

C. A. LINDSTROM.
BOLSTER.

APPLICATION FILED APR. 8, 1907.

943,979.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

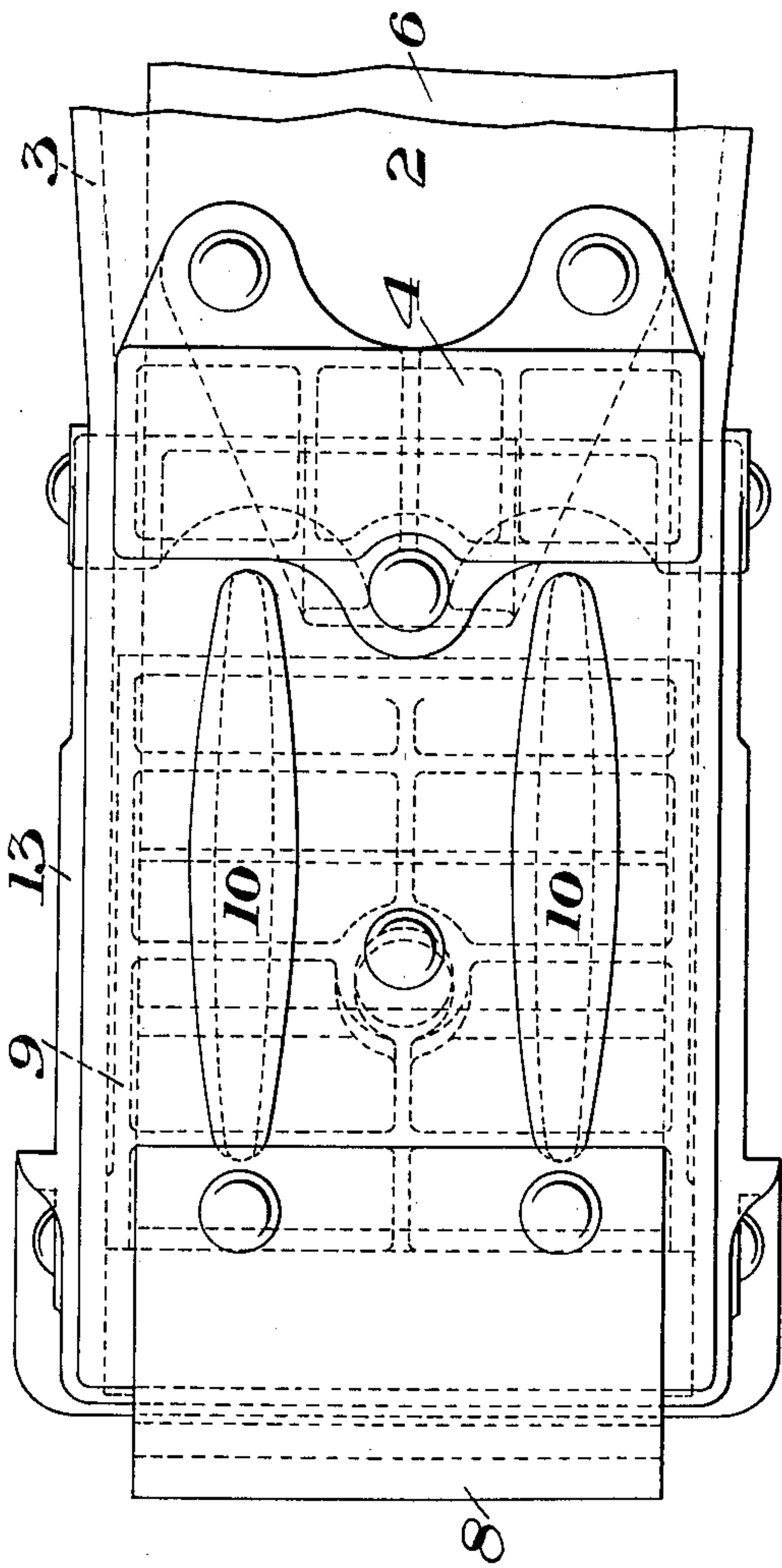


Fig. 2.

WITNESSES

W. W. Swartz
R. H. Balderoon.

Fig. 1.

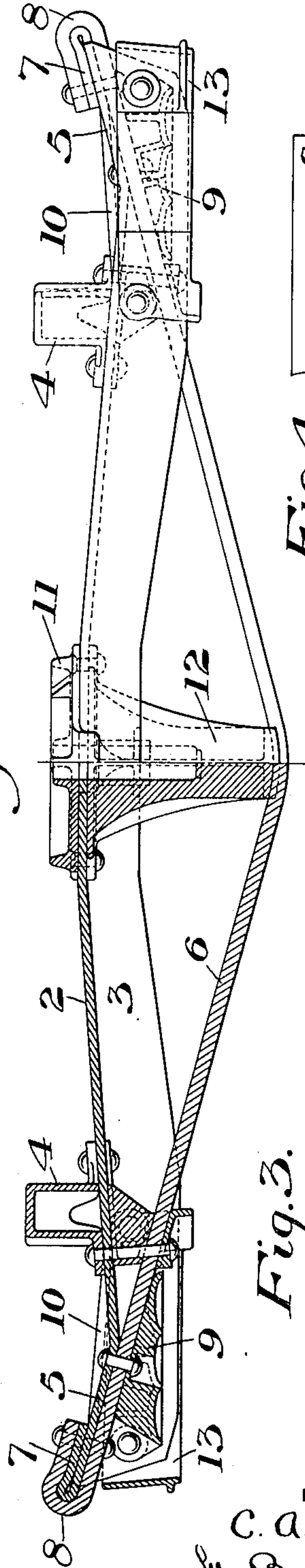


Fig. 4.

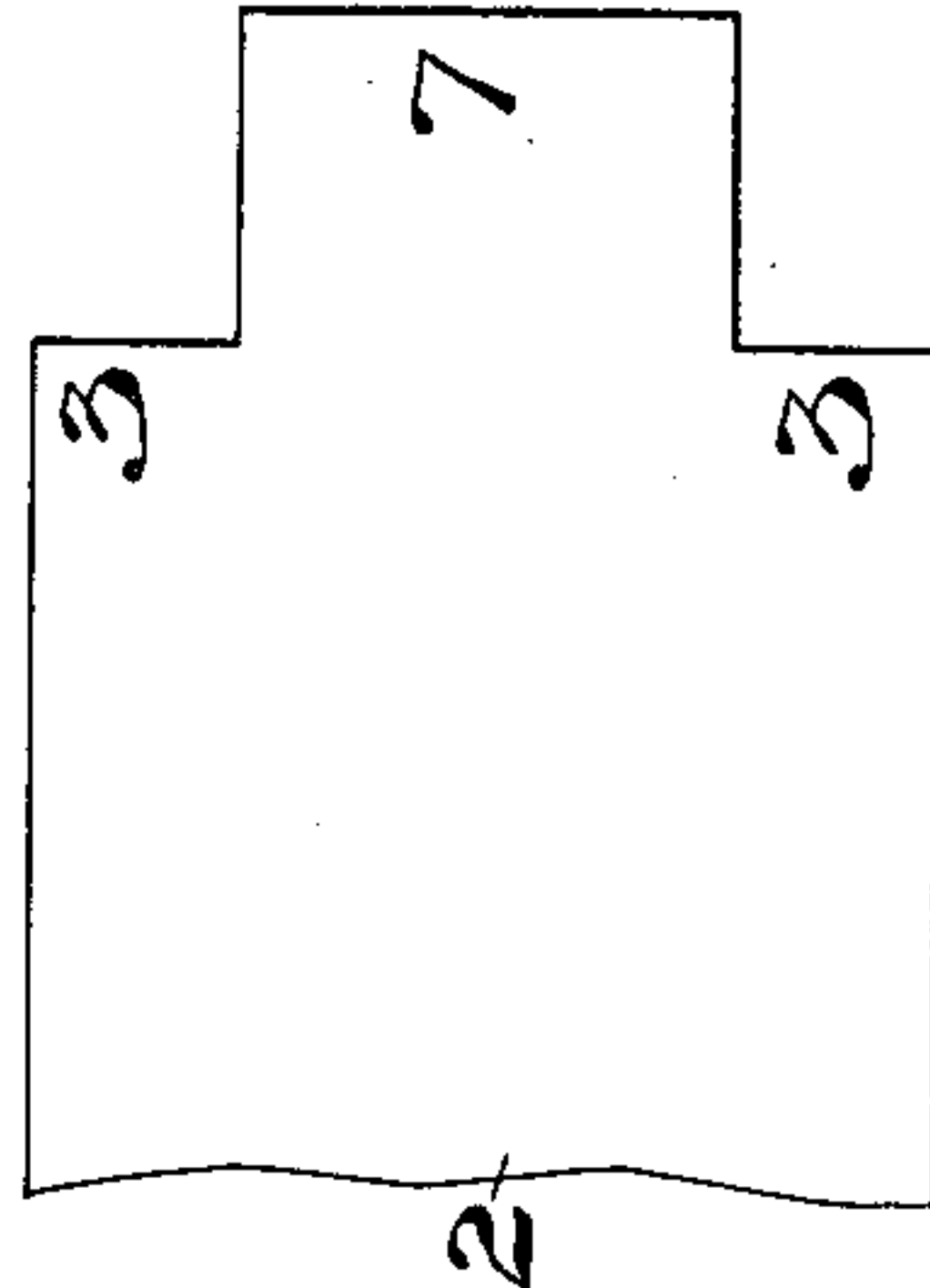
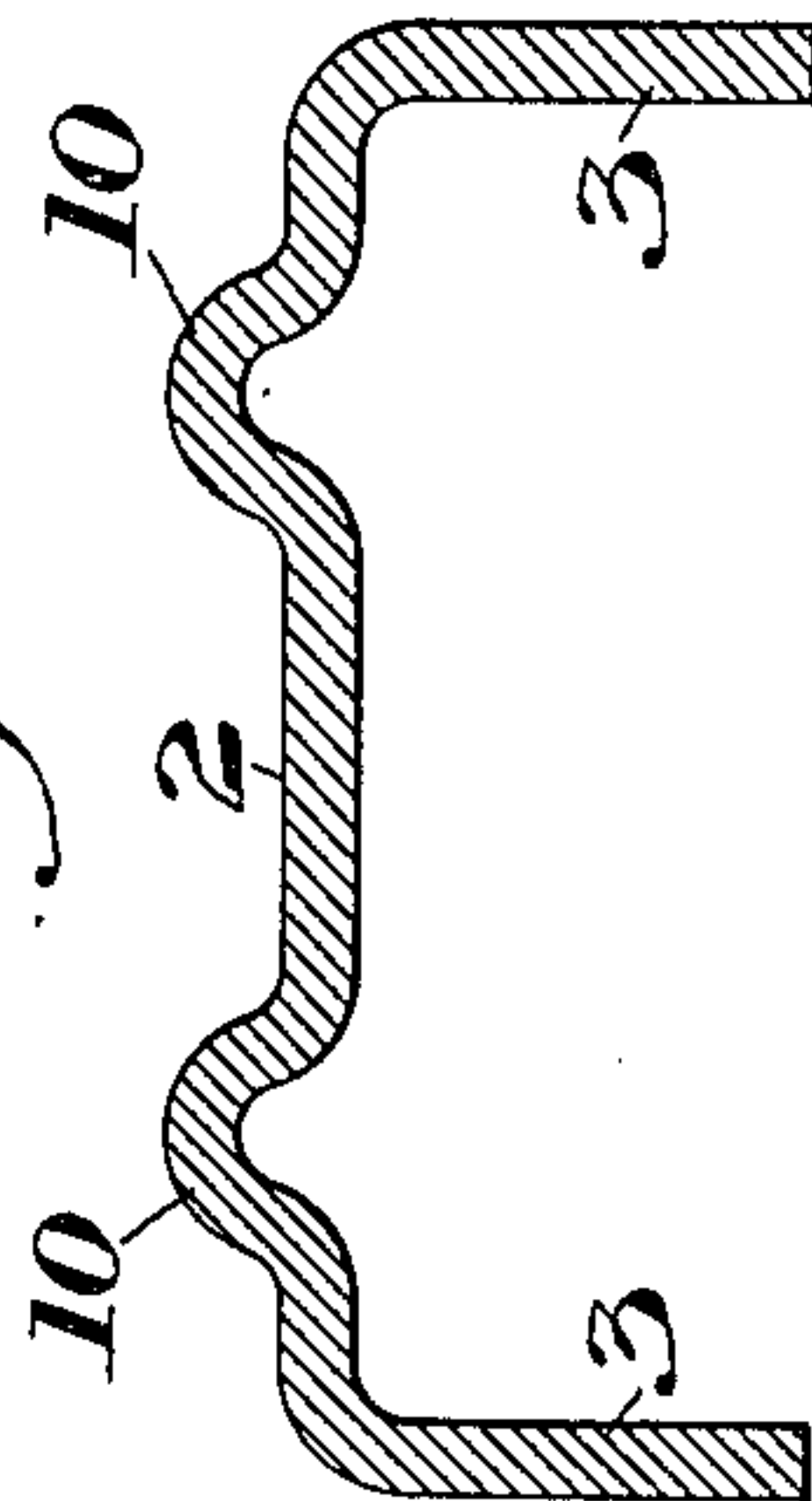


Fig. 3.



INVENTOR

C. A. Lindström,
By Baker & Byrnes,
his Attys.

C. A. LINDSTRÖM.

BOLSTER.

APPLICATION FILED APR. 8, 1907.

943,979.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 2.

Fig. 5.

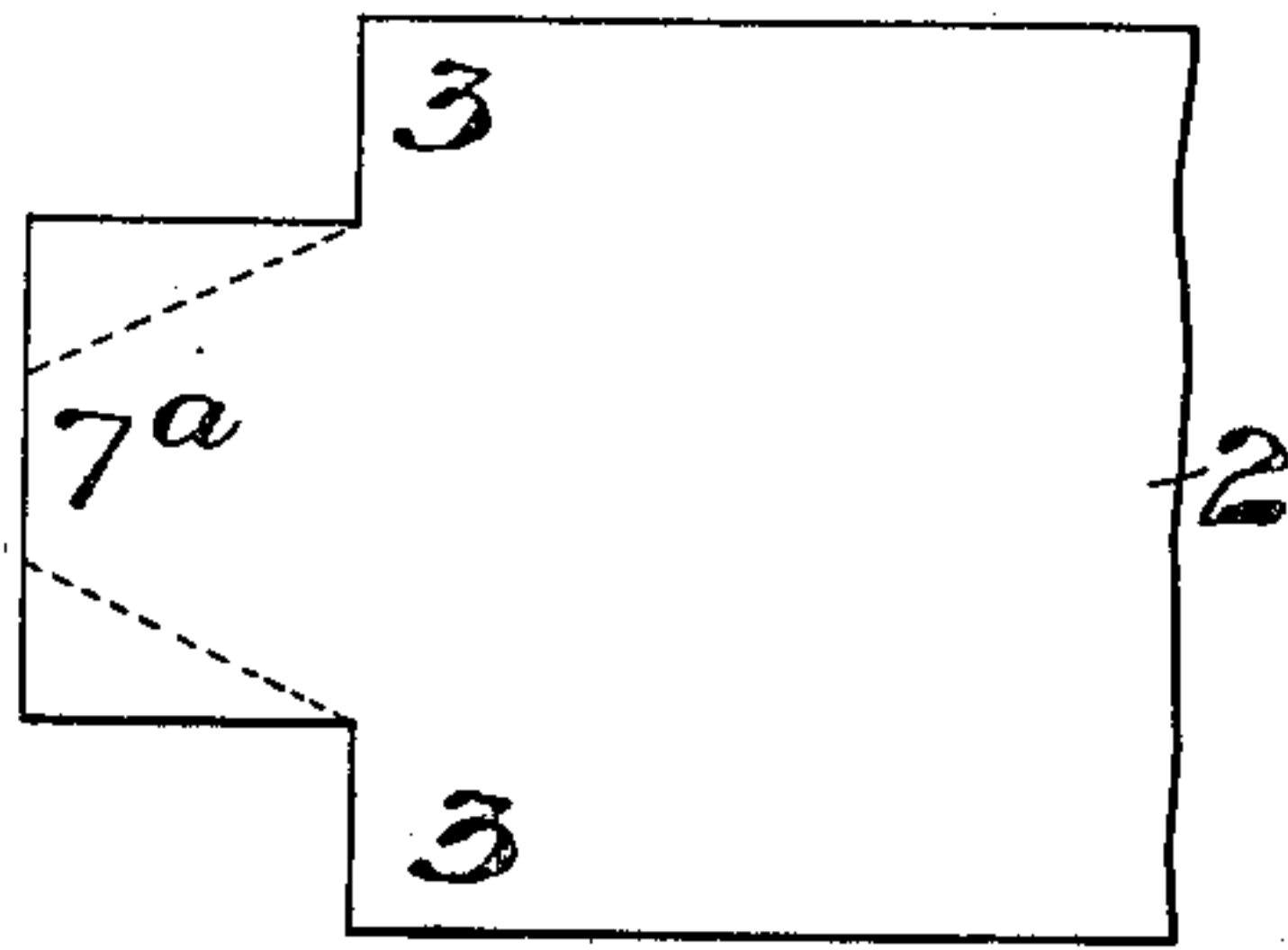


Fig. 6.

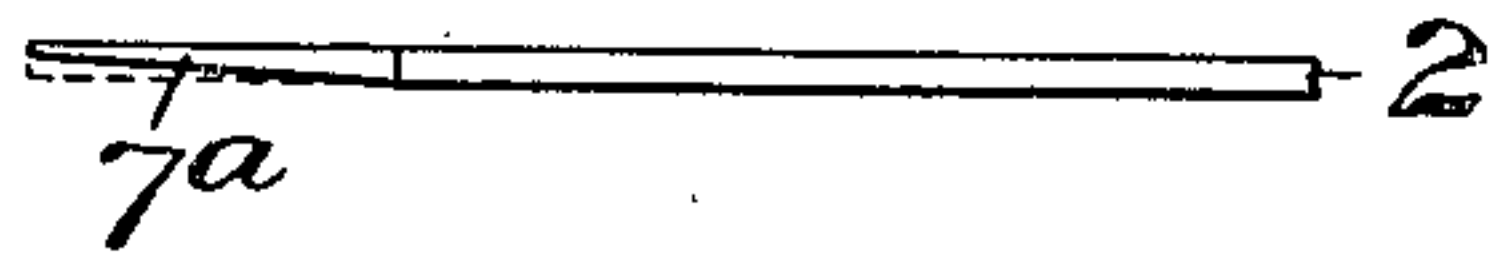


Fig. 7.

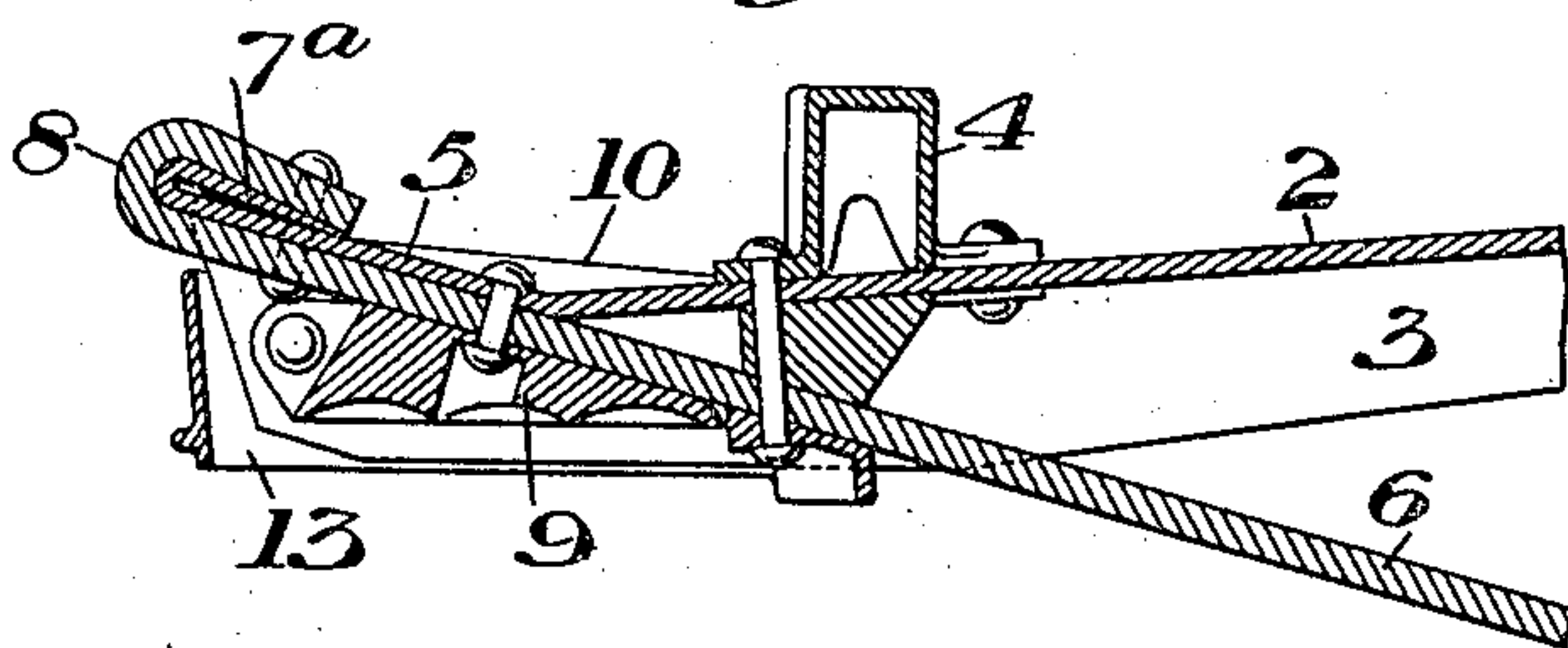
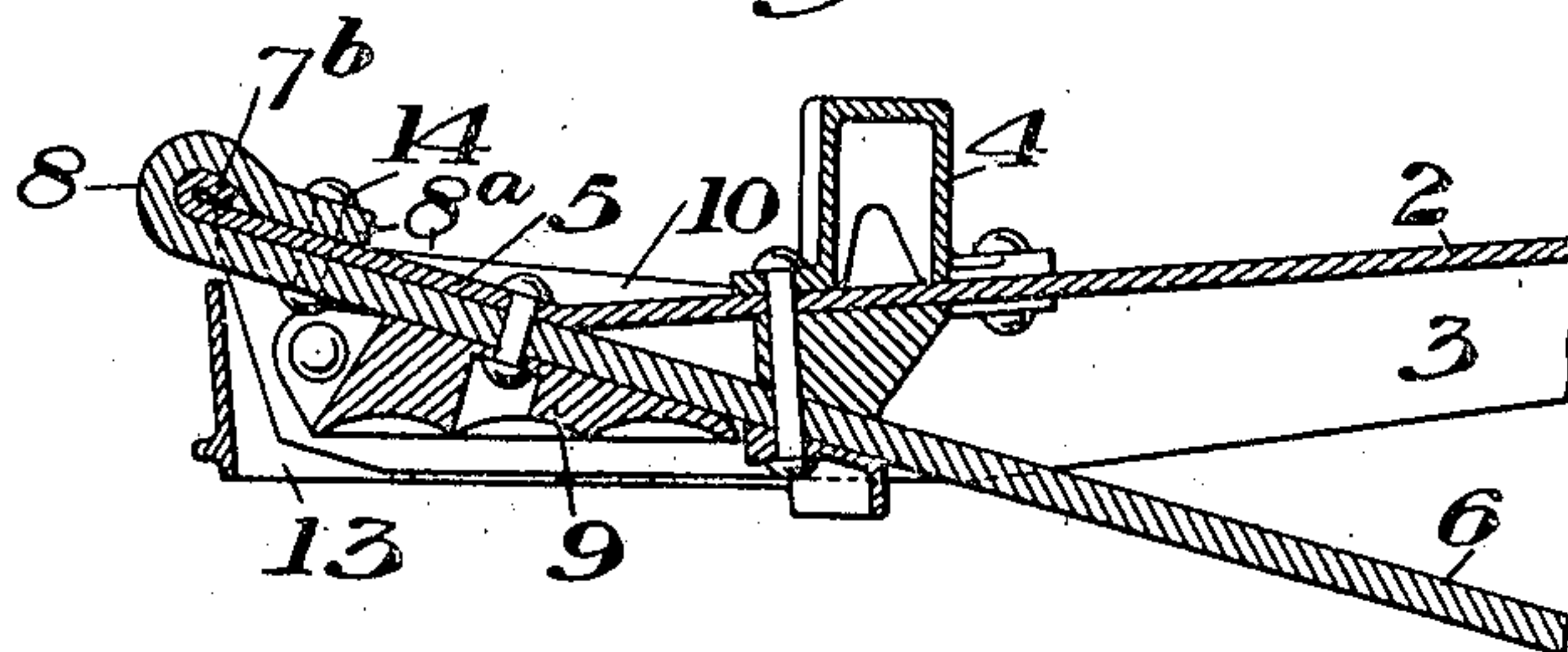


Fig. 8.



WITNESSES

W. W. Swartz
R. A. Balderson

INVENTOR

C. A. Lindström,
by Babcock & Byrnes,
his Attys

UNITED STATES PATENT OFFICE.

CHARLES A. LINDSTRÖM, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR TO PRESSED
STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW
JERSEY.

BOLSTER.

943,979.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed April 8, 1907. Serial No. 366,914.

To all whom it may concern:

Be it known that I, CHARLES A. LINDSTRÖM, of Allegheny, Allegheny county, Pennsylvania, have invented a new and useful Bolster, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view partly in side elevation and partly in vertical section, of a truck bolster embodying my invention; Fig. 2 is a plan view of one end portion of the same; Fig. 3 is a transverse section of one end portion of the compression member; Fig. 4 is a plan view of one end portion of the blank from which the compression member is made before the same is bent and shaped to form; Fig. 5 is a view similar to Fig. 4, but illustrating a modification; Fig. 6 is an edge view of Fig. 5; Fig. 7 is a detail sectional view of one end portion of a truck bolster, showing the use of the modification illustrated in Figs. 4 and 6; and Fig. 8 is a similar view showing another modification.

My invention relates to bolsters of the built-up type, and is designed to provide an improved construction of the compression and tension members of the bolster, whereby the parts may be readily pressed or otherwise shaped from sheet or rolled metal. Also to provide an improved form of connection between the tension and compression members. These objects are obtained by the peculiar construction of the parts now to be described.

In the drawings, 2 designates the compression member of a bolster which is preferably formed from a flat sheet or blank of steel, pressed into the shape of a channel having depending flanges 3, and preferably so formed that at the middle portion the flanges are relatively shallow, and the web portion is relatively wide, while at the end portions the flanges are deeper and the web is narrower. Thus by reference to Fig. 2 of the drawings, it will be seen that the web portion commences to widen at the end at about the point where the side bearings 4 are secured thereto, while the flanges 3 commence to widen a short distance from the center of the bolster, and attain their maximum width at about the points where the side bearings are attached. Each end portion of the compression member is bent downwardly as indicated at 5 into parallel-

ism with the plate tension member 6, and the end portion of its web bent or folded over upon itself to form an integral reinforcement or thickening 7 around which the end portion 8 of the tension member is bent and to which it is riveted. To provide for this reinforcement or thickening of the ends of the compression member, the blank (shown in Fig. 4) is provided with the tongue or extension 7 which is the part which is thus folded over and backwardly upon the body portion of the blank, the edge portions 3 of the blank being bent downwardly to form the flanges 3.

The tension member 6 has its ends riveted to the parallel end portions of the compression member, being extended upwardly over the spring seats 9, which may be of any suitable character.

For the purpose of strengthening or stiffening the web of the compression member at the points where it meets the ends of the tension member, ridges or ribs 10 are pressed in said web, as shown. These ribs 10 extend substantially from the side bearings 4 to the inner end of the double-back portion, tongue or extension of the compression member 2, so that they extend across the downward bend in the compression member at the point where the compression member is brought into parallelism with the tension member. Thus, ribs 10 stiffen the bent outer ends of the compression member.

11 designates the usual center-bearing plate, 12 is the center plate support or strut, and 13 are the chafing plates which limit the end movements of the bolsters.

If desired, the tongue or extension which is bent over upon the web portion of the compression member may be thinned as shown at 7^a in Fig. 7. In such cases, the tongue is preferably initially made in the tapered form shown by the dotted lines in Fig. 5. It is then hammered or rolled to thin it, which spreads the metal to the rectangular form shown in full lines in said figure. In this manner, the total thickness of the end portions of the compression member is reduced, thus giving additional clearance under the truck arch bars and obviating the necessity for making the bolsters as long as would be required in some cases where the full thickness of the material is maintained.

Fig. 8 shows another modification, in that

the bent over portion 7^b is made shorter so that the rivet 14 does not pass therethrough, the end 8^a of the tension member being bent down directly against the upper surface of the web of the tension member.

While I prefer to make the compression member from pressed steel, it is obvious that it may be made from a rolled channel section, having its flanges cut away at each end portion and the ends of the web bent over to form the reinforcements. The compression member may also be made from angle irons having their end portions bent over in a similar manner to provide the integral reinforcements.

My invention is applicable to body bolsters as well as truck bolsters.

The advantages of my invention result from the construction of the compression member of the bolster in such a manner that its end portions provide an integral reinforcement for the attachment thereto of the tension member, the latter being bent around and secured to such reinforcement, the compression member, and to itself or to the compression member and itself, without the use of separate filling members of any kind. So long as these features of my invention are retained, various changes may be made in the details of construction and arrangement without departing from the spirit and scope of my invention.

What I claim is:—

1. In a bolster, a compression member having its end portions bent over upon itself and said portions being thinned; substantially as described.

2. In a bolster, a compression member of channel form having the end portions of its web reduced in thickness and bent over upon itself; substantially as described.

3. In a bolster, a pressed steel compression member having its web tapered at the ends, and a tension member, substantially as described.

4. In a bolster, a compression member of

channel form having a web with narrowed end portions having deeper flanges than at the center of this section, and a tension member, substantially as described.

5. In a bolster, a truss member of channel form having its web shaped to form hollow upwardly projecting parallel reinforcing ribs or ridges therein.

6. In a bolster, a truss member of channel form having its web shaped to form a pair of hollow upwardly projecting longitudinal reinforcing ribs or ridges therein and located on each side of the transverse center of said member.

7. In a bolster, a pressed steel compression member of channel form having parallel reinforcing ribs or ridges pressed in its web portion near each end.

8. In a truck bolster, a pressed steel compression member of channel form having a pair of longitudinal reinforcing ribs or ridges pressed in its web near each end and located on each side of the transverse center of said member.

9. In a bolster, a compression member of channel form having end portions of its web bent over and downwardly upon itself, and also having reinforcing ribs or ridges in its web near each end and on each side of the transverse center of said member, and a tension member having its ends wrapped about the bent over end of the compression member to form a reinforced connection between the ends of said members.

10. In a bolster, a truss member having an end portion formed into angular shape, a stiffening rib formed in said member and extending across the depression formed by the angular shape of said member.

In testimony whereof, I have hereunto set my hand.

CHARLES A. LINDSTRÖM.

Witnesses:

K. L. ROBINSON,

H. B. FISHER.