

No. 677,139.

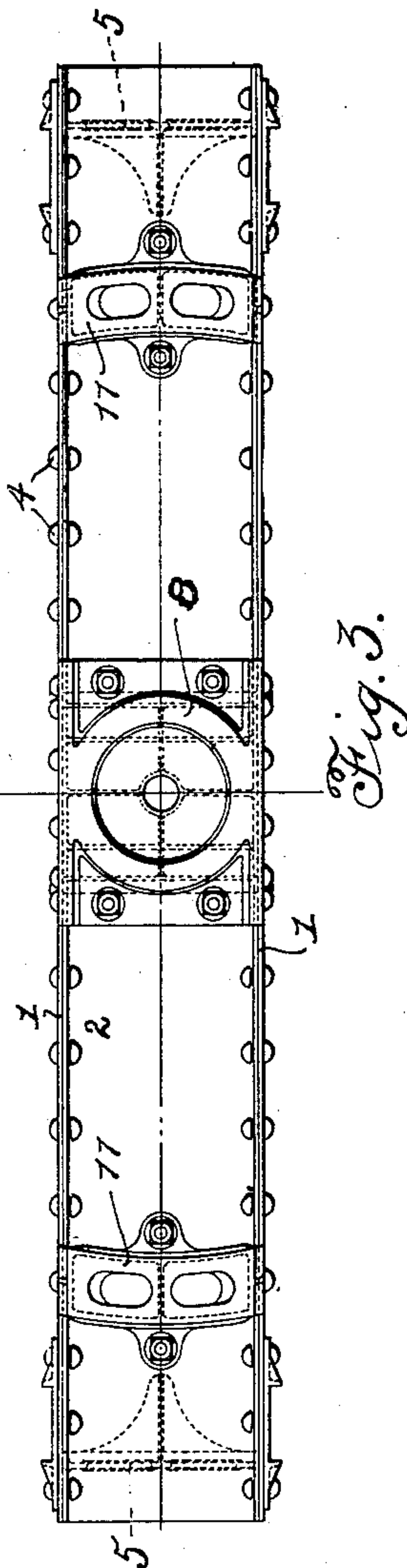
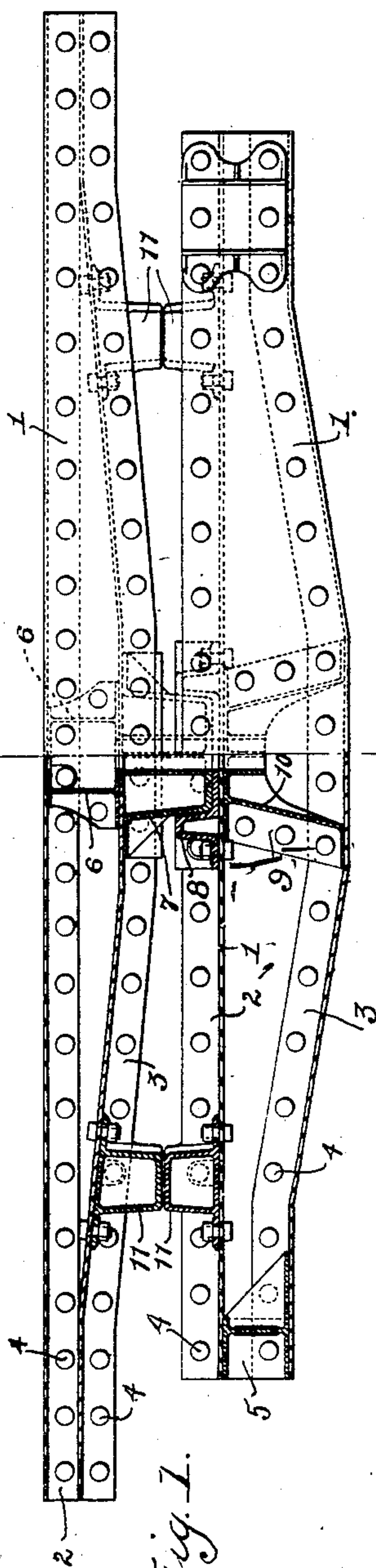
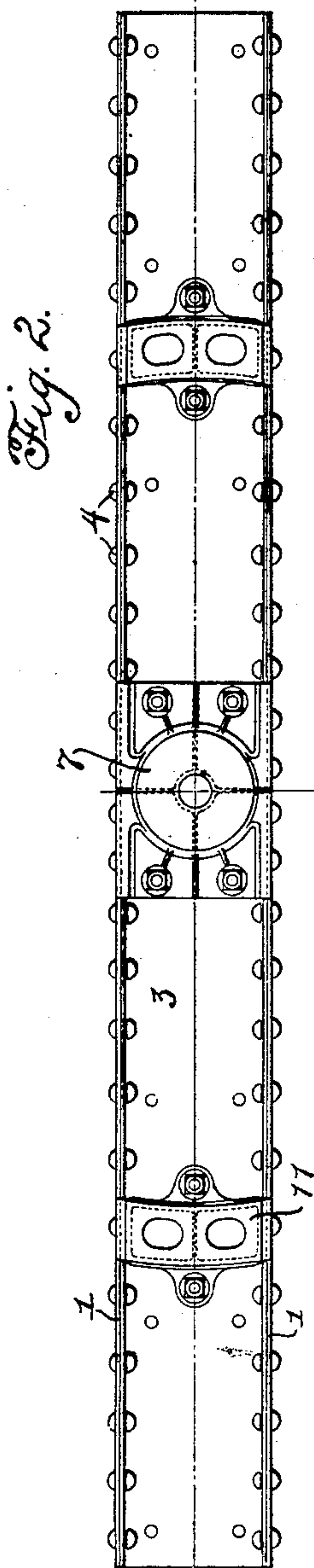
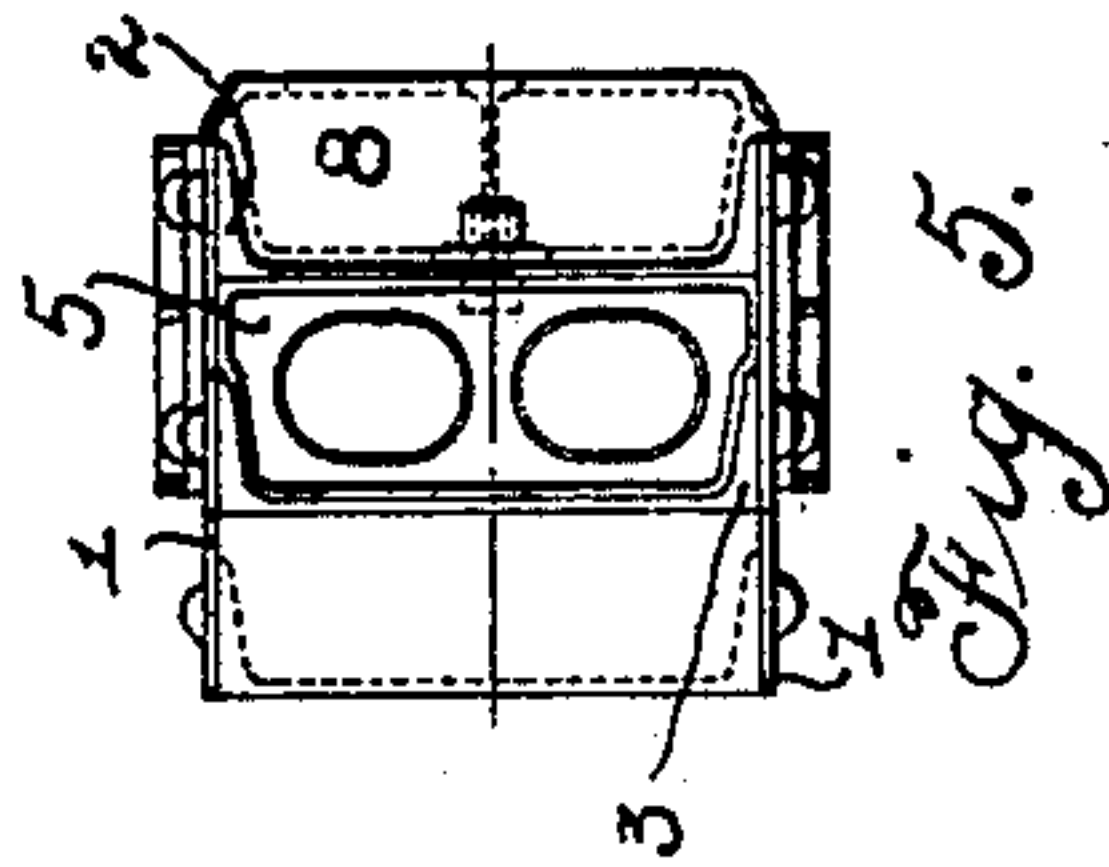
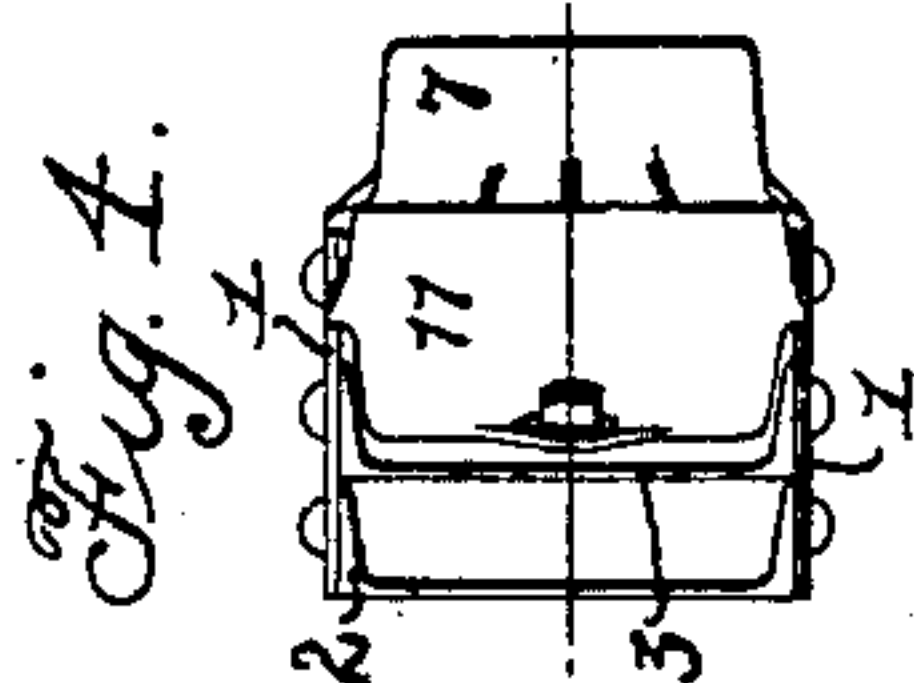
Patented June 25, 1901.

L. OBERAUER.  
CAR BOLSTER.

(Application filed Sept. 10, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 7.

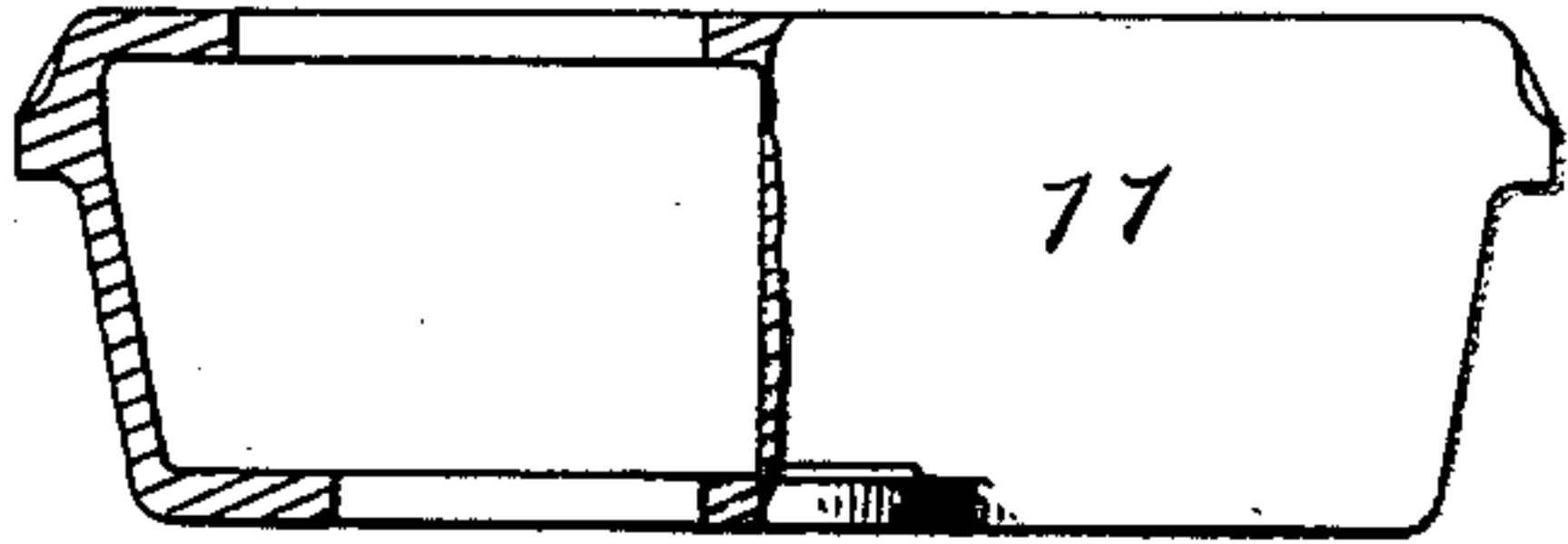


Fig. 8.

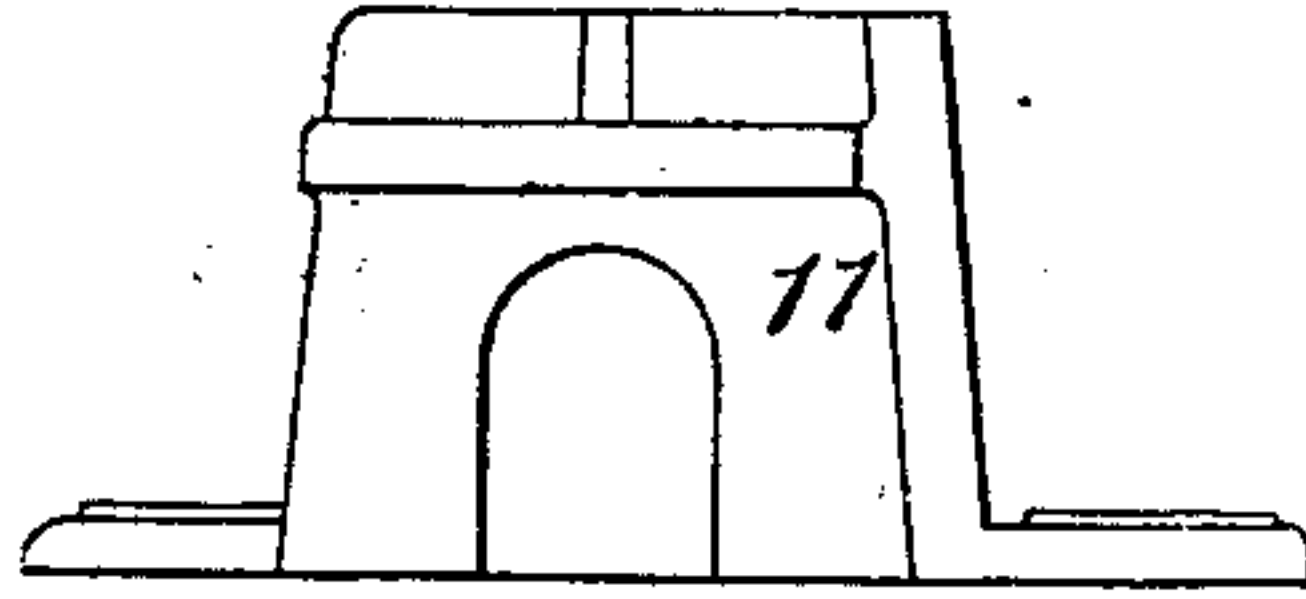


Fig. 9.

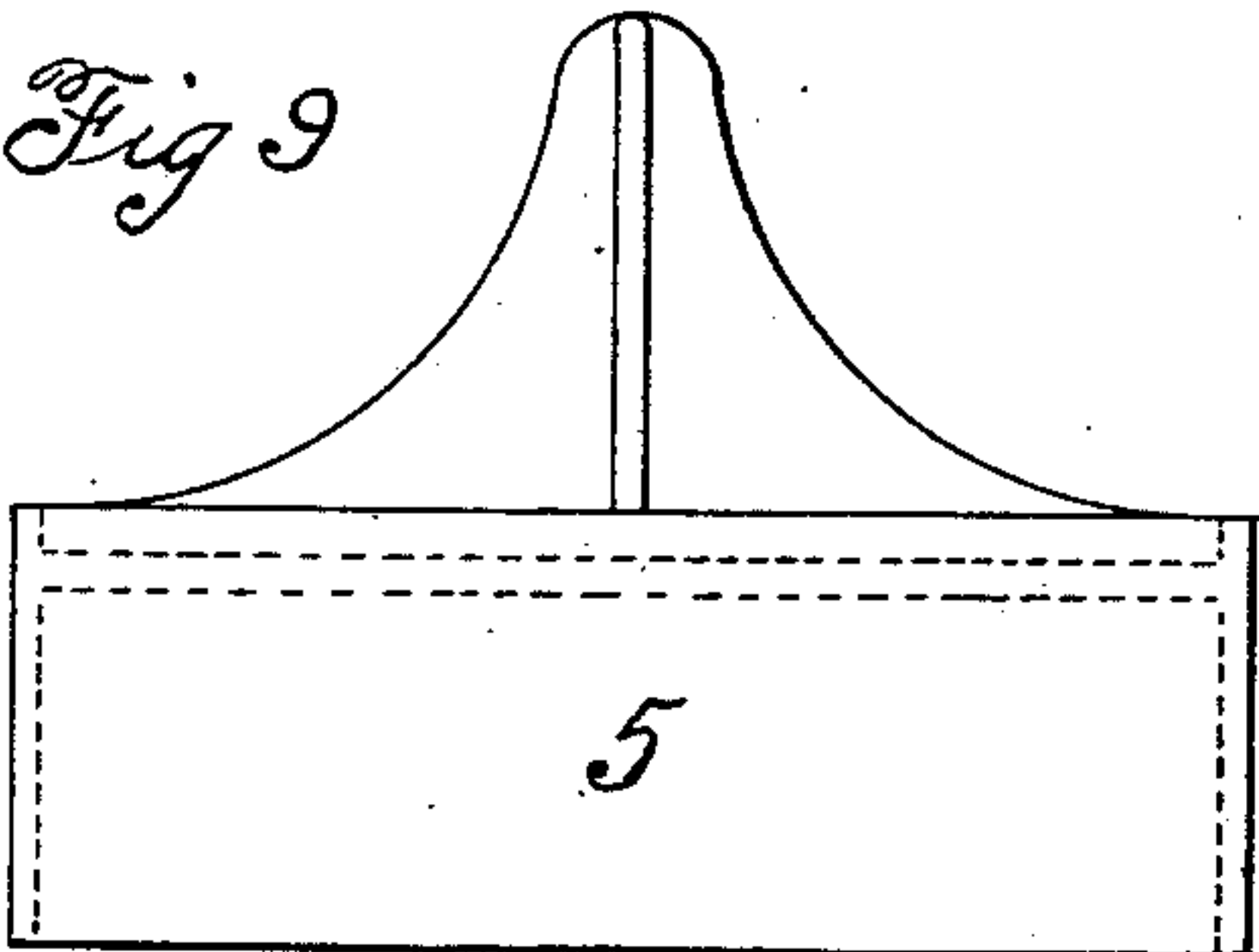


Fig. 10.

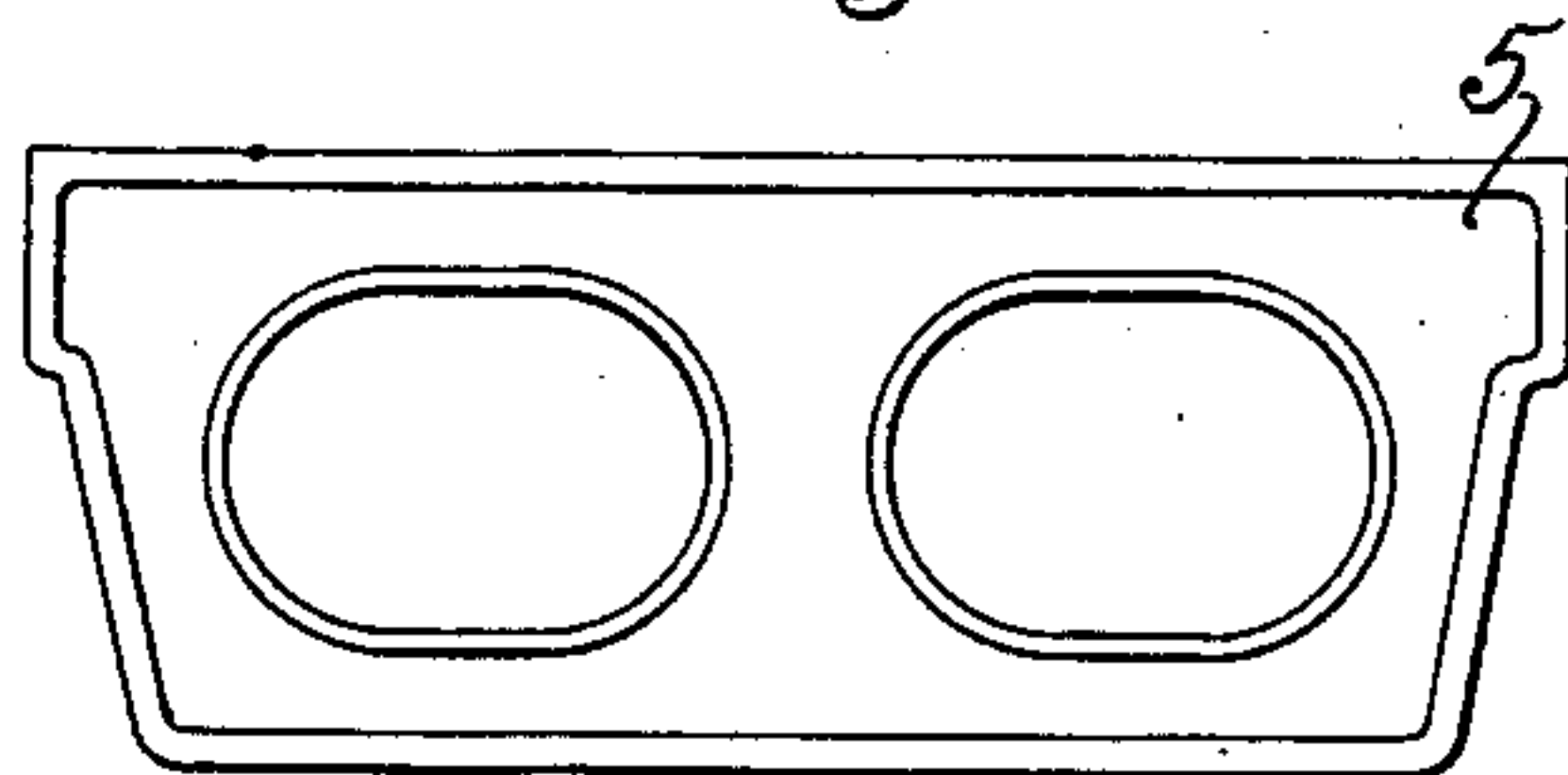


Fig. 11.

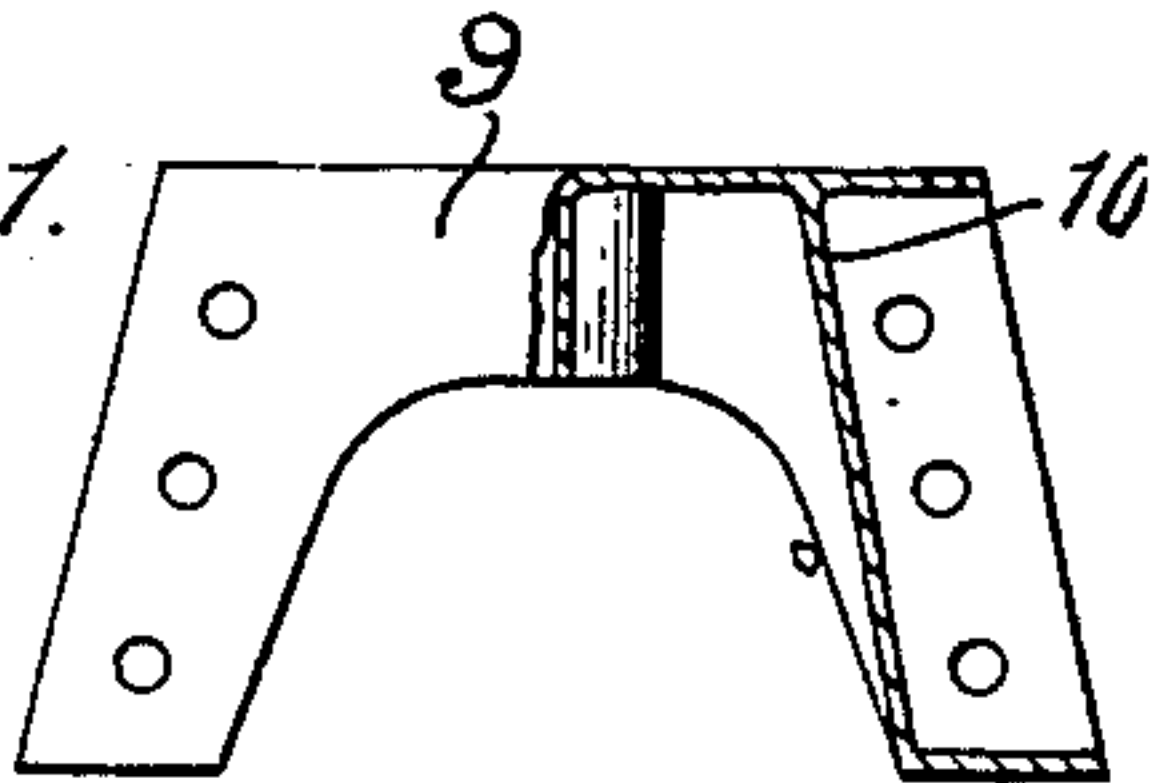


Fig. 12.

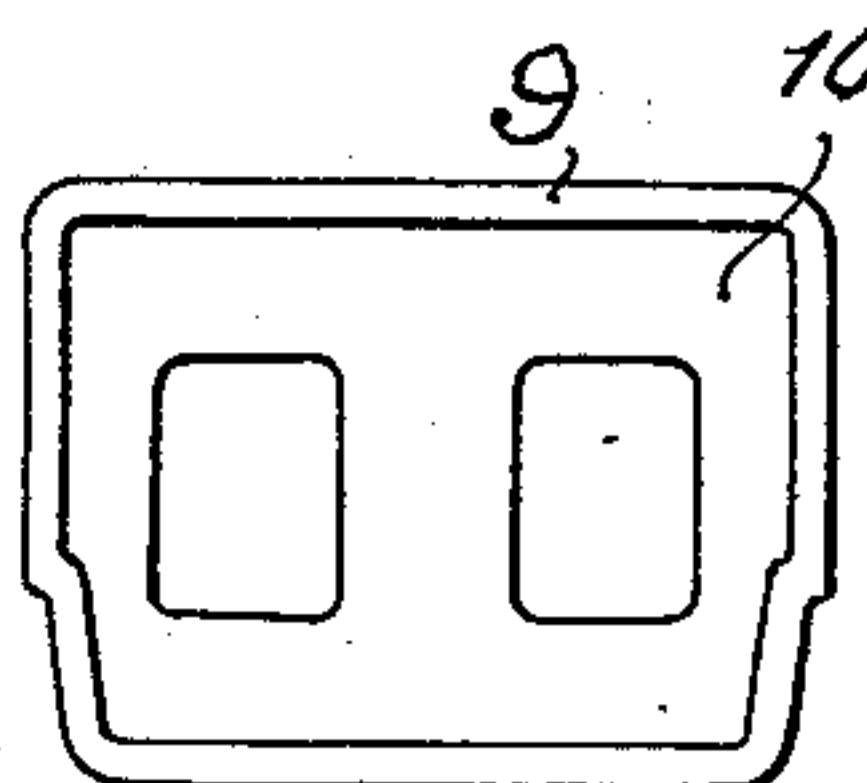


Fig. 13.

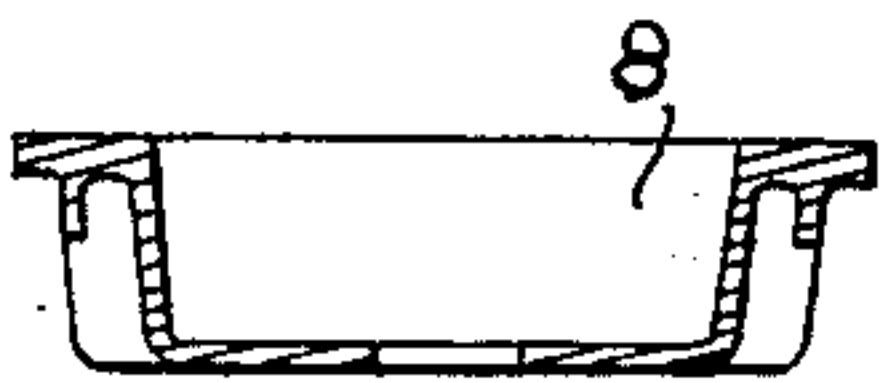
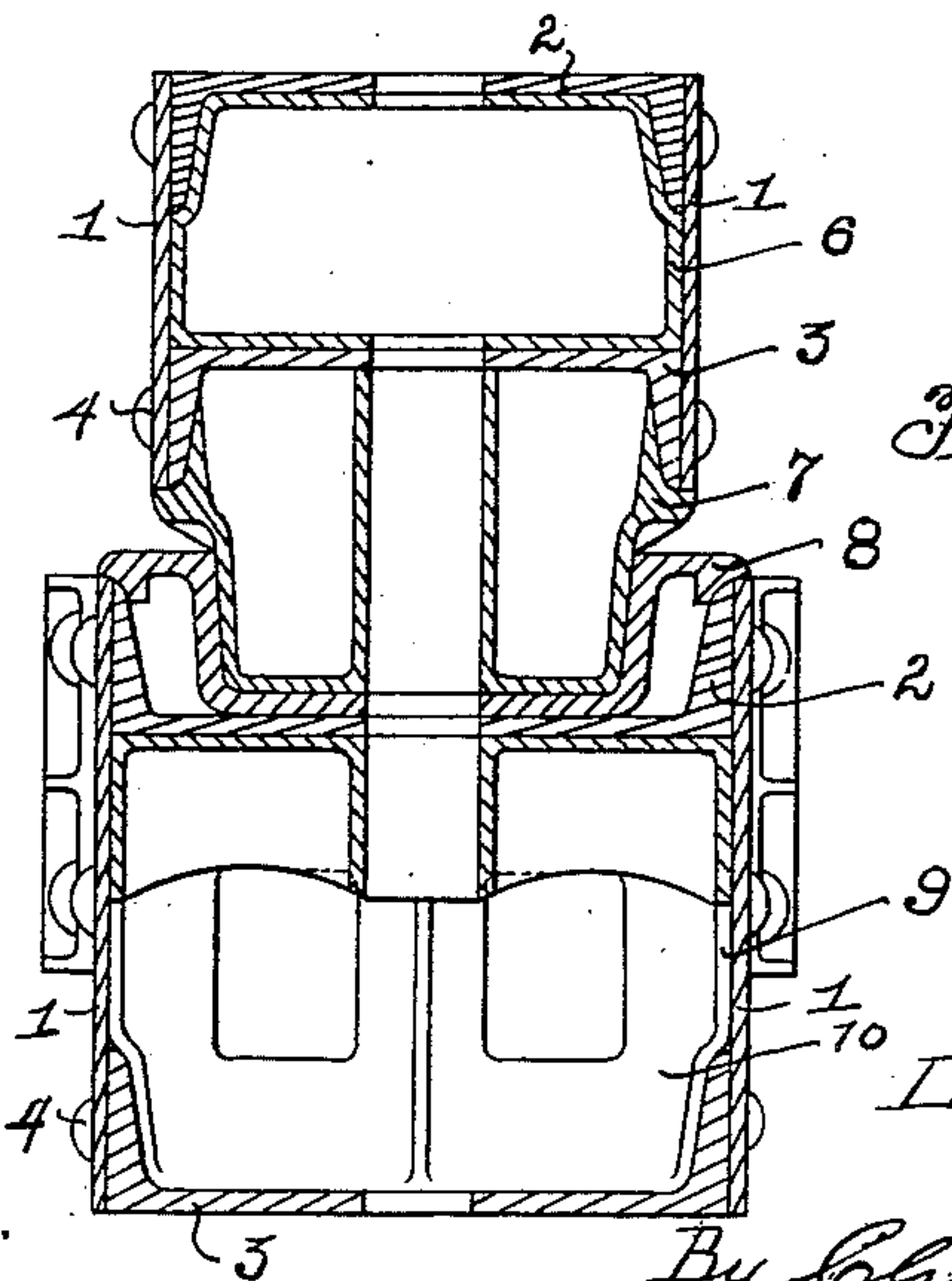


Fig. 14.



Fig. 6.



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# UNITED STATES PATENT OFFICE.

LUDWIG OBERAUER, OF CHICAGO, ILLINOIS.

## CAR-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 677,139, dated June 25, 1901.

Application filed September 10, 1900. Serial No. 29,593. (No model.)

*To all whom it may concern:*

Be it known that I, LUDWIG OBERAUER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Car-Bolsters, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to bolsters through which the weight of a railroad-car body and its load is transmitted to the axles and wheels of the trucks upon which the car is carried. The principal object of my invention is to provide a simple, inexpensive, and durable bolster which can be inexpensively manufactured of commercial iron or steel and can be easily repaired if injured or worn.

To the attainment of this and other desired ends my invention consists in matters hereinafter set forth.

In the accompanying drawings, Figure 1 is a view, half in elevation and half in vertical section, of a body-bolster and a truck-bolster embodying my invention. Fig. 2 is a plan view of the body-bolster. Fig. 3 is a plan view of the truck-bolster. Figs. 4 and 5 are end views of the body and truck bolsters, respectively. Fig. 6 is a transverse central section of the body and truck bolsters; and Figs. 7, 8, 9, 10, 11, 12, 13, and 14 are views of details of construction.

Referring to the drawings, and particularly to Figs. 1, 2, 3, and 6 thereof, it will be seen that my bolster is composed of two vertical side plate members 1 1 and upper and lower horizontally-arranged channel members 2 and 3. The vertical side members 1 1 are made in the form of flat straight plates and extend from end to end of the structure. The upper and lower channel members 2 and 3 are interposed between the side members 1 1. In the body-bolster the upper member has its flanges pointing or extending inwardly and the upper or outside of its web level or flush with the top horizontal edges of the side members 1 1, and the lower member 3 has its flanges pointing outwardly and their outer or lower edges coincident or flush with the lower edges of the side members 1 1. In the case of the truck-bolster the arrangement of

these flanges is reversed—that is to say, the flanges of the upper member 2 point outwardly, and their outer edges are flush with the top horizontal edges of the side members, while the flanges of the lower member 3 extend inwardly and the outside of the web is flush with the lower edges of the side members.

In both bolsters the upper member 2 is straight or horizontal, and the lower member 3 is bent so that its middle portion is farthest from the upper member 2 and its side portions both inclined toward that member. In the case of the body-bolster, referring especially to Fig. 1, the ends of the lower member 3 preferably meet the upper member 2; but in the case of the truck-bolster the ends of the lower members are not extended to the upper member 2, but are bent before reaching that member, so as to be parallel therewith for a short portion at their ends. The side members 1 1 are formed so as to conform to the shape of the lower members, being in the case of both bolsters widest or highest at their middle portions and gradually reduced therefrom to their ends. The upper and lower members are secured to the side members 1 1 by rivets 4 4, passing through the side members and through the flanges on the upper and lower members.

The truck-bolster is provided with shoes 5 5, fitted and secured in its ends, so as to strengthen the same and assist in maintaining the shape thereof.

The body-bolster is braced by transversely-extending struts or braces 6 6, extending interiorly across its middle portion.

The body-bolster is provided with a bearing 7, secured at the middle portion of its lower side, and the truck-bolster is provided with a seat 8, adapted to receive the bearing 7. The bearing 7 is bolted to the lower member 3 of the body-bolster, and the seat 8 is bolted to the upper member 2 of the truck-bolster.

The truck-bolster is provided with an interiorly-arranged strut or brace 9, secured in position, as by being riveted to the side members 1 1, so as to brace and support the weight received upon the seat 8. The internal strut 9 is conveniently made with upwardly-converging walls or side pieces 10 10, as best shown in Fig. 1. The upper and lower mem-



bers of the body-bolster, the bearing 7, the seat 8, the upper member 2 of the truck-bolster, and the top plate of the internal strut 9 are provided with holes to receive the king-bolt for the bolsters.

Both bolsters are provided with side bearings 11 11, arranged opposite one another on the respective bolsters and conveniently secured to the lower member of the body-bolster and the upper member of the truck-bolster.

Bolsters constructed as above set forth have numerous advantages, among which may be mentioned the following: They can be made of easily-obtainable and standard shapes of steel plates, so that the bolster can be made cheaply and can be repaired by the owner without having to send the bolster to the manufacturer. All of the rivets can be driven by power, thereby securing joints almost as strong as the solid metal. The bolster is just as stiff horizontally as it is vertically. It is unnecessary to heat the various members for the purpose of shaping them to the outline of the bolster, and therefore these members are not punished in manufacture.

The central seat and side bearings of the truck-bolster being embedded in the bolster by being placed upon the depressed top member prevents any possibility of them being torn off and permits the greatest obtainable depth of body-bolster, or if the depth of body-bolster is determined it permits an increase in the set of the truck arch-bar. The side members receive the load directly by reason of the way the center seat and the side bearings are arranged.

It will be understood that the precise construction shown herein is the one which is to be used in certain constructions of cars and that this exact construction can readily be modified or changed so as to accommodate it to other varieties of cars without departing from the spirit of my invention. For instance, in certain cases it will be desirable to have either both of the top members straight or both of the bottom members straight or both the top and bottom members inclined. It may also be desirable to provide the body-bolster with shoes 5 5 as well as the truck-bolster.

Other changes or modifications of the bolster involving the principle herein shown and described will be obvious to persons familiar

with the construction and design of car-bolsters.

What I claim as my invention is—

1. A bolster composed of side plate members; and upper and lower plate channel members, the flanges of one of said channel members pointing inwardly, and the web thereof being flush with the edges of the side members, and the flanges of the other channel member pointing outwardly, and their outer edges being flush with the edges of the side members.

2. The combination with truck and body bolsters, the body-bolster having a channel member on its under side, and the truck-bolster having a channel member on its upper side, the flanges of both of said channel members pointing outwardly and their outer edges being flush, or substantially flush with the edges of the bolsters, of a pivoting device interposed between the adjoining channel members of said bolsters, substantially as described.

3. The combination with truck and body bolsters, each composed of side plate members, and upper and lower channel members, the upper channel member of the body-bolster, and the lower channel member of the truck-bolster having their flanges pointing inwardly, and their webs flush with the edges of the side members, and the lower channel member of the body-bolster, and the upper channel member of the truck-bolster having their flanges pointing outwardly, and the outer edges thereof being flush with the edges of the side members, of a pivoting device interposed between the adjacent channel members of said bolsters, substantially as described.

4. In a truck-bolster, the combination with the side plate members, and the upper and lower channel members; of a seat secured to the upper channel member; and a strut arranged within the bolster and secured to the side members thereof so as to support the seat, the said strut being composed of upwardly-converging walls or sides.

In witness whereof I hereunto subscribe my name this 30th day of June, A. D. 1900.

LUDWIG OBERAUER.

Witnesses:

HERBERT F. OBERGFELL,  
HENRY H. DAHLMAN.