plan view partly in horizontal section taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a side elevational view of one of the web plates; Fig. 5 is a perspective view of said web plate; Fig. 6 is a cross sectional view illustrating a pressed metal member used to form the top chord of the side frame; Fig. 7 is a side elevational view of a web plate of slightly different construction from the one shown in Fig. 4; Fig. 8 is a side elevational view illustrating the web plate shown in Fig. 7 embodied in a side frame; and Fig. 9 is a side elevational view illustrating a web plate of slightly different construction from the one shown in Fig. 8.

Referring to Fig. 1 of the drawings, which illustrates the preferred form of my invention, 1 and 2 designate two members which form the top and bottom chords, respectively, of a girder, and 3 designates vertically disposed web plates which are connected to said members. In the embodiment of my invention shown in Fig. 1, four web plates 3 are used, two of said plates being arranged on opposite sides of the members

1 and 2 at one side of the bolster opening A, and the other two plates being arranged on opposite sides of the members 1 and 2 at the other side of said bolster opening. The top and bottom members 1 and 2 of the side frame are preferably of channel-shape in cross section arranged with the side flanges or legs of the member 1 projecting upwardly and the side flanges of the member 2 projecting downwardly, said members 1 and 2 being formed either from commercially-rolled channels, as shown in Fig. 3, or from channel-shaped pressed members, as shown in Fig. 6. While I prefer to use channel-shaped members to form the top and bottom chords of the side frame I could, of course, use members of a different shape in cross section and therefore I do not wish it to be understood that my invention is limited to a girder side frame having channel-shaped chords.

The web plates 3 are connected to the side flanges of the top and bottom members in any suitable manner as, for example, by means of rivets 4 or other suitable fastening devices, and said plates are provided at their outer ends with laterally projecting stiffening flanges 5 and at their inner ends with laterally projecting flanges 6, said flanges 5 and 6 being formed integral with the web plates, as herein shown, or formed from pieces of angle iron. The flanges 6, of the pair of web plates at each side of the bolster opening project inwardly, toward each other, as shown in Fig. 3, so as to form the inner faces of bolster columns which have relatively wide bearing surfaces for the side face of the bolster B, and said plates are notched out or cut away at 7, below said flanges 6, so as to provide a clearance for the integral column guides B' on the bolster when the bolster is being removed or arranged in operative position. Each pair of web plates is spaced apart a distance approximately equal to the space between each pair of column guides B' on the bolster so that said web plates will act as a column for the bolster, and said web plates are so arranged that the upper contracted portion of the bolster opening A will receive the bolster snugly and thus prevent the bolster from moving longitudinally of the side frames.

A spring plank 8 of any preferred design, preferably a channel-shaped member is connected to the bottom chords 2 of the two side

frames of the truck, and the end portions of the top and bottom members of each side frame are connected together by through bolts 9 which are so arranged that openings 5 are provided for the journal-boxes, said bolts 9 passing through openings 10 in the horizontal webs of said top and bottom members. If desired, the web plates can be provided with hand-holes 11 so as to enable 10 the brake-shoes to be gotten at easily.

A side frame of the construction above described is exceptionally strong and light because it is a girder composed of commercially-rolled members or pressed members 15 and metal plates. It can also be built at a low cost and repaired easily, and another desirable feature is that the size and dimensions of said side frame can be modified to meet different conditions or requirements.

20 While I prefer to use four separate plates to form the vertical web of the side frame, said web could be formed from two plates 3^a, as shown in Figs. 7 and 8, each of which is bent or doubled on the dotted lines X in Fig. 25 7 so as to form two side portions y which are connected to the top and bottom chords, and an intermediate portion z that ties the portions y together. The upper and lower edges of the plate 3^a are notched or cut away at w so as to receive the top and bottom chords of the side frame, and the lower part of the intermediate portion z of said plate is pressed at 7^a so as to form a clearance for 35 the column guides B' on the bolster. If desired, a pocket 7^b can be pressed in the intermediate portion z of the plate a short distance above the lower end of same, as shown in Fig. 9, so as to form a clearance for the column guides on the bolster.

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

1. A truck side frame consisting of a built-up girder which is composed of top 45 and bottom chords whose end portions are spaced away from each other so as to form spaces for journal boxes, and vertically disposed web plates connected to said chords.

2. A truck side frame provided with top 50 and bottom members of approximately channel-shape in cross section which form the chords of a girder, and web plates connected to the flanges of said members.

3. A truck side frame consisting of a 55 girder formed from flanged top and bottom members and web plates, said side frame having journal-box openings between said top and bottom members and also a bolster opening whose lower portion is of greater 60 width than its upper portion.

4. A truck side frame of girder construction that consists of flanged members which form the top and bottom chords of the 65 girder, and approximately parallel web plates that are connected to said top and

bottom chords, the end portions of said chords being spaced away from each other so as to provide openings or spaces in which the journal boxes are arranged.

5. A truck side frame provided with top 70 and bottom members of substantially channel-shape in cross section, and separate vertically disposed web plates connected to the flanges of said members and arranged in such a manner that an opening is provided 75 for the bolster.

6. A truck side frame, comprising top and bottom chords of substantially channel-shape in cross section, and vertically disposed web plates connected to the flanges of 80 said chords, said web plates having portions which provide a relatively wide bearing surface for the side faces of the bolster.

7. A truck side frame having top and bottom members of substantially channel-shape 85 in cross section, and vertically disposed web plates embracing said members and connected to the flanges of same, said web plates being so arranged and constructed that the side frame can be used with a bolster provided with integral column guides. 90

8. A truck side frame comprising substantially channel-shaped top and bottom members that form the chords of a girder, the top member being arranged with its side flanges 95 projecting upwardly and the bottom member being arranged with its side flanges projecting downwardly, and vertically disposed web plates connected to said side flanges and provided with portions that form the inner 100 faces of vertically disposed columns.

9. A truck side frame comprising substantially channel-shaped top and bottom members that form the chords of a girder, 10 the top member being arranged with its side flanges projecting upwardly and the bottom member being arranged with its side flanges projecting downwardly, and vertically disposed web plates connected to said side flanges and provided with portions that 11 form the inner faces of vertically disposed columns, said web plates being so constructed that a comparatively wide bolster opening is formed below said columns.

10. A truck side frame, comprising top 11 and bottom members of substantially channel-shape in cross section, approximately vertically disposed web plates connected to the side flanges of said members, flanges on said plates which form the inner faces of 12 bolster columns, and independent strengthening flanges on said plates.

11. A truck side frame of girder construction that consists of approximately channel-shaped top and bottom chords, pairs of 13 approximately vertically disposed web plates connected to the flanges of said chords and embracing said chords, said plates being so arranged that an opening is provided for a 14 bolster, means on said plates which provides 15

a clearance for a bolster having integral column guides, and members which connect the end portions of said chords together.

12. A truck side frame having top and
5 bottom chords which consist of commercially-rolled channels arranged with their side flanges projecting in opposite directions, two pairs of vertically disposed web plates arranged on opposite sides of said
10 members and connected to the flanges thereof, inwardly projecting flanges on said

plates which form the inner faces of bolster columns, and devices which connect the end portions of said top and bottom members together.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this thirtieth day of January 1911.

VICTOR M. SUMMA.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKEWELL.