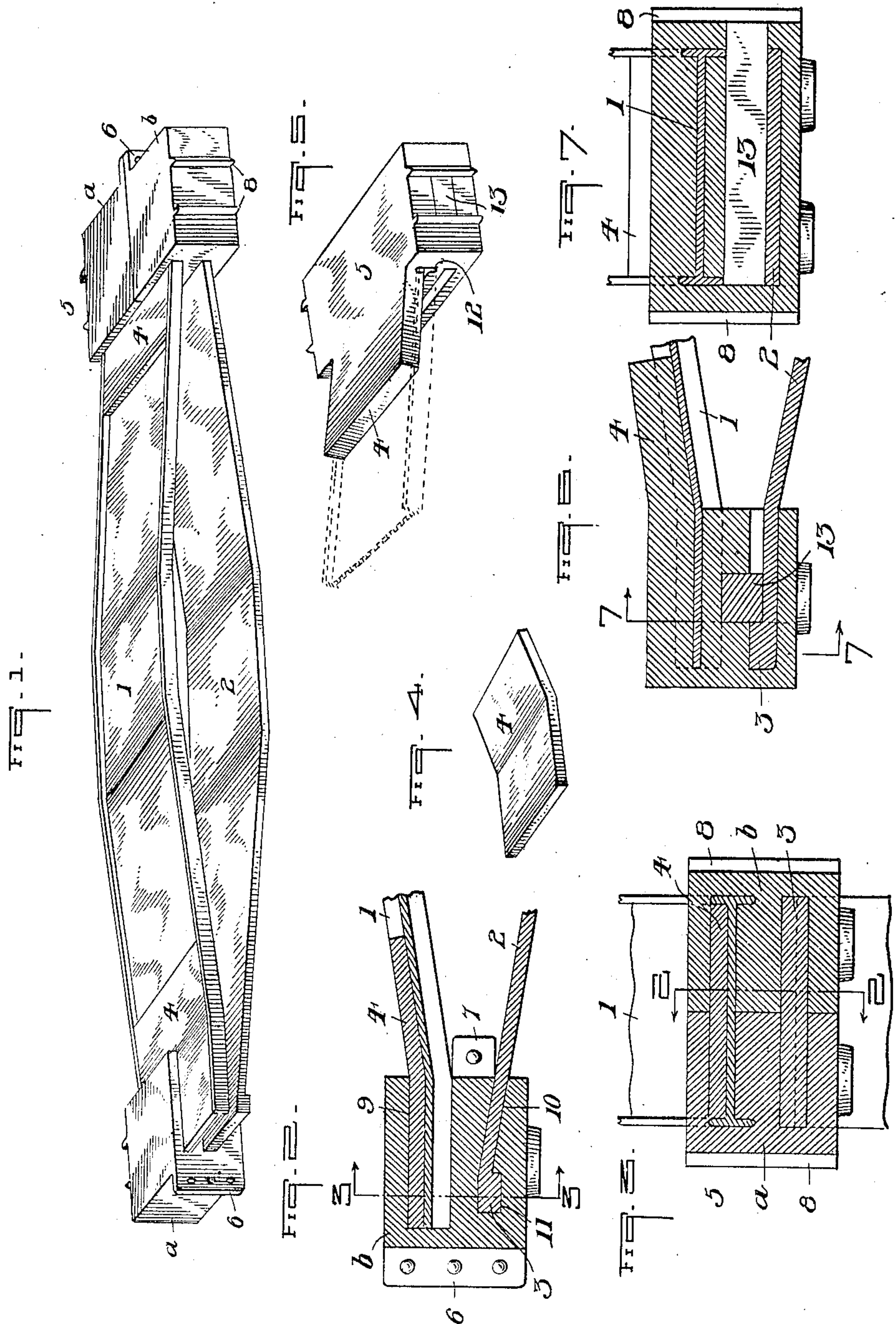


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O. S. PULLIAM,
BOLSTER.

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WITNESSES:

J. P. Jefferson
Margaret Hughes

INVENTOR
Oswald S. Pulliam

W. G. Doolittle

ATTORNEY

UNITED STATES PATENT OFFICE

OSWALD S. PULLIAM, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH EQUIPMENT COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BOLSTER.

No. 869,650.

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To all whom it may concern:

Be it known that I, OSWALD S. PULLIAM, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in

5 Bolsters, of which the following is a specification.

My invention relates to bolsters, and more particularly to bolsters of the built-up type.

One object of the present invention is to provide new and improved means or end-members for joining the

10 ends of the compression and tension-members, whereby the necessity of forming holes in the ends of either of said members is done away with.

A further object of my invention is to provide strengthening-pieces for the compression-members.

15 With these ends in view, my invention consists of a new and improved bolster, in the novel features of construction, and in the combination of parts all as fully hereinafter described and claimed.

In the accompanying drawing, which illustrates applications of my invention, Figure 1 is a perspective view of a bolster embodying my invention; Fig. 2 a

20 broken sectional view of the form of Fig. 1; Fig. 3 a sectional view taken on line 3—3 of Fig. 2; Fig. 4 a detail view of strengthening-piece; Fig. 5 a perspective view of a modified form of my invention; Fig. 6 a longitudinal sectional view of the form of Fig. 5; and Fig. 7 a sectional view taken on line 7—7 of Fig. 6.

Referring to the drawing, the compression-member 1, as illustrated and as preferred, is of I-beam form, but

30 other suitable shapes may be employed for this member. The tension-member 2 is formed from a single plate and is provided with a flange 3 at each end thereof. These engaging flanges may be such as shown by the form of Fig. 1 or the ends of the tension-member

35 may be bent upwardly as shown by the other form illustrated. Located at both ends of the compression-member I have shown strengthening-pieces or plates 4. In the form of Fig. 1 the strengthening-pieces 4 are independent pieces while in the form of Fig. 5 these strengthening-pieces are formed integral with the end-members 5.

The end-members 5 constitute a characteristic and important feature of my invention and in the drawing I have shown two constructions of end-members. In the

45 form of Fig. 1 the end-members comprise two parts *a* and *b*, each part formed with lugs 6 and 7 adapted to receive bolts or rivets for securing the two parts together after they are in position on the ends of the compression and tension-members. In addition to the lugs 6 and 7

50 each part is provided with column-guides 8. In this construction the end-members are designed to be moved laterally into position on the ends of both the compression and tension-members, each part *a* and *b* being formed with slots or openings 9 and 10 to receive the

55 said ends. Slots 9 are also adapted to receive a portion

of each of the strengthening-pieces 4. To engage the flanged end of the tension-member 1 provide a groove 11 in each part. In the form of Fig. 5 each of the end-members consists of a single box-shaped structure having slots or openings 9 and 10 corresponding to the openings of the two part end-member. Grooves 12 are provided to receive the flanges of the compression-member thereby permitting a face of the web to make contact with a bearing surface of the end-member and its strengthening-piece 4. The end-members in the form 65 under consideration are placed on the ends of the compression and tension-members by moving the same lengthwise of said members. In this form, I employ a laterally extending wedge 13 adapted when placed in position within the respective end-members to engage 70 the flanged ends of the tension-members. This wedge is inserted through an opening formed in the end-member between the column-guides. In the form of Fig. 5, the end-members may be cast on the ends of the compression and tension-members instead of making those 75 members independently and afterwards placing them on the ends of said members as above described.

What I claim is:

1. A bolster comprising a compression-member having imperforate ends, a tension-member having imperforate 80 ends, and laterally separable end-members having openings to receive the said ends of the compression and tension-members and having portions overlapping said ends and provided with means for maintaining the said ends within the end-members. 85

2. A bolster comprising a compression-member having imperforate ends, a tension-member having imperforate ends and formed with engaging end flanges, and laterally separable end-members having openings to receive the 90 ends of the compression and tension-members and provided with means for engaging the flanged-ends of the tension-member.

3. A bolster comprising a compression-member, a strengthening-piece located near each end of the compression-member, a tension-member, and overlapping end-members adapted to receive and maintain the ends of both the compression and tension-members and the strengthening-piece therein. 95

4. A bolster comprising a compression-member of I-beam form, a strengthening-piece located near each end of the compression-member, a tension-member, and end-members adapted to receive and maintain the respective ends of the compression and tension-members therein. 100

5. A bolster comprising a compression-member provided with a strengthening-piece at each end, a tension-member formed with end engaging flanges, and laterally separable 105 end-members having openings to receive the ends of the compression and tension-members and provided with portions overlapping the ends of both the compression and tension-members and means for engaging the flanged-ends of the tension-members. 110

6. A bolster comprising a compression-member having imperforate ends, a strengthening-piece located near each end of the compression-member, a tension-member having imperforate ends, and laterally separable overlapping end-members adapted to receive the said ends of the compression and tension-members and strengthening-piece and pro- 115

vided with means for maintaining the ends within the end-members.

5 7. A bolster comprising a compression-member, a tension-member having end-engaging flanges, laterally separable end-members overlapping the ends of both the compression and tension-members, said end-members provided with means for engaging the flanges of the tension-member.

8. A bolster comprising a compression-member, a tension-member, and a laterally separable end-member having

each part provided with an opening adapted to receive and clasp the respective ends of both the compression and tension-members.

In testimony whereof I affix my signature in presence of two witnesses.

OSWALD S. PULLIAM.

Witnesses:

MARGARET HUGHES,
W. G. DOOLITTLE.