

(No Model.)

2 Sheets—Sheet 1.

C. T. SCHOEN.

CENTER BEARING PLATE FOR RAILWAY CARS.

No. 403,560.

Patented May 21, 1889.

Fig. 1.

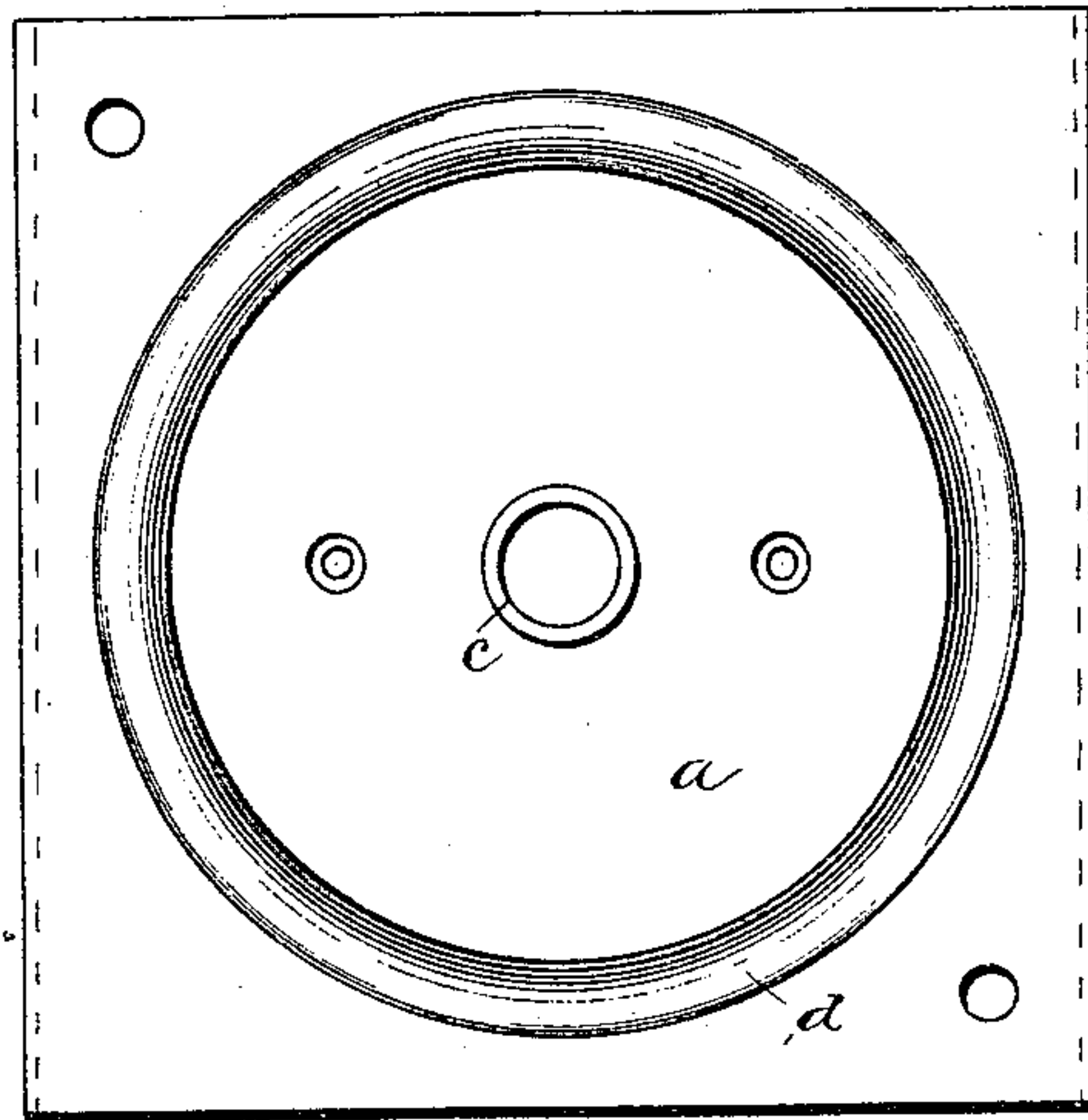


Fig. 4.

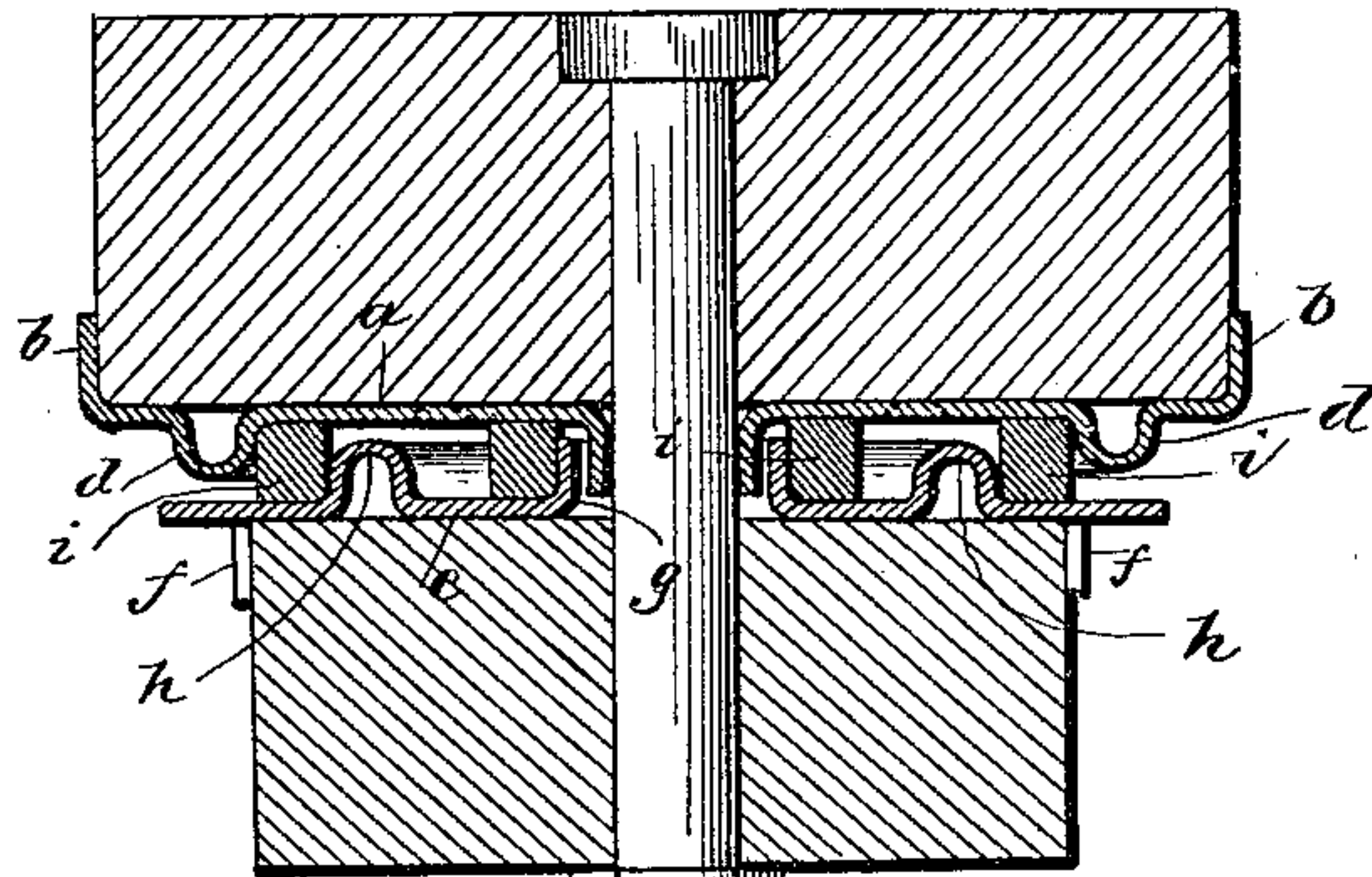
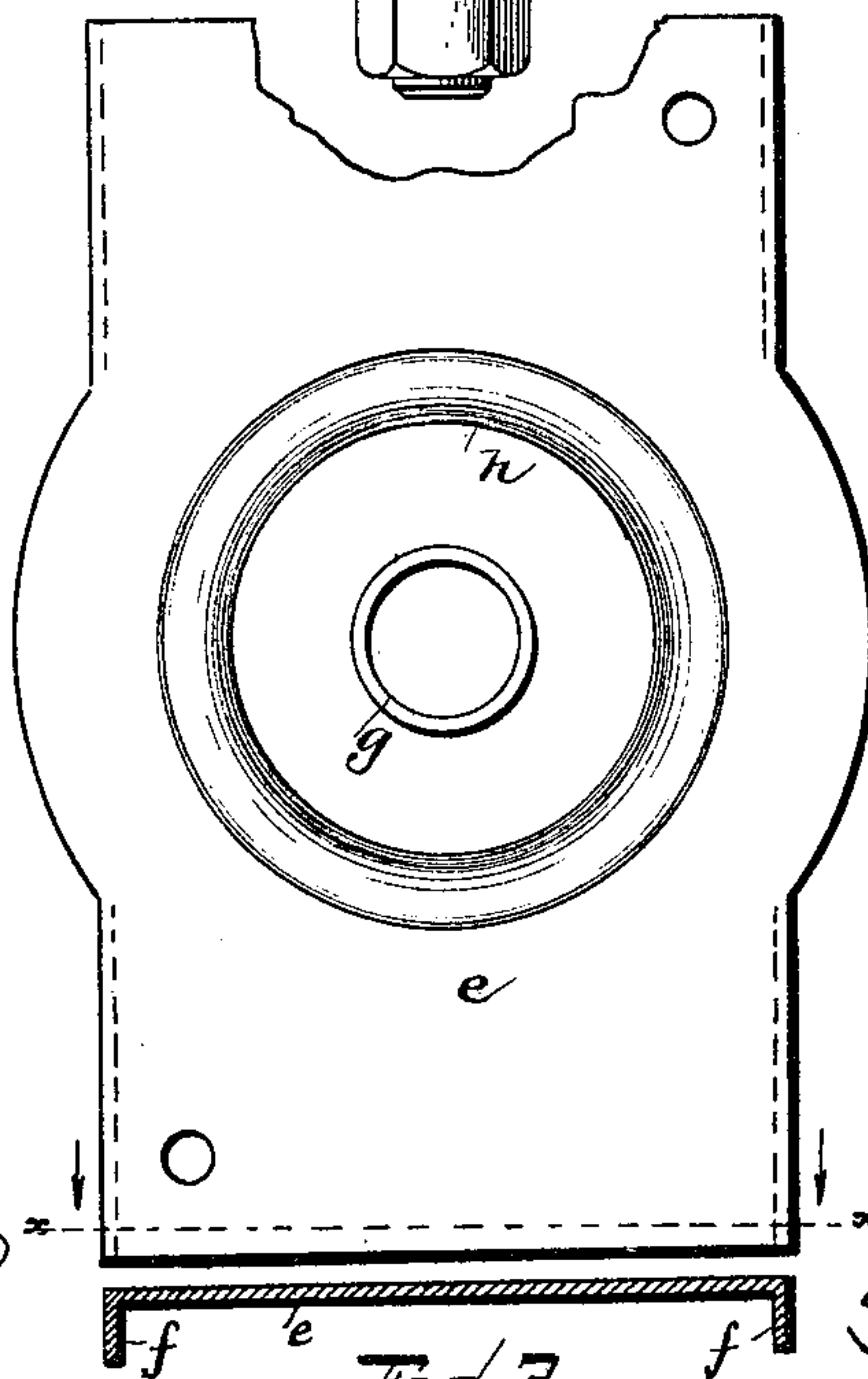


Fig. 2.



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Fig. 3.

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Fig. 5.

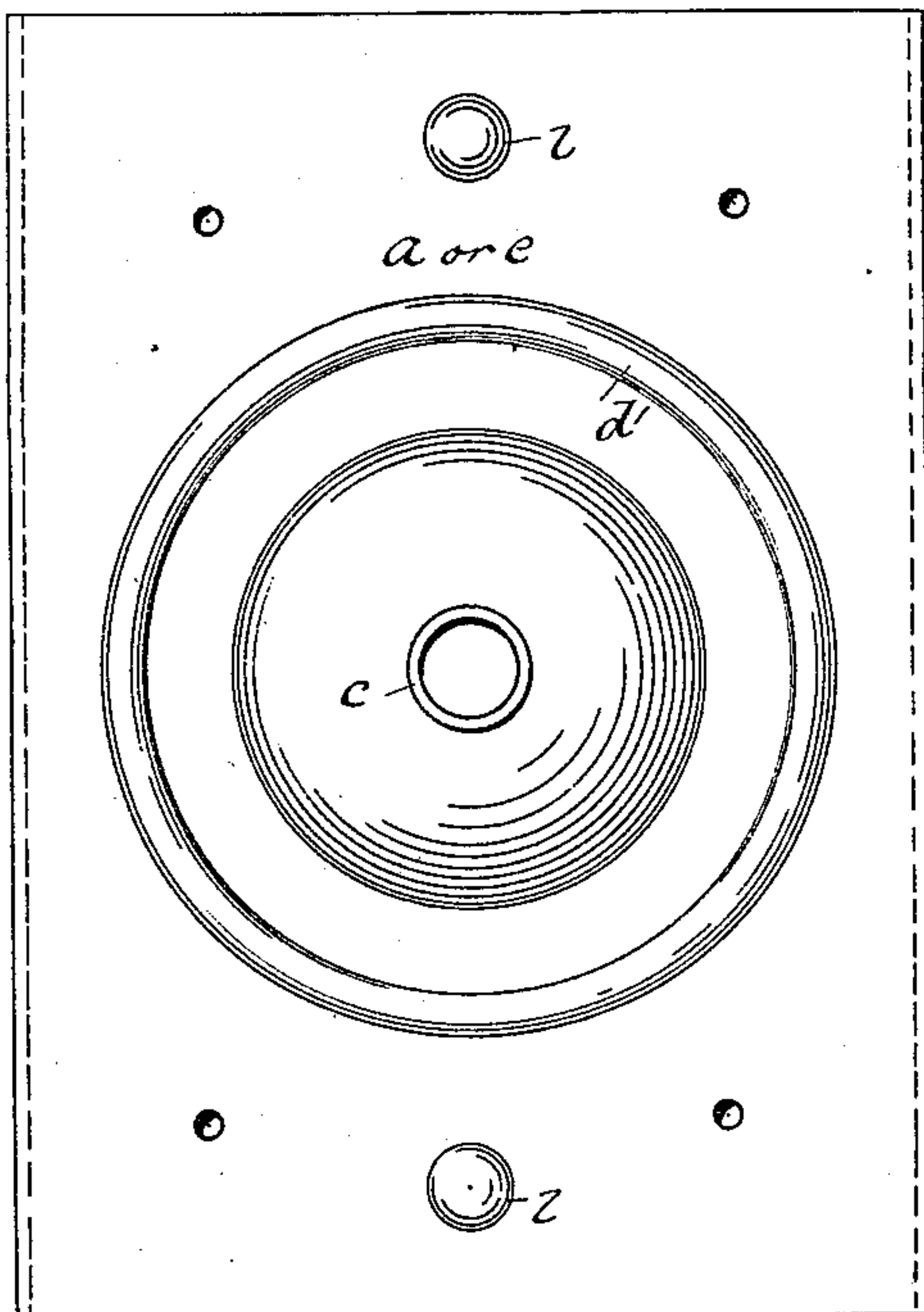
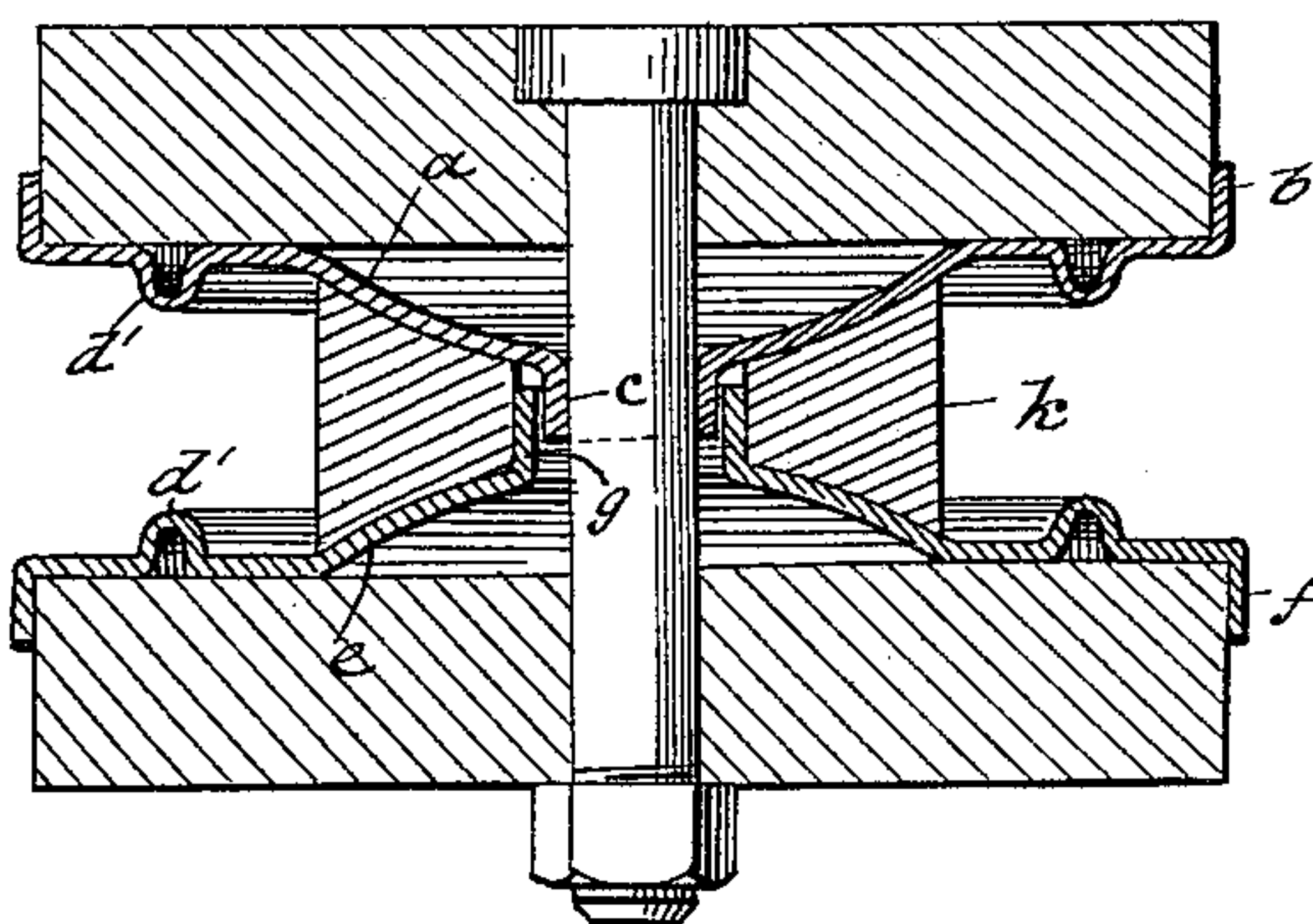


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES T. SCHOEN, OF PHILADELPHIA, PENNSYLVANIA.

CENTER BEARING-PLATE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 403,560, dated May 21, 1889.

Application filed March 15, 1889. Serial No. 303,421. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. SCHOEN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Center Bearing-Plates for Railway-Cars, of which the following is a full, clear, and exact description.

This invention relates to wrought-metal center bearing-plates for railway-cars; and its object is to increase the strength and durability of such bearing-plates without adding to their cost, and at the same time greatly reducing dead-weight.

The invention consists of wrought-metal center bearing-plates having one or more added bearing-surfaces held in place by intermeshing flanges or ribs, or both, on the plates proper, as I will now proceed to particularly set forth and claim.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of the upper bearing-plate. Fig. 2 is a plan view of the lower bearing-plate; and Fig. 3 is a section on line $x x$, looking in the direction of the arrow. Fig. 4 is a cross-section of the plates in position. Fig. 5 is a plan view, and Fig. 6 is a cross-section, of a modified form.

In practice I prefer to form the plates of rather hard steel plate by striking them up in dies in accordance with well-known methods of hot-pressing. The upper plate, a , is of suitable outline and dimensions to fit the car-timbers, and may have its side edges flanged, as at b , to embrace the edges of such timbers. A central flanged opening, c , is made to receive the king-bolt and to fit into a corresponding opening in the lower plate, as will appear presently. A circular rib or projection, d , depends from the face of the plate a , and it is made concentric with the center opening c . The lower plate, e , is of an outline and dimensions to be applied to the bolster of the truck, and has flanged edges f to embrace the sides of the bolster. The central opening g is flanged and receives the flange of the opening c of the upper plate, to assist the king-bolt to resist lateral strain, deflection, or movement and to center the plates.

h is a circular rib or projection struck up in the lower plate concentric with the center opening g , and also concentric with the rib d of the upper plate.

Between the ribs d and h there is sufficient space to admit and receive an annular bearing-piece, i , which is preferably made rectangular in cross-section, and a second similar bearing-piece, k , surrounds the flanged opening g . The plates come in contact with these bearing-pieces and not with each other, and the load is borne by such bearing-pieces. In this way wear is taken off the bearing-plates and put upon the bearing-pieces. The ribs serve to hold in place the bearing-piece i , and the flange of opening g serves a similar purpose for the piece k . The ribs subserve the additional purpose of stiffening the plates.

The bearing-pieces i and k may be malleable castings or wrought metal.

Any usual fastenings may be employed to secure the plates to the timbers. I have shown them provided with bolt-holes to this end.

The forms and dimensions of the ribs and of the bearing-pieces may be varied to best adapt these parts to the particular service to which they are to be applied. The ribs may be continuous, as shown, or be made up of a series of sections.

In Figs. 5 and 6 another form of my invention is shown, in order to illustrate at least one other form necessary to meet the structural exigencies of cars, the one selected being an adaptation of these plates to a greater height between bolsters. This increased height is compensated for by making the centers of the plates convex, and in this construction a single central ring, k , is interposed between the convex portions, and is made concave to fit such convex portions. Similar ribs, d' , are made in the plates outside of the convex portions, and with the convex portions serve to stiffen the plates. The upper and lower plates in this form of my invention are substantially alike.

Spuds l may be added to the plates, as indicated in Fig. 5, to assist in holding the plates in position.

Other forms of plates and added bearing-rings may be adapted for use under peculiar conditions and obviously without departing from my invention.

What I claim is—

1. Center annular bearing-plates of wrought metal, constructed with concentric ribs, combined with interposed bearing-pieces, substantially as described.
2. Center bearing-plates of wrought metal, constructed with concentric ribs and flanged central openings, combined with annular bearing-pieces interposed between the ribs, and also around the center openings, substantially as described.
3. Wrought-metal center bearing-plates constructed with concentric intermeshing ribs or projections, combined with an annular bearing-piece placed between said ribs and held from lateral displacement by them, substantially as described.

4. Center bearing-plates of wrought metal, constructed with stiffening-ribs and an interposed bearing-ring, substantially as described.

5. Center bearing-plates constructed of wrought metal with central flanged openings, and a bearing-ring surrounding such flanged openings and adapted to the shape of the plates adjacent to such openings, substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of March, A. D. 1889.

CHARLES T. SCHOEN.

Witnesses:

EDWARD P. HIPPLE,
U. H. HIPPLE.