

No. 614,269.

Patented Nov. 15, 1898.

F. H. KINDL.
SIDE FRAME FOR CAR TRUCKS.

(Application filed June 23, 1898.)

(No Model.)

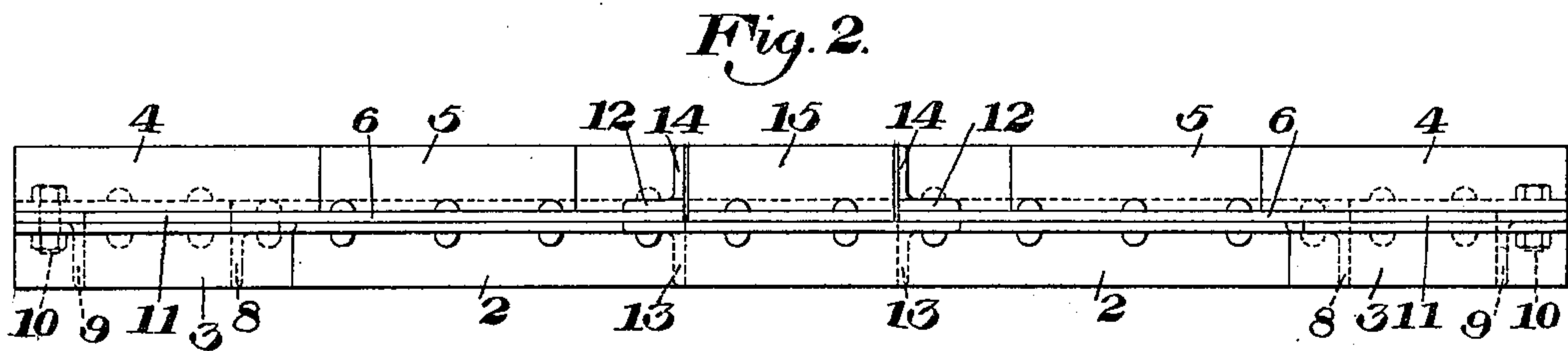
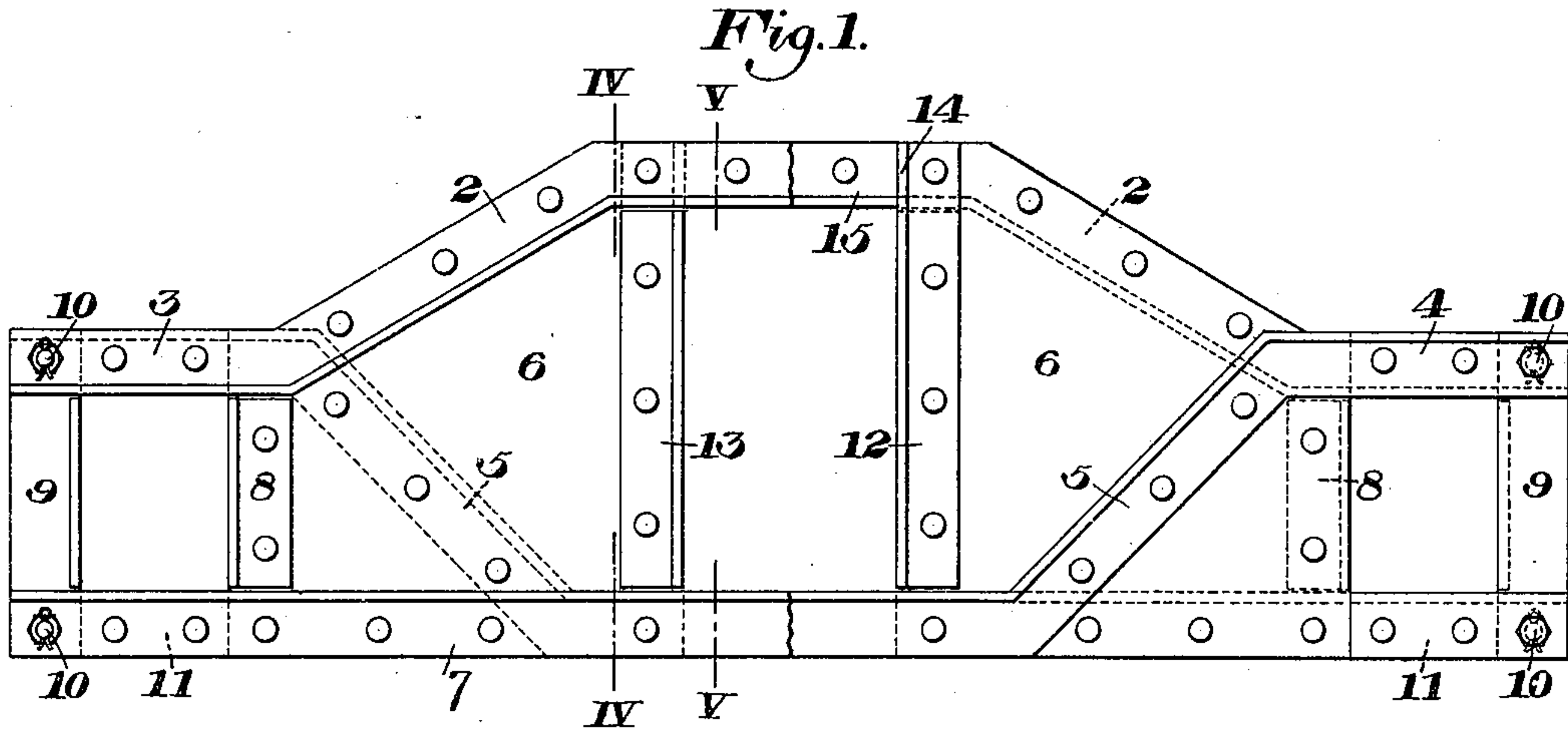


Fig. 3.

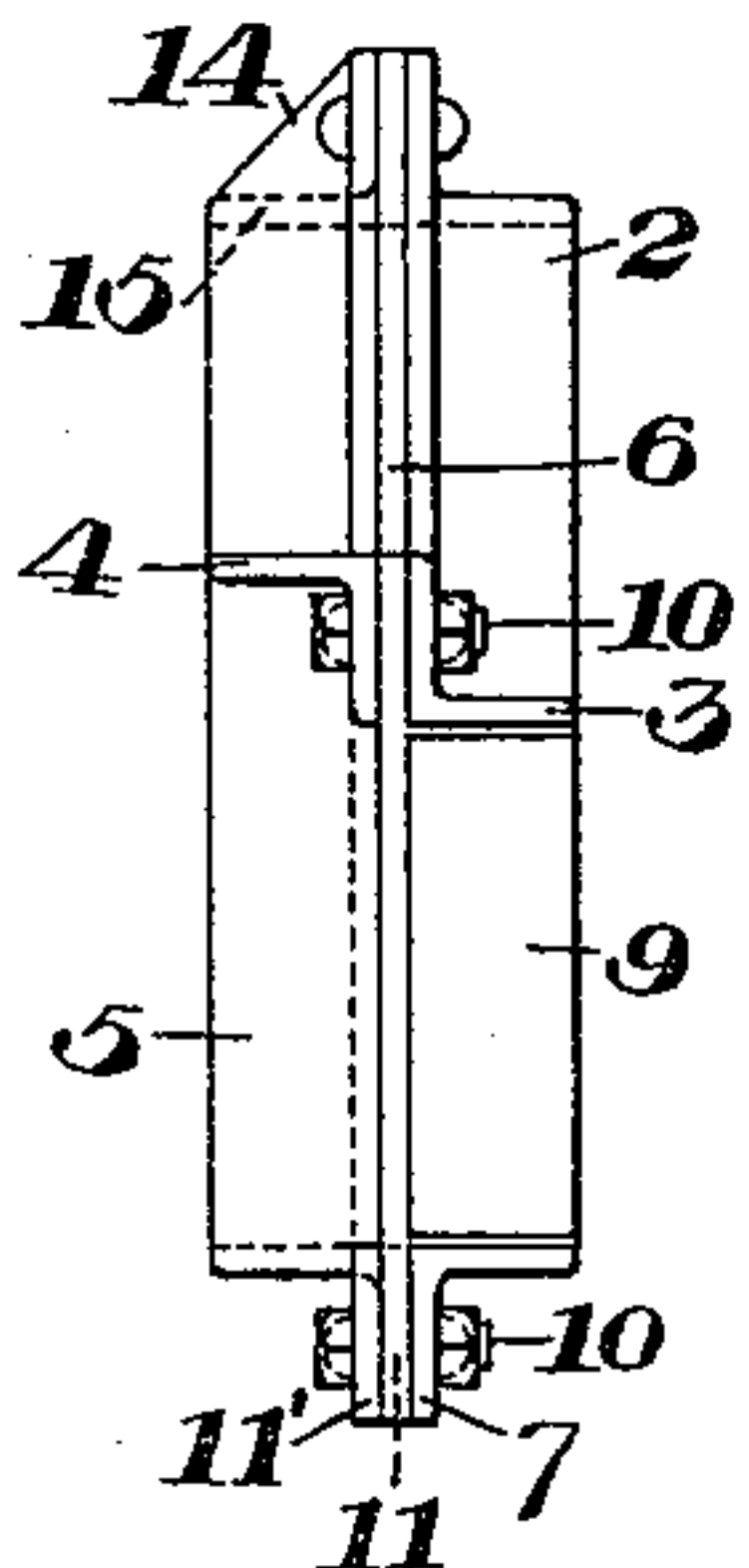


Fig. 4.

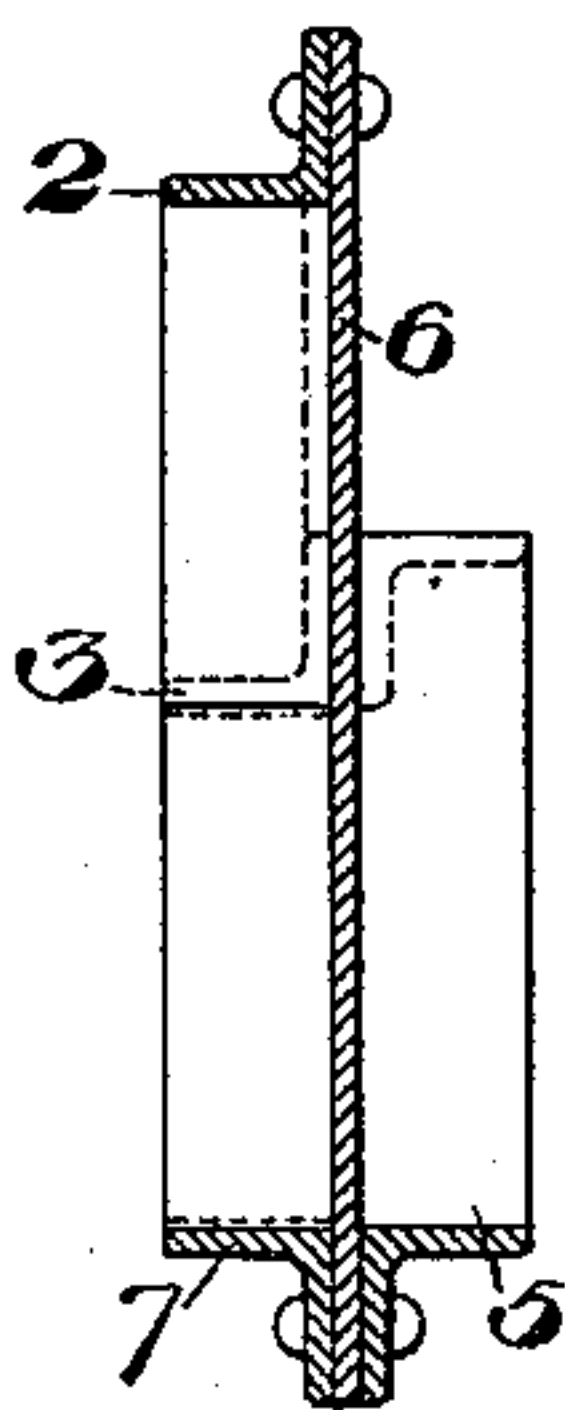
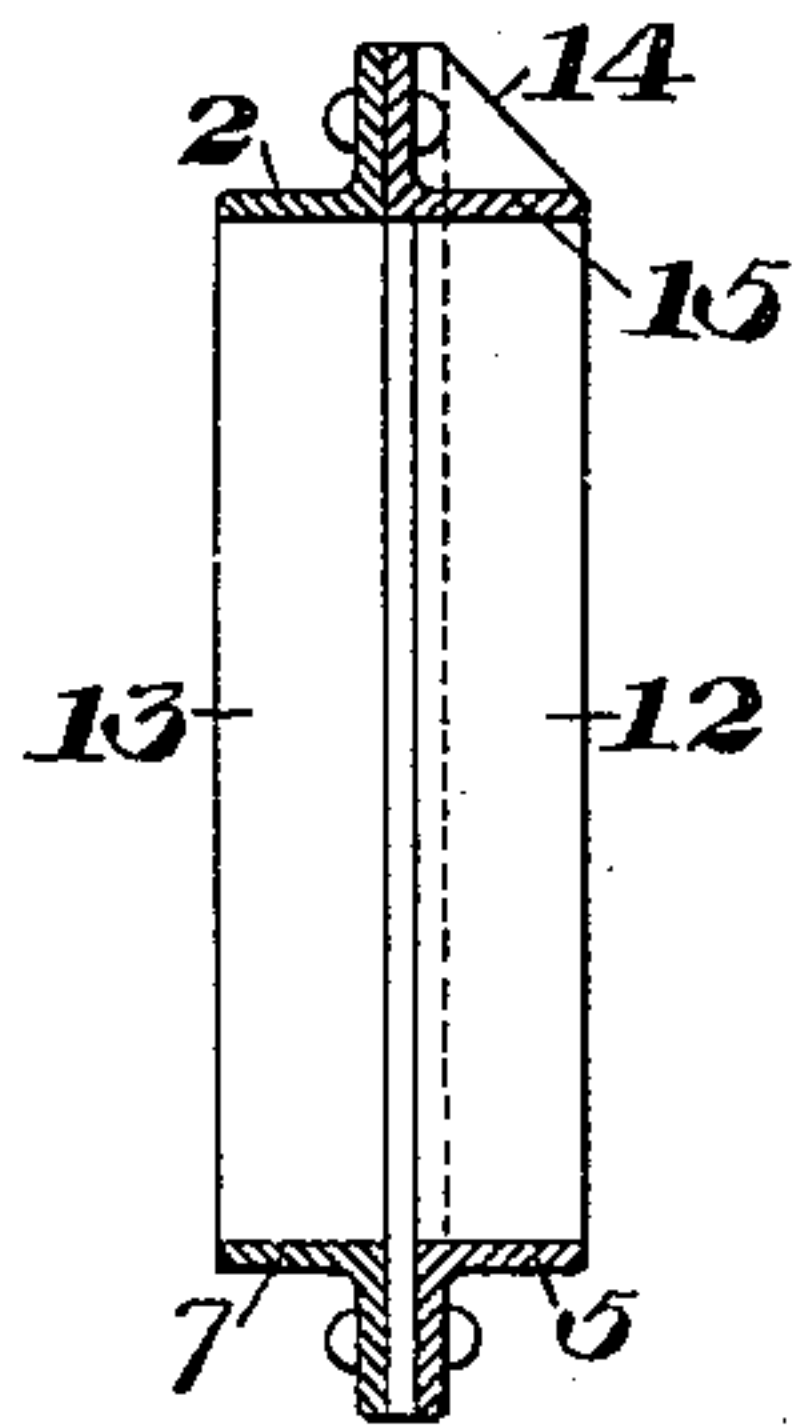


Fig. 5.



WITNESSES

Warren W. Swartz
S. J. Doldship

INVENTOR

F. H. Kindl
by Baker & Baker
his attys.

UNITED STATES PATENT OFFICE.

FREDERICK H. KINDL, OF PITTSBURG, PENNSYLVANIA.

SIDE FRAME FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 614,269, dated November 15, 1898.

Application filed June 23, 1898. Serial No. 684,293. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK H. KINDL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Side Frames for Car-Trucks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my improved side frame, the left-hand half being an outside view and the right-hand side being an inside view. Fig. 2 is a plan view. Fig. 3 is an end view, and Figs. 4 and 5 are cross-sections on the lines IV IV and V V of Fig. 1.

My invention relates to the side frames employed upon car-trucks, and is designed to stiffen and strengthen what is known as the "arch-bar" type of side frame and to do away with the vertical through-bolts heretofore employed with such frames.

In the drawings, 2 represents the top member, which consists of an angle-line having its central portion bent into arch form, while its ends 3 3 form the tops of the pedestals. To these end portions 3 3 are riveted corresponding end portions 4 4 of another angle-iron 5, having its flanges projecting in the opposite direction from its upper edge, the intermediate part of this angle being bent into depending arch form and extending along the base of the bolster-opening, across the top of which the upper arch angle-bar extends.

6 6 are web-plates which are riveted to the angle arch-bars and extend on each side from the bolster-opening to the pedestal. A lower horizontal angle-iron 7 is riveted to the lower ends of these plates and to the lower portion of the depending arch-angle. The sides of each pedestal are formed by vertical angle-bars 8 and 9, of which the bar 8 extends between the portion 3 of the upper angle and the lower angle 7, and is riveted directly to the web-plate 6, while the ends of the angle 9 are shaped to fit between the angles 3 and 4 by cutting away the end portions of the flanges. This angle-iron 9 is removably bolted in place by bolts 10, the upper of which passes through the webs of the angles 3 and 4, while the lower passes through the web of the angle 7 and through a plate 11', riveted to a filler-

plate 11, which extends along the base of the pedestal and is riveted to the web of the angle 7. The bolts are thus placed in double shear.

At the sides of the bolster-opening are provided pairs of vertical angle-irons 12 and 13, both of which extend downward to the level of the angle 7, while the one 12 extends to the lower face of the upper angle 2 and the other extends to the top of such angle, its flange preferably being cut away at an angle, as shown at 14. These angles 12 and 13 are riveted to each other through the web-plate, as shown. To strengthen the upper part of the frame above the bolster-opening, I rivet to the angle 2 the short angle 15, which extends between the pairs of angles forming the sides of the opening.

This side frame is applicable to different forms of trucks and presents many advantages both in strength and stiffness and in cheapness of building. It is formed from commercial shapes, and the journal-boxes may be easily removed endwise from the pedestals by loosening the bolts of the angle 9 and slipping out this angle.

Many variations may be made in the form of the arches and the joints of the various parts without departing from my invention.

I claim—

1. An arch-bar side frame having upwardly and downwardly extending arch-shaped members of angle-bar material; substantially as described.

2. An arch-bar side frame having the arch-bars formed of angle-iron, the end portions of which are secured together and form the tops of the pedestals; substantially as described.

3. An arch-bar side frame in which the arch-bars are formed of angle-irons, in combination with vertically-extending angle-irons secured between the arch-bars; substantially as described.

4. An arch-bar side frame having the upper arch-bar made of angle-iron material and a removable outer pedestal portion detachably secured to the angle-iron arch-bars; substantially as described.

5. An arch-bar side frame, having upper and lower arches formed of angle-bar material, the ends of these angle-bars being se-

cured together above the pedestal and a lower horizontal extending angle-iron forming the base of the pedestals and secured to the lower arch-bar; substantially as described.

5 6. An arch-bar side frame having an upper and lower arch-bar each formed of angle-iron material, web-plates secured thereto between the central opening and the pedestals, and
10 vertically-extending angle-irons secured to the arch-bars and to the web-plates; substantially as described.

7. An arch-bar side frame, comprising an upper and lower arch-bar, each formed of angle-iron material and having their ends se-
15 cured together above the pedestals, a lower horizontal angle-iron forming the base of the pedestals and the central opening, web-plates secured to the arch-bars and the horizontal
20 angle and extending between the central opening and the pedestals, and vertical angle-irons forming the sides of the pedestal and the sides

of the central opening; substantially as described.

8. An arch-bar side frame, comprising an upper and lower arch-bar, each formed of 25 angle-irons with their flanges extending in opposite directions, and having their ends secured together above the pedestals, a lower horizontal angle-iron forming the base of the pedestals and of the central opening, vertical 30 connecting members between the parts and detachable outer side members for the pedestals removably secured to the arch-bars and the lower horizontal angle-irons; substantially as described. 35

In testimony whereof I have hereunto set my hand.

FREDERICK H. KINDL.

Witnesses:

GEO. B. BLEMMING,
E. SMITH.