

No. 709,755.

Patented Sept. 23, 1902.

F. DITCHFIELD.
CENTER BEARING FOR RAILWAY CARS.

(Application filed July 1, 1902.)

(No Model.)

Fig. 1.

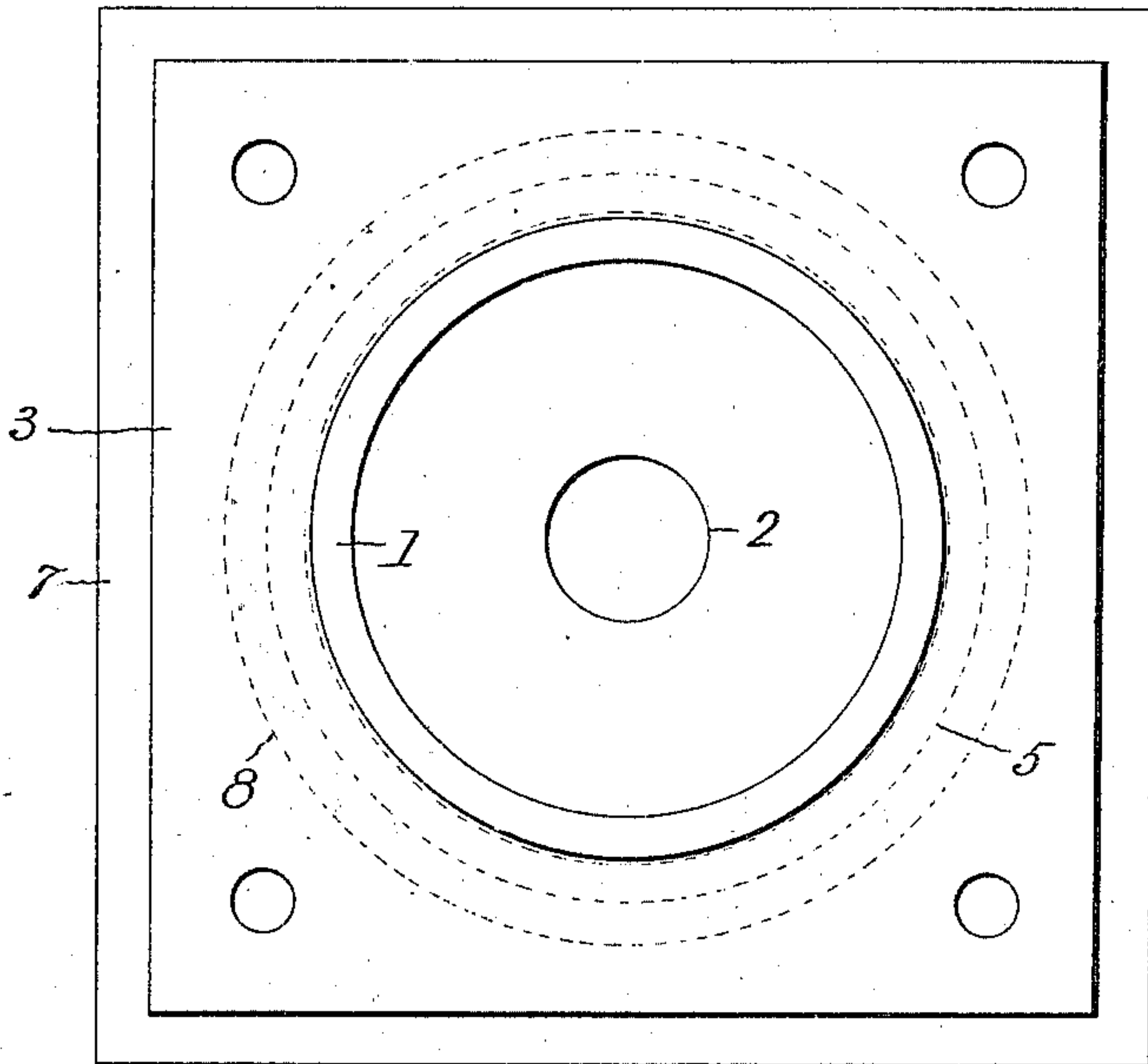


Fig. 2.

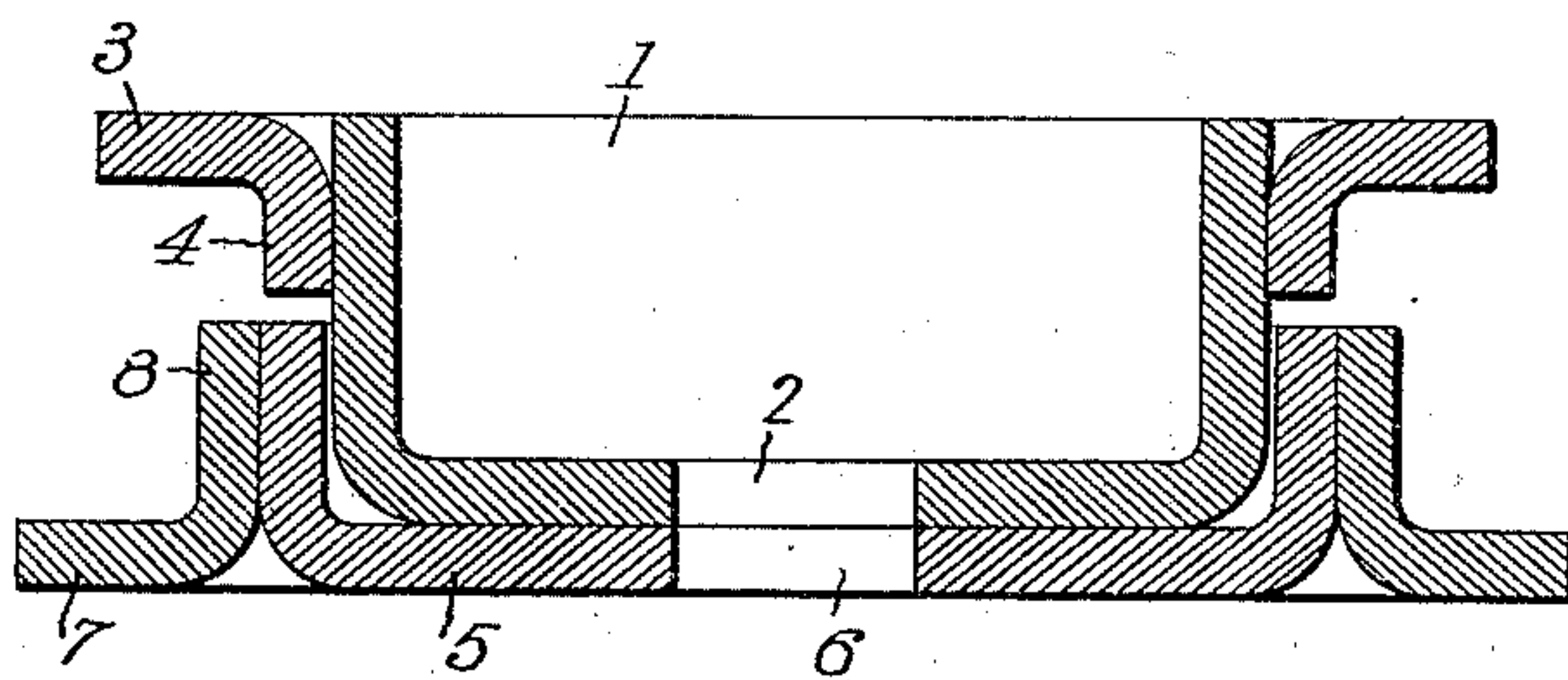
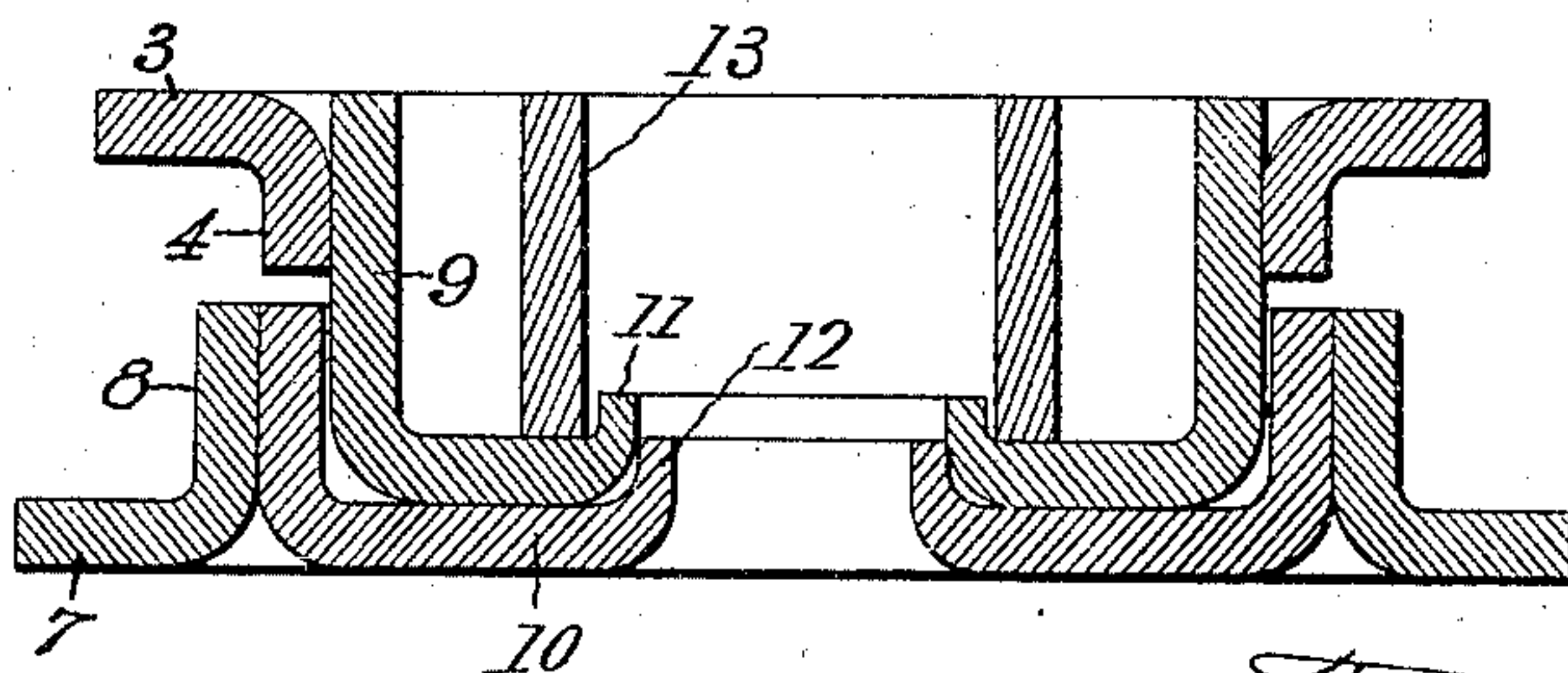


Fig. 3.



Witnesses

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FRANK DITCHFIELD, OF AVALON, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

CENTER-BEARING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 709,755, dated September 23, 1902.

Application filed July 1, 1902. Serial No. 113,963. (No model.)

To all whom it may concern:

Be it known that I, FRANK DITCHFIELD, a subject of the King of Great Britain, residing at Avalon, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Center-Bearings for Railway-Cars, of which the following is a full, clear, and exact description.

This invention relates to body and truck center-bearing plates for railway-cars of the class known as "pressed-steel center-bearings."

In the formation of pressed-steel center-bearings a plate of steel of appropriate thickness is heated and then subjected to pressure in dies and given the proper profile. It sometimes happens in the formation of pressed-steel plates by this method, especially when the parts are raised relatively high from the base, that the metal is stretched, and consequently thinned at the bends, thus materially weakening the plates.

One object of the invention is to avoid the stretching or thinning of the metal in the formation of pressed-steel center-plates; and the invention consists in making these plates in two parts, one of which is allowed to cool and then the other is shrunk around it. By this means the proper elevation or projection or profile may be obtained by merely cupping a plate and the part completed by shrinking the base-piece upon such cupped portion without the necessity of folding the metal upon itself, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view of a pair of body and truck center-bearing plates arranged as in use. Fig. 2 is a longitudinal vertical section. Fig. 3 is a longitudinal vertical section of a modification.

Referring to Figs. 1 and 2, the projecting portion 1 of the body-bearing, no matter what its desired height, is pressed up from a flat plate in the form of a cup of the desired profile and height, and the opening 2 for the king-bolt is made therein, and then the device is allowed to cool. The base member

of this body-plate comprises the horizontal flange 3, having the vertical annular flange 4 of an internal diameter sufficient to surround the member 1 while hot and to be permanently united therewith by its shrinkage in cooling. Similarly the projecting member of the truck-plate is made with a cup 5, having a central opening 6 for the passage of the king-bolt and having its base composed of a horizontal flange 7 and a vertical flange 8, which while hot is shrunk upon the cooled member 5, as in the case of the body-plate. Thus obviously is avoided the necessity for folding the metal upon itself, as arises in the manufacture of those pressed-steel bearing-plates in which the base and the projection are integral.

As illustrated in Fig. 3, the projection 9 of the body-plate and the projection 10 of the truck-plate may, respectively, have their king-bolt opening provided with upturned annular interlocking flanges 11 and 12, which in addition to reinforcing the bolt-hole and also reinforcing the projections serve as a hub to receive an applied internal annular brace 13 to resist the crushing strains of service and also form pockets to hold lubricating material. The annular brace 13 may be a section of tubing, and it is used as an economical substitute for the cast spider commonly dropped inside the bearing projection. The annular brace may be used in either form of plate.

It will be observed that in the case of the body-plate and the truck-plate the projecting member has its base-line extended to the attaching-level of the base, so as to take off from said base a material portion of the thrust and transmit it to the car frame and truck, respectively.

An advantage of the construction herein set forth over former constructions is that the adjacent contact areas of the two plates are greatly increased, and thus the wear more evenly distributed.

Obviously the invention is susceptible of various modifications and alterations without departing from its principle as herein set forth and claimed, and it is to be understood that while the use of pressed-steel shapes is

preferred in the production of the invention, still where admissible castings may be employed.

What I claim is—

- 5 1. A center-bearing plate, for railway-cars, having a projecting member of any desired height and conformation, and a base member shrunk thereon.
2. A pressed-steel center-bearing plate, hav-
10 ing a central projecting member of appropriate height and profile, and a base having a horizontal flange and a vertical flange fitted to the projecting member and shrunk thereon.
3. Center-bearing plates for cars, compris-
15 ing a body member and a truck member, each composed of a projecting portion of appropriate height and profile, and a base portion,

the several base portions being shrunk upon the projecting portions.

4. A center-bearing plate for cars, having 20 a projecting portion of appropriate height and profile, and a base portion, the base portion being shrunk upon the projecting portion, combined with a reinforcing-annulus.

5. A center-bearing plate for cars, compris- 25 ing a projection of appropriate height and profile having a flanged king-bolt hole, and a base shrunk upon the projection.

In testimony whereof I have hereunto set my hand this 27th day of June, A. D. 1902. 30

FRANK DITCHFIELD.

Witnesses:

A. H. MERCER,
RICHARD T. GRIFFITHS.