

No. 791,449.

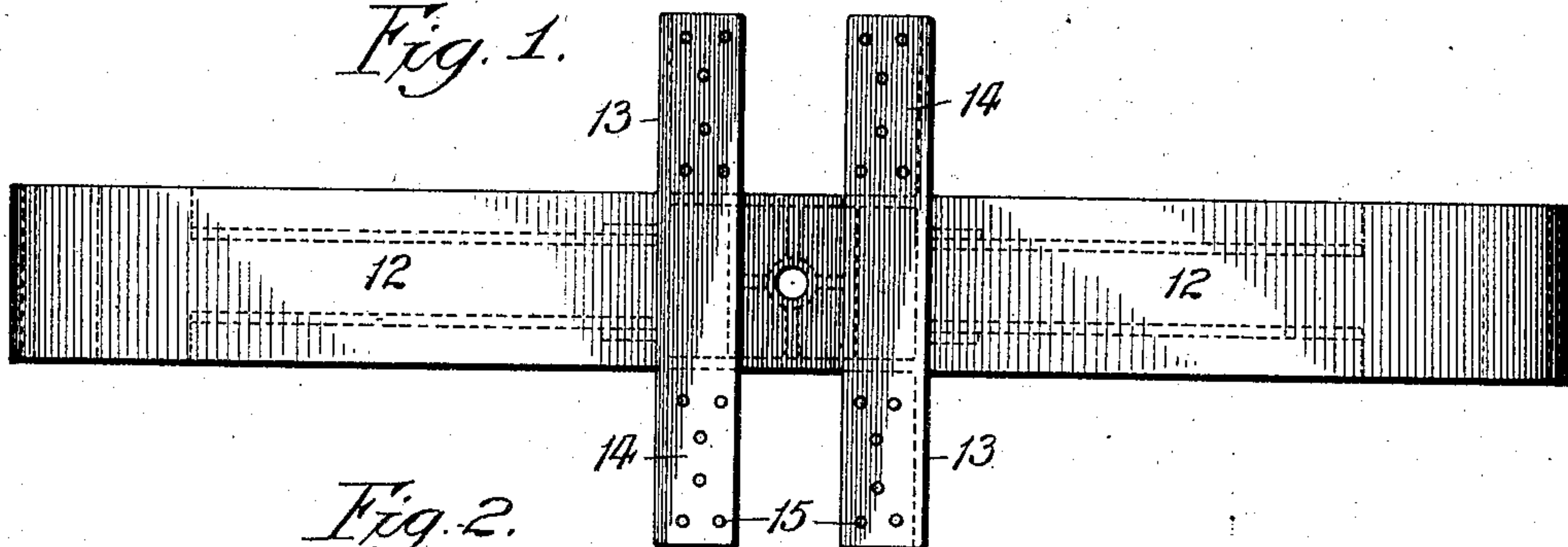
PATENTED JUNE 6, 1905.

E. D. BRONNER.  
BOLSTER.

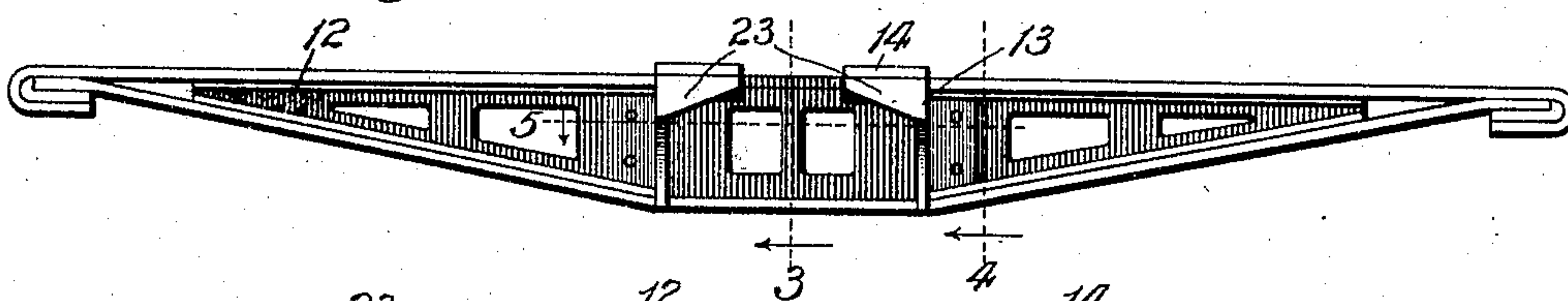
APPLICATION FILED NOV. 4, 1903.

3 SHEETS—SHEET 1.

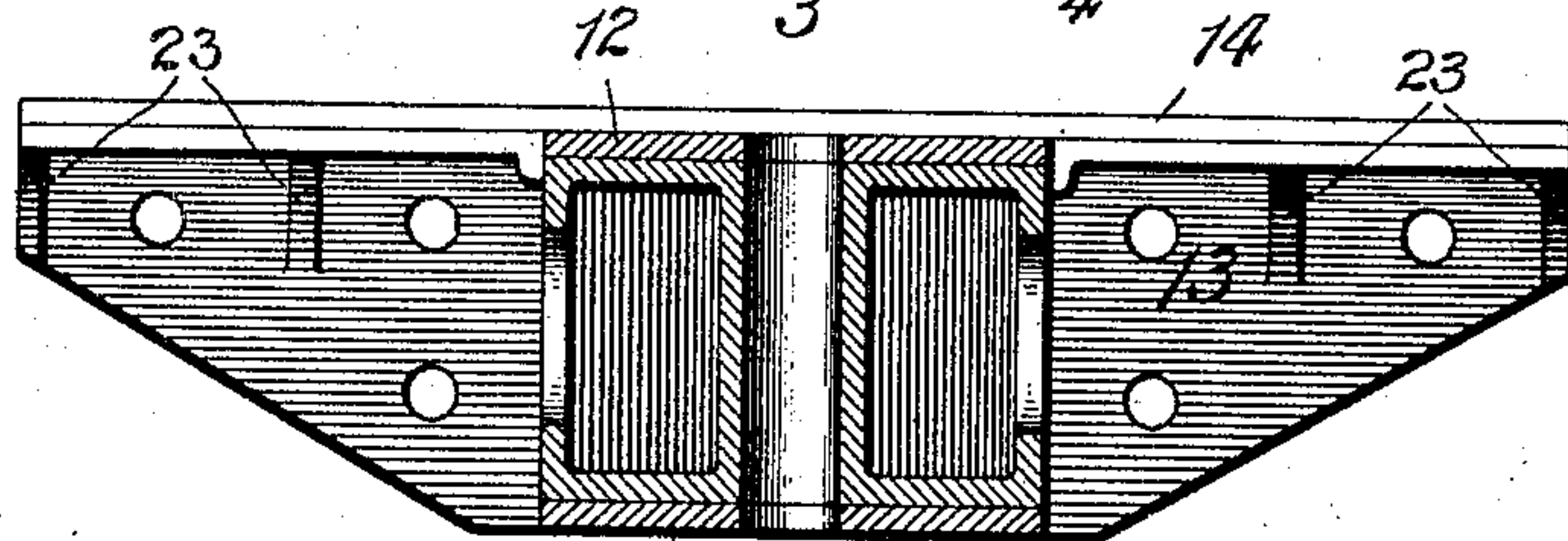
*Fig. 1.*



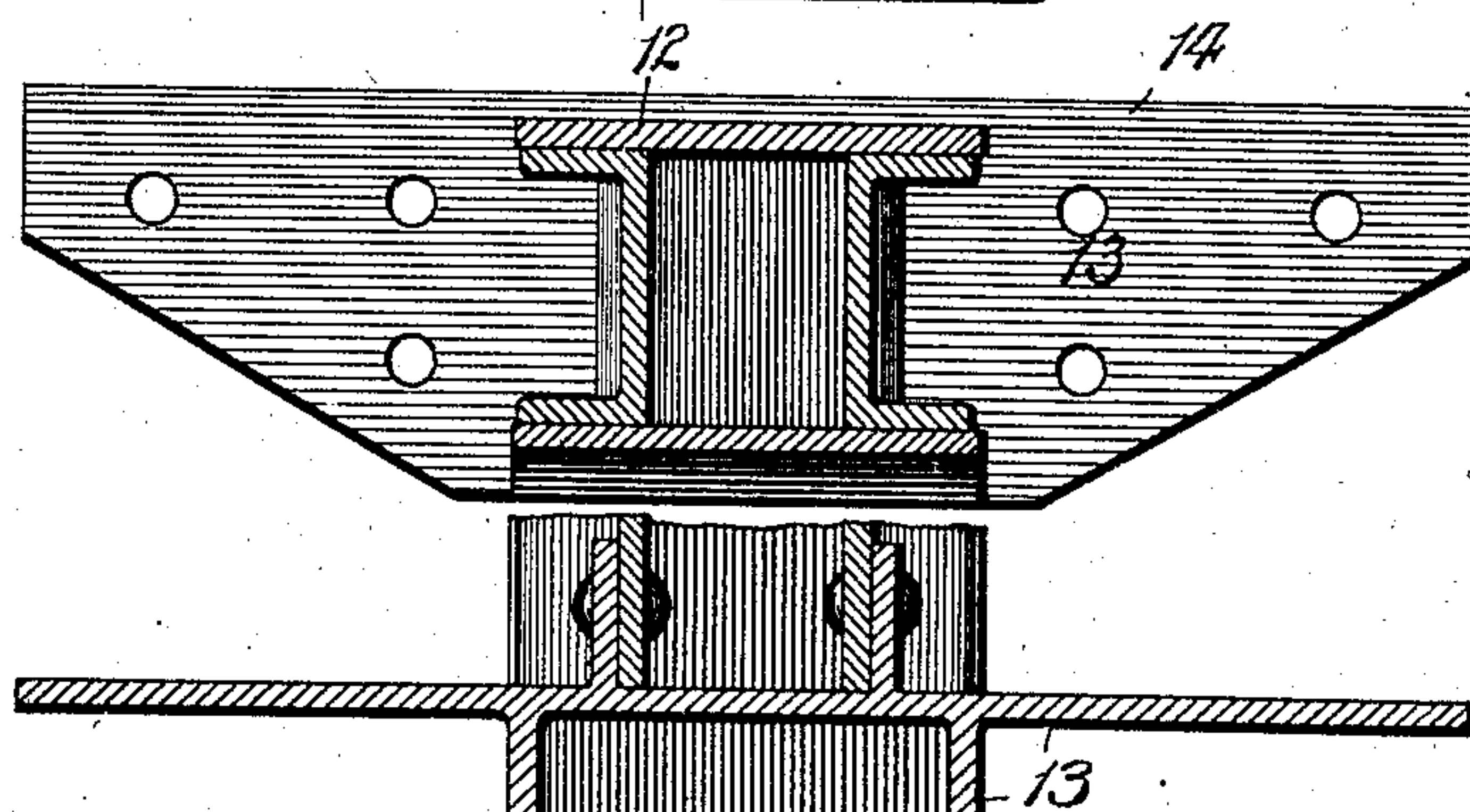
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*

Witnesses:

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Edward A. Burns

Inventor:

Edmond D. Bronner,  
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3 SHEETS—SHEET 2.

Fig. 6.

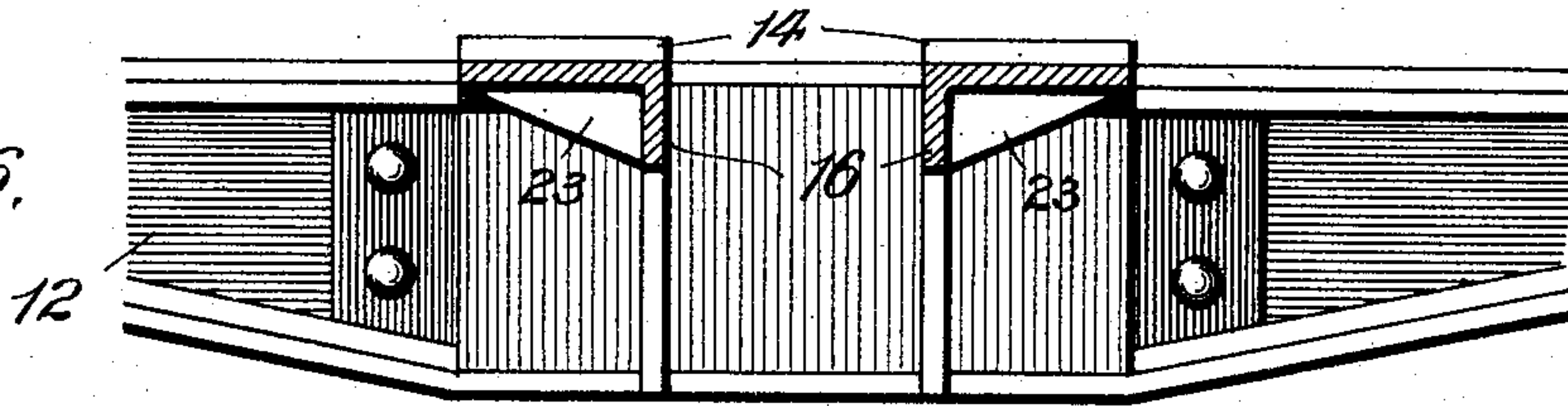


Fig. 7.

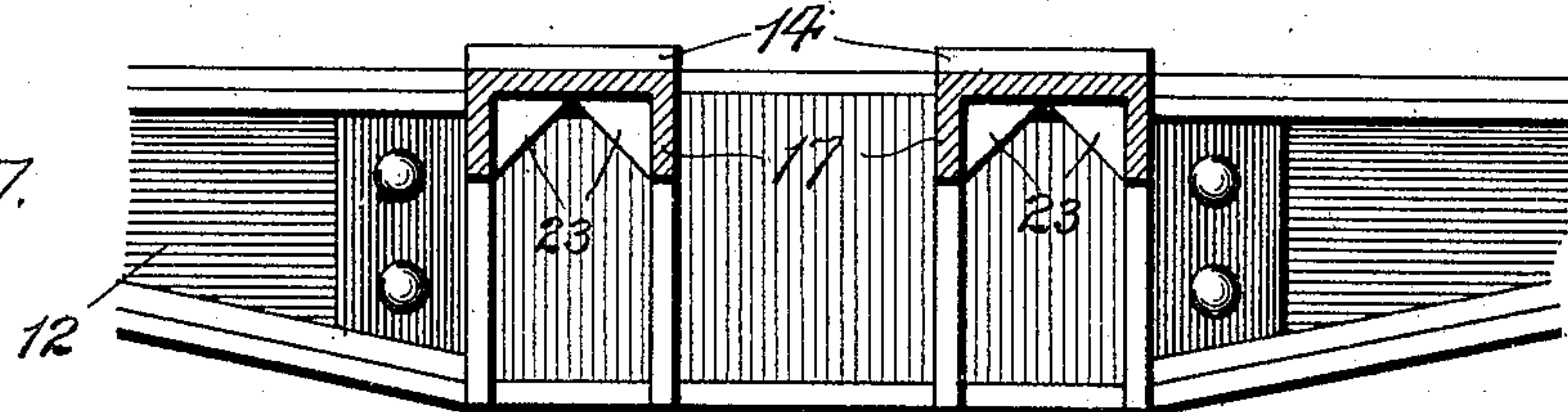


Fig. 8.

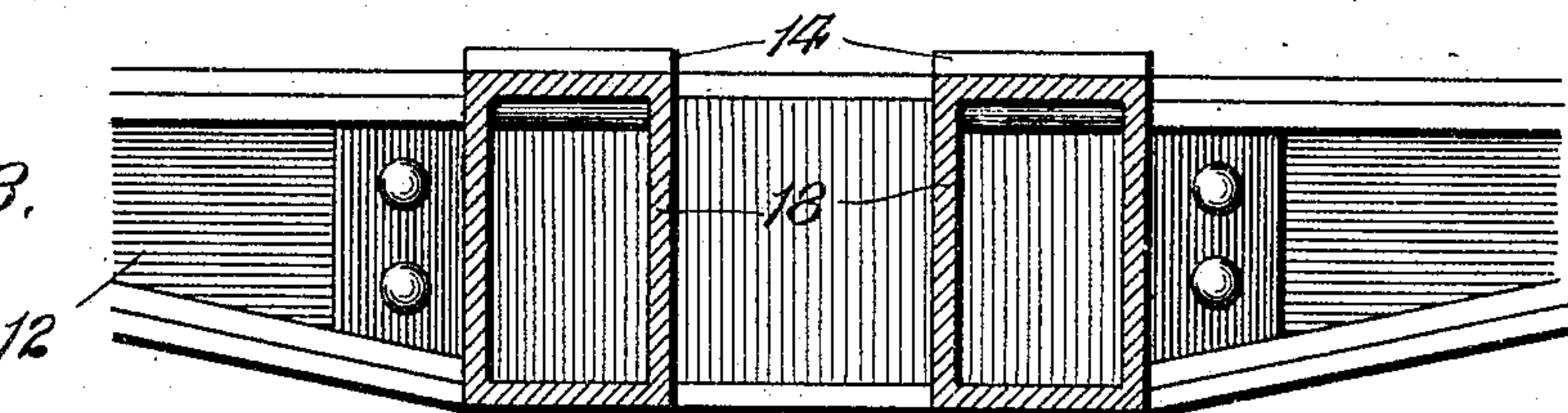


Fig. 9.

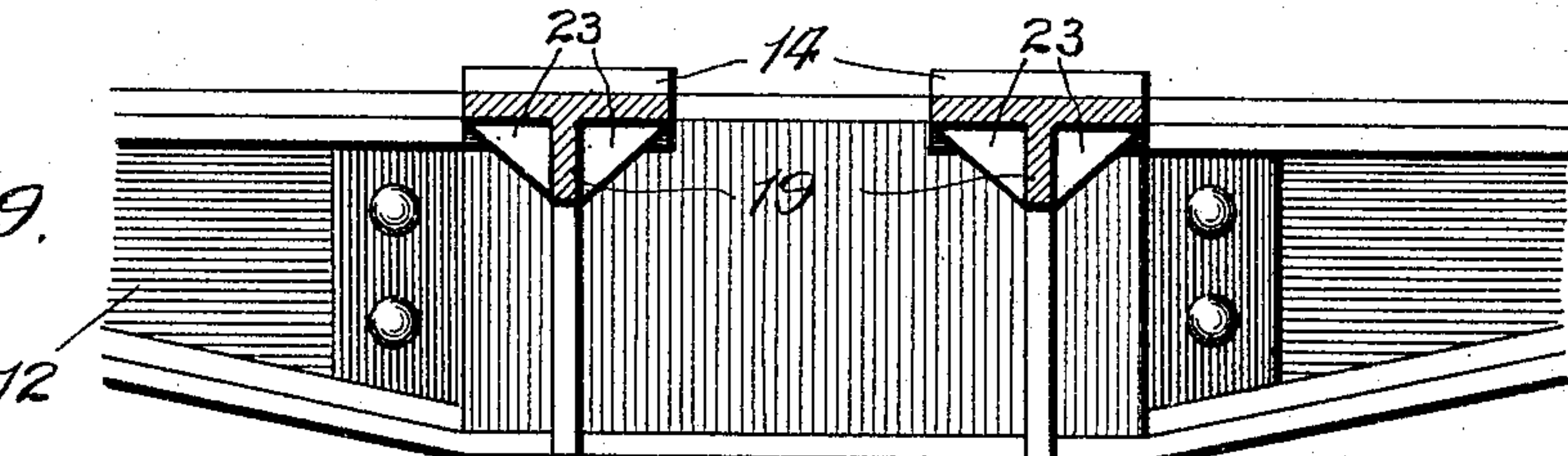


Fig. 10.

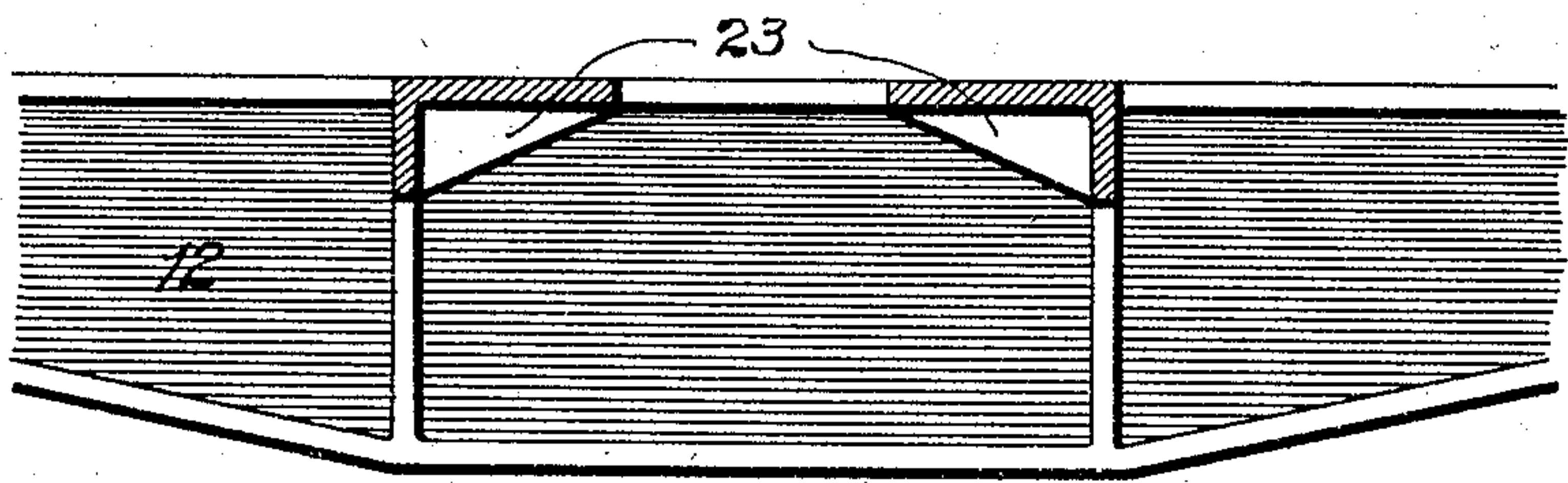
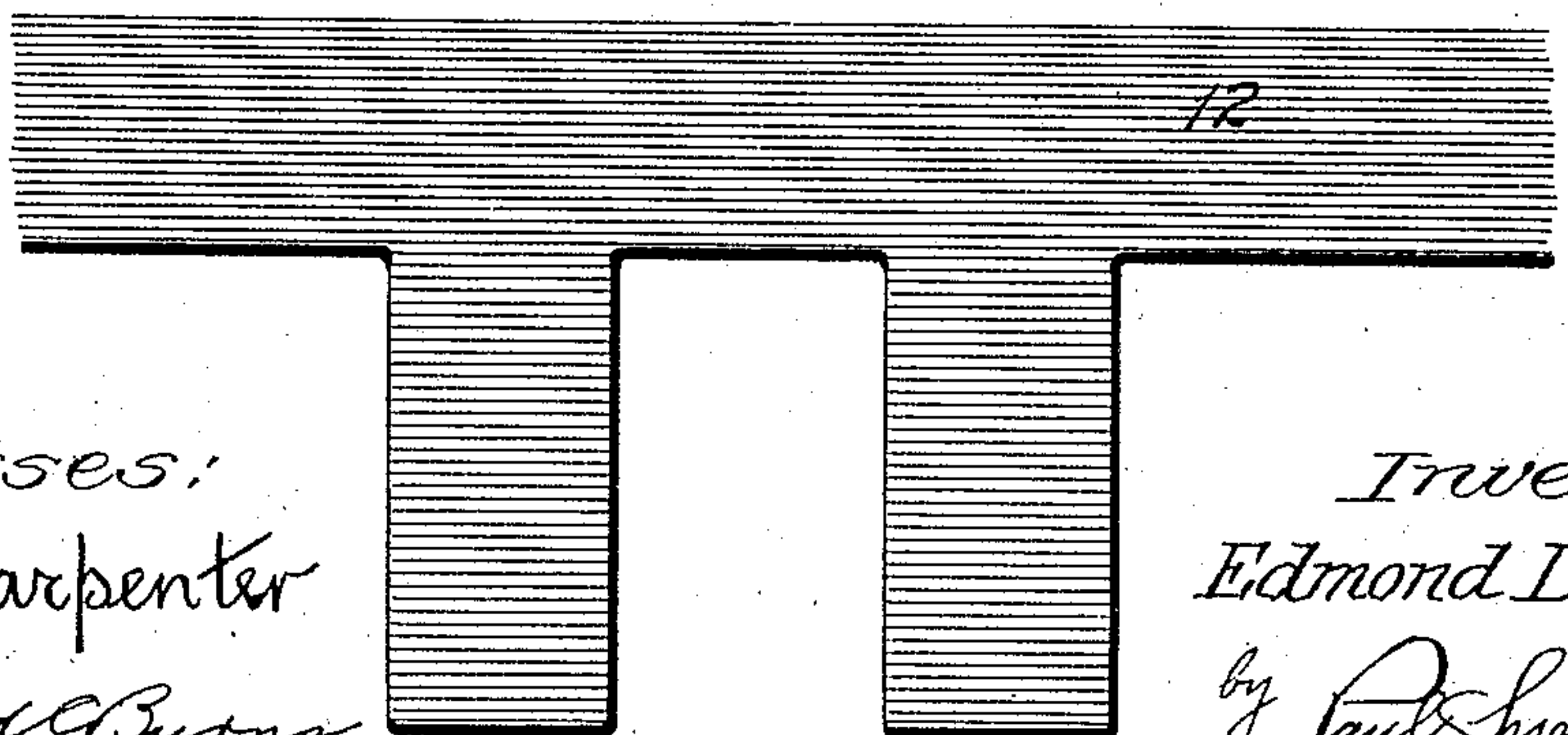


Fig. 11.



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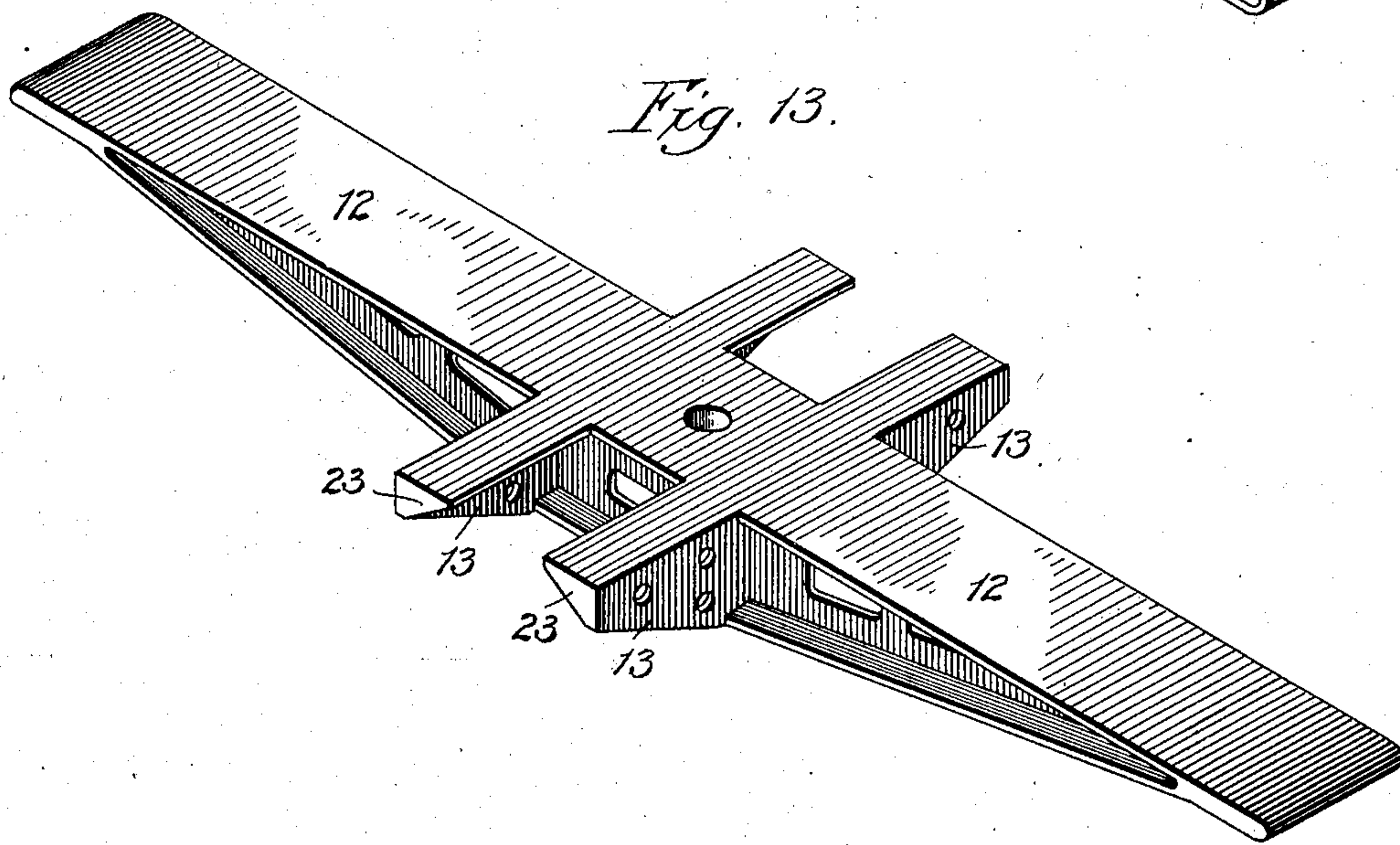
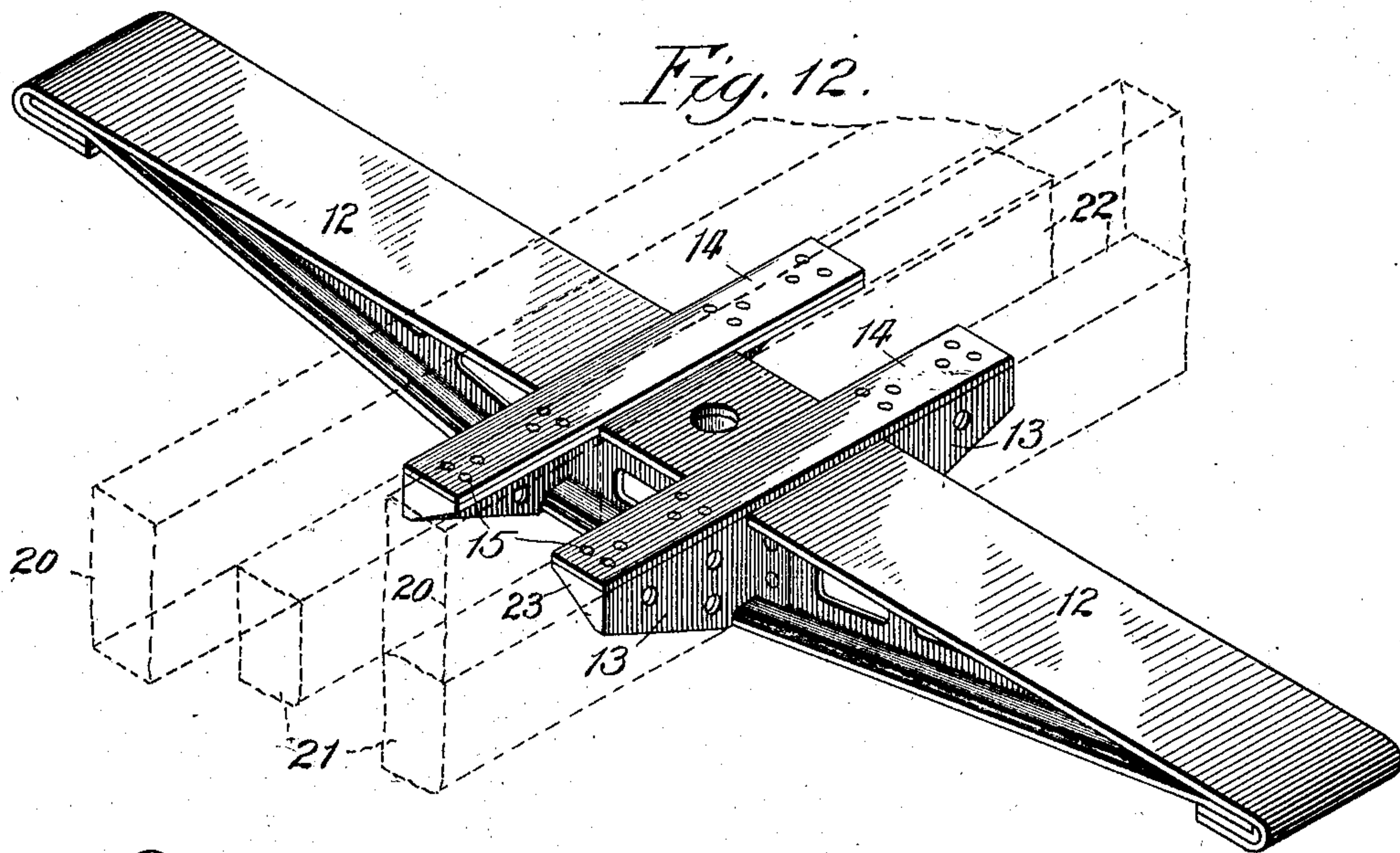
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3 SHEETS—SHEET 3.



Witnesses:

Paul Carpenter

Edward Burns

Inventor:

Edmond D. Bronner

By Paul Synnestvedt  
Atty..



# UNITED STATES PATENT OFFICE.

EDMOND D. BRONNER, OF DETROIT, MICHIGAN.

## BOLSTER.

SPECIFICATION forming part of Letters Patent No. 791,449, dated June 6, 1905.

Application filed November 4, 1903. Serial No. 179,864.

*To all whom it may concern:*

Be it known that I, EDMOND D. BRONNER, a citizen of the United States, residing at Detroit, in the State of Michigan, have invented certain new and useful Improvements in Bolsters, of which the following is a specification.

This invention has reference to car-framing and particularly to that portion of the framing which is ordinarily known as the bolster, and has for its primary object the provision of means whereby a continuous, strong, and easily constructed bolster may be obtained with the draft timbers arranged to abut against the bolster and not pass through it so as to weaken it, as is the case with some of the common constructions, and a further object is to provide in combination with such structure, attaching means for securing firm anchorage for the ends of the draft and butting timbers.

Heretofore in constructing body bolsters, it has been found necessary in order to get the requisite amount of strength for heavy cars, to build them continuous, that is, without making openings in them for the draft timbers to pass through, such timbers being caused to abut against the bolster and arranged to be held in place by some of the ordinary attaching devices without being securely held in connection with the bolster itself. It has been found in constructions of this kind that there is a tendency for the structure to give way at the point where the butting sills and draft sills contact with the bolster, and it is particularly to improve this portion of a car construction that my present invention is designed.

In overcoming the difficulties enumerated above, I provide a bolster structure which has brackets or wings extended out at right angles to the center line of the bolster and of sufficient size and strength to form material support for the draft timbers and to provide a more secure connection between the draft timbers and the car underframing through the bolster, the wings or brackets referred to being securely attached to the draft and butting timbers and providing thereby a very substantial anchorage for the same. By this

means I do away with the great expense incident to frequent repairs of broken sills directly over the bolsters, and pulled out draft timbers due to insufficient anchorage thereof.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have illustrated in preferred form in the accompanying drawings, in which—

Figure 1 is a plan view of a bolster embodying my improvement;

Figure 2 is a side view of the same;

Figure 3 is a transverse section taken on the line (3) of Figure 2;

Figure 4 is a transverse section taken on the line (4) of Figure 2;

Figure 5 is a horizontal section taken on the line (5) of Figure 2;

Figure 6 represents a modified form of my improvement in which angle shaped projections or wings are used;

Figure 7 shows another modified form in which channels are applied with the flanges thereon extending downwardly over the timbers;

Figure 8 shows the employment of box-like projections which form sockets for the ends of the timbers;

Figure 9 shows the wings or projections made of T shaped iron;

Figures 10 and 11 are a side view and plan respectively of a construction in which the wings or projections at the side are formed integrally with the rest of the bolster, as for example, by casting the entire structure in one piece;

Figure 12 is a perspective view of my improved bolster showing connecting timbers in dotted lines; and

Figure 13 is a perspective view showing the structure formed in one piece.

Referring now more particularly to Figures 1 to 5 inclusive which show the preferred form of my invention, it will be seen that I construct a bolster member, which for convenience herein I will term the main bolster member, 12, without any transverse openings in the middle through which the draft timbers (see 21 Figure 12) may pass, which is the preferred and stronger construction.



tion. Attached to this main bolster member 12, and extending out in opposite directions, are wings or projections marked 13, which form sockets or anchorage pieces for the timbers, the draft timbers being attached on one side of the bolster and the butting timbers 22 on the other, there being in the ordinary type of construction two projections or wings at each side of the bolster although I do not wish to have my invention limited to any particular number of such projections or wings, as it is obvious the projections or wings on one side could be omitted if conditions rendered this desirable, and those on either side could be combined into one if such construction seemed most suitable.

While I have in these drawings, shown a bolster which has its compression and tension members both of a plate form with the end of the tension member bent around the end of the compression member and a filling block between, which is one of the most common constructions of standard bolster in the market, still it is to be observed that any other form of bolster could be used in place of this if desired. The means for attachment of the projections or wings to the bolster member 12 is also a matter of relatively little importance, although I prefer to use rivets and employ on top of the side projecting parts 13, cover plates 14 which can be secured by means of rivets 15 or by means of the same attaching devices as secure the wings or projections to the timbers, as may be preferred.

To secure greater strength and additional means for transmitting strains between the timbers and the wings, I provide brackets 23 adapted to rest in transverse notches cut in the timbers and thus form anchorages for the said timbers, this relieving the fastening-bolts of some of the strain.

It is to be observed further, that it is immaterial to my improvement whether the projecting parts or wings which form the means for attachment to the timbers, are made of cast or rolled or any other form of metal, or whether they are made in one piece with the bolster, or detachable relative to the main body of the bolster. It is also obvious that it is immaterial to the improvement forming the subject matter of my present invention, whether or not the timbers employed in conjunction therewith be of wood or of steel, the essential feature of my invention residing in the provision of a continuous bolster member provided with one or more projections or wings forming means of attachment to draft or other timbers.

While in the construction shown, the draft and butting timbers are below the center sills indicated at 20, it is obvious that my invention is applicable to a construction in which a bolster is used which is practically on the same plane as the rest of the car underframe, the projections or wings being arranged on one side for attachment to center sills which would have to terminate at the bolster and on the other side for attachment to draft sills extending outwardly from the bolster.

Referring now to Figures 6 to 11 inclusive, it will be seen that I have therein illustrated, as stated above, various different modifications or forms of the projecting wings, there being an angle iron form shown at 16 in Figure 6; a channel form at 17 in Figure 7; a box-like form at 18 in Figure 8 which forms a socket for the timbers; a T iron form at 19 in Figure 9; and a solid cast construction in which all of the parts are formed integrally, in Figures 10 and 11.

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

1. A bolster construction comprising in combination a main bolster member and projecting wings on said member forming flanges for attaching the same to the sides of the draft or other timbers, substantially as described.

2. A bolster construction comprising in combination a continuous main bolster member and projecting wings extending laterally from said member on both sides thereof forming flanges for engaging the sides of the draft timbers or other abutting timbers, substantially as described.

3. A bolster construction comprising in combination a main bolster member and a laterally projecting wing of angle form attached thereto forming a means of connection for attachment of a center sill or draft timber, substantially as described.

4. A bolster having laterally extending and depending flanges to bolt on the abutting sills, substantially as described.

5. A bolster having angle-formed wings to engage abutting timbers on two sides and cross webs to engage notches in said timbers.

6. A bolster of truss form having cross bars of truss form to engage the abutting timbers and made integral with the bolster.

In testimony whereof I have hereunto set my hand in the presence of the two subscribed witnesses.

EDMOND D. BRONNER.

Witnesses:

PAUL CARPENTER,  
EDWARD C. BURNS.