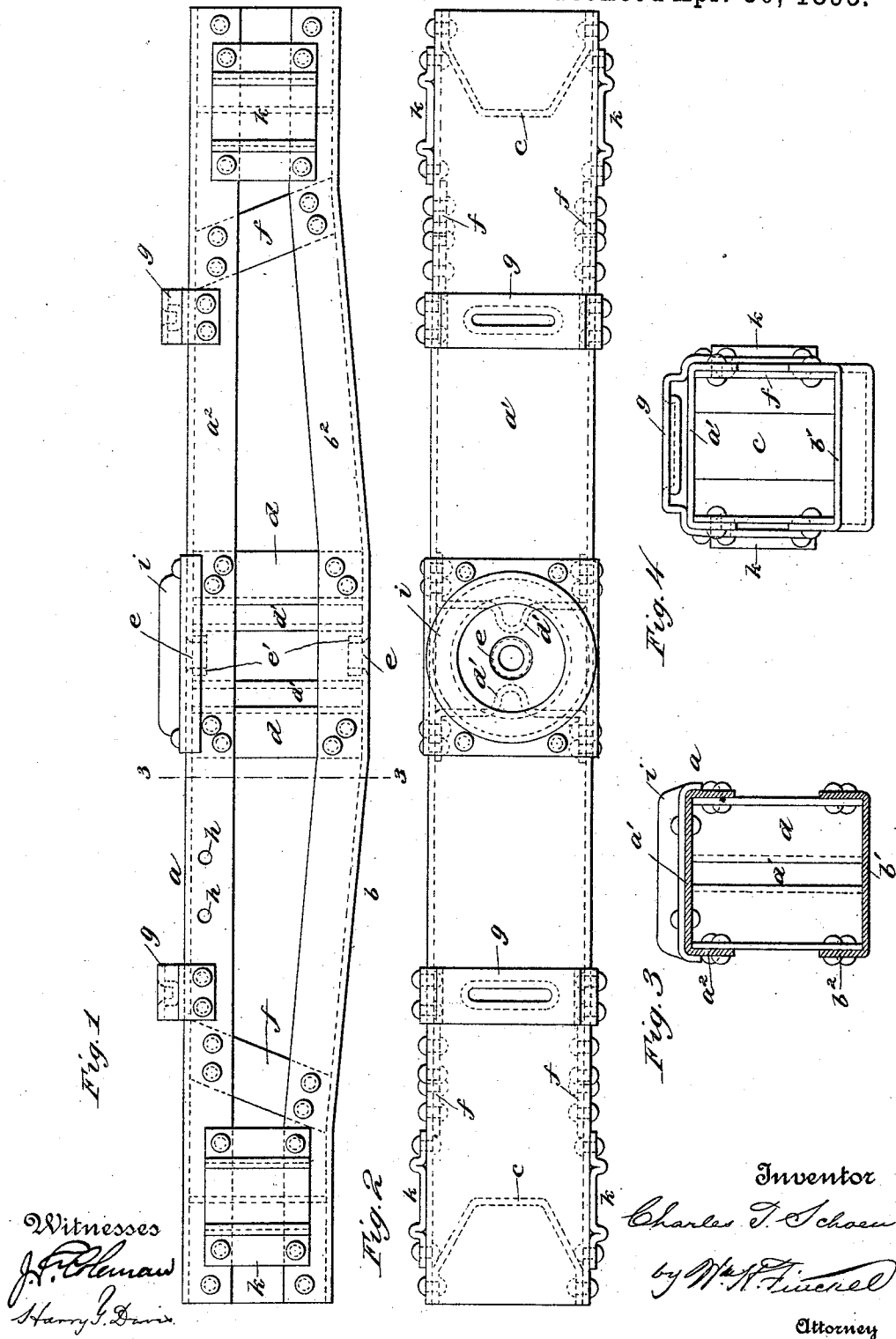


(No Model.)

C. T. SCHOEN.
BOLSTER FOR RAILWAY CARS.

No. 538,286.

Patented Apr. 30, 1895.



UNITED STATES PATENT OFFICE.

CHARLES T. SCHOEN, OF ALLEGHENY, PENNSYLVANIA.

BOLSTER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 538,286, dated April 30, 1895.

Application filed March 2, 1895. Serial No. 540,299. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. SCHOEN, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Bolsters for Railway-Cars, of which the following is a full, clear, and exact description.

The object of this invention is to provide an economical, durable and strong built-up metallic bolster for railway cars.

Built-up bolsters have been constructed heretofore of channels arranged in such manner that the compression and tensile strains have been thrust upon the flanges. I have found that the flanges will not support as great a load per pound of metal used in their construction as will the bodies. Again, in order to get the proper depth, taper or inclination of the ends of the bolster, recourse has been had to cutting away the metal, but this results in waste of material and consequently an enhanced cost of production.

In the present invention, channel pieces are used in which their bodies form the top and bottom members, while their flanges form the sides. Thus the full width of the bodies is utilized to resist the attendant strains and the flanges are contributory instead of the main strain resisting mediums. Instead of shearing off the metal to get the proper inclination, the channel pieces may be bent, and supporting or distance-pieces may be inserted at the center and ends in order to get the requisite height. Side braces are applied at the points of greatest strain. These features, together with other details of construction, constitute the present invention.

In the accompanying drawings illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation of a truck-bolster. Fig. 2 is a top plan view thereof. Fig. 3 is a cross-section taken in the plane of line 3 3, Fig. 1; and Fig. 4 is an end elevation.

The top or compression member *a* and the bottom or tensile member *b* are made of channel-shaped pieces of metal, preferably mild steel plate, pressed to shape, the tensile member, and, if need be, the compression member being bent to obtain the proper depth at the center and ends, without cutting or shearing

off and wasting the metal. The bodies *a'* and *b'* of the respective members form respectively the top and bottom faces, while the flanges *a²* and *b²* form the sides of the bolster. Heretofore, the bodies have been arranged to form the sides and the flanges the top and bottom faces of the bolster, but I have found this construction defective in the particulars hereinbefore mentioned, namely, lack of strength adequately to resist the strains to which the bolster is subjected in use, and the waste of metal in obtaining the proper depth or inclination.

Distance pieces *c*, of substantially the shape outlined in dotted lines Fig. 2, are arranged between the top and bottom members and riveted to the flanges, at the ends, in order to get and maintain rigidly the proper height at the ends of the bolster; and supports or distance pieces *d* are placed between the top and bottom members centrally and riveted to their flanges in order to obtain the necessary strength and rigidity at that point. These supports *d* may profitably be corrugated vertically, as at *d'*, to reinforce them and to extend as close as possible to the king-bolt holes, *e, e*. The holes, *e, e*, made in the top *a* and bottom *b*, are provided with the surrounding flanges *e'* in order to reinforce them against wear and strain.

Obliquely arranged braces *f* are riveted to the flanges, preferably inside, at or near the ends, to serve the following purposes, namely: In "curving," the car is on the side bearings (*g*) for a time, and sometimes might strike pretty hard in suddenly going around curves. In such case, the top member of the truck bolster, being the compression member, might be bent down, although this is not likely; but the braces stiffen the bolster to resist such a contingency. These braces also reinforce the bolster at the points where the springs are located, and they make a place from which the brake beams may be hung.

The holes *h, h*, are employed to receive the brake lever connection.

The center-bearing plate *i* and the bolster-column guide-plates *k* may be as usual.

By obvious changes, this construction of truck bolster may be applied equally well to body bolsters.

In addition to the advantages and economies

already specified as attained by this invention, I am enabled to dispense with spacing plates at the ends, the channels being bent to suit, and the distance pieces being cut to
5 suit. The power to resist the concussion produced by buffing is augmented, as is also the strength to sustain a load with a given quantity of material in the bolster, the full width of the channels being availed of for compression and tension and the flanges assisting.
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As already intimated, the parts of this bolster are designed to be formed of plate steel by pressing same to shape and riveting them together.

15 What I claim is—

1. A pressed steel bolster composed of a top and a bottom member, of channel shape, the full width of the bodies of which channel-shaped members is utilized in each to form
20 the respective faces, and the flanges of which form the sides, and distance-pieces interposed between and connecting the said members rigidly at their centers and ends, substantially as described.

25 2. A bolster composed of a top and a bottom member, of channel-shaped metal, the full width of the bodies of which channels is

utilized in each to form the respective faces, and the flanges of which form the sides, the said members being bent to obtain the proper
30 depth and inclination, and central and end connecting pieces, substantially as described.

3. A bolster composed of a top and a bottom member, of channel-shaped metal, the full width of the bodies of which channels is
35 utilized in each to form the respective faces, and the flanges of which form the sides, combined with the central and end supports and the side braces, substantially as described.

4. A bolster composed of a top and a bottom member, of channel-shaped metal, the full width of the bodies of which channels is
40 utilized in each to form the respective faces, and the flanges of which form the sides, the said members being bent to present a less
45 height at the ends than at the center, and having suitable connecting devices, substantially as described.

In testimony whereof I have hereunto set my hand this 1st day of March, A. D. 1895.

CHARLES T. SCHOEN.

Witnesses:

E. A. SCHOEN,
FREDK. G. ELY.