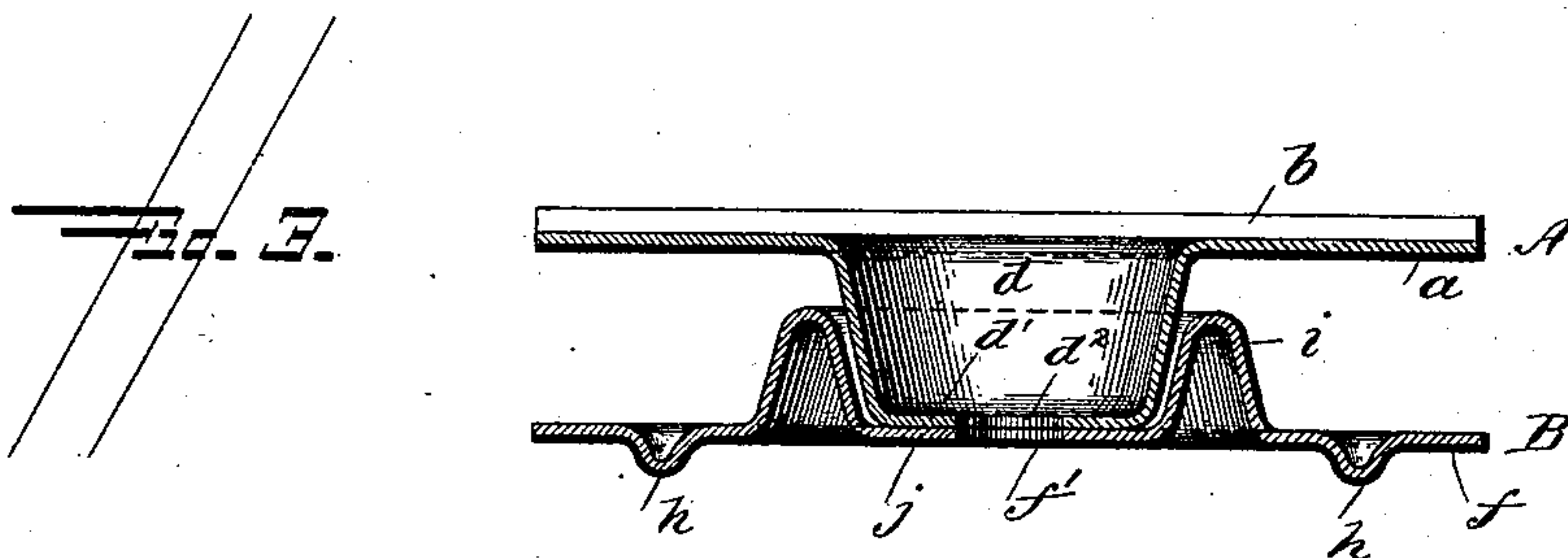
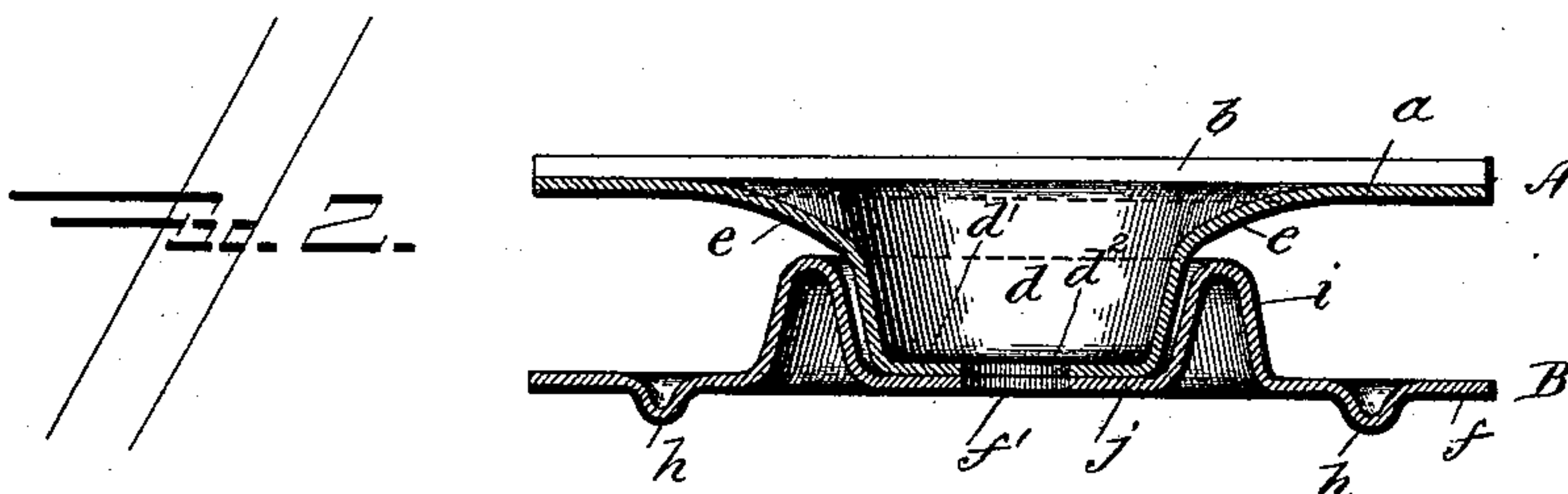
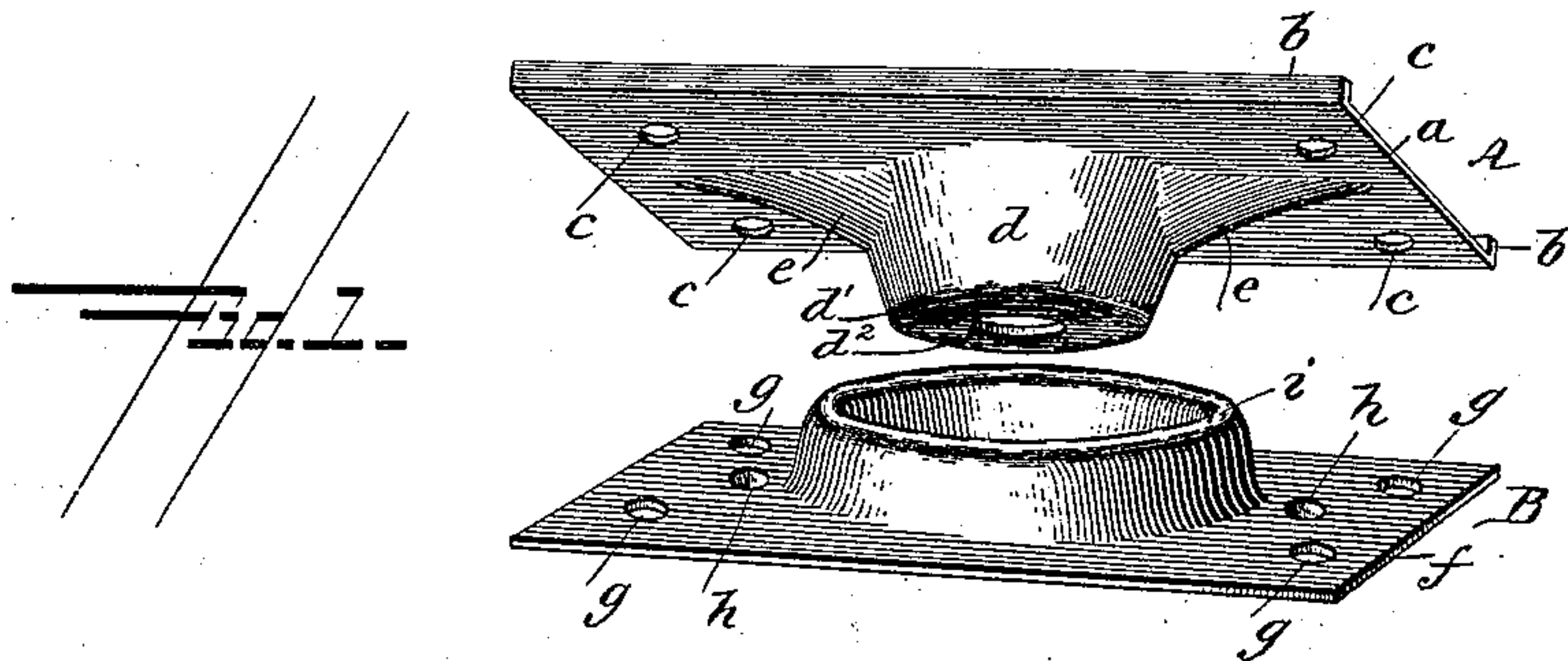


(No Model.)

C. T. SCHOEN.  
CENTER BEARING PLATE FOR CARS.

No. 446,296.

Patented Feb. 10, 1891.



WITNESSES

E. A. Finckel.  
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INVENTOR

Charles T. Schoen.  
by W. A. Finckel.  
his Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES T. SCHOEN, OF PITTSBURG, PENNSYLVANIA.

## CENTER-BEARING PLATE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 446,296, dated February 10, 1891.

Application filed December 10, 1890. Serial No. 374,236. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES T. SCHOEN, a citizen of the United States, residing at Pittsburg, in the county of Allegheny 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 the plates used for connecting or swiveling the trucks of railway-cars to the bodies, and which are technically designated "center-bearing plates" or "center-bearings;" and it has reference more especially to that class of center-bearing plates which are struck up or pressed in dies from steel plate or equivalent wrought metal.

Patents have already been granted to me for various forms of such center-bearing plates, in which pressed steel center-bearing plates are claimed generically and specifically.

In the present instance I desire and intend to cover a certain improvement in center-bearing plates, and to this end I will explain first the principle of my invention and the best mode I have contemplated applying that principle, so as to distinguish it from other inventions, and will particularly point out and distinctly claim the improvement which I claim as my invention.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the upper and lower plates. Fig. 2 is a central longitudinal section of same, and Fig. 3 is a similar view of plates constructed without the re-enforcing ribs.

The upper or body plate A may be made with a base *a*, having longitudinal flanges *b* and bolt-holes *c*, as usual, for securing it to the body-bolster. From the center of the plate depends a projection *d*, whose bearing end *d'* is flat, the preferred form of projection being a frustum of a cone, as shown.

In order to re-enforce both the base and the projection I provide ribs *e*, which extend from the sides of the projection outwardly along the base; and while the use of these ribs is preferred, still it is within my invention to omit them, as clearly indicated in Fig. 3. The

bearing end *d'* is provided with a hole *d''* for the passage of the king-bolt, as usual.

The truck-plate B may be constructed with a base *f*, with or without side flanges, and having bolt-holes *g* and dowels *h*, as usual, for securing the plate to the truck-bolster. The base *f* is provided with a socket having an annular rib *i*, struck up from the center of the base *f*, and of a diameter and height sufficient to receive the projection *d* of the body-plate, prevent lateral escape, and admit of the necessary movement of the parts. The bottom *j* of the socket is flat to receive the flat end of the projection *d*, and said bottom is provided with a king-bolt hole *f'* to register with the king-bolt hole in the projection *d*. It will be observed that the bottom of the socket is in the plane of the base *f*, and that when in use such bottom rests upon the timbers of the truck. Hence the projection on the upper plate receives a solid bearing and there is no liability of the plates being crushed.

In this invention the flat end of the projection and the flat bottom of the socket are the only bearings or load-supports.

The preferred mode of constructing my center-bearing plates is by pressing or striking them up in dies from suitable flat blanks of plate-steel of substantially uniform thickness, although I may use other wrought metal suitable for the purpose.

Some of the advantages of my improvement are:

First. The construction is simplified without impairment of durability and strength.

Second. By reason of its simplicity the cost of production is diminished.

Third. The flat contact surfaces of the upper and lower plates insure a firm and large extent of bearing, and consequently an increased distribution of the load, thus diminishing the liability to distortion and crushing of the plates, and serving to prevent undue rocking of the car-body and shifting of the load.

Fourth. The annular rib can be made quite high without interfering, and it takes off from the king-bolt the force of the concussion, thus preventing distortion of the plate by the king-bolt when a severe blow is re-



ceived. In practice it is desirable to have as much play around the king-bolt as there is between the annular rib and the projecting portion of the other plate, and this is obtained in my invention.

Fifth. The plates may be reversed, and what is here shown as the body or upper plate may be used as the truck or lower plate and the latter used as the body or upper plate; and I include within the scope and meaning of my claims such a reversal of the arrangement of these plates and any and all variations in structure that may be needed to adapt the plates to any peculiarities of car construction so long as the main feature of the invention is retained—to wit, the flat bearing-surfaces of the two plates, constituting the only bearings and therefore rendering unnecessary any lateral bearings such as heretofore common.

What I claim is—

1. Center-bearing plates for railway-cars, consisting of an upper or body plate having a flat-ended projection and a lower or truck plate having a flat-bottomed socket constructed with a surrounding annular rib to receive the flat-ended projection, said plates

being constructed of plate metal, preferably steel, struck up or pressed to shape, substantially as described.

2. Center-bearing plates for railway-cars, consisting of an upper or body plate having a flat-ended projection and laterally-extended re-enforcing ribs, and a lower or truck plate having a flat-bottomed annular rib to receive the flat-ended projection, said plates being constructed of plate metal, preferably steel, struck up or pressed to shape, substantially as described.

3. Center-bearing plates for railway-cars, one of which is constructed with a flat-ended projection and the other with a flat-bottomed socket constructed with a surrounding annular rib to receive the flat-ended projection, said plates being struck up or pressed from plate metal, preferably steel, substantially as described.

In testimony whereof I have hereunto set my hand this 9th day of December, A.D. 1890.

CHARLES T. SCHOEN.

Witnesses:

WM. H. SCHOEN,  
H. R. SHULTZ.

Correction in Letters Patent No. 446,296.

It is hereby certified that in Letters Patent No. 446,296, granted February 10, 1891, upon the application of Charles T. Schoen, of Pittsburg, Pennsylvania, for an improvement in "Center-Bearing Plates for Cars," an error appears in the printed specification requiring the following correction: In line 35, page 2, the words *socket constructed with a surrounding* should be inserted after the word "flat-bottomed"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 17th day of February, A. D. 1891.

[SEAL.]

CYRUS BUSSEY,  
*Assistant Secretary of the Interior.*

Countersigned:

C. E. MITCHELL,  
*Commissioner of Patents.*