

No. 658,784.

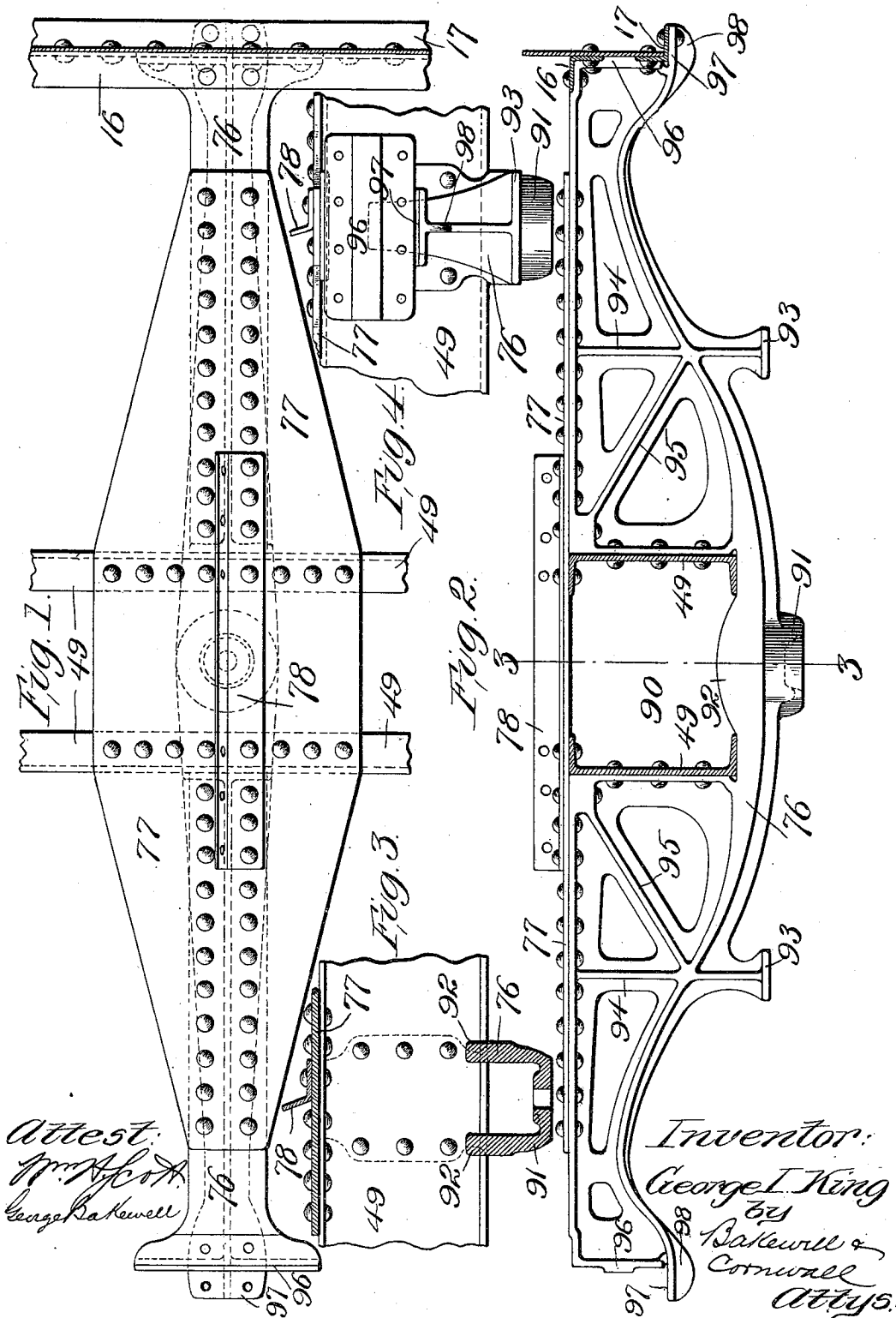
Patented Oct. 2, 1900.

G. I. KING.

BODY TRANSOM OR BOLSTER FOR RAILWAY CARS.

(Application filed May 7, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

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BODY TRANSOM OR BOLSTER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 658,784, dated October 2, 1900.

Original application filed February 26, 1900, Serial No. 6,534. Divided and this application filed May 7, 1900. Serial
No. 15,813. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. KING, a citizen of the United States, residing at the city of Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Body Transoms or Bolsters for Railway-Cars, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved body transom or bolster for railway-cars. Fig. 2 is an elevational view. Fig. 3 is a cross-sectional view on line 3 3, Fig. 2; and Fig. 4 is an end elevational view.

This invention relates to a new and useful improvement in body transoms or bolsters for railway-cars, the object being to construct a device of the character described in a simple and compact form and at the same time preserving the strength which is required of structures of this character.

With this object in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

The bolster shown in the accompanying drawings is illustrated in an application for patent for hopper-bottom car, filed by me February 26, 1900, Serial No. 6,534, and this present application is divided from the parent case.

Generally speaking, the bolster consists of a casting, preferably steel, made deepest at its middle portion and strengthened to best take care of the strains to which it is subjected. The casting forms, substantially, the compression member of a trussed structure, the center sills acting in the capacity of struts, while a cover-plate serves as a tension member, said cover-plate being riveted to the flange of the bolster proper and terminating short of the ends of the bolster.

The body portion of the bolster in the form of a casting is marked 76 in the drawings and observes a general cross-section of I-beam form, one of its characteristics being that a squared

recess 90, open at its top, is provided at about the center of this casting, and against the flanges forming the side walls of said recess are received and secured by suitable rivets the channel-beams 49, forming the main members of the center sills. The usual center bearing 91 is provided on the lower face of the bolster, while the structure above this center bearing and between the beams 49 is strengthened by a bulge or crown 92, which also forms abutting shoulders, against which rest the lower flanges of the beams 49.

93 indicates the side bearings, formed integral with the bolster and which, as usual, are located directly above the side bearings of the truck-bolster.

The central web of my improved bolster is cut away at convenient places for the purpose of lightening the same, and strengthening-ribs are provided at convenient points where the middle web is left for well-known purposes. I have arranged these ribs vertically, as at 94, immediately above the side bearings to strengthen the structure at this point, while diagonal ribs 95 extend from the junction of the flanges at the upper corners of the middle pocket to the junction of the vertical ribs 94 and the bottom lateral flange of the bolster. The vertical web of the bolster is preferably extended beyond its bottom flange for the purpose of strengthening the same. The ends of the bolster are broadened and formed with elongated vertical walls 96, which are shaped to snugly receive the angle-bars 16 and 17, forming the side sills, which are riveted thereto. The horizontal flanges of the bar 17 are further supported by the horizontal shelf-like projections 97, extending from the ends of the bolster therebeneath. These projections 97 are strengthened by vertical flanges 98, the same being continuations of the central vertical web of the bolster.

77 indicates the cover-plate, to which I have referred above, said cover-plate being substantially diamond-shaped in plan view, the broadest part bridging the squared recess 90, while the side edges converge toward the casting, the ends of said cover-plate terminating short of the ends of the bolster. Rivets

secure this cover-plate to the casting and also to the channel-beams 49, forming the main members of the center sill. A most rigid structure is thus produced, and in order to strengthen the tension cover-plate I prefer to arrange an angle-plate 78 on top thereof and extending across the squared recess 90, as shown. This reinforcing angle-plate also affords attachment for the floor-supports.

(Not shown in the present application.)

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a body-bolster, the combination with a casting whose upper face is flush with the center and side sills throughout the width of the car to serve as an unbroken floor-support between the center and side sills, said upper face being formed with a recess at about its center for receiving the center sills, and serving as a compression member, of center sills arranged in said recess and serving as a strut, and a cover-plate bridging said recess and extending some distance therebeyond, said cover-plate being riveted to the upper flange of the bolster and serving as a tension member therefor; said cover-plate also offering a floor-support of considerable area which extends substantially across the bottom of the car, substantially as described.

2. The combination with a body-bolster formed with a recess in its upper face for the reception of the center sills, of a tension member in the form of a cover-plate bridging said recess, and an angle-plate for reinforcing said cover-plate tension member; substantially as described.

3. The herein-described body-bolster provided with a squared recess 90, open at its top, for receiving center sills, an integral center bearing on the lower face of the bolster, and a bulge or crown 92 above said center plate and between the lower ends of the

center sills, whose inner edges abut thereagainst; substantially as described.

4. The herein-described body-bolster substantially of I-beam cross-section throughout, of integral side bearings depending from said bolster, the central web of the bolster being cut away at convenient places for the purpose of lightening the same, vertical ribs arranged above the side bearing, and diagonal ribs extending from the junction of the flanges at the upper corners of the middle pocket to the junction of the vertical ribs 94 and the bottom lateral flange of the bolster; substantially as described.

5. The herein-described body-bolster substantially of I-beam cross-section throughout its length, the vertical web of the same extending beneath the bottom flange, the ends of said bolster being broadened and formed with elongated vertical walls 96 shaped to receive the side sills, and horizontal shelf-like projections 97 extending from the ends of the bolster, said projections being strengthened by vertical flanges 98, said vertical flanges being continuations of the central vertical web of the bolster; substantially as described.

6. The herein-described body-bolster substantially of I-beam cross-section throughout, the central web of said bolster being cut away at convenient places for the purpose of lightening the same, vertical ribs connecting the top and bottom flanges of the bolster, and diagonal braces or ribs; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of April, 1900.

GEORGE I. KING.

Witnesses:

WM. H. SCOTT,
GEORGE BAKEWELL.