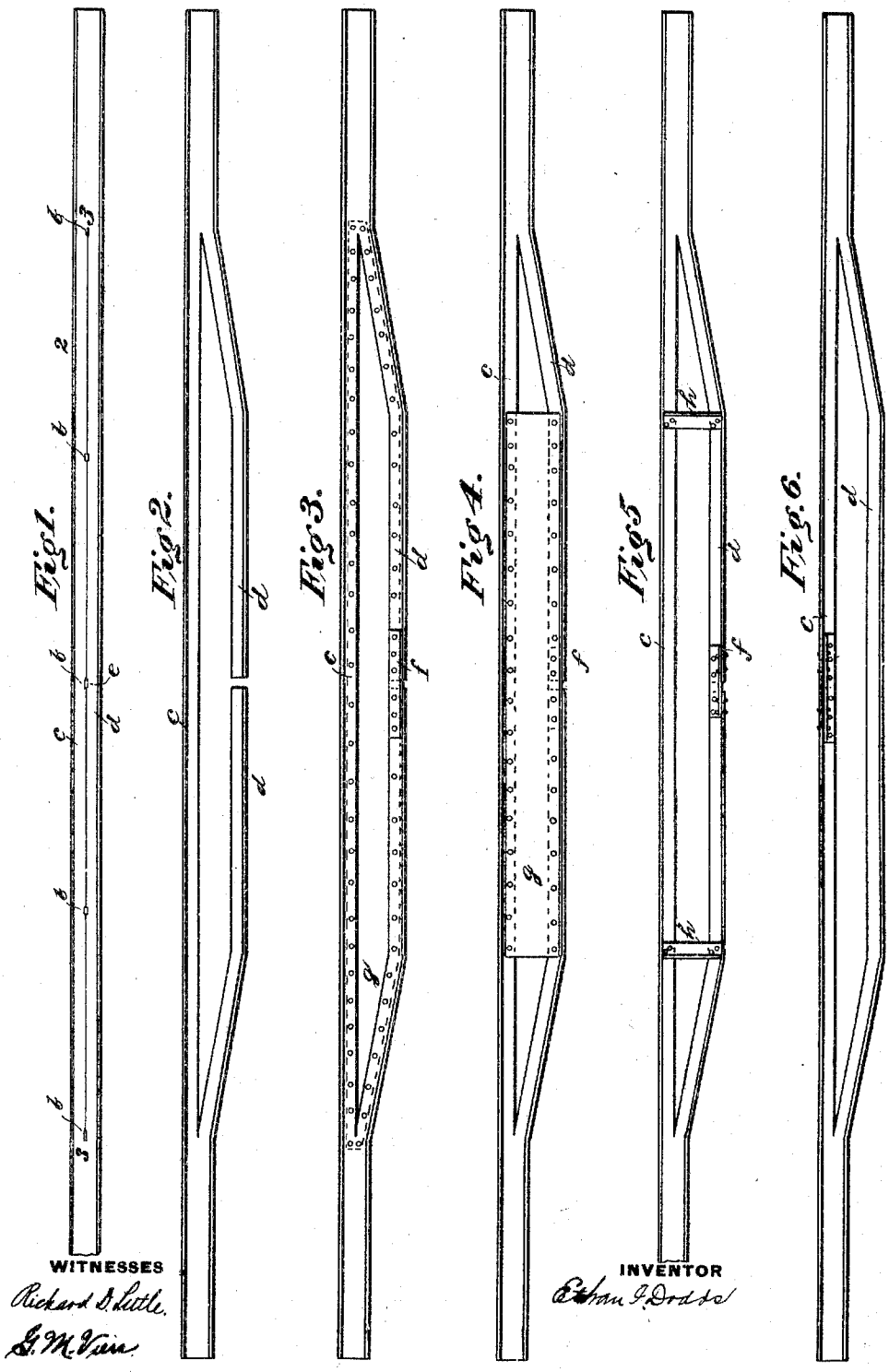
No. 776,175. PATENTED NOV. 29, 1904.

E. I. DODDS.

CAR PART.

APPLICATION FILED FEB. 23, 1904.

NO MODEL. 4 SHEETS—SHEET 1.



WITNESSES

Richard S. Little.

G. M. Vain.

INVENTOR

Edwin I. Dodds

No. 776,175. PATENTED NOV. 29, 1904.

E. I. DODDS.

CAR PART.

APPLICATION FILED FEB. 23, 1904.

NO MODEL. 4 SHEETS—SHEET 2.

Fig. 7.

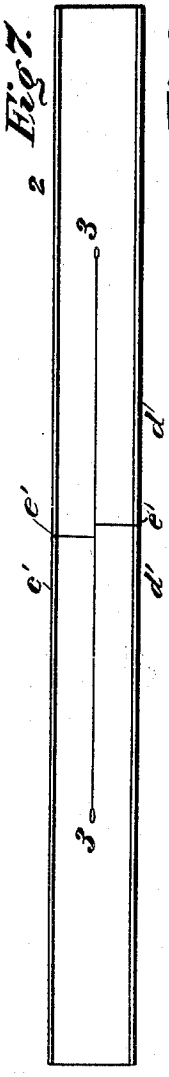


Fig. 8.

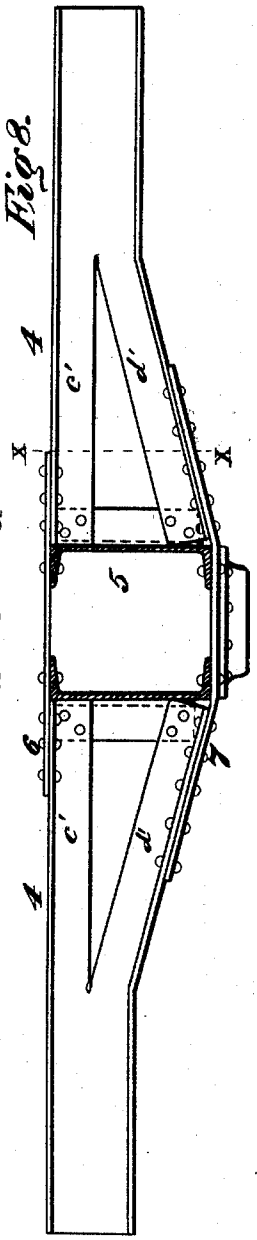


Fig. 9.

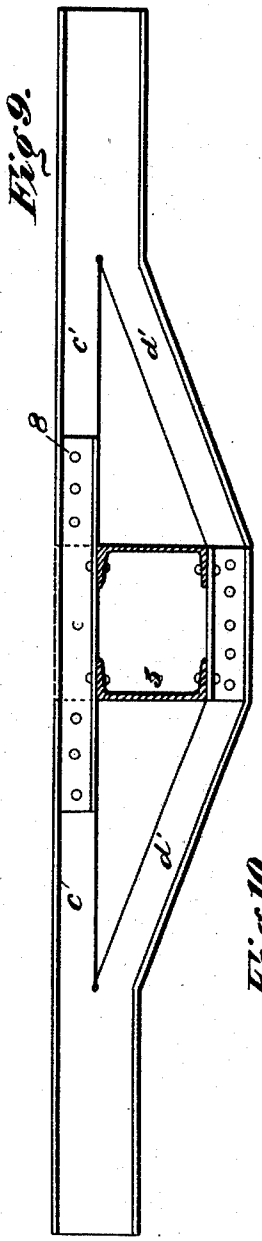


Fig. 11.

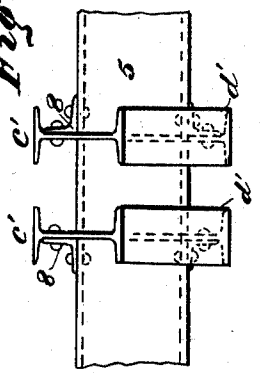
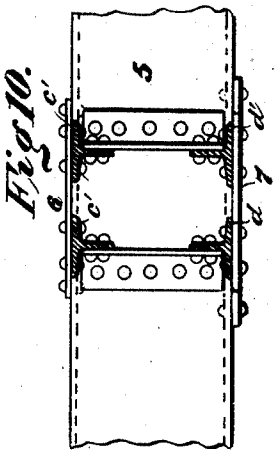


Fig. 10.



WITNESSES

Richard D. Little.

A. M. View

INVENTOR

Ethan I. Dodds

No. 776,175. PATENTED NOV. 29, 1904.

E. I. DODDS.

CAR PART.

APPLICATION FILED FEB. 23, 1904.

NO MODEL. 4 SHEETS—SHEET 3.

Fig. 12.

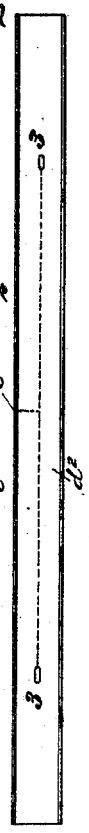


Fig. 13.

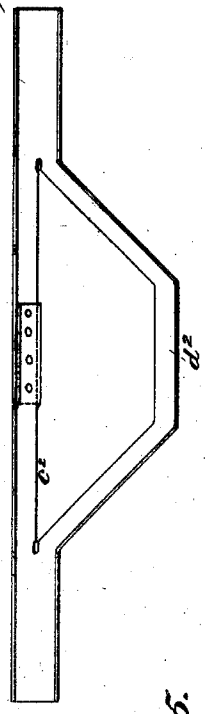


Fig. 15.



Fig. 14.

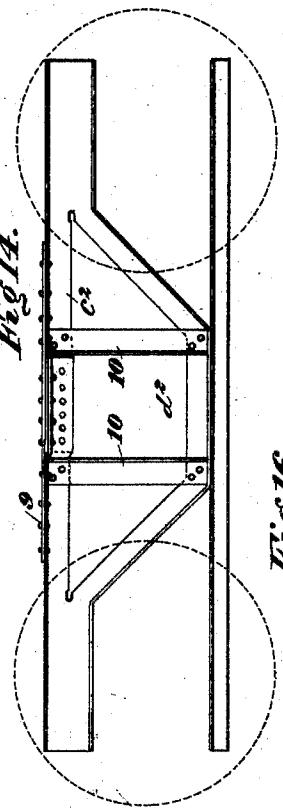
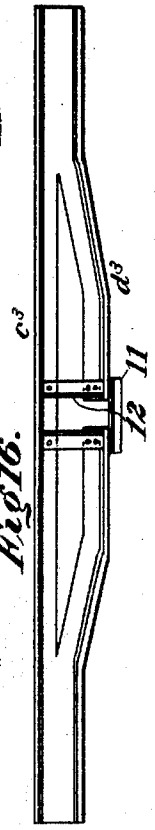


Fig. 16.



WITNESSES

Richard S. Little

G. M. Viers

INVENTOR

Ethan I. Dodds

PHOTO LITHOGRAPHED BY SACHETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 776,175. PATENTED NOV. 29, 1904.

E. I. DODDS.

CAR PART.

APPLICATION FILED FEB. 23, 1904.

NO MODEL. 4 SHEETS—SHEET 4.

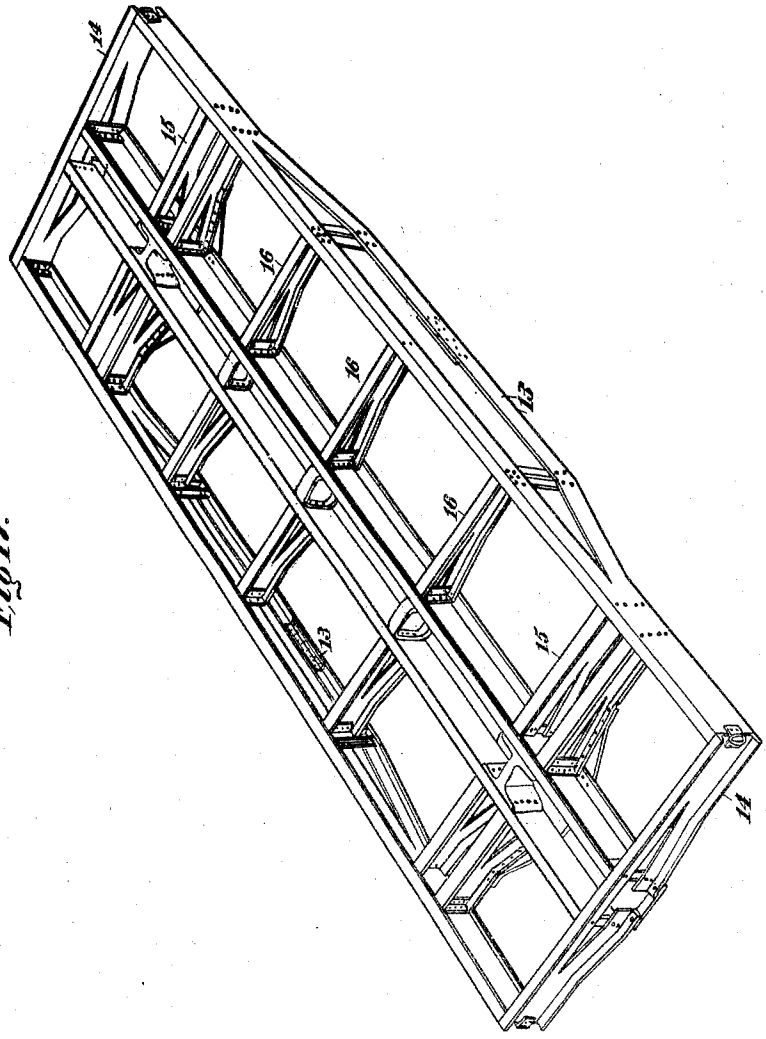


Fig. 17.

WITNESSES

Richard D. Little

G. M. Viers

INVENTOR

Ethan I. Dodds

No. 776,175. Patented November 29, 1904.

UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF AVALON, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

CAR PART.

SPECIFICATION forming part of Letters Patent No. 776,175, dated November 29, 1904.

Application filed February 23, 1904. Serial No. 194,643. (No model.)

To all whom it may concern:

Be it known that I, ETHAN I. DODDS, of Avalon, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Car Parts, 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—

Sheet 1 of the drawings illustrates my invention when applied to the manufacture of side sills for railroad-cars. Figure 1 is a plan view of the blank from which the side sill is made. Fig. 2 shows the blank when bent to form the side sill, but before the divided ends of the bent member are joined together. Fig. 3 shows the same when the ends of the said member have been united and a web-plate applied to the sill. Fig. 4 shows a similar construction made with a shorter web-plate. Fig. 5 is a similar view in which the web-plate is replaced by struts. Fig. 6 illustrates a modification in which the unbent member of the sill is divided and the bent member is not divided.

Sheet 2 of the drawings shows the invention as applied to the manufacture of body-bolsters and flying transoms. Fig. 7 is a plan view of the blank. Fig. 8 is an elevation of a built-up body-bolster, the members of which are made from the blank shown in Fig. 7. Fig. 9 shows a continuous body-bolster or flying transom. Fig. 10 is a vertical section on the line x x of Fig. 8, and Fig. 11 is an end view of Fig. 9.

Sheet 3 shows my invention as applied to the manufacture of side frames for trucks. Fig. 12 is a plan view of the blank; Fig. 13, a view of the blank when bent into shape to form the side frame. Fig. 14 shows the side frame when properly braced and reinforced.

The figures on Sheet 4 of the drawings show the invention as applied to the manufacture of end sills and also show a car-frame whose end sill, side sills, body-bolster, and transoms are constructed in accordance with my invention. Fig. 15 is a view of the blank for the end sill. Fig. 16 shows the end sill, and Fig. 17 shows the car-frame.

On Sheet 1, 2 is the blank from which the side sill is made. It consists of a flanged beam—either an I-beam or a channel may be used—and is of suitable length. It is slit lengthwise with a cut 3 3, holes b b being preferably formed in the beam in the line of the intended cut. This cut divides the beam into two members c d, each flanged along its outer edge. The member d is cut transversely at e and is bent edgewise of the web into the laterally-deflected position shown in Fig. 2, the ends of the member d being then somewhat separated from each other. The member c is preferably left straight and unbent, though it may be bent if desired. Then to complete the side sill I connect the severed ends of the member d d in any suitable manner, preferably by a riveted angle-piece f, and connect the members c and d by a riveted web-plate g. In Fig. 3 the web-plate g extends from end to end of the member d, and in Fig. 4 it is shorter in length. In Fig. 5 it is replaced by vertical struts or king-posts h. In Fig. 6 instead of dividing the bent member d in order to permit its being bent I divide the straight member c. When the member d is bent to form two or more sides of a closed figure, such bending draws the severed ends of the member c past each other, so that they will overlap. The overlapping portions are then riveted together, as shown in Fig. 6.

It will be noticed that the side sill produced as above described is made with little or no waste of metal. It is flanged at the upper and lower edges and possesses great strength and rigidity. It can be made at very little cost. The manner of reinforcing it may be varied to suit the requirements of the car on which it is used, and it may be braced longitudinally as well as vertically.

The principle of construction of the body-bolster and flying transom shown on Sheet 2 is like that of the side sill above described.

The blank 2 shown in Fig. 7 is slit with a longitudinal cut 3 3 through the web, thus constituting two members c' d', which are divided transversely by cuts e'. The portions d' are then bent edgewise away from the members c', thus constituting two bolster members 4 4 with forked ends, which are applied

to the sides of the center sill 5, as shown in Fig. 8, and are connected by suitable tie-plates 6 and 7.

To make the continuous body-bolster or flying transom, (shown in Figs. 9 and 11,) I take the blank, slit as shown in Fig. 7, and divide only one of the members—say the member c'. I then bend the member d' edgewise away from the member c' and by thus forming a triangular or other polygonal figure draw the divided ends of member c' together into overlapping position, or the ends of the member c' may be cut so as to abut against each other and may then be connected by an angle 8. The member d' of the bolster is then continuous, and the member c' is sectional.

In the figures on Sheet 3, which show the application of my invention to the manufacture of side frames for trucks, the flanged blank 2 shown in Fig. 12 is slit lengthwise through the web with a cut 3 3. The member c^2 thus constituted is divided transversely with a cut e^2, and the member d^2 is then bent edgewise into the position shown in Fig. 13, drawing the ends of the member c^2 into overlapping position, in which they may be riveted together. The truck-frame thus constituted is braced and reinforced in a suitable manner, preferably by a plate 9 and vertical members 10 or otherwise, as desired.

The end sill (shown in Fig. 16) is made from the flanged blank 2 of Fig. 15, which is slit through its web with a longitudinal slit 3 3, and the member d^3 thus constituted is divided transversely by a cut e^3 and is then bent edgewise away from the member c^3. The separated ends of the member e^3 may then be connected by a piece 11, as shown in Fig. 16, and connected also by vertical members 12 or otherwise with the members c^3, or the connection between the members c^3 and d^3 may be made by the ends of the draft-sills.

In the car-frame, (shown in Fig. 17,) which is built up of parts made in accordance with my invention, 13 13 are the side sills, 14 the end sills, 15 the body-bolsters, and 16 the flying transoms.

Within the scope of my invention as defined in the claims the parts may be modified in many respects by the skilled mechanic, since

What I claim is—

1. A car part composed of a flanged blank divided lengthwise through the web and transversely through one of its members, the integral member thus constituted being separated edgewise from the axis of the divided member and the ends of the divided member being overlapped and connected; substantially as described.

2. A car part composed of a flanged blank, divided lengthwise through the web and transversely through one of its members, the members thus constituted being separated edgewise, the ends of the transversely-divided member being overlapped and secured together and the edgewise-separated members being connected together by a strut; substantially as described.

In testimony whereof I have hereunto set my hand February 18, 1904.

ETHAN I. DODDS.

Witnesses:

JOHN MILLER,

H. M. CORWIN.