

(No Model.)

F. H. RAPLEY.
BODY BOLSTER FOR RAILWAY CARS.

No. 562,488.

Patented June 23, 1896.

Fig. 1.

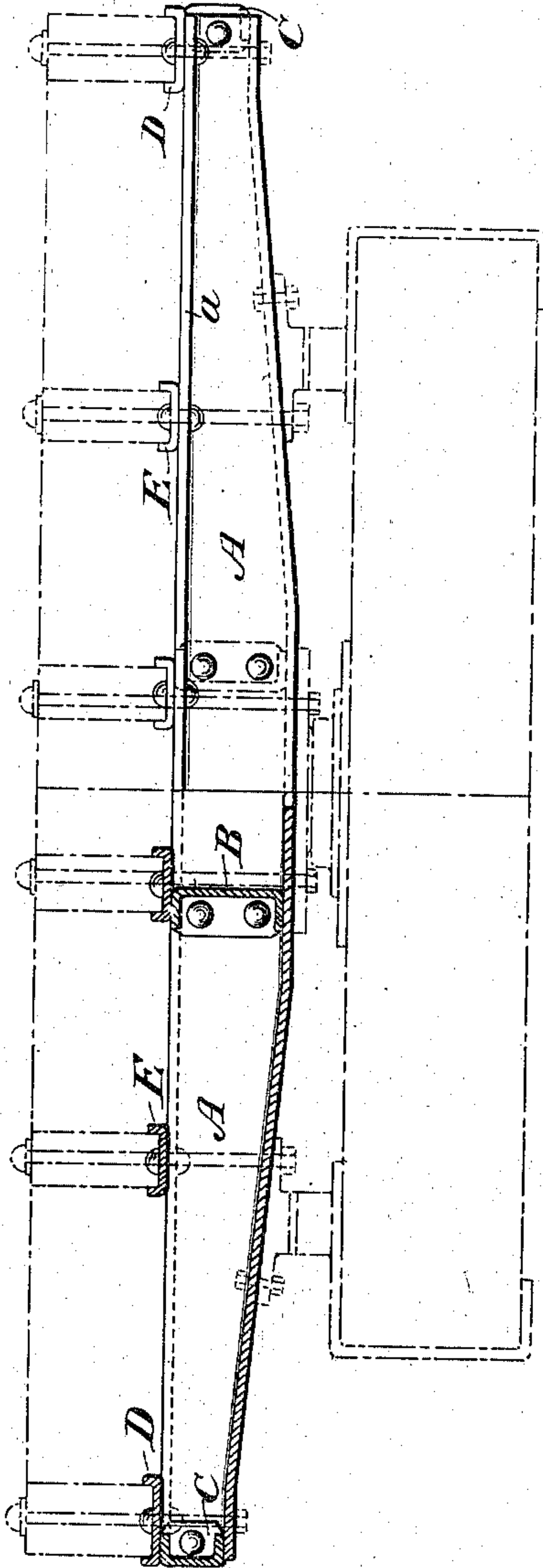


Fig. 2.

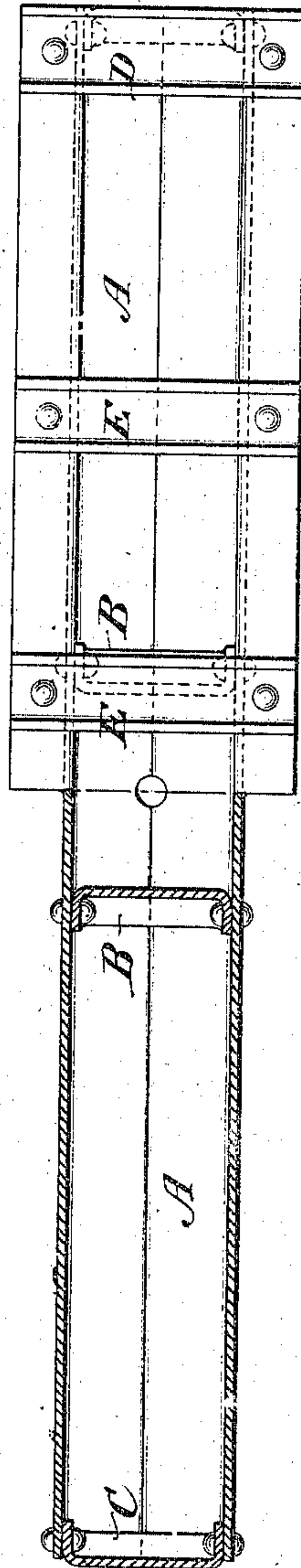
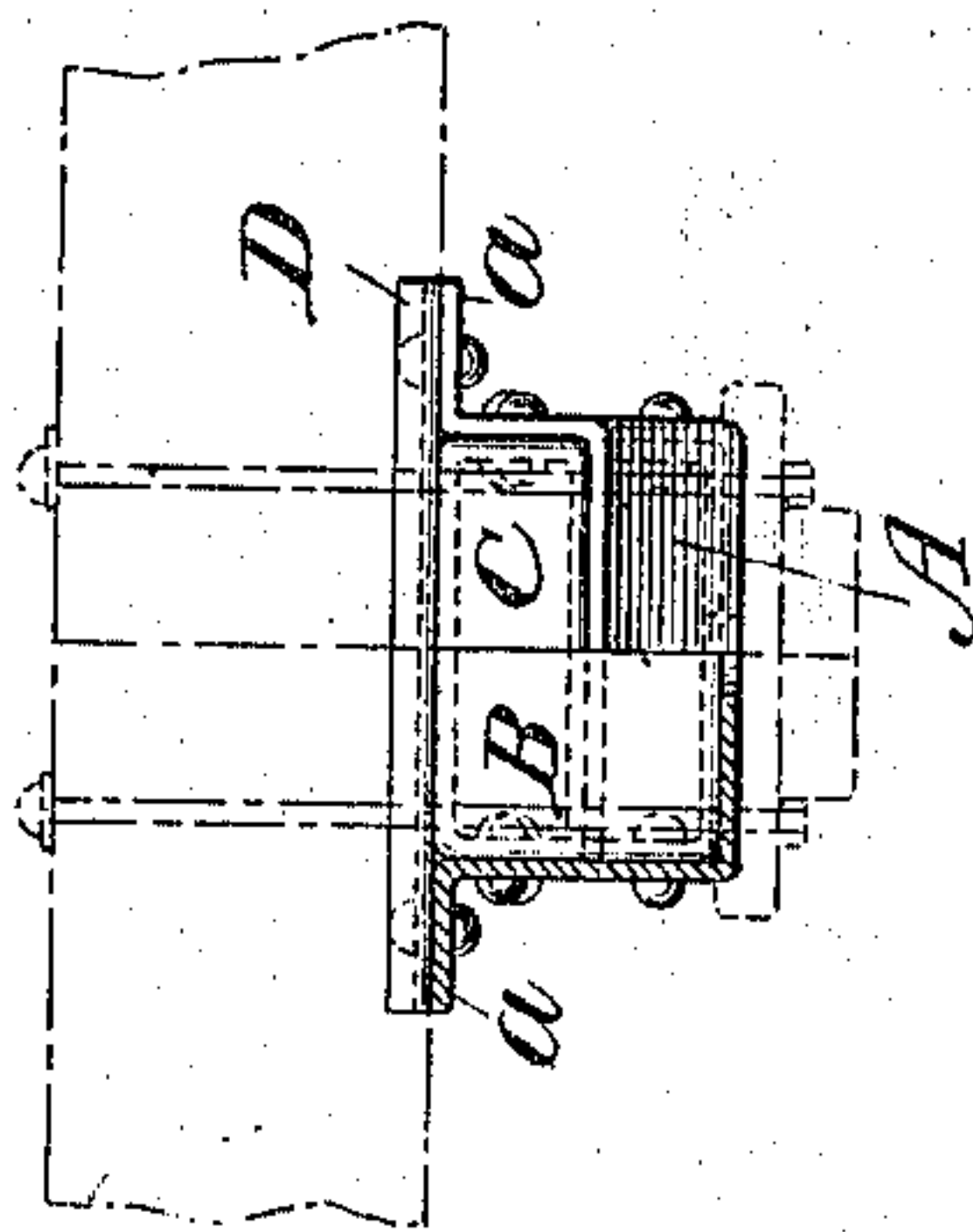


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK HARVEY RAPLEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE
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BODY-BOLSTER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 562,488, dated June 23, 1896.

Application filed December 23, 1895. Serial No. 573,976. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK HARVEY RAPLEY, a subject of the Queen of Great Britain and Ireland, residing at Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Body-Bolsters for Railway-Cars, of which the following is a full, clear, and exact description.

This invention relates to that class of bolsters sustaining the weight of a railway-car body on its trucks and commonly known as "body-bolsters."

The object of my invention is to increase the rigidity, lightness, and durability of bolsters of the class referred to. This I accomplish by the use of a material specially adapted to the purpose in their construction, subjecting such material to special treatment in the manufacture of the bolster, and shaping the bolster in a new and novel manner. I further provide improved means for attaching the bolster to the car-sills, so that injury to the latter by reason of the shocks and strains incidental to railway-car service shall be minimized.

In the accompanying drawings, Figure 1 represents a half-sectional elevation of my improved bolster; Fig. 2, a plan of the same, and Fig. 3 a half-end elevation and also a half-section through the center.

A is the bolster, preferably constructed in trough form, having its deepest portion at the center, by pressing out same from one sheet of metal. The sides are provided with outwardly-turned flanges at the top *a-a*.

B and C represent strengthening-pieces, or stiffeners, and are preferably pressed into the shape shown and riveted to the bolster. Their purpose is to give the bolster rigidity and enable it to better resist the strains encountered in service, thus preventing its distortion by such strains and shocks.

D and E represent the sill saddle-plates and may be formed of pressed steel, or cut from a rolled-metal section. These sill-plates are interposed between the wooden sills on the bottom of the car-body and the bolsters and are secured to the top flanges of the bolster.

By reason of the large area of the sills covered by said plates, they materially reduce the frequent crushing and splintering of the sill-timbers common to railway-car service. These plates are provided with flanges, preferably constructed with largest cross-section at the center in order to obtain greater rigidity. It is of course evident that, in order to meet the varied requirements of car construction, the bottom of my improved bolster may be formed straight, so that the top flanges may pass under the side sills, where necessary, without departing from the spirit of my invention.

None of the various forms of car-body bolsters with which I am familiar furnishes the same degree of strength at equal weight as does the bolster herein described, while the material of which it is composed, and the process through which such material is passed in the manufacture of various parts of railway cars and trucks, insures the same durability and tenacity for this bolster as have become well-known characteristics of such other parts, notably, pressed-steel car-trucks. The protection to wooden car-sills, as commonly constructed, is also a feature of my invention.

While I prefer to construct the strengthening or stiffening pieces of box or rectangular shape, and to secure the saddle-plates to the bolster-flanges by means of rivets, I do not, of course, limit myself to this form of construction or mode of fastening said parts together. Further, the trough shape affords maximum strength with minimum quantity of material.

Having thus described my invention, I claim—

1. A pressed-steel car-body bolster, of trough shape, flanged outwardly at the top, formed deepest at the center, and provided with strengthening-pieces at its center and ends, substantially as described.

2. The combination of a pressed-steel car-body bolster of trough shape, sides formed integral therewith and flanged outward at the top, and sill saddle-plates secured to said flanges, substantially as described.

3. The combination of a pressed-steel car-body bolster of trough shape, sides formed integral therewith and flanged outward at the top, strengthening-pieces secured to the bolster, and sill saddle-plates secured to the flanges, substantially as described.

5 In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

FREDERICK HARVEY RAPLEY.

Witnesses:

FRANK M. LOWES,

J. CLYDE RICHART.