

No. 638,749.

R. W. OSWALD.
CAR BOLSTER.

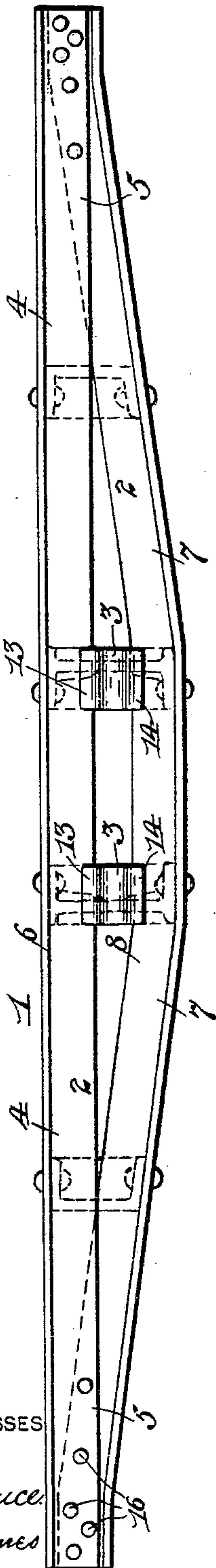
(Application filed May 12, 1899.)

Patented Dec. 12, 1899.

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

Forrance
H. Meynes

Fig. 3.

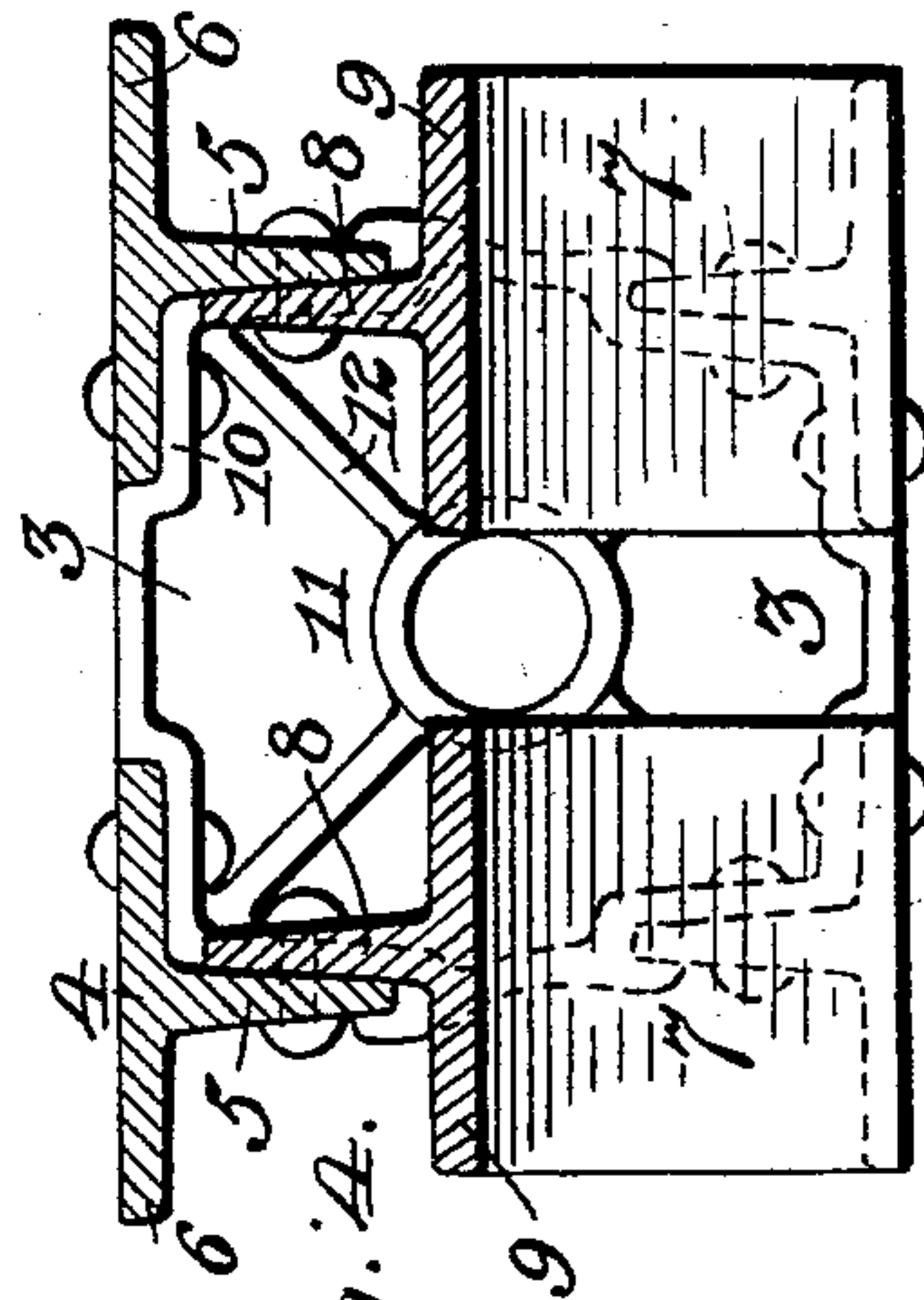
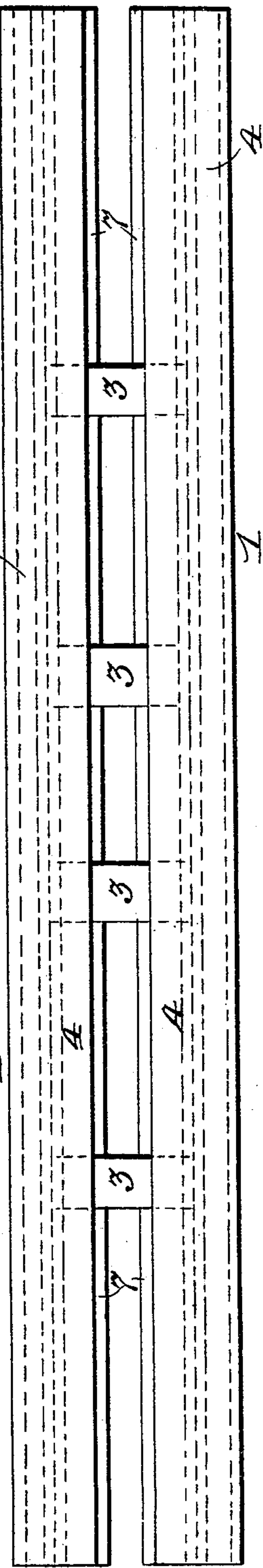


Fig. 4.

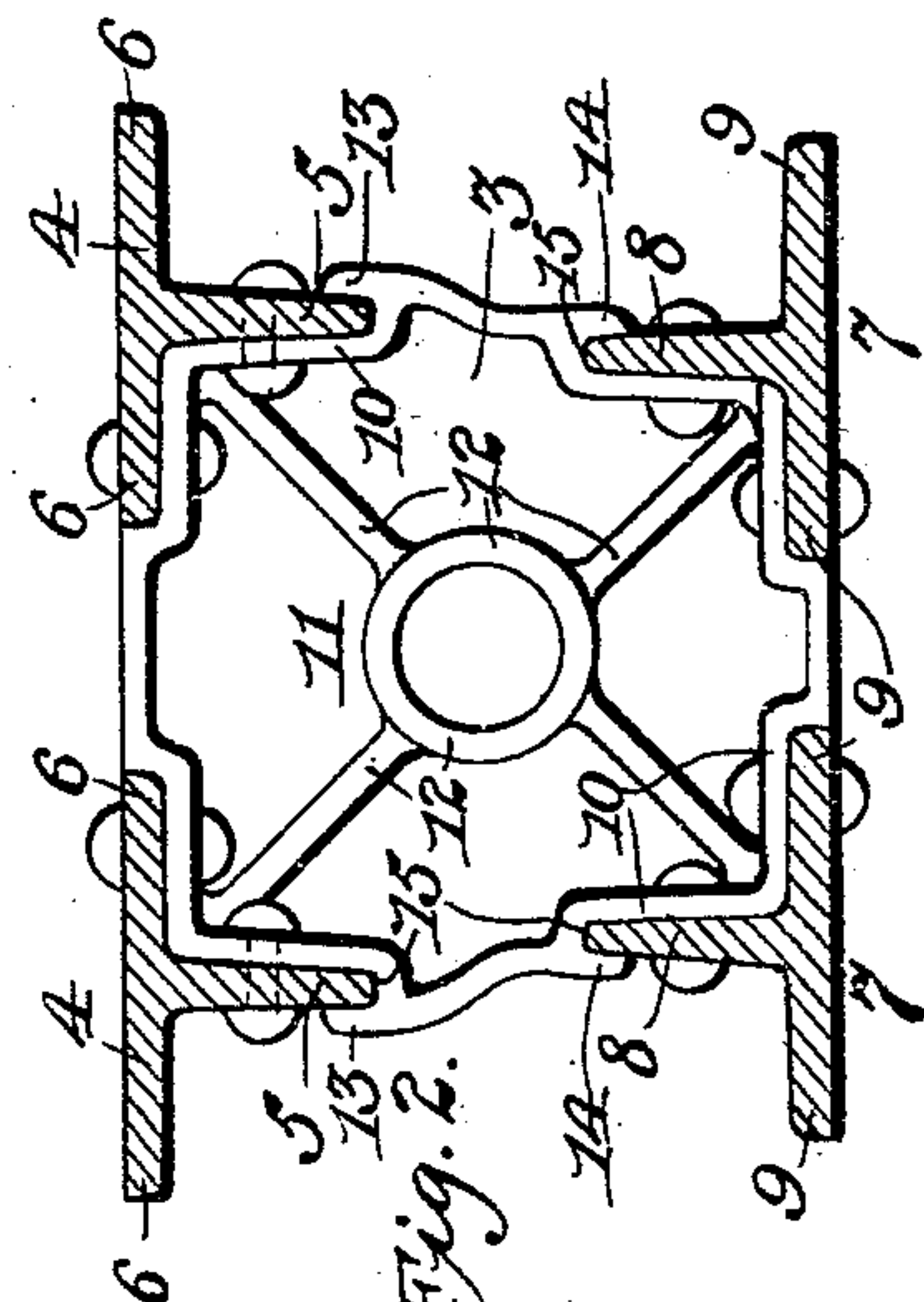


Fig. 2.

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Fig. 5.

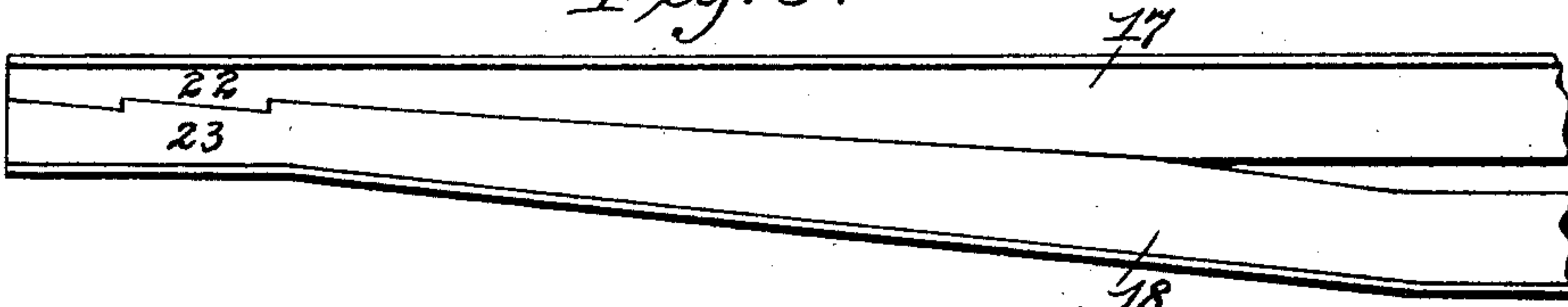


Fig. 6.

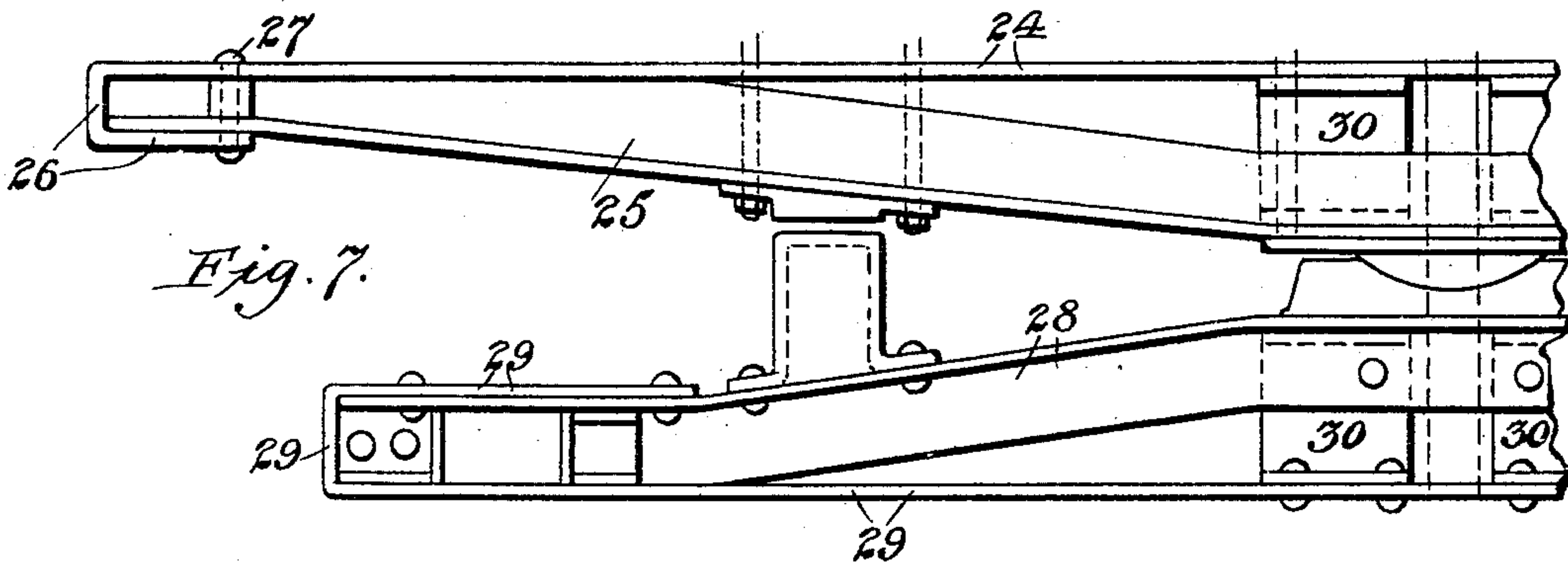
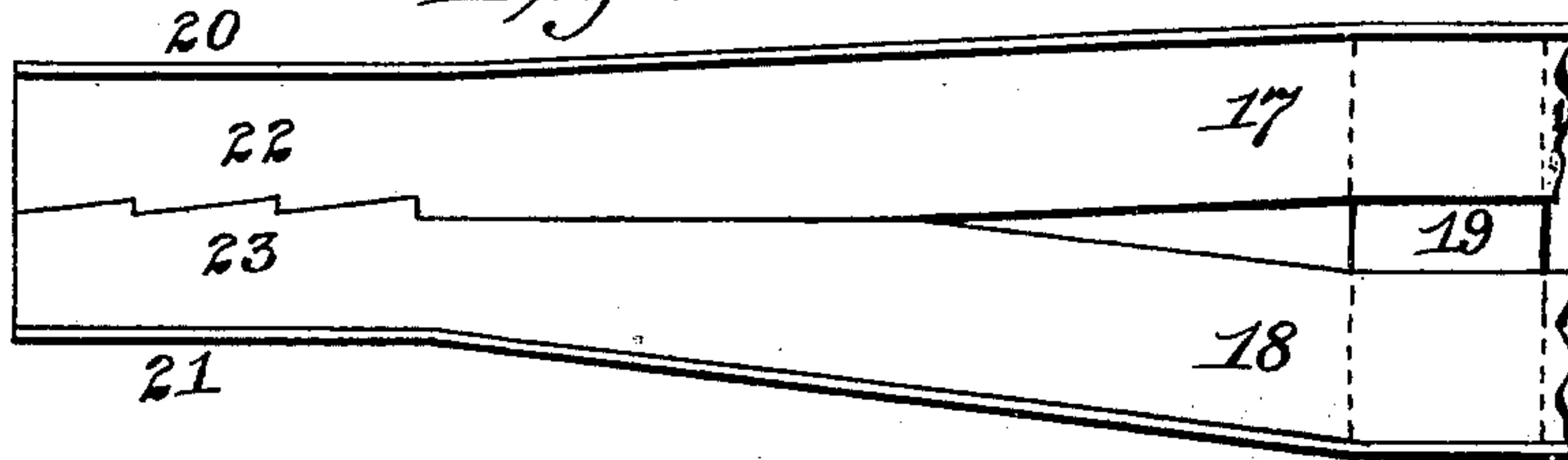


Fig. 8.



Fig. 10.

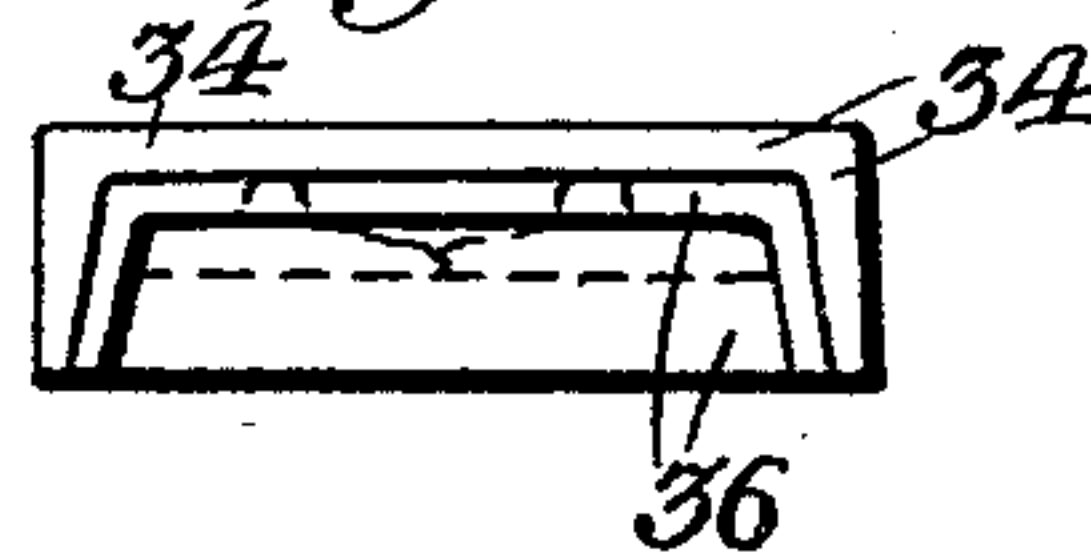
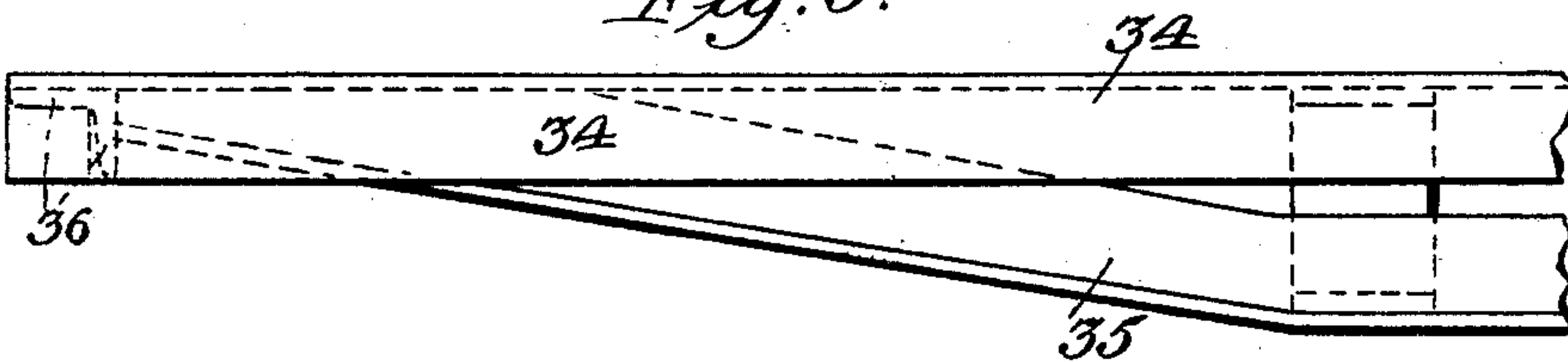


Fig. 9.



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UNITED STATES PATENT OFFICE.

RICHARD W. OSWALD, OF BLOOMSBURG, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO EDWARD B. TUSTIN, OF SAME PLACE.

CAR-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 638,749, dated December 12, 1899.

Application filed May 12, 1899. Serial No. 716,524. (No model.)

To all whom it may concern:

Be it known that I, RICHARD W. OSWALD, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Bolsters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in bolsters, and more particularly to that class of bolsters which are adapted for use upon railway-cars; and it consists in bolsters having their lower or compression members formed of T-irons having their vertical webs extending toward the upper or tension members, their tension members being formed of suitable irons with or without flanges and suitable braces interposed between the tension and compression members, whereby the irons are held in proper relation to each other and the bolster greatly strengthened.

It also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of a bolster constructed in accordance with my invention. Fig. 2 represents a vertical transverse section through the same. Fig. 3 is a top plan view of the said bolster. Fig. 4 is an end view of the same. Fig. 5 represents a slightly different manner of securing the members of the bolster together at their ends. Fig. 6 represents the same as adapted for a truck-bolster. Fig. 7 is a side elevation of a body and truck bolster, the said bolsters having flat plates for tension members. Fig. 8 is a detail view of the end of a bolster. Fig. 9 is a side elevation of a portion of a bolster having a channel-bar for its tension members, and Fig. 10 is an end view of the same.

1 in the drawings represents my improved bolster. 2 represents strengthening-webs for connecting the parts of the bolster, and 3 represents struts for bracing the parts with respect to each other.

A bolster constructed in accordance with my invention may be adapted either for use

as a body-bolster, as shown in Figs. 1, 3, 4, 5, 7, 8, 9, and 10 of the drawings, or may be adapted for use upon the truck of a car, as seen in Figs. 6 and 7, the principle upon which they are constructed being practically the same in either case. It will also be apparent that such a bolster could be used as a car-sill. I find that by the use of T-irons or irons provided with ordinary webs I am enabled to produce car-bolsters of great strength and simplicity of construction. In producing such a bolster as indicated in the drawings when I use T-irons, as 4 4, for the tension member their vertical flanges or webs 5 extend downwardly and their flanges 6 extend laterally, forming upon their upper sides flat bearing-surfaces. As shown in Fig. 1 of the drawings, these flat bearing-surfaces are preferably horizontal from end to end and adapted to receive and support beams upon the car-body. The compression member of the bolster 1 is preferably formed of inverted T-irons, as 7 7, their legs or webs 8 extending upwardly toward the webs 5 of the tension member, while their laterally-extending flanges 9 9 present a flat surface upon the under side of the bolster. The compression member of the bolster is preferably separated at its central portion from the tension member by means of connecting struts or blocks, as 3 3. The struts 3 3 are formed with broad engaging-flanges, as 10 10, adapted to fit the contour of a portion of the T-irons 4 and 7, and are strengthened by a central web portion 11. The web portion 11 is further strengthened by ribs, as 12. A portion of the flanges 10 of the struts 3 are extended upwardly and downwardly, as at 13 14, upon each side of the bolster, so as to form sockets, as 15, to receive the edges of the legs or webs 5 and 8, thus locking them securely in place with relation to each other. The struts 3 are securely riveted or bolted, as illustrated in the drawings, to the legs and flanges of the T-irons both of the tension member and the compression member of the truck. On either side of the struts 3 the compression members are bent upwardly and at their outer ends meet the tension members. The T-irons 4 of the tension member are arranged at a little greater distance apart than the irons 7 7 of the compression member, so that at the

ends of the bolster the leg 8 of the compression member may come inside the legs 5 of the tension member, the said legs being held together at these points by means of rivets or bolts, as 16. It will be seen that the parts are thus firmly braced both vertically and laterally, and the tension members are firmly braced at their ends by the compression members.

As indicated in Fig. 6 of the drawings, when it is desired to use the bolster for the trucks of the car the compression member, as 17, may be bent downwardly at its ends to meet the upwardly-bent ends of the tension member 18. The central portions of the members 17 and 18 are braced by the struts 19, similar to the struts 3, as heretofore described. In adapting the bolsters to a truck the outer ends of the compression and tension members are preferably brought to a horizontal plane again, as indicated at 20 and 21. In this construction, as well as in the one shown in Fig. 5, in securing the ends of the compression and tension members corresponding teeth may be formed upon the flanges 22 and 23 of the said members, the said teeth being adapted to engage one another to prevent the slipping of the parts with respect to each other. It will be noted that in the construction just described it is not necessary to bring the tension and compression members quite so close together, and the legs of the T-irons instead of passing by one another are preferably placed edge to edge, as illustrated in the said Figs. 5 and 6.

While I have described the ends of the members of the bolster as being bolted or riveted together, it will be apparent that I could weld the parts securely together without departing in the least from the spirit of my invention and without having to use bolts or rivets, and thus save the time and expense of boring rivet-holes.

As seen in Fig. 7 of the drawings, the tension member 24 may be made of a flat bar or plate, which extends outwardly to the ends of the compression member 25, said tension member being preferably bent downwardly and beneath the end of the compression member 25, as at 26. A bolt or rivet, as 27, may be employed to hold the parts firmly together at this point. The compression member in this instance, it will be noted, is the same as heretofore described, being made of T-irons, with their vertical flanges extending upwardly. As illustrated in the drawings also, an excellent car-truck bolster may be made by inverting the bolster just described, T-irons, as 28, being uppermost and having their flanges extending downwardly, while the tension member 29 is upon the bottom and its ends being folded back upon the ends of the T-irons, as clearly seen in the drawings. The central portions of the body-bolsters and the truck-bolsters are strengthened by suitable struts 30, secured near their central portions. As seen in Fig. 8, the tension member when

made of a plate will engage the ends of the compression member 32 by having its ends elongated, as at 33, sufficiently to extend down opposite the said end of the said compression member.

As seen in Figs. 9 and 10, a very desirable form of bolster may be constructed by forming the upper tension member, as 34, of a channel iron or bar having its flanges turned downwardly and its web arranged horizontally. The compression member 35 is, as heretofore described, preferably formed of T-irons, having their flanges vertical. The downwardly-turned flanges of the channel-beam 34 preferably incloses the ends of the compression member 35, as illustrated in these figures. The ends of the compression members 35 may be made to abut against a suitable piece or block 36, which is fitted into the ends of the channel-bar 34.

While, as I have before stated, I am enabled to produce a strong and simple car-truck, still the construction of the same is very inexpensive.

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

1. A bolster comprising T-irons having their vertical legs extending toward each other and struts or braces for separating and securing the said T-irons together, substantially as described.

2. A bolster comprising T-irons having their vertical legs extending toward each other, struts or braces for separating the said irons near their central portion, the ends of the said T-irons being brought together and having their vertical legs lapped and secured together, substantially as described.

3. A bolster comprising in its construction parallel irons having horizontal members and vertical members, the said vertical members being arranged so as to extend toward each other and their horizontal members extending in the same plane for forming the flat top and bottom surfaces and means for securing the said irons together, substantially as described.

4. A bolster comprising parallel irons having vertical legs and horizontal flanges, the said vertical legs extending toward each other, struts having broad bearing-flanges conforming to the contour of the said irons and secured thereto for bracing the same, substantially as described.

5. A bolster comprising irons having horizontal flanges and vertical webs, the said webs being arranged so as to extend toward each other, struts interposed between the said irons and having broad bearing-flanges adapted to fit a portion of their outer contour, projections formed on the said bearing-flanges and extending laterally with respect to the bolster to form sockets for receiving the edges of the vertical legs of the said irons, substantially as described.

6. A bolster comprising parallel T-irons,

the vertical flanges of said irons having shoulders or ratchet-teeth near their outer ends whereby the meeting edges of the said vertical flanges are braced with relation to each other, 5 the construction being such that the ends of the tension member of the said bolster are prevented from slipping beyond the ends of the compression member, and means for securing the parts together, substantially as described.

10 7. A bolster comprising upper and lower members, the lower member being formed of inverted T-irons and depressed centrally, while the upper member is formed of a flat plate or bar, said plate being lapped about 15 the ends of the lower member and securely fastened thereto, substantially as described.

8. A bolster comprising tension and com-

pression members, the compression member being formed of T-irons having their vertical flanges extending inwardly and the tension 20 member of said bolster being formed of a channel-bar having its flanges extending inwardly and embracing the ends of the compression members, while its web is arranged horizontally, and means at the ends of the 25 channel-bar for abutting against the ends of the T-irons, substantially as described.

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

RICHARD W. OSWALD.

Witnesses:

S. F. PEACOCK,
R. L. ORANGE.