

No. 697,664.

Patented Apr. 15, 1902.

R. V. SAGE.  
TRUCK BOLSTER.

(Application filed Oct. 19, 1901.)

(No Model.)

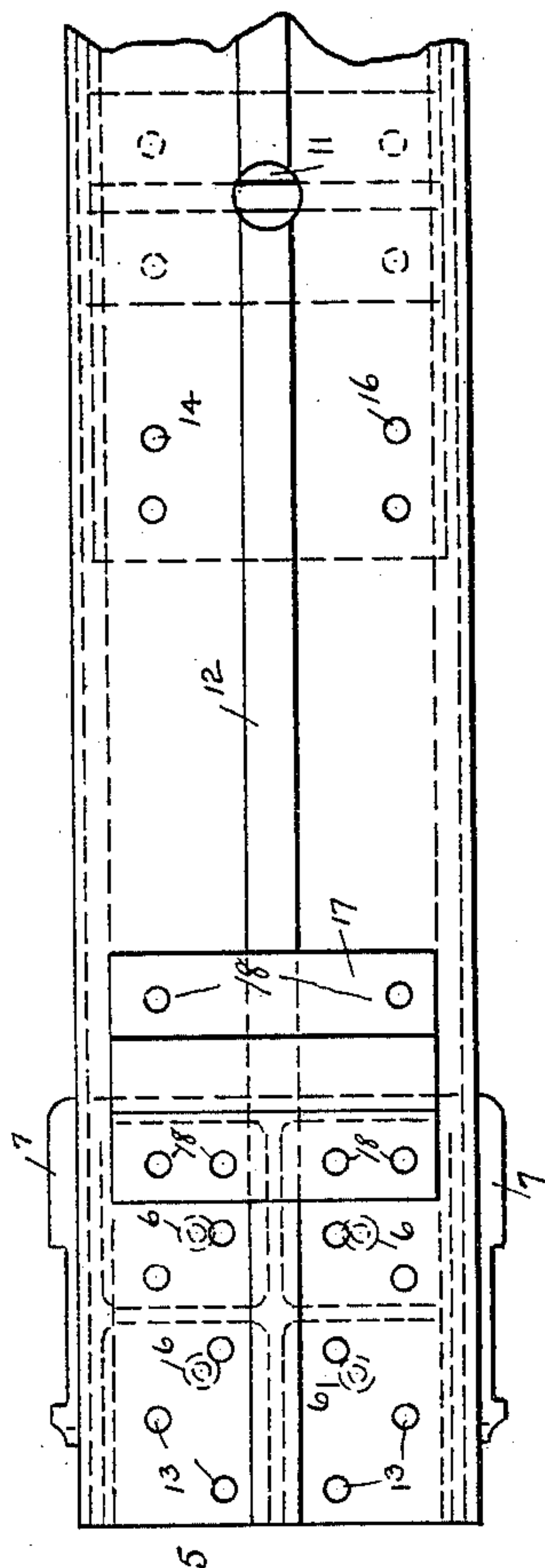


Fig. 1.

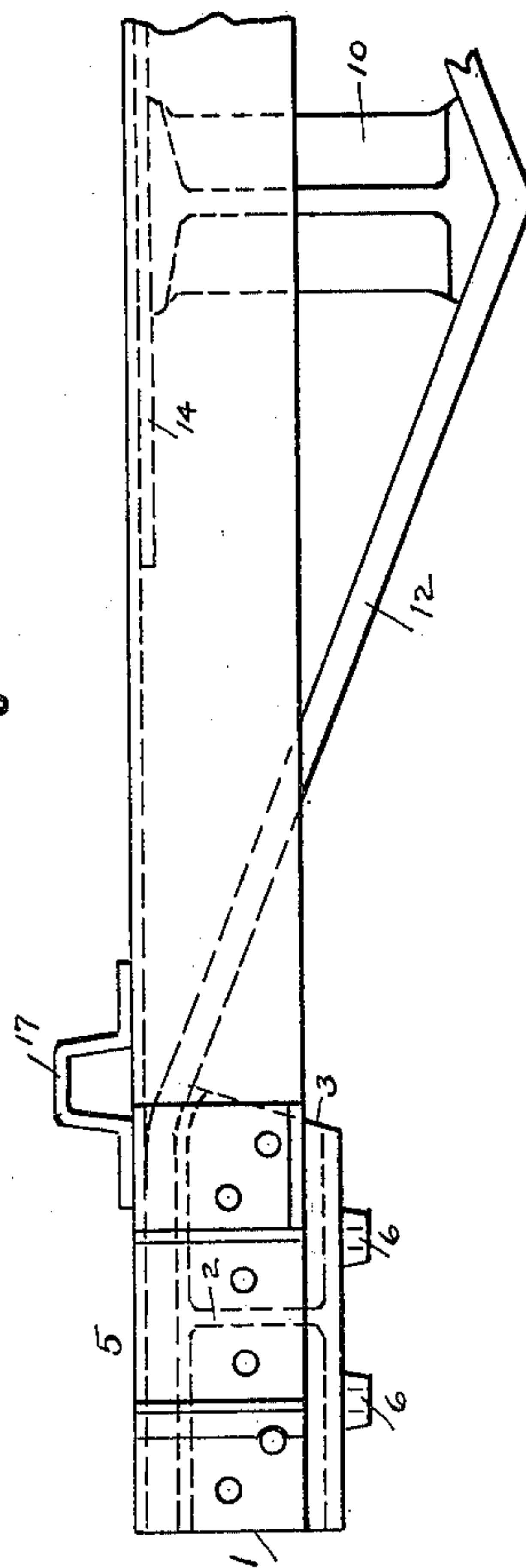


Fig. 2.

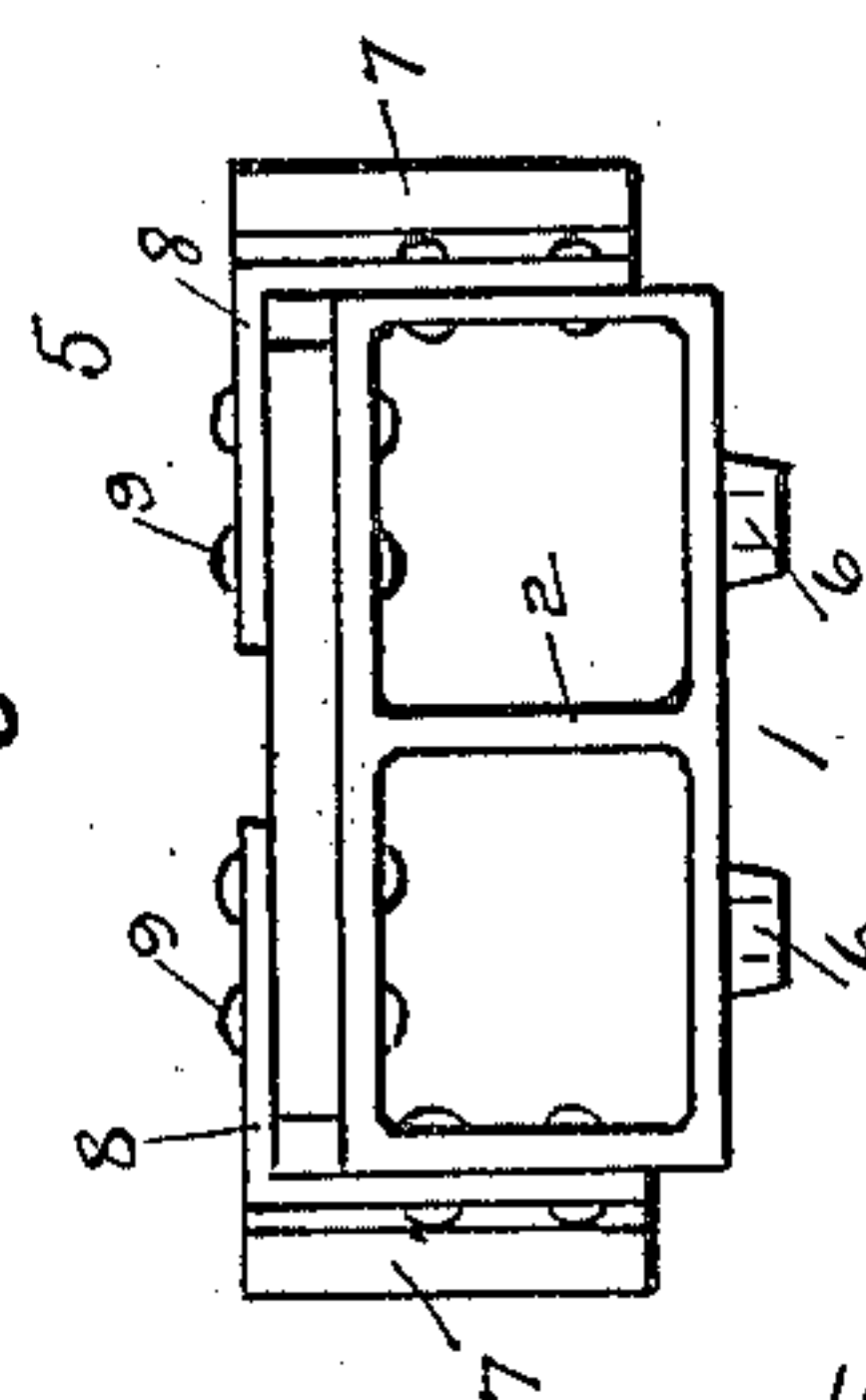


Fig. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

RALPH V. SAGE, OF JOHNSTOWN, PENNSYLVANIA.

## TRUCK-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 697,664, dated April 15, 1902.

Application filed October 19, 1901. Serial No. 79,214. (No model.)

*To all whom it may concern:*

Be it known that I, RALPH V. SAGE, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Truck-Bolsters, of which the following is a specification.

This invention relates to truck-bolsters, and particularly to bolsters for heavy vehicles or vehicles adapted to carry heavy freight and especially steel gondola cars, and has for its object to provide an improved bolster of this class which will possess points of advantage in facility of construction, simplicity of design, and in the arrangement of the parts and in the lessening of the cost of manufacture, but which will be strong, durable, and equally as good as those now in use.

Figure 1 is a plan view of a bolster embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation of the same.

In the drawings the same reference characters denote corresponding parts in the several views.

My improved bolster comprises in general a malleable casting at each end of the bolster provided with means for receiving the bolster-springs and adapted to slide between the truck-columns and to have the other parts of the bolster secured thereto, said casting being made to fit the bend of the tie-bar and thereby relieve the strain on the rivets securing the tie-bar to such casting; a top part formed of two angles or channels and an I-beam or a channel, as the strain requires; a center strut formed of a short piece of an I-beam or two channels back to back or a malleable strut in the shape of an I-beam, with a reinforcing-rib on each side, said strut being provided with a hole in its top to receive the king-pin and a tie-bar passing beneath the strut and on to the castings, where it is secured.

In the form shown in the drawings and which, if desired, may be the preferred form my improved bolster comprises a hollow malleable casting 1, having longitudinal and transverse partitions 2 and an inclined rear surface 3, the top of said casting 1 being curved downward to said rear surface 3 from a

suitable point to conform such top to the bend of the tie-bar 12, which casting 1 takes the place of the bent plates heretofore used and forms each end of the bolster 5. The casting 1 is provided at the bottom with lugs 6 to take the bolster-springs. (Not shown.)

The upper portion of the body of the bolster 5 may be composed of two angles 8, the ends of which are secured to the casting 1 in any suitable manner, herein shown as rivets 9. Instead of two angles an I-beam or two channels or a channel, as the strain requires, may be used for said upper portion, if desired, since the use of any of these will accomplish the desired result, which is the use of ordinary merchantable forms, so that the resistance to strain and the strength in proportion to the amount of metal used will be greatest and the manufacture of bolsters will be easier, simpler, and less expensive, while the article produced will be equally as good as any now in use. Near the ends of the bolster 5 ways 7 are riveted to receive the truck-columns. (Not shown.)

A center strut 10 is provided formed of a short piece of an I-beam, which has a hole 11 in the top to receive the king-pin. (Not shown.) Various modifications may be made in the center strut 10. It may be composed of two channels back to back or a malleable cast strut of a shape similar to an I-beam, with reinforcing-rib on each side extending longitudinally of the strut.

A tie-bar 12 extends beneath the center strut 10 and at each end over the curved rear top surface of the casting 1 and is secured to the casting 1 in any suitable manner, herein shown as rivets 13, the strain on the rivets 13 being diminished by the curve of the casting 1, being the same as the bend in the tie-bar 12, whereby such strain is largely taken by the casting 1.

A center plate 14, having a hole registering with the hole 11 in the strut 10, is placed between the top of the center strut 10 and the top of the bolster 5 and is secured to the center strut 10 and the top of the bolster 5 in any suitable manner, herein shown as rivets 16.

A suitable bent metal plate 17 to receive the side sills (not shown) of the car is secured on



top of the bolster 5, near each end thereof, in any suitable manner, herein shown as rivets 18.

The operation and advantages of my improved bolster will be readily understood and appreciated. The casting 1 is peculiarly adapted in construction and shape to what is required of it and is more easily and inexpensively produced than the bent plates heretofore used. The rear upper surface of the casting 1 conforms to the bend of the tie-bar 12 and takes the strain off the rivets 13, securing such tie-bar 12. The other parts of the bolster 5 are simple ordinary merchantable forms, which are readily, easily, and inexpensively procured, and the organization of the parts is such that a very strong and durable bolster is produced.

I do not desire to be understood as limiting myself to the details of construction and arrangement as herein described and illustrated, as it is manifest that variations and modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variation and modification as properly falls within the scope of my invention and the terms of the following claims.

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

35 1. An improved bolster of the class described, comprising a body portion and a tie-

bar fitted together at their ends, and a separate hollow malleable cast member provided with longitudinal and transverse partitions and with lugs at the bottom to receive the bolster-springs and secured below the tie-bar at the joint, said separate member having its upper surface curved complementary to the under surface of the tie-bar adjacent to its ends to form a bearing-surface for such tie-bar whereby the strain is taken partly off the rivets and borne by said separate member.

2. An improved bolster of the class described, comprising a flanged body portion, a tie-bar having its ends fitted against the base of the body portion between a pair of its flanges, a center strut composed of a section of an I-beam, and a hollow malleable casting having its top fitted against the lower face of the tie-bar at the joint and having its upper surface curved complementary to the under surface of the tie-bar adjacent to its ends to form a bearing-surface for such tie-bar whereby the strain is taken in part by such casting, rivets extending through the body portion, the tie-bar and the top of the casting, and rivets extending through the flanges of the body portion and the sides of the casting.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

RALPH V. SAGE.

Witnesses:

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WM. P. PARKER.