

D. C. COURTNEY.
TRUCK BOLSTER.

APPLICATION FILED OCT. 15, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

FIG. 1

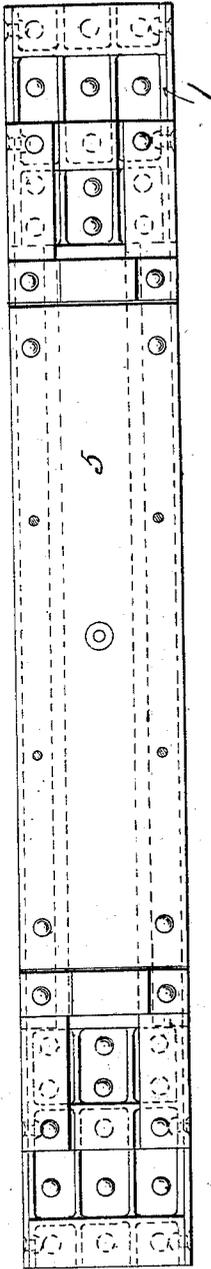


FIG. 2

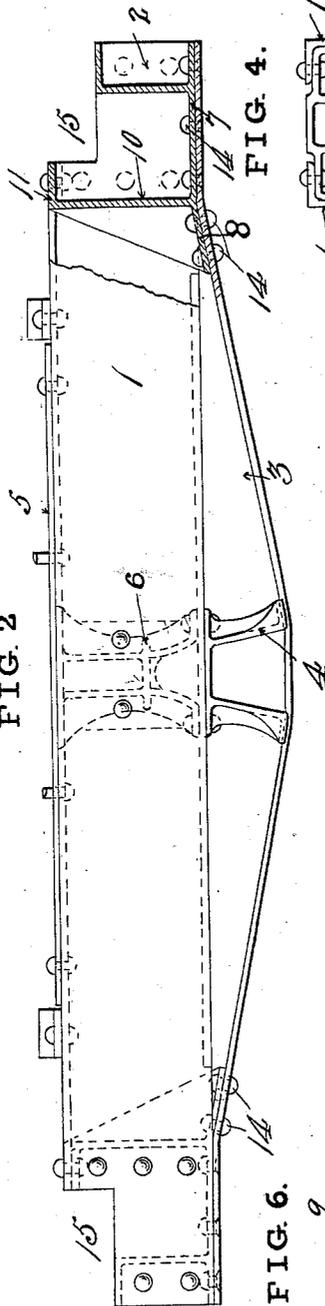


FIG. 4.

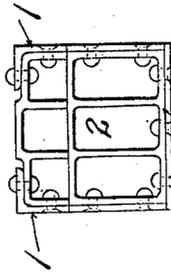


FIG. 5.

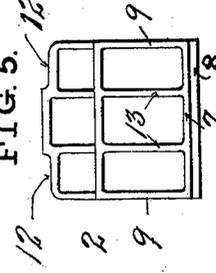


FIG. 3

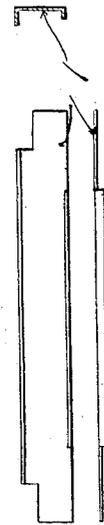


FIG. 6.

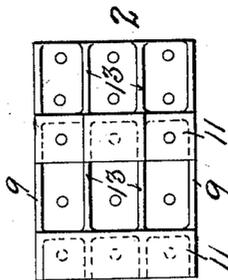
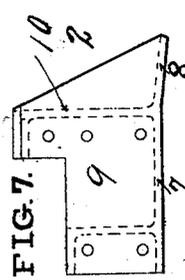


FIG. 7.



Witnesses
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3 SHEETS—SHEET 2.

FIG. 8.

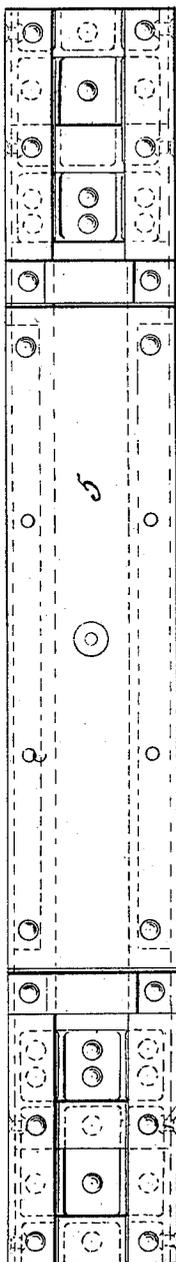


FIG. 9.

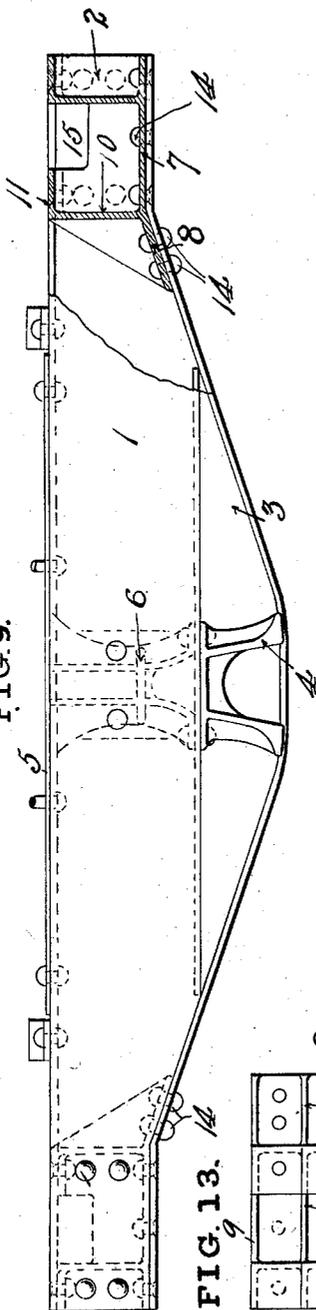


FIG. 10.

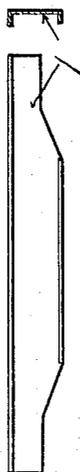


FIG. 11.

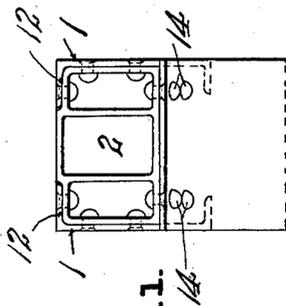


FIG. 12.

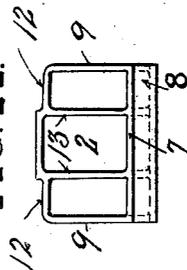


FIG. 13.

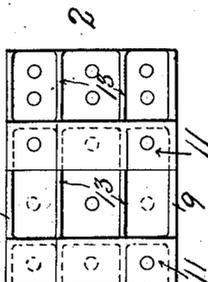
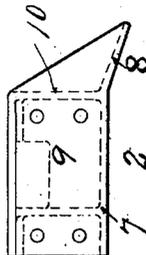


FIG. 14.



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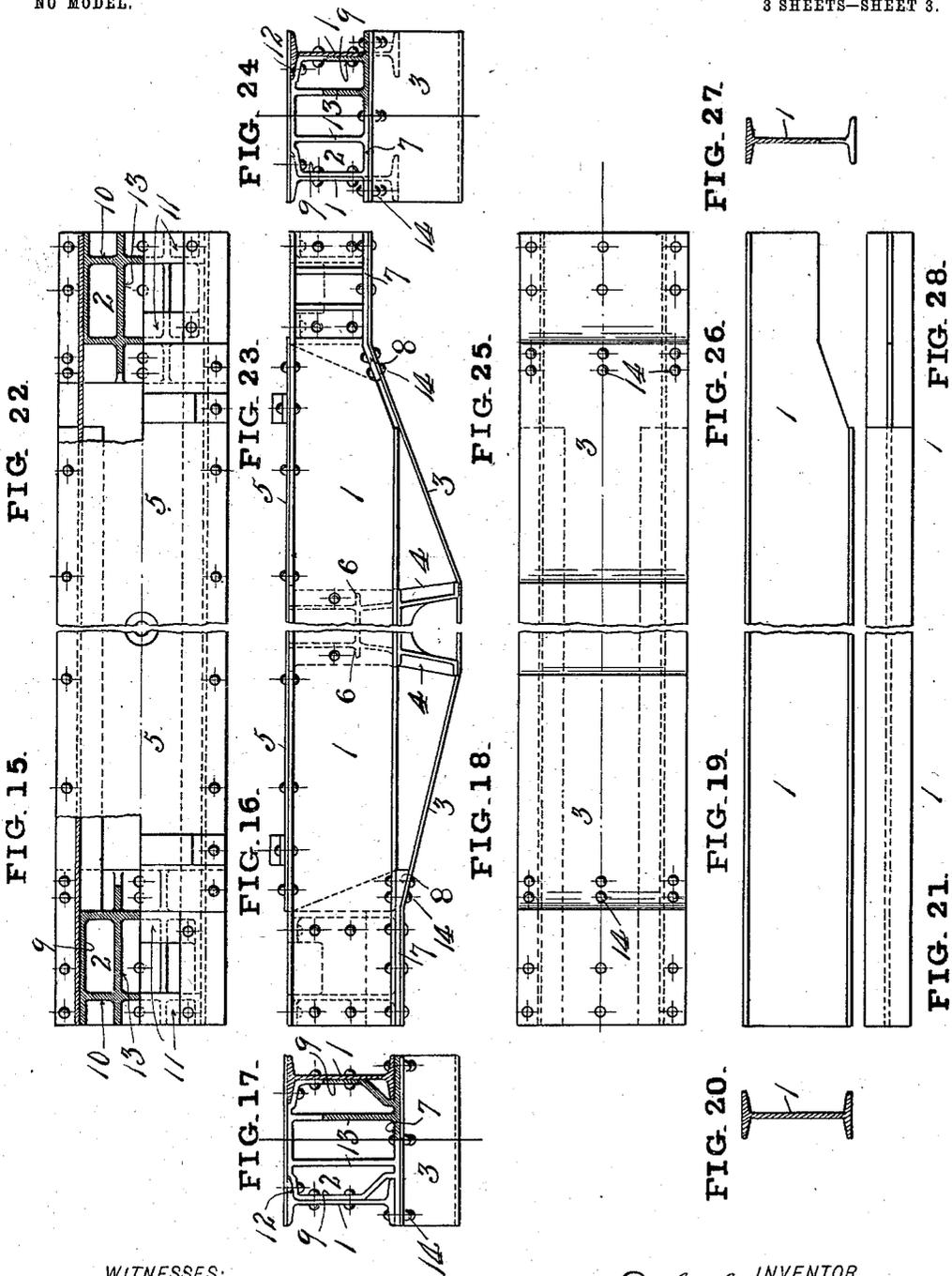
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3 SHEETS—SHEET 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL C. COURTNEY, OF ALLEGHENY, PENNSYLVANIA.

TRUCK-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 748,167, dated December 29, 1903.

Application filed October 15, 1903. Serial No. 177,103. (No model.)

To all whom it may concern:

Be it known that I, DANIEL C. COURTNEY, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Truck-Bolsters, of which the following is a specification.

The object of my invention is the production of a bolster for car-trucks which can be constructed in the ordinary car-shops without the use of special tools, which shall be strong and durable and especially adapted for the support of great weights without bending, so as not to allow the side bearings to come in contact with the side bearings upon the body-bolster, which shall be adapted for use with car-bodies which are either relatively high or low from the track, and which withal shall constitute a superior means for performing the requisite functions.

With these ends in view my invention consists in certain novelties of construction and combinations of parts hereinafter set forth and claimed.

The accompanying drawings illustrate four examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principle.

Figures 1, 2, 3, 4, 5, 6, and 7 illustrate the first example. Fig. 1 is a top plan view. Fig. 2 is a side view in elevation. Fig. 3 illustrates one of the metallic beams which constitutes an element of the bolster, the flanges and web being cut away in part as shown. Fig. 4 is an end view of Fig. 1. Fig. 5 illustrates a skeleton filling-piece removed. Fig. 6 is a top plan view of Fig. 5. Fig. 7 is a side view of Fig. 6. Figs. 8, 9, 10, 11, 12, 13, and 14 illustrate the second example. Fig. 8 is a top plan view. Fig. 9 is a side view in elevation with part of one end broken away. Fig. 10 illustrates one of the metallic beams with parts of the lower flange and web cut away. Fig. 11 is an end view of Fig. 8. Fig. 12 shows a skeleton filling-piece removed. Fig. 13 is a top plan view of Fig. 12. Fig. 14 is a side view of Fig. 13. Figs. 15, 16, 17, 18, 19, 20, and 21 illustrate the third example. Fig. 15 is a half top plan view with the end broken away. Fig. 16 is a side view of Fig. 15. Fig. 17 is an end view of Fig. 15. Fig.

18 is a bottom plan view of Fig. 16. Fig. 19 is a side view of one of the I-beams constituting one of the main elements of the bolster. Fig. 20 is a section of Fig. 19, and Fig. 21 is a top plan view of Fig. 19. Figs. 22, 23, 24, 25, 26, 27, and 28 illustrate the fourth example. Fig. 22 is a top plan view of one-half of the bolster with a part broken away. Fig. 23 is a side view of Fig. 22. Fig. 24 is an end view of Fig. 22. Fig. 25 is a bottom plan view of Fig. 23. Fig. 26 shows one of the I-beams constituting a part of the bolster with its lower flange and part of its web cut away. Fig. 27 is a cross-section of Fig. 26. Fig. 28 is a bottom plan view of Fig. 26.

Referring to the several figures, the numeral 1 designates the rolled flange-beams of I shape and channel shape in cross-section, the first, second, and fourth examples with the webs and portions of the lower flanges cut away, as shown in Figs. 3, 10, and 26; 2, skeleton filling-blocks located between the parallel ends of the rolled flanged beams; 3, truss-plates bent to the shape shown in the drawings, so that the ends will be in a higher plane than the central portion of a plate when the said plate is in position; 4, truss-stools located between the lower flanges of the rolled flanged beams and the truss-plates and which deepen the truss; 5, top tie-plates; 6, filling-blocks located between the rolled flange-beams and above the truss-stools and secured in place by rivets; 7, the lower walls of the skeleton filling-blocks; 8, a flange upon each block oblique to the lower wall; 9, the side walls of the blocks; 10, the end walls; 11, top tie-pieces; 12, seats at the upper surfaces of the blocks for the flanges of the rolled beams; 13, the webs of the blocks for strengthening the same, and 14 designates rivets which unite the ends of the truss-plate to the skeleton filling pieces or blocks between the ends of the parallel beams.

In Fig. 1 the numeral 15 denotes notches in the ends of the bolsters formed by cutting away portions of the webs and flanges, the skeleton filling-blocks being shaped to conform to the shape of the notches.

The example shown on Sheet 1 is especially adapted for cars having high body-bolsters and the examples on Sheets 2 and 3 for cars with low body-bolsters. The skeleton filling

pieces or blocks are made integral and provided with suitable strengthening-flanges and recesses and with holes for rivets which secure the filling-blocks to the rolled flanged beams and the truss-plate.

The first and second examples illustrate the main elements of the bolster comprised of channel-beams, and in the third and fourth examples the main elements are of rolled beams I-shaped in cross-section.

The fourth example has the lower flanges and webs of the I-beams cut away, whereas in the third example the beams have the lower flanges integral, as they are rolled at the mills.

While I have illustrated only four examples of the physical embodiment of my invention, I do not thereby intend to limit the scope thereof to such examples, inasmuch as modifications and changes may be introduced at the will of the manufacturer. For instance, I may use pressed-steel channel-beams for the main elements of the bolster and slightly alter the skeleton filling-blocks to adapt them for the changes in form. Such and other minor changes and modifications I shall regard as falling within the scope of my claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. A truck-bolster comprising two flanged beams arranged in parallel planes and having portions of their lower flanges cut away; a filling-block between the beams; a truss-plate; a truss-stool; and skeleton filling-pieces between the ends of the flanged beams; the ends of said truss-plate being riveted to the skeleton filling pieces or blocks.

2. A truck-bolster comprising two flanged beams having portions of their lower flanges cut away; a filling-block; a truss-plate; a truss-stool; and skeleton filling-pieces between the ends of the flanged beams, each filling-piece having an oblique flange as 8 to which the ends of the truss-plate are riveted.

3. The combination in a bolster, of two flanged beams arranged in parallel planes and having portions of their lower flanges cut away; a filling-block uniting the beams at their centers; a top tie-plate; a truss-plate; a truss-stool; and skeleton filling-pieces located between the ends of the flanged beams; the ends of the truss-plate being riveted to the lower walls of the skeleton filling-pieces.

4. The combination in a truck-bolster, of two channel-beams having portions of their lower flanges removed; a filling-block; a truss-stool; a truss-plate; and skeleton filling-pieces between the ends of the channel-beams and to which the ends of the truss-plate are secured by rivets.

5. The combination in a truck-bolster, of two channel-beams having portions of their lower flanges removed and also portions of their upper flanges and webs removed; a truss-plate; a truss-stool; skeleton filling-pieces located between the ends of the beams and secured in place by rivets; and a top tie-plate; the ends of the truss-plate being secured to the skeleton filling-pieces; and the bolster at its top having the notches or recesses in substance as set forth.

6. The combination in a truck-bolster of two flanged beams with flanges facing each other, portions of the lower flanges being cut away; a truss-plate; a truss-stool; and skeleton filling-pieces located between the flanges of the beams and secured in place by rivets; the top surfaces of the filling-pieces being provided with seats to receive the flanges of the beams.

7. The combination in a truck-bolster of two flanged beams arranged in parallel planes; a truss-plate located beneath the parallel flanged beams; a truss-stool between the truss-plate and the flanged beams; and integral skeleton filling-pieces located between the ends of the flanged beams and secured in place by rivets; the ends of the truss-plate being riveted to the lower surfaces of the skeleton filling-pieces.

8. The combination in a truck-bolster of two flanged beams arranged in parallel planes; a truss-plate located beneath the parallel flanged beams; a truss-stool between the truss-plate and the flanged beams; and skeleton filling-pieces located between the ends of the flanged beams and secured in place by rivets; the ends of the truss-plate being riveted to the lower flanges of the skeleton filling-pieces and to the flanges upon the pieces.

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

DANIEL C. COURTNEY.

Witnesses:

DAVID ELPHINSTONE,
T. C. WAITE.