

No. 622,465.

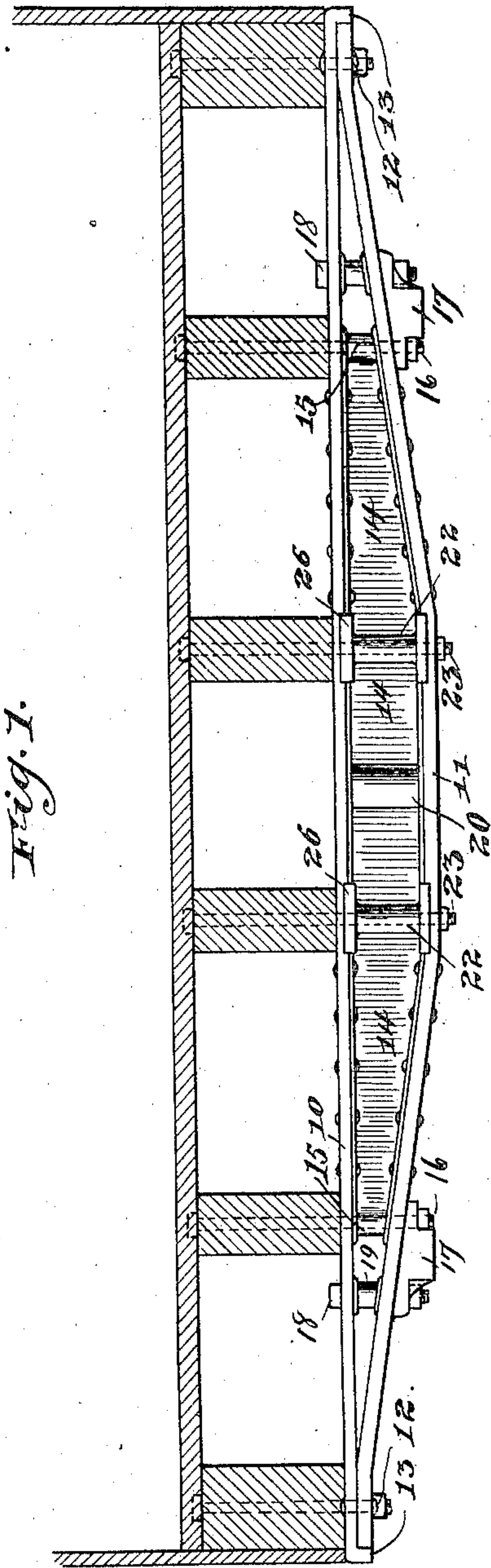
Patented Apr. 4, 1899.

G. L. HARVEY.  
CAR BOLSTER.

(Application filed Sept. 19, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses,  
J. E. Mann,  
Frederick Goodwin

Inventor,  
George L. Harvey,  
By Offield, Fowler & Linticum,  
Attys.

No. 622,465.

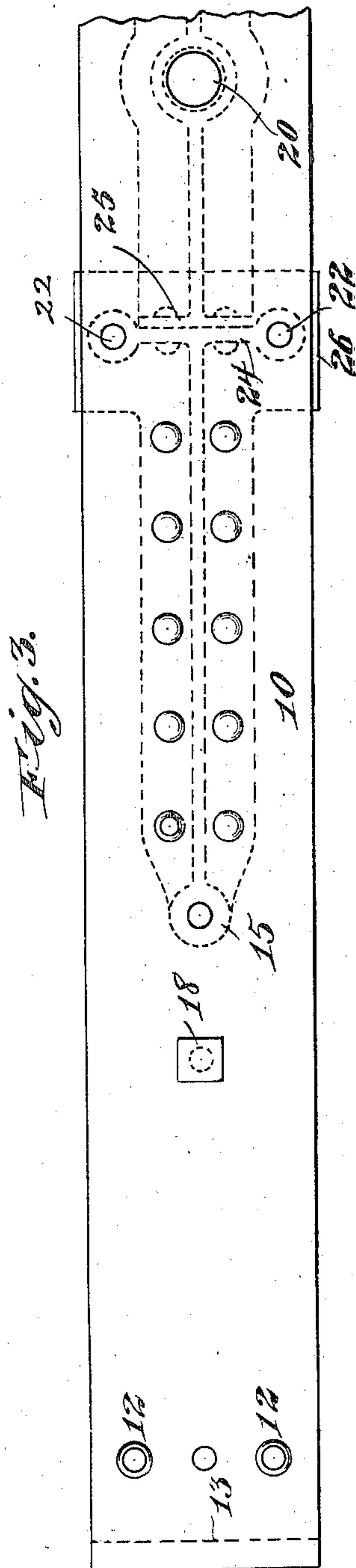
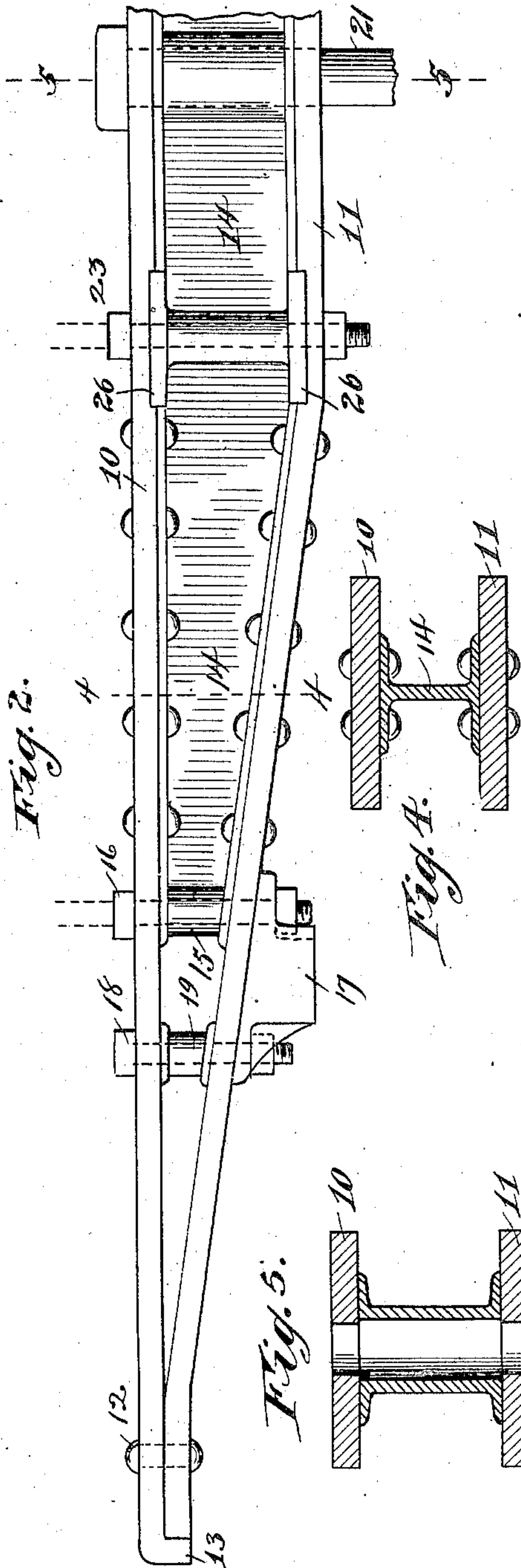
Patented Apr. 4, 1899.

G. L. HARVEY.  
CAR BOLSTER.

(Application filed Sept. 19, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses,  
J. E. Mann,  
Frederick Goodwin

Inventor,  
George L. Harvey,  
By Offield, Fowler & Linticum,  
Attys.



# UNITED STATES PATENT OFFICE.

GEORGE L. HARVEY, OF CHICAGO, ILLINOIS.

## CAR-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 622,465, dated April 4, 1899.

Application filed September 19, 1898. Serial No. 691,354. (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 Car-Bolsters, of which the following is a specification.

This invention relates to car-bolsters, and more particularly to metallic-body bolsters, and has for its object to produce a bolster which shall be light, strong, and durable and adapted to be produced at a comparatively small cost and without the use of special machinery.

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, an enlarged view of one-half of the structure shown in Fig. 1; Fig. 3, a plan view of so much of the structure as is shown in Fig. 2; Fig. 4, a detail sectional view taken on the line 4 4 of Fig. 2; and Fig. 5, a similar view taken on the line 5 5 of Fig. 2, the center pin being omitted.

In the said drawings, 10 indicates the tension member of my improved bolster, which preferably consists of a flat plate or bar of wrought metal, and 11 the compression member, which is also preferably formed from a similar flat plate or bar. These members are separated at their central portion and converge to a meeting at each end, and to produce this structure one or both of the members may be bent to the desired form. In the present instance I have shown the tension member as straight, while the compression member has a straight central portion and upwardly-inclined portions on each side thereof, terminating in straight end portions, which lie parallel with and against the under side of the tension member. The ends of the compression and tension members are secured together by riveting, bolting, or otherwise, as indicated at 12, and in order to more firmly unite the structure and relieve the rivets or bolts from strain one of the members is headed or bent up for engagement with the end of the other member—as, for instance, in the construction shown, wherein the tension member 10 is bent to form a head 13 at each of its

ends, against which the ends of the compression member 11 abut.

The bolster thus constructed is completed by means of a central member 14, extending longitudinally of the bolster from one side bearing to the other and vertically thereof from the lower or compression member to the upper or tension member. This central member 14 is preferably a casting, although it may be of pressed or wrought metal, and it may be made in sections riveted together, as indicated in dotted lines in Fig. 3, for convenience in manufacture, it being essential, however, that it should form when united and in place a continuous rigid strut extending between the side bearings and between the upper and lower members of the bolster. The central member 14 is preferably I-shaped in cross-section, as indicated in Fig. 4, and is connected to the upper and lower members of the truck by riveting or otherwise and is provided at its ends with sleeves 15 to receive the bolts 16, which secure the side bearings 17 to the under side of the bolster, these bolts 16 being in some cases extended upward, as indicated in dotted lines, through the intermediate sills of the car and serving to connect the bolster to these sills. The outer ends of the side bearings may be secured by bolts 18, passing through the upper and lower members of the bolster, and through sleeves 19, interposed between said members. The central member is also provided with a central sleeve 20 to receive the center pin 21 and with sleeves 22 to receive the bolts 23, which may be extended up through the center sills, as indicated in dotted lines.

When the central member 14 is made in separate pieces secured together, as indicated in Fig. 3 of the drawings, I provide the side portions between the sleeves 22 with a transverse web 24, to which a similar transverse web 25 at each end of the central portion is secured by riveting or otherwise, said webs abutting against each other to give a firm and extended bearing. The end portions are provided with lateral extensions of their upper and lower flanges, the ends whereof are bent at right angles, as indicated at 26, to overlap the edges of the upper and lower members of the bolster and further insure rigidity of the relations between the upper



and lower and central members of the bolster.

By the employment of a continuous rigid central member extending from one side bearing to the other and from the upper to the lower member of the bolster I provide a bolster which is adapted to resist the transverse strains which are brought thereon by the intermediate sills or bearings at points between the center bearing and the extreme ends of the bolster, so that the bolster will not have that tendency to sag at the side bearings which is frequently found in bolsters as ordinarily constructed. The wrought-metal plates which compose the upper and lower members of the bolster may be readily obtained in the open market, being commercial shapes, and may be readily bent to the desired form without special machinery. The bolster as a whole, comprising the wrought-metal top and bottom members and the cast or pressed central member, is light, strong, and durable, particularly in respect to the resisting of the transverse strains hereinbefore pointed out.

I do not wish to be understood as limiting my invention to the precise details of construction hereinbefore specified, and shown in the drawings, as it is obvious that these minor features may be varied without departing from the principle of my invention.

I claim—

1. A metallic car-bolster, comprising two members separated at their middles and converging at their ends, one of said members having a central bearing-point and side bearing-points intermediate said central bearing-point and the ends of the bolster, and a central member forming a continuous rigid strut longitudinally of the bolster from one side

bearing to the other and vertically thereof from the lower to the upper member, substantially as described.

2. A metallic car-bolster, comprising two unitary or continuous members separated at their middles and converging at their ends, one of said members having a central bearing-point and side bearing-points intermediate said central bearing-point and the ends of the bolster, and a central member forming a continuous rigid strut extending longitudinally of the bolster from one side bearing to the other and vertically thereof from the lower to the upper member, substantially as described.

3. A metallic car-bolster, comprising two members separated at their middles and converging at their ends and a central member comprising a central vertical web with lateral flanges at its upper and lower edges, whereby it is riveted to the first-mentioned members, said central member forming a continuous rigid strut extending longitudinally of the center of the bolster from one side bearing to the other and vertically thereof from the lower to the upper member, substantially as described.

4. A metallic car-bolster, comprising two wrought-metal members separated at their middles and converging to contact at their ends, and a central cast-metal member I-shaped in cross-section and forming a continuous rigid strut extending longitudinally of the bolster from one side bearing to the other and vertically thereof from the lower to the upper member, substantially as described.

GEORGE L. HARVEY.

Witnesses:

FREDERICK C. GOODWIN,  
IRVINE MILLER.