(No Model.) 4 Sheets—Sheet 1.

H. PRIES & J. J. CASEY.

TRUCK BOLSTER.

No. 588,777. Patented Aug. 24, 1897.

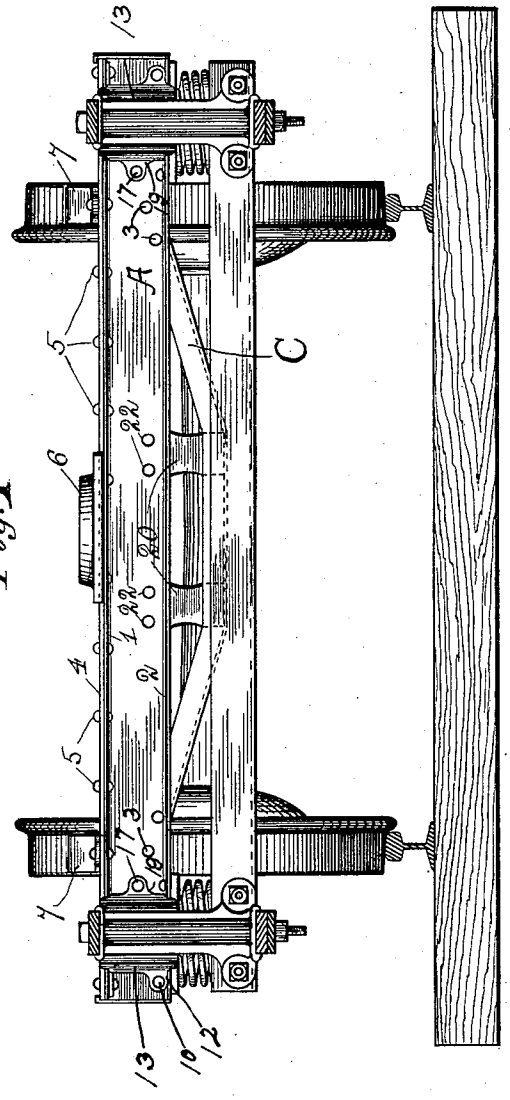


Fig. 1

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Fig. 2.

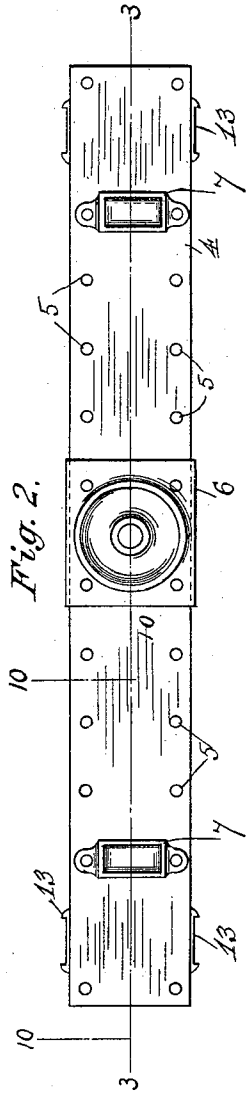


Fig. 3.

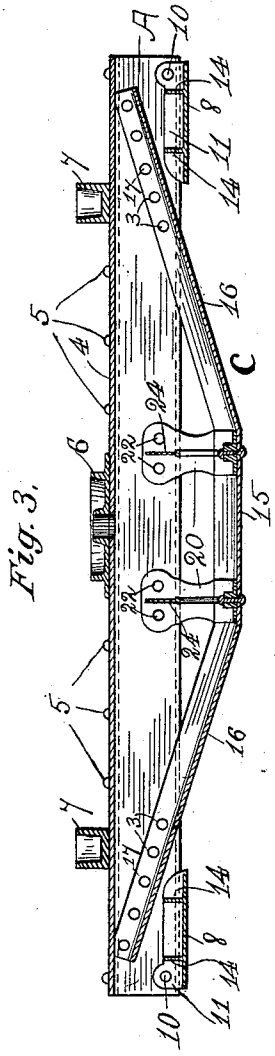
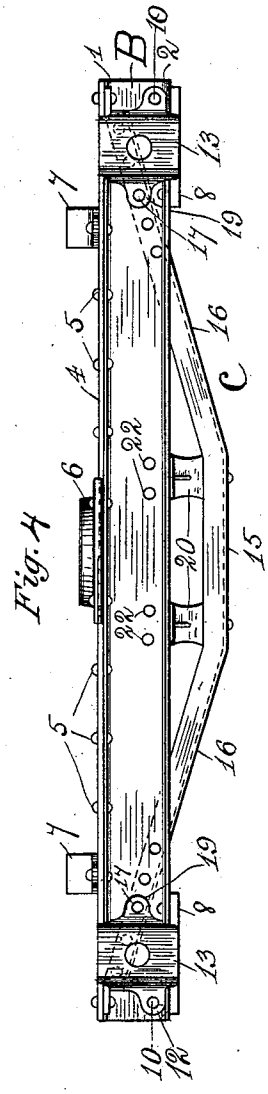


Fig. 4.



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Fig. 5

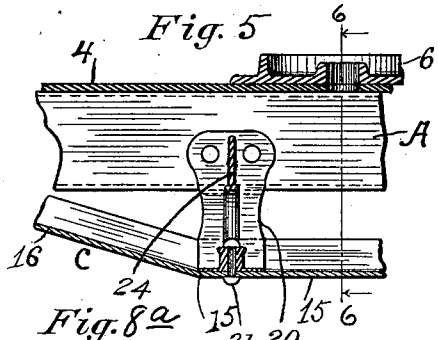


Fig. 6

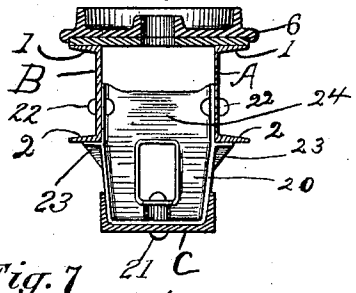


Fig. 8a

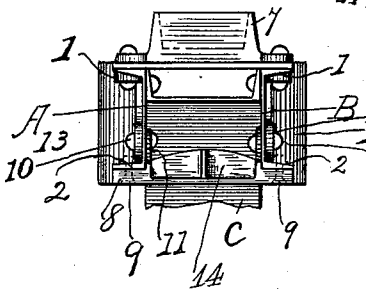


Fig. 7

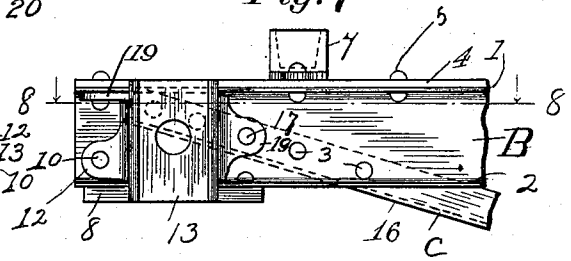


Fig. 8

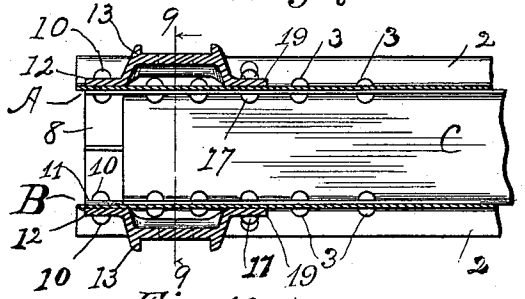


Fig. 9

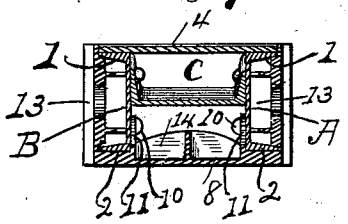
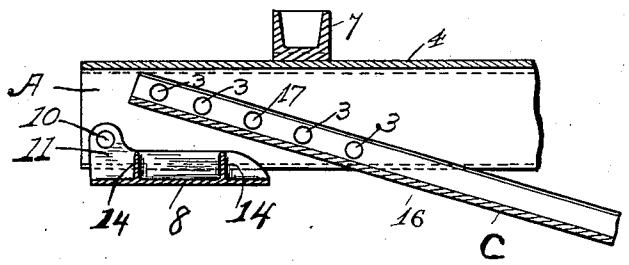


Fig. 10



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Fig. 11.

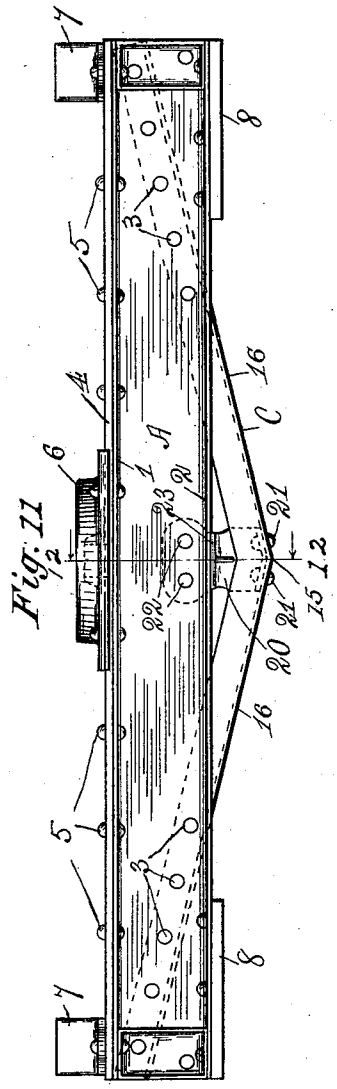


Fig. 12.

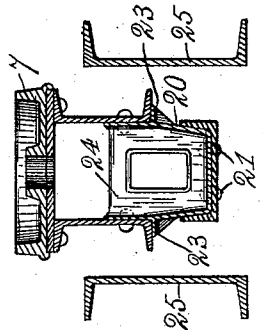
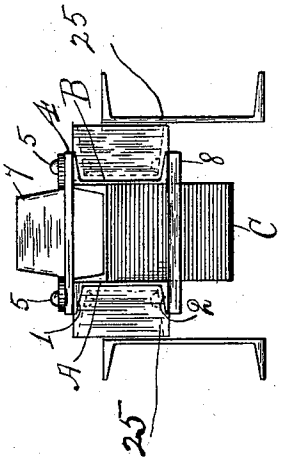


Fig. 13.



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UNITED STATES PATENT OFFICE.

HERMAN PRIES AND JOHN J. CASEY, OF MICHIGAN CITY, INDIANA.

TRUCK-BOLSTER.

SPECIFICATION forming part of Letters Patent No. 588,777, dated August 24, 1897.

Application filed June 3, 1897. Serial No. 639,325. (No model.)

To all whom it may concern:

Be it known that we, HERMAN PRIES and JOHN J. CASEY, citizens of the United States, residing at Michigan City, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Truck-Bolsters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a novel construction in a truck-bolster for car-trucks, the object being to provide a device of the description which will sustain the maximum of loads consistent with the utmost lightness and cheapness of construction; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

One feature of our invention consists in constructing our bolster mainly of rolled-steel channel-irons, two of which form the side struts or compression members and one of which forms the tension member.

Another feature of our invention consists in bending the tension member so that its middle portion falls below the lower edge of the compression members and in interposing one or more vertical struts between said depending portion of said tension member and the adjacent lower edges of the compression members.

Another feature of our invention consists in so bending said tension member that its flanges extend upwardly and securing the end portions of said tension member between said compression members or side struts by means of rivets or bolts passing through the webs of said side struts or compression members and through the end portions of the flanges of said tension member.

Another feature of our invention consists in joining said compression members together by means of plates riveted to the flanges thereof and by means of said vertical struts interposed between the tension and compression members to prevent spreading of said compression members under excessive strain.

In the accompanying drawings, illustrating our invention, Figure 1 is a transverse vertical section of a truck, showing a bolster constructed in accordance with our invention in side elevation. Fig. 2 is a top plan view of our bolster. Fig. 3 is a vertical longitudinal section of the same on the line 3 3 of Fig. 2. Fig. 4 is a side elevation of the same. Fig. 5 is a fragmentary sectional view of the same on an enlarged scale. Fig. 6 is a vertical transverse section on the line 6 6 of Fig. 5. Fig. 7 is a fragmentary side elevation of the same on an enlarged scale. Fig. 8 is a horizontal section on the line 8 8 of Fig. 7. Fig. 8^a is an end elevation of the same. Fig. 9 is a vertical transverse section on the line 9 9 of Fig. 8. Fig. 10 is a fragmentary sectional view, on an enlarged scale, on the line 10 10 of Fig. 2. Fig. 11 is a side elevation of a bolster constructed for a swing-motion truck. Fig. 12 is a vertical transverse section of the same on the line 12 12 of Fig. 11. Fig. 13 is an end elevation of the same.

Referring now to said drawings, A and B indicate the side struts or compression members, and C the tension member of a truck-bolster, which consist, preferably, of rolled-steel channel-bars, though it will be obvious that any other suitable material may be substituted. The flanges 1 and 2 of said members A and B extend outwardly, while the flanges of said member C preferably extend upwardly and are secured at their end portions to the webs of said members A and B by means of rivets 3, said tension member being mounted between said members A and B. Said members A and B are further secured together by means of a covering-plate 4, extending the entire length thereof, and between the outer edges of the flanges 1, to which said plate is secured by means of rivets 5. The center plate 6 and side bearings 7 are mounted upon said plate 4. Spring-plates 8 are secured upon the end portions of said flanges 2 of said compression members and are secured thereto by means of rivets 9 and 10, said rivets 9 passing through the flanges 2 and said rivets 10 passing through upwardly-extending ribs 11 on said plates 8, through the webs of said compression members, and through the flanges 12 of the guides 13, thus serving a double purpose. Said plates 8 are further provided with ribs 14, extending transversely between the ribs 11, thus obviously strengthening said plates.

Said tension member is bent at its middle portion 15, so that its end portions 16 extend upwardly at an incline therefrom between the members A and B, to the webs of which they are secured by means of the rivets 3 and 17, said rivets 3 passing through the webs of said compression members and said rivets 17 passing also through the flanges 19 of the guides 13. Struts 20 are interposed between said middle portion 15 of said tension member C and the adjacent portions of said members A and B, said struts being secured by rivets 21 to the web of said member C and by means of rivets 22 to the webs of said members A and B, and are provided between their ends with outwardly-extending flanges 23, which are adapted to engage the lower faces of the flanges 2 of said members A and B. Said struts 20 are provided with cross-ribs 24, which obviously strengthen the same and prevent the adjacent portions of the members A and B from spreading. In the figures of the drawings hereinbefore referred to we have shown two of said struts 20, but it will be obvious that this number can be increased or diminished without departing from the spirit of our invention, and in Fig. 11 we have shown only one of said struts. Though this figure shows a modified construction of our bolster for use in swing-motion trucks it will be obvious that the modification can also be applied to the bolster for rigid trucks. (Shown in Figs. 1 to 10, inclusive.)

The bolster shown in Figs. 11 to 13, inclusive, differs only in that instead of the guides 13 end bearings are used which hold the bolster centered between the struts 25 of the truck.

A bolster constructed in accordance with our invention is very light and cheap to manufacture, but will bear a very heavy load compared to its weight.

We claim as our invention—

1. A truck-bolster, comprising side struts or compression members composed of channel-irons, a tension member secured between said compression members, and struts interposed between said compression and tension members, substantially as described.

2. A truck-bolster comprising side struts or compression members consisting of channel-irons, a tension member consisting of a channel-iron bent at its middle portion and secured at its end portions between said side struts, and struts interposed between said tension member and the lower edges of side struts, substantially as described.

3. A truck-bolster, comprising side struts or compression members consisting of parallel channel-irons having outwardly-extending flanges, a tension member consisting of a channel-iron having upwardly-extending flanges bent at its middle portion so as to depend below said side struts and secured to the webs of said side struts by means of rivets or the like passing through the flanges of said tension member, and means for transferring the load on said compression members to said tension member, substantially as described.

4. A truck-bolster, comprising side struts or compression members consisting of parallel channel-irons having outwardly-extending flanges, a tension member consisting of a channel-iron having upwardly-extending flanges bent at its middle portion so as to depend below said side struts and secured to the webs of said side struts by means of rivets or the like passing through the flanges of said tension member, and means for transferring the load on said compression members to said tension member, consisting of vertical struts interposed between the depending middle portion of said tension member and the lower flanges of said compression members, substantially as described.

5. In a truck-bolster, the combination with side struts having parallel vertical webs, of a tension member secured between said side struts and depending below the same at its middle portion, and means interposed between said depending middle portion of said tension member and the adjacent lower edges of said side struts for transferring the strain upon said side struts to said tension member, substantially as described.

6. In a truck-bolster, the combination with side struts having parallel upright webs, of a tension member having parallel upright flanges secured at their end portions to the webs of said side struts, and bent at its middle portion to depend below said side struts, and means interposed between the lower edges of said side struts and the web of the bent portion of said tension member for transferring the strain upon said side struts or compression members to said tension member, substantially as described.

7. A truck-bolster, comprising side struts consisting of parallel channel-irons having outwardly-extending flanges, a plate mounted upon said side struts and secured to the upper flanges thereof, a tension member consisting of a channel-iron having upwardly-extending flanges secured at their end portions to the webs of said side struts, and bent at its middle portion so as to depend below said side struts, and struts secured to the web of said tension member and bearing against the lower edges of said side struts for transferring the strain from said side struts to said tension member, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

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JOHN J. CASEY.

Witnesses:
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T. D. HAMRICK.