

No. 753,289.

PATENTED MAR. 1, 1904.

A. C. McCORD.  
CAR BOLSTER.

APPLICATION FILED JUNE 9, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

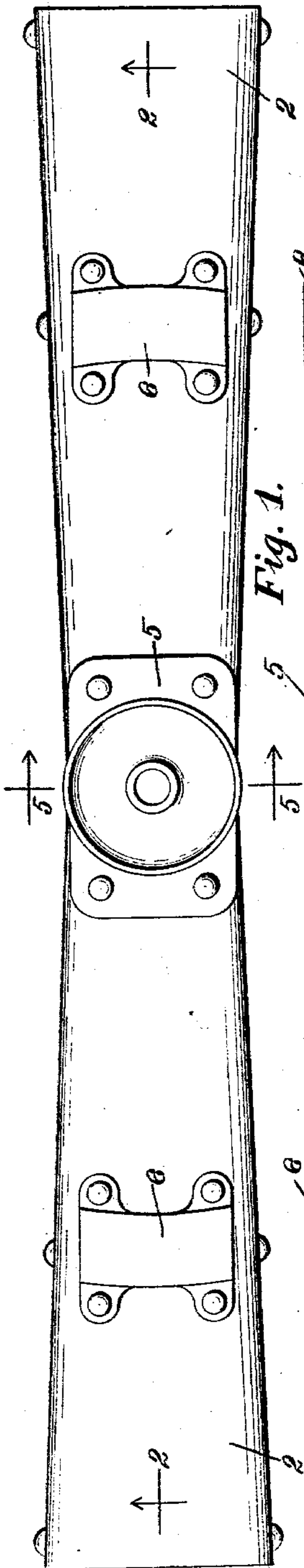


Fig. 1.

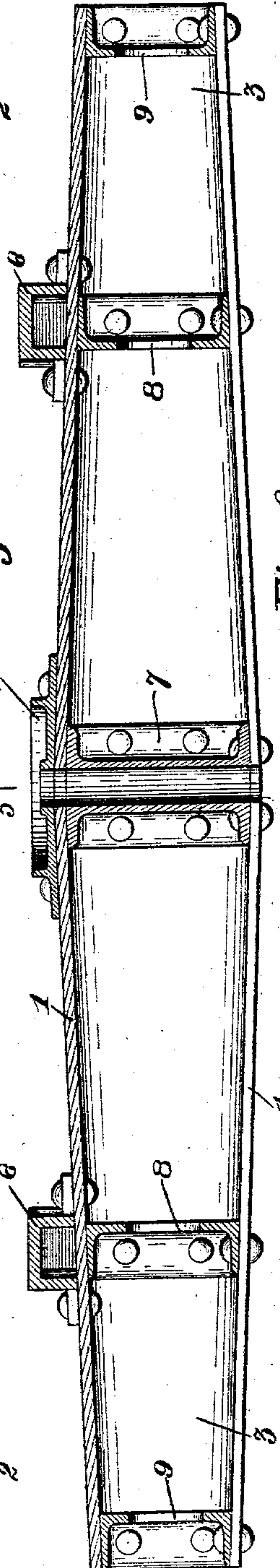


Fig. 2.

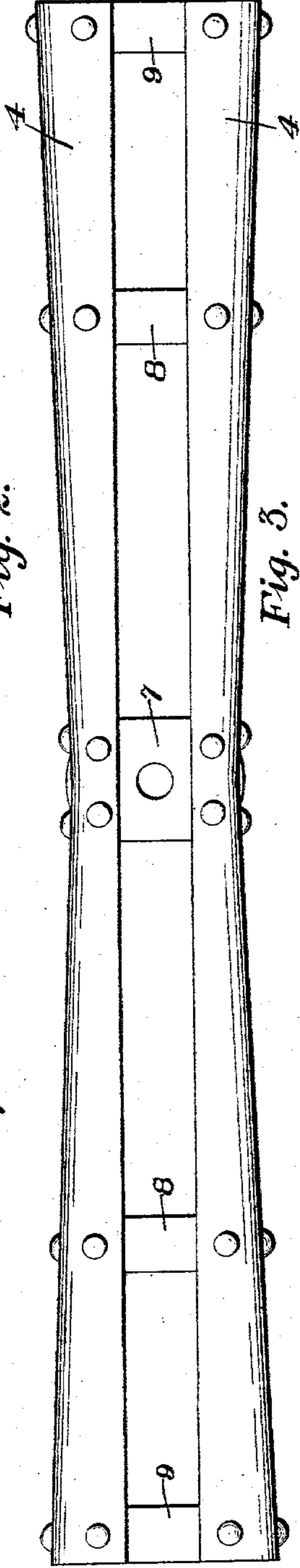


Fig. 3.

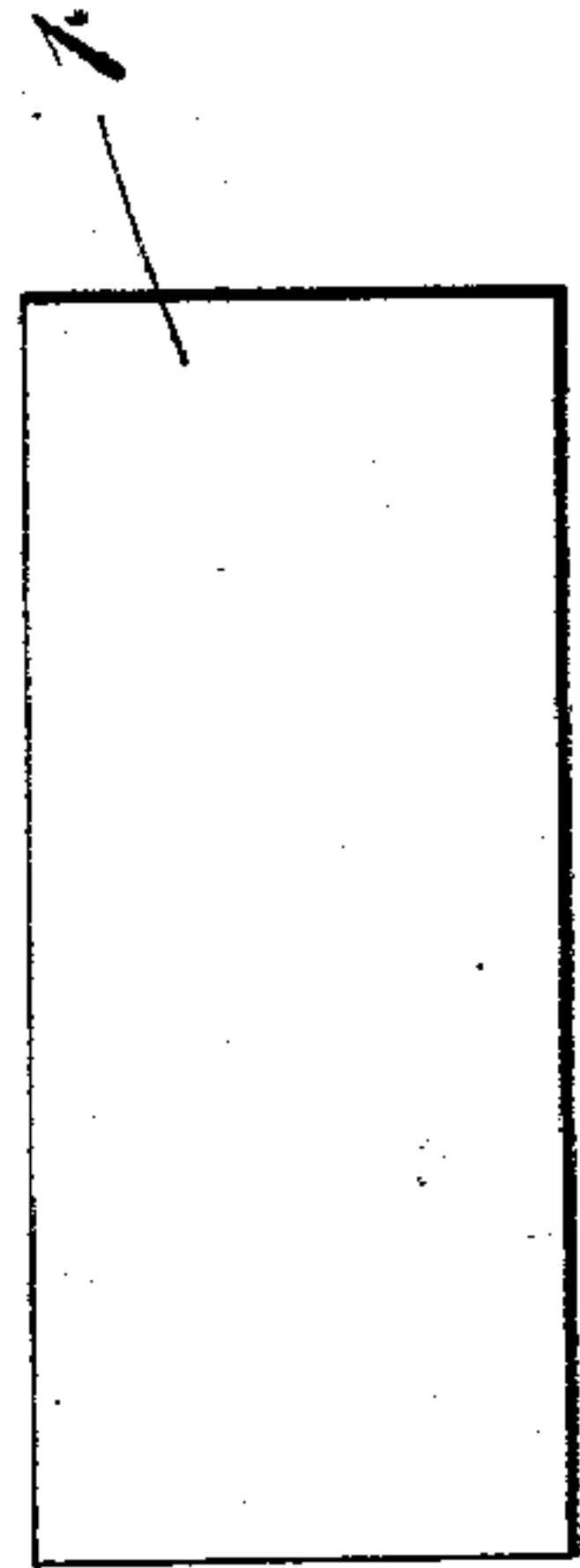


Fig. 4.

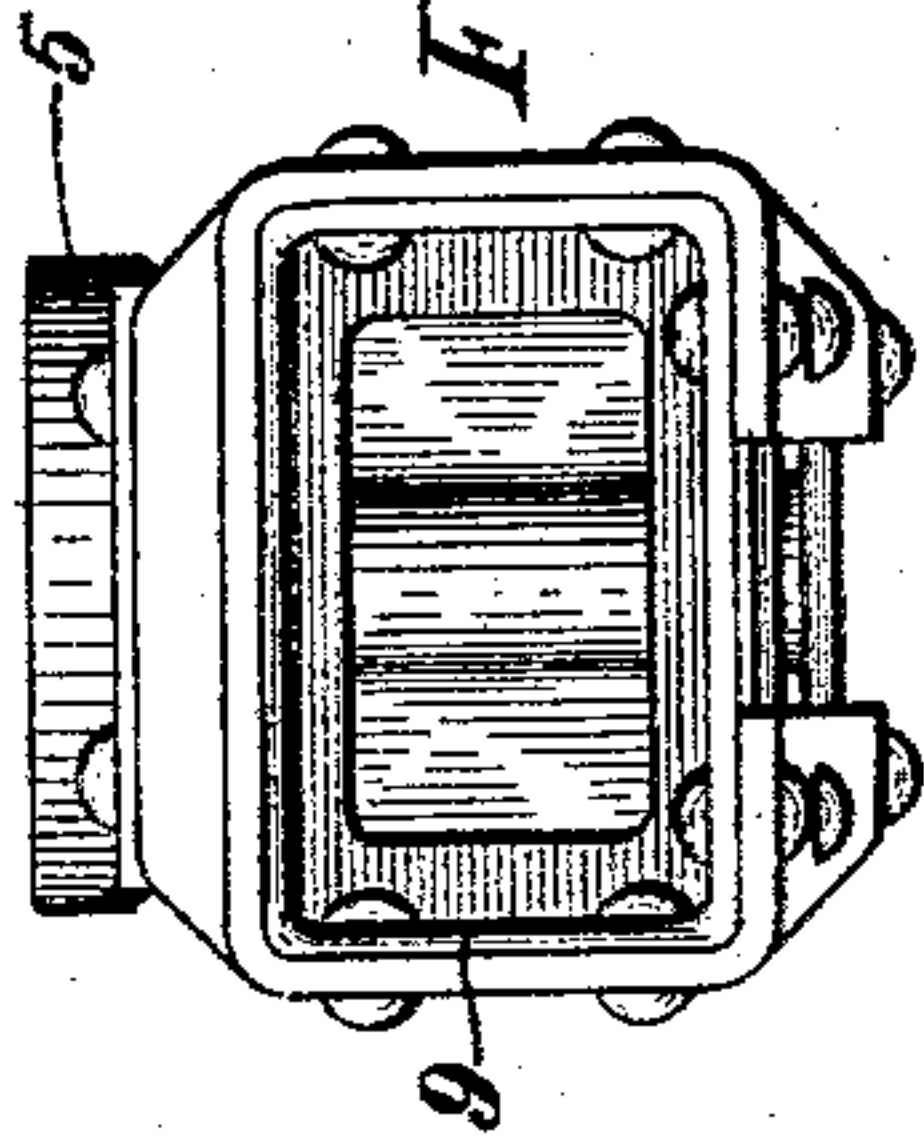


Fig. 5.

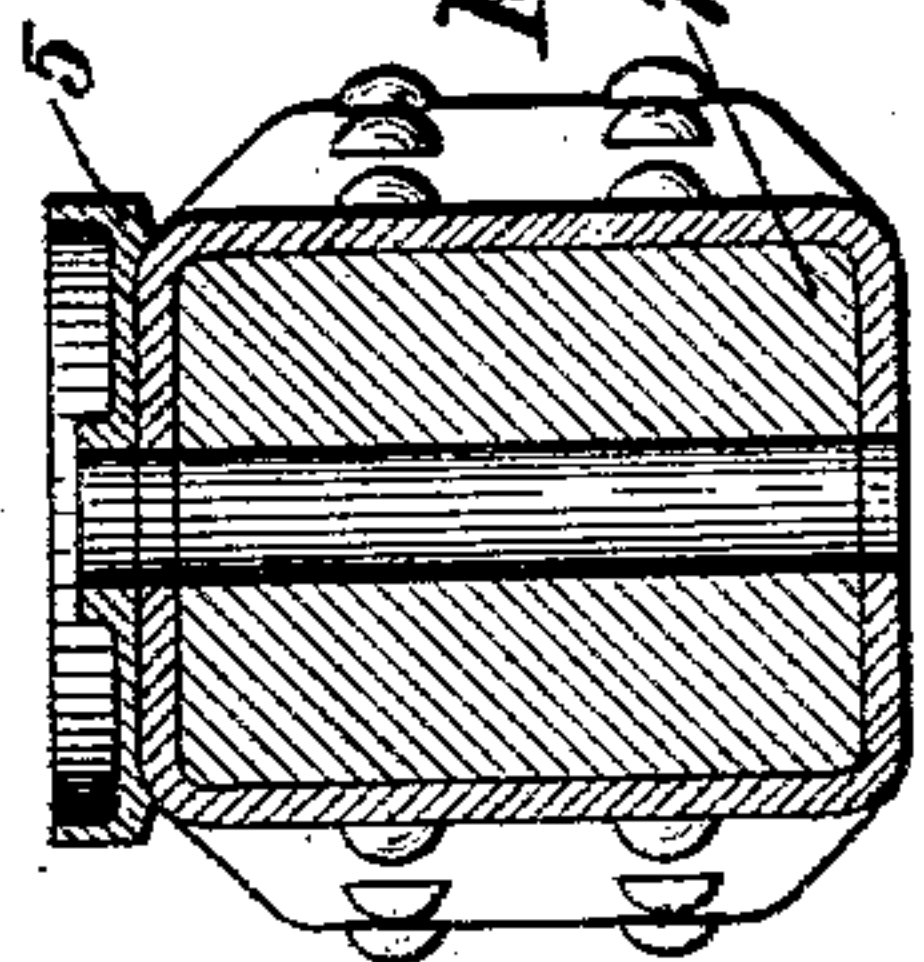


Fig. 6.

Witnesses:

*Lynn A. Williams*  
*May W. Lavel.*

Inventor:  
Alvin C. McCord.  
By *Charles A. Brown & Co.*  
Attorneys.

No. 753,289.

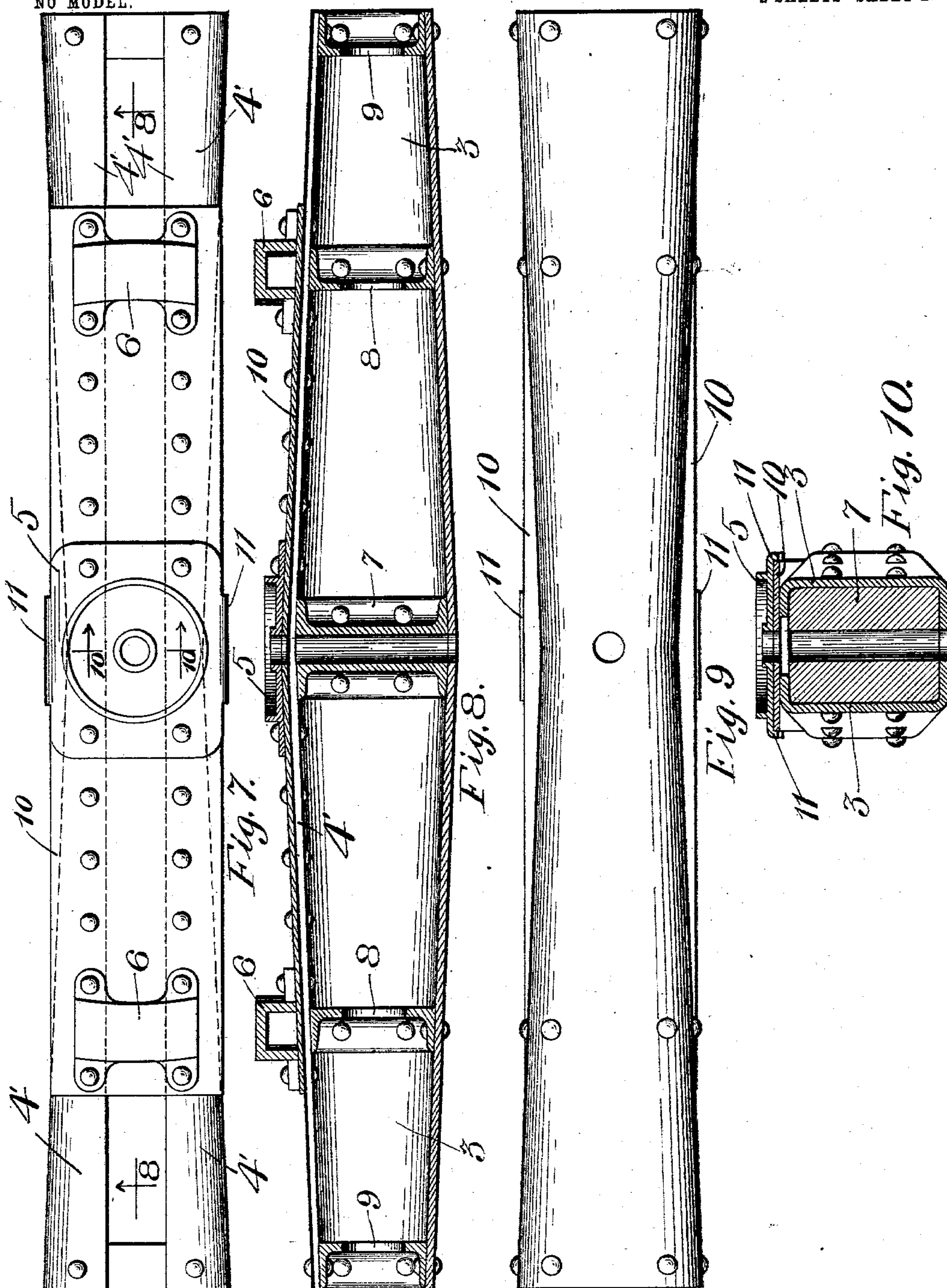
PATENTED MAR. 1, 1904.

A. C. McCORD.  
CAR BOLSTER.

APPLICATION FILED JUNE 9, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses:

*Lynn A. Williams*  
*Harvey L. Hanson.*

Inventor:

Alvin C. McCord,  
By *Charles A. Brown & Co.*  
Attorneys.



# UNITED STATES PATENT OFFICE.

ALVIN C. McCORD, OF CHICAGO, ILLINOIS.

## CAR-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 753,289, dated March 1, 1904.

Application filed June 9, 1902. Serial No. 110,793. (No model.)

*To all whom it may concern:*

Be it known that I, ALVIN C. McCORD, 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. 10,) 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 car-bolsters, and has for its object the provision of a bolster formed of sheet metal, preferably mild steel, bent to the desired shape.

By means of my invention I am enabled to employ an integral sheet of metal and to bend and shape the same into a car-bolster having top, bottom, and side portions integrally formed. In order that the bolster-body may taper from the middle toward the ends, as is most desirable, it is formed from a blank of metal substantially rectangular in shape. By employing blanks of this shape there is very little waste necessitated. When a plate of metal thus shaped is properly bent to form the bolster-body, a structure is secured which is deeper at its middle than at the ends and which is narrower at the middle than at the ends, whereby a novel distribution of metal in bolster-bodies is secured that is admirably adapted for the purpose. The shell of metal thus formed may be provided with a center plate and side bearing-plates upon its top portion and equipped with fillers, webs, or struts intervening between the top and bottom and the sides of the bolster to act as distance-pieces to maintain the shape of the bolster and as compression devices to resist strains.

A very important result gained by means of my invention is the provision of a bolster wherein bolts that have hitherto been employed for uniting fractional parts of the bolster-shell may be dispensed with, there thus being no bolts subject to any shearing action, which was a fault largely found with bolsters of the prior art.

I will explain my invention more fully by reference to the accompanying drawings, in which—

Figure 1 is a top view of my improved bolster. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is a bottom view. Fig. 4 is an end view. Fig. 5 is a sectional view on line 5 5 of Fig. 1. Fig. 6 is a plan view of a blank of metal shaped in accordance with my invention. Fig. 7 is a plan view of a modified form of bolster. Fig. 8 is a sectional view on line 8 8 of Fig. 7. Fig. 9 is a bottom view of the bolster shown in Figs. 7 and 8. Fig. 10 is a cross-sectional view on line 10 10 of Fig. 7.

Like parts are indicated by similar characters of reference throughout the different figures.

The blank shown in Fig. 6 is an illustration, on a reduced scale, of a plate having the preferred shape before it is bent into the bolster-body 1. Referring first to Figs. 1 to 6, inclusive, the plate is preferably of such a size that with the relative areas of the top 2 and sides 3 shown the bottom wall of the bolster is formed in separated sections 4 4, leaving a gap between the sections, preferably midway between the side walls, for access of riveting-tools. The form of plate illustrated in Fig. 6 enables me to secure a bolster-body that is deeper at its center than at its ends and wider at its ends than at the center. There is provided at the middle of the bolster a center bearing-plate 5 and toward the ends of the bolster the side bearings or bearers 6 6, these being secured to the top 2 by means of rivets. A filler 7 is in the middle of the bolster-body and is provided with an aperture for the reception of a bolster-pin, as is well understood. There are also, preferably, placed in vertical alinement with the side bearers 6 6 additional fillers 8 8 to resist compression at these points, the ends of the bolster-body containing the fillers 9 9.

The form of bolster shown in Figs. 7 to 10, inclusive, is the preferred form. The structure there illustrated contains substantially all the parts shown in Figs. 1 to 5, inclusive, having in addition thereto the top plate 10, riveted to the shell of the bolster, which, it will be observed, is reversed with respect to the bolster-shell shown in Figs. 1 to 5, inclu-



sive, that which is the top of the shell in one form of bolster being the bottom of the shell in the other form of bolster. The top of the bolster shown in Figs. 7 to 10, inclusive, containing the separated marginal portions 4', is supplemented by the top plate 10, which is riveted to these marginal portions 4' and which carries the center and side bearings 5 and 6. The center bearing 5 is preferably provided with ears 11, which prevent transverse movement thereof with respect to the cap-plate 10. The structure in Figs. 7 to 10 is preferred, as it may be lighter for a given capacity or strength.

It will be seen that the bolster of my invention possesses many advantages over those of the prior art, both in cheapness of manufacture and economy in material forming the same and in the resulting structure.

It is obvious that features of my invention may be embodied in bolsters of other forms than that illustrated without departing from the spirit of the invention. I do not, therefore, wish to be limited to the precise form of bolster shown; but,

Having described my invention, I claim as new and desire to secure by Letters Patent—

1. A bolster formed of a rectangular metal blank bent into a hollow bolster structure

wider at its ends than at its middle, substantially as described.

2. A bolster formed of a rectangular blank bent into a hollow bolster structure wider at its ends than at its middle, and deeper at its middle than at its ends, substantially as described.

3. A bolster formed of a rectangular metal blank bent into a tubular structure closed on three sides and partially closed on the fourth, but having a longitudinal opening on said fourth side, said tubular structure being wider at its ends than at its middle and deeper at its middle than at its ends, substantially as described.

4. A bolster formed of a sheet of metal bent into a bolster-shell, the top of the bolster-shell containing separated marginal portions 4', 4', a top plate 10 riveted to the marginal portions 4', 4', said top plate being provided with center and side bearings, substantially as described.

In witness whereof I hereunto subscribe my name this 19th day of May, A. D. 1902.

ALVIN C. McCORD.

Witnesses:

HARVEY L. HANSON,  
JOHN STAHR.