

No. 614,323.

Patented Nov. 15, 1898.

G. L. HARVEY.
BOLSTER.

(Application filed Sept. 28, 1898.)

(No Model.)

Fig. 1.

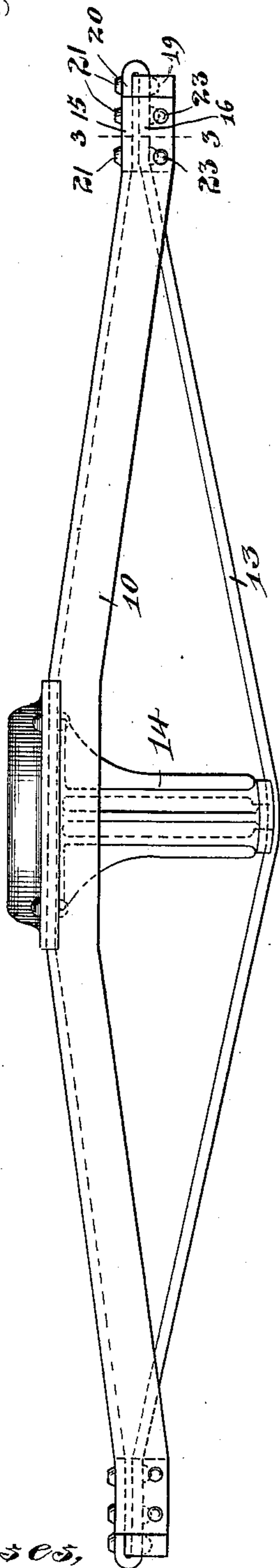


Fig. 2.

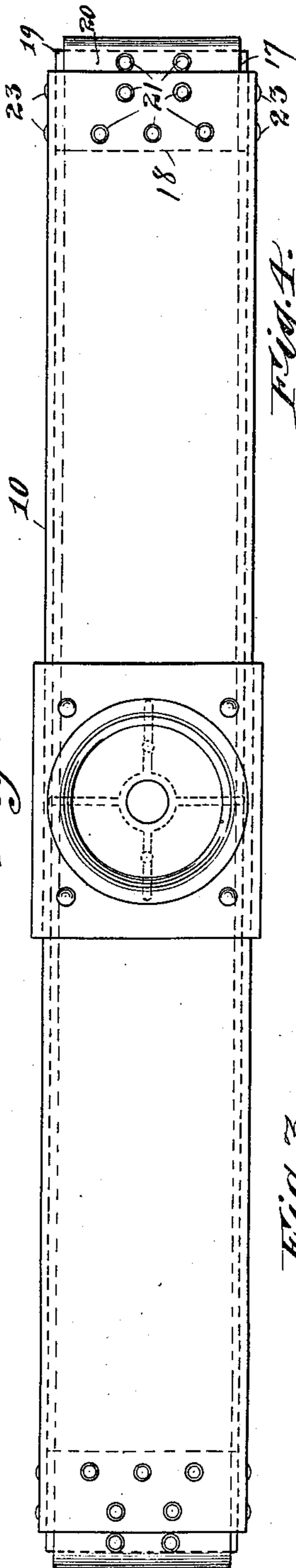


Fig. 3.

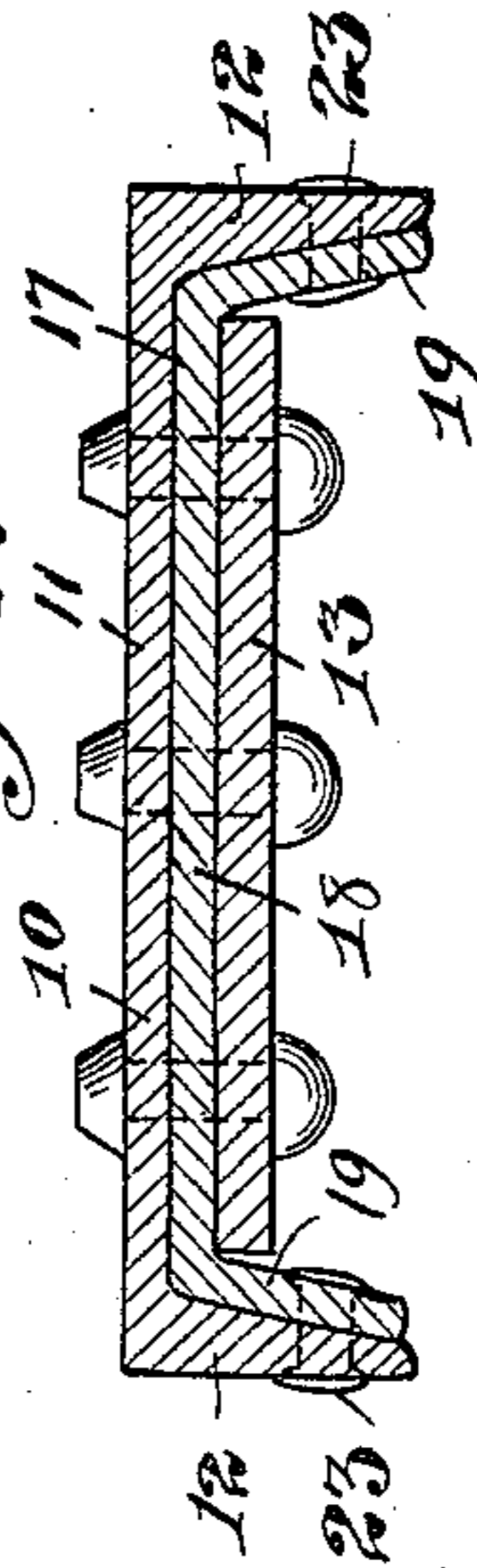
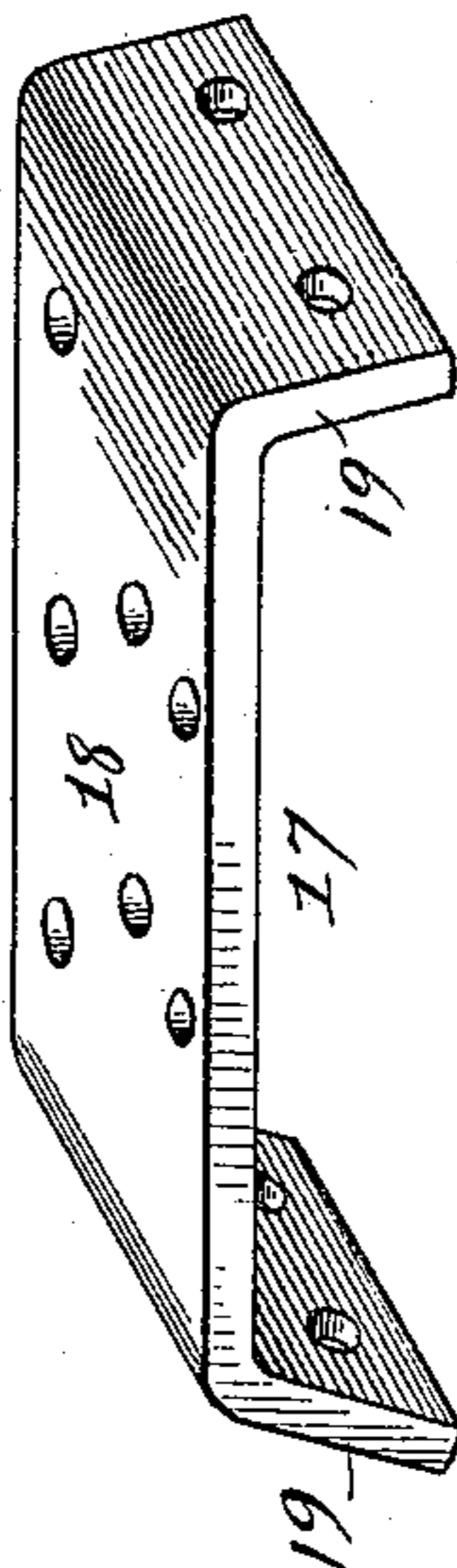


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BOLSTER.

SPECIFICATION forming part of Letters Patent No. 614,323, dated November 15, 1898.

Application filed September 28, 1898. Serial No. 692,126. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. HARVEY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bolsters, of which the following is a specification.

This invention relates to car-bolsters, and more particularly to that class of metallic bolsters composed of two members, one of which is a channel-bar and the other a bar or plate separated at their middle and converging at their ends, although adapted for use in bolsters wherein the first-mentioned member is other than a channel-bar—as, for instance, any form of bar having lateral flanges at its ends.

The object of my present invention is to provide a firm and secure means for uniting the ends of these bars in such a manner as to properly distribute the strains and give increased durability; and to these ends my invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a bolster embodying my invention in one form; Fig. 2, a plan view of the same; Fig. 3, a detail sectional view taken on the line 3 3 of Fig. 1 and on an enlarged scale; and Fig. 4, a detail perspective view, on an enlarged scale, of the intermediate tie-piece or strain-distributing piece detached.

In the said drawings I have shown my invention as embodied in a car-truck bolster, although the features thereof may also be embodied in a body-bolster as well. In said structure, 10 represents one of the members of the bolster, which is in this instance the upper or compression member and which is preferably constructed of a channel-bar, having a web 11 and lateral flanges 12, which are downwardly directed toward the other member, as shown in the sectional view in Fig. 3. It will be understood, however, that the member 10 for the purposes of my invention may be of any suitable construction, providing it has at its ends lateral flanges. 13 represents the other member, in this case the lower or tension member, which is constructed of a plate or bar and which is separated at its middle from the member 10 by means of an interposed pillar or strut 14, which forms the

king-post of the bolster. The two members thus separated at their middles are caused to converge at their ends to a contact with each other by suitably bending either one or both of the members, and in the case of the structure shown both of these members are bent so as to approach each other toward their ends, the terminal portions being preferably parallel, as indicated at 15 and 16, for a short distance. There is interposed at each end of the bolster, between the two members thereof, an intermediate tie or strain-distributing piece 17, which preferably has the shape shown in Fig. 4, and consists of a web or top portion 18 and lateral flanges 19, the web being adapted to fit against the web 11 of the bar 10 and the flanges 19 being adapted to fit and abut against the flanges 12 of said bar. Each intermediate piece 17 projects beyond the end of the flanged bar at which it is located, and the member 13, which is adapted to lie against the web 18 of the member 17 and between the flanges 19 thereof, is bent up at each end around the projecting portion of the piece 17, its terminal portions lying on top of said projecting portions and parallel with the parts 16 of the member 13 and at the same time abutting squarely against the ends of the member 10, against the terminal portions of the web 11 of which they bear.

The ends of the members 10 and 13 and the intermediate pieces 17 are secured together by rivets or bolts 21, passing through all three of the members, and the terminal portions 20 of the member 13 are secured to the projecting portions of the pieces 17 by means of rivets 22 passing through the two thicknesses of the member 13 and through the enclosed projecting portion of the pieces 17. The flanges 19 of the pieces 17 are secured to the flanges 12 of the member 10 by rivets 23.

By providing an intermediate filling-piece secured between the two members and bearing upon the flat portions of each the strain upon the connecting rivets or bolts and upon those portions of the members to which said rivets or bolts are secured is equally distributed, while at the same time the projection of this filling-piece provides a support or part around which the end of the plate member may be bent without danger of deflecting it at too sharp an angle, and thereby weaken-

ing said member at the bend. Moreover, by reason of this construction I am enabled to cause the end of one member to abut firmly and squarely against the end of the other member, and thereby equalize and distribute the strains at the connection between the two members. When the intermediate piece 17 is given the preferred form shown, with the lateral flanges, it serves to distribute a portion of the strain to the flanges of the flanged bar, and thereby relieve the web. These flanges may, however, be omitted without departing from the principle of my invention, although I prefer to employ them.

The intermediate pieces are shown as each constructed in a single piece; but it is obvious that they may be made in more than one piece, while at the same time the advantages pointed out may be in a great measure attained. For instance, in the form shown the piece 17 is in practice a section of a channel-bar; but it is obvious that two angle-bar sections may be substituted therefor, and my invention contemplates and includes such a construction in its scope. Obviously, therefore, I do not limit myself to the precise details hereinbefore set forth, and shown in the drawings.

I claim—

1. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members being a bar laterally flanged at its ends and the other a bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends and projecting beyond the flanged member, the extended member having its ends bent around the projecting portions of said intermediate pieces and abutting against the ends of the flanged member, substantially as described.

2. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members being a bar laterally flanged at its ends and the other a bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends, having lateral flanges to bear against the flanges of the flanged member and projecting beyond the ends of said member, the extended member having its ends bent around the projecting portions of said intermediate pieces and abutting against the ends of the flanged member, substantially as described.

3. A metallic car-bolster, comprising two members separated at their middles and con-

verging at their ends, one of said members being a bar laterally flanged at its ends and the other a bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends, having lateral flanges bearing against and secured to the flanges of the flanged member and projecting beyond the ends of said member, the extended member having its ends bent around and secured to the projecting portions of said intermediate pieces and abutting against the ends of the flanged member, substantially as described.

4. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members being a channel-bar and the other a flat plate-bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends and projecting beyond the channel member, the plate member having its ends bent around the projecting portions of said intermediate pieces and abutting against the ends of the channel member, substantially as described.

5. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members being a channel-bar and the other a flat plate-bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends, having lateral flanges to bear against the flanges of the channel member and projecting beyond the ends of said member, the plate member having its ends bent around the projecting portions of said intermediate pieces and abutting against the ends of the channel member, substantially as described.

6. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members being a channel-bar and the other a flat plate-bar extending beyond the first-mentioned member, and intermediate pieces secured between said members at their ends, having lateral flanges bearing against and secured to the flanges of the channel member and projecting beyond the ends of said member, the plate member having its ends bent around and secured to the projecting portions of said intermediate pieces and abutting against the ends of the channel member, substantially as described.

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