

No. 810,840.

PATENTED JAN. 23, 1906.

A. CAMPBELL.
CAR BOLSTER.

APPLICATION FILED SEPT. 18, 1905.

Fig. 1.

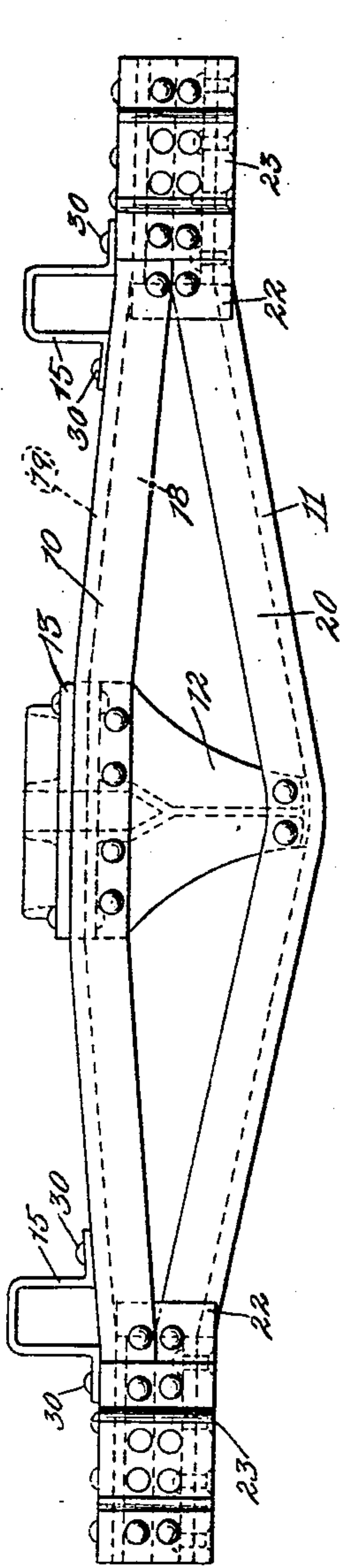


Fig. 2.

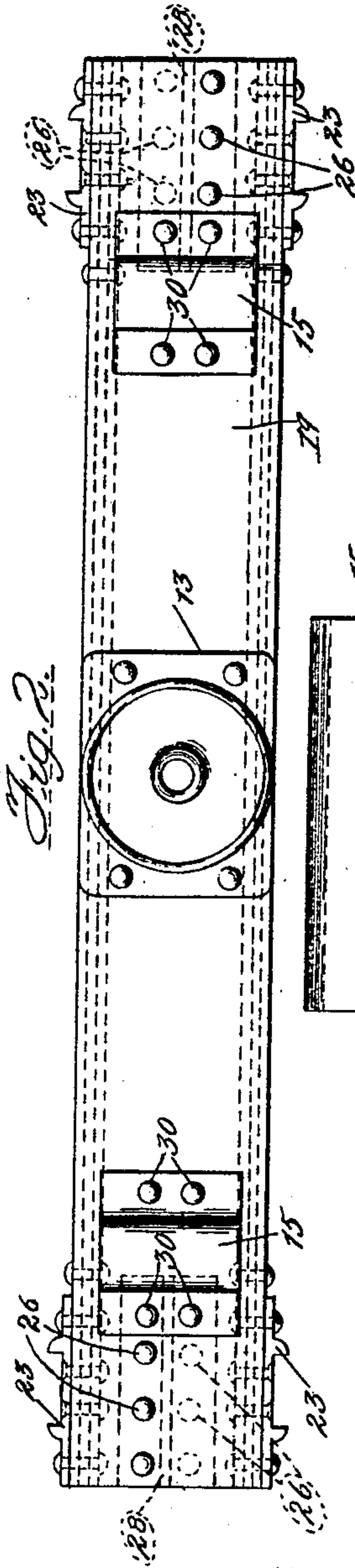
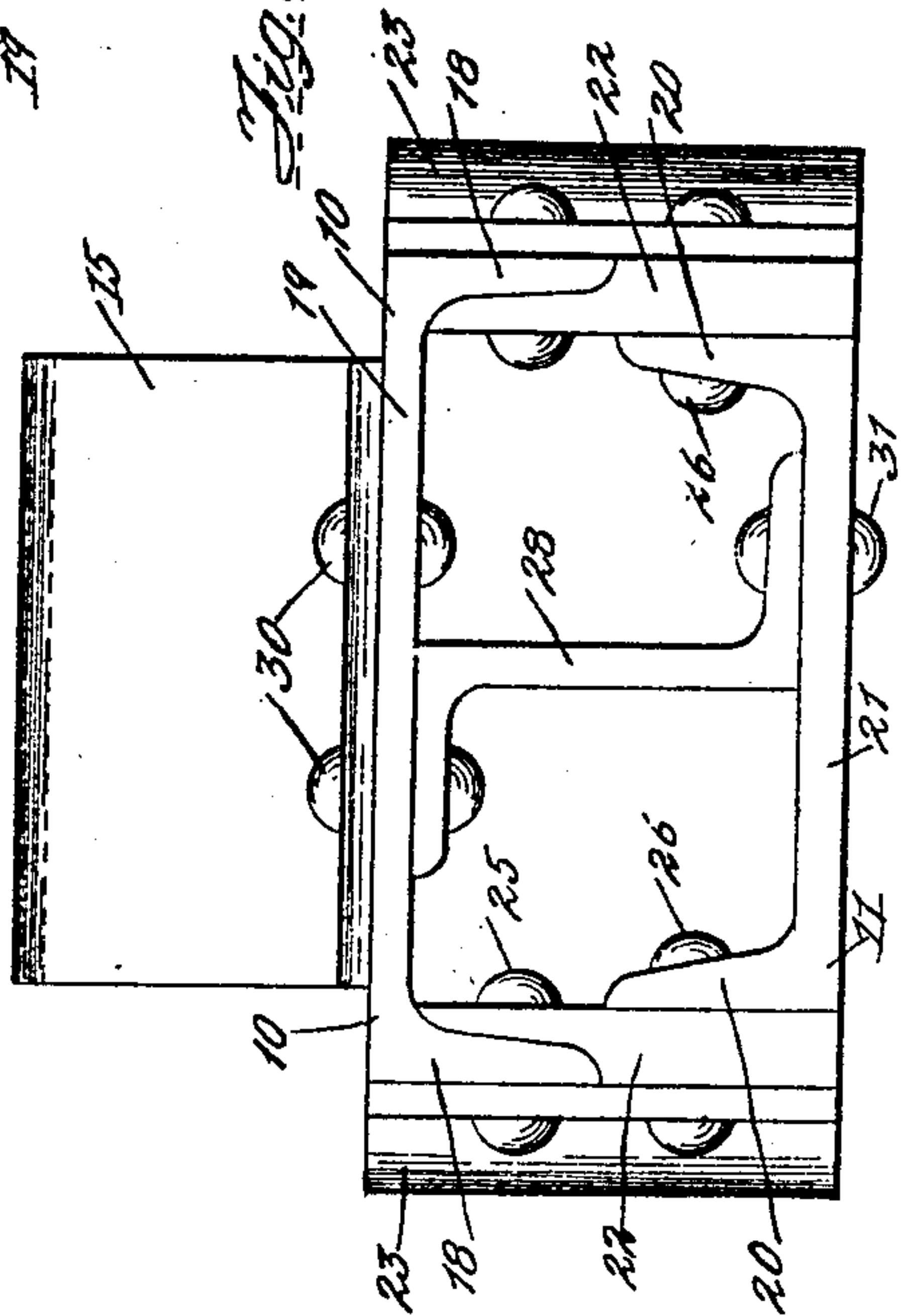


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

ARGYLE CAMPBELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ENTERPRISE RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CAR-BOLSTER.

No. 810,840.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed September 18, 1905. Serial No. 279,033.

To all whom it may concern:

Be it known that I, ARGYLE CAMPBELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Car-Bolsters, of which the following is a specification.

My invention relates to car-bolsters primarily for use upon freight-cars.

The object of my invention is to provide a metal car-bolster which shall possess a minimum of weight with a maximum of strength in a bolster for a given size of cars and which shall be particularly strong at its ends against side strain.

My invention consists in mechanism which is capable of accomplishing the above objects, which can be easily and cheaply made, which is efficient in operation, and not readily liable to get out of order.

In detail it consists in a novel means for fastening the outside ends of the upper and lower members of the bolster together.

It also consists in details of construction, which will be hereinafter more fully described and claimed.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a plan view, of a bolster, illustrating my invention in its preferred form. Fig. 3 is an enlarged end view of the bolster, showing the method of construction by which the top and bottom members of the bolster are secured together.

My bolster consists of a horizontal upper member 10, preferably a channel-iron with the flanges turned downward, extending from side to side of the car, as shown, and a lower member 11, consisting of another channel-iron of less width than the channel-iron 10 with its flanges extending upward, also extending from side to side of the car. These channel-irons have their ends secured together in the manner which will be hereinafter described. The upper and lower members heretofore described are separated in the middle of the car by a post or support 12, which may be a casting of any usual form or shape. On the top of the bolster is secured a center casting 13, to which the car-body (not shown) is attached in such a way that the bolster may turn with reference to the car in the usual manner to allow the car to go around a curve in the track. On the upper

part of each end of the bolster I provide any suitable form of side bearing 15.

In the preferred form I provide, as illustrated, an upper member 10, made from a twelve-inch channel, thirty-five-pound weight having five and five-sixteenths inch flanges 18 and three-fourths-inch webs 19, and I provide a lower member 11, consisting of a ten-inch channel, thirty-five-pound weight, having three and five-sixteenths inch flanges 20 and eighty-two one-hundredths inch web 21. As will be seen from Fig. 3 and from a study of the channels, the lower channel 11 is narrower than the upper channel 10, and to secure the ends of the two members together, while providing some depth at the ends of the bolster, thereby stiffening it, I provide means which I will now describe.

I provide plates 22, adapted to fit on the outside of the ends of the lower channel, as shown in Fig. 3, and I cut the plates away so that they fit inside of and snugly fit against the insides of the flanges 18 of the channels 10, as shown. These plates 22 are, as shown in Figs. 1 and 2, substantially the length of the portions of the members 10 and 11, which are secured together at the ends of the bolster, and in order to give the bolster end depth are of approximately the depth of the flanges of the two channels, as shown. Outside of the flanges of the upper channel-iron and the special plates just described I place reinforcing angle-irons or other members 23. Through this angle-iron 23, the respective flanges of the two channel-irons 10 and 11, and the special plates 22 when arranged as heretofore described I place suitable bolts or rivets 25 and 26, thereby securing the whole together, as will more clearly appear from an inspection of Fig. 3.

In order to more fully reinforce the end construction of the bolster, I place in each end and between the webs 19 and 21 of the respective members of the bolster a Z-bar 28 and secure it to the upper web 19 by rivets 30 and to the lower web 21 by rivets 31, as shown. An I-beam or channel-irons may be substituted in place of this Z-bar 26 without departing from my invention.

On examination of the drawings, and particularly Figs. 1 and 3, it will be seen that the upper and lower members of the bolster or their flanges do not substantially overlap

each other at any point in their length, with the result that the depth, and consequently the strength, of the bolster at its end is not sacrificed, while at the same time I maintain the cross-section of the bolster at its end in substantially rectangular form of the same or greater width than the widest of the two cross members of the bolster, thereby increasing the strength of the bolster at its end.

10 By the construction here shown I provide a very rigid end construction for the bolster, which enables me to use top and bottom members of different widths, thereby saving weight and metal in the bolster while main-
15 taining strength. I also thus form a bolster which is particularly strong against side strain.

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

20 1. In a bolster, the combination of an upper member extending from end to end of the bolster, downwardly-turned flanges at the ends of the said member, a lower member ex-
25 tending from end to end of the bolster, upwardly-turned flanges at the ends of said member, one of said members being broader than the other, and neither cross member or its flanges substantially overlapping parts of
30 the other member, a suitable brace or support at the center of the bolster between said upper and lower members, and a set of plates inserted inside the end flanges of the larger member and outside of the end flanges of the
35 narrower member at the ends of the bolster and separate means for securing said plates to the flanges of the upper and lower members.

40 2. In a bolster, the combination of an upper member extending from end to end of the bolster, downwardly-turned flanges at the ends of the said member, a lower member extending from end to end of the bolster, upwardly-turned flanges at the ends of said

member, one of said members being broader 45 than the other, and neither cross member or its flanges substantially overlapping parts of the other member, a suitable brace or support at the center of the bolster between said upper and lower members, and a set of plates 50 inserted inside the end flanges of the broader member and outside the end flanges of a narrower member at the ends of the bolster, separate means for securing said plates to the flanges of the upper and lower members, and 55 reinforcing means between the flanges secured to both the upper and lower members.

3. In a bolster, the combination of an upper member extending from end to end of the bolster, downwardly-turned flanges at the 60 ends of the said member, a lower member extending from end to end of the bolster, upwardly-turned flanges at the ends of said member, one of said members being broader than the other neither member or its flanges 65 overlapping parts of the other member, a suitable brace or support at the center of the bolster between said upper and lower members, a set of plates inserted inside the end flanges of the larger member and outside of 70 the end flanges of the narrower member said plates being of such a thickness that they and the narrower members together occupy a horizontal space substantially equal to the width of the broader member, vertical rein- 75 forcing members adjacent to the sides of the ends of the bolster thus far described and independent separate mechanisms for securing the flanges of each cross member to the adjacent plate and reinforcing member. 80

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

ARGYLE CAMPBELL.

Witnesses:

CAROLYN RAFTERY,
DWIGHT B. CHEEVER.