

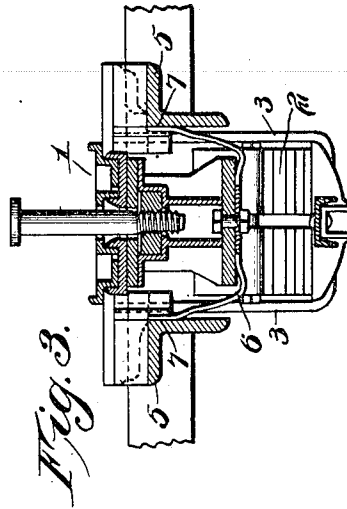
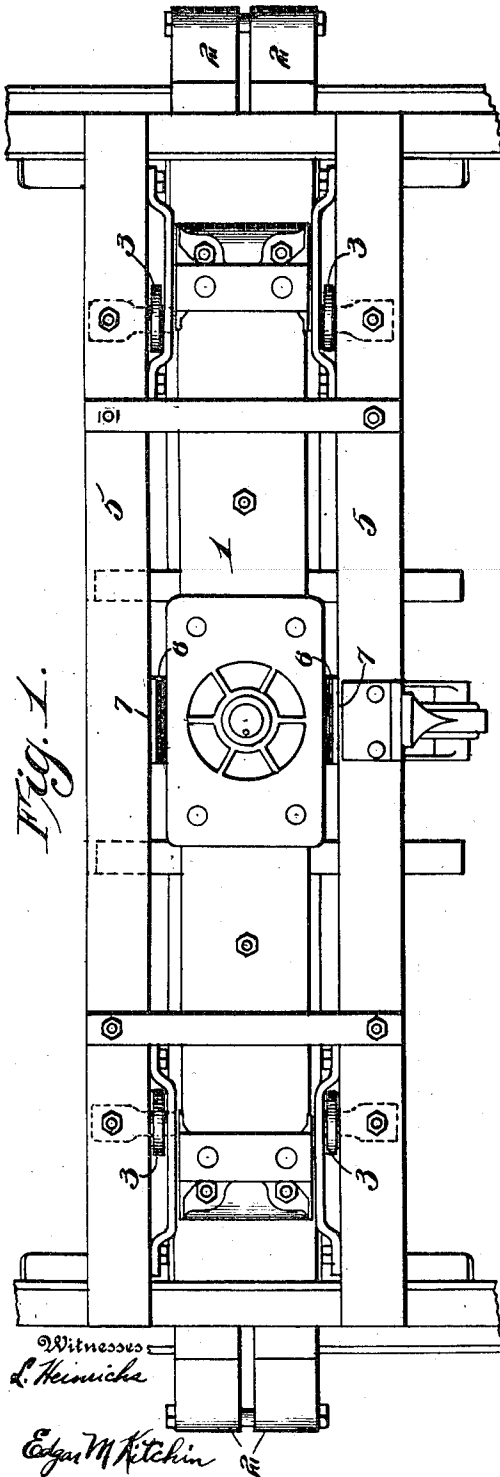
No. 818,640.

PATENTED APR. 24, 1906.

W. G. PRICE.
CAR TRUCK.

APPLICATION FILED NOV. 12, 1904.

2 SHEETS—SHEET 1.



Witnesses
L. Heinrichs

Edgar M. Kitchin

Inventor
William G. Price

By Mason, Fenwick & Lawrence
his Attorney &c.

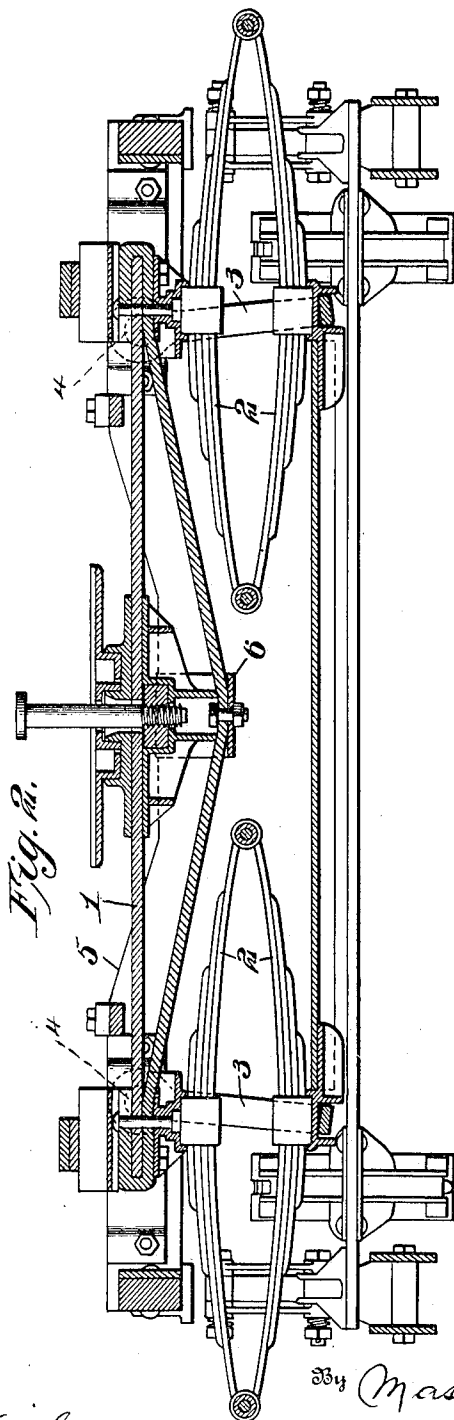
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UNITED STATES PATENT OFFICE.

WILLIAM G. PRICE, OF PITTSBURG, PENNSYLVANIA.

CAR-TRUCK.

No. 818,640.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed November 12, 1904. Serial No. 232,504.

To all whom it may concern:

Be it known that I, WILLIAM G. PRICE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Trucks; and I 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.

This invention relates to improvements in car-trucks, and more particularly to means for damping the movement of the bolster upon its hinged supports.

The object in view is the obviation of undesirable movement of the bolster of a car-truck, and such object is attained by the provision of means for preventing cumulative swing of the bolster upon its supports.

A further object is the provision of means for normally retaining the bolster against movement, while permitting unlimited movement thereof when desired.

A still further object is the provision of means for damping the movement of a bolster and for providing for the same amount of resistance to movement of the bolster at all points throughout the movement thereof.

With these and further objects in view the invention comprises certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a top plan view of a bolster and surrounding parts provided with elements embodying the features of the present invention. Fig. 2 represents a vertical longitudinal central section taken therethrough. Fig. 3 represents a transverse vertical central section taken through the parts illustrated in Fig. 1.

In practice it is common to mount the bolster of a car-truck upon hinged supports, so that the bolster is free to swing longitudinally with respect to itself and transversely with respect to the car-frame. By movement of the truck the bolster is caused to swing, and, if nothing is provided to limit the swing of the bolster, by cumulative movement the swing of the bolster sometimes becomes so great as to occasion discomfort of the passengers within the car. It has been proposed heretofore to cushion this swinging movement by springs disposed at the ends of

the bolster; but I find in practice that such springs only tend to reduce the length of the stroke of the bolster. The springs thus arranged tend to limit the movement of the bolster in a ratio proportionate to the expansion or compression of the springs, and the resistance to the movement of the bolster is therefore varied throughout the stroke of the bolster, and the said springs necessarily positively limit the stroke of the bolster to a fixed extent. By my present invention I propose to offer the same resistance to the movement of the bolster throughout its movement, such resistance being sufficient normally to practically eliminate movement of the bolster, but permitting the full stroke of the bolster when necessary. These desirable results are accomplished by the elements disclosed in the accompanying drawing, in which—

1 indicates an ordinary bolster of a car-frame supported in the usual way upon the elliptic springs 2, which springs in turn are carried by pivotally-mounted yoke-supports 3, being pivoted, as at 4, to transoms 5, arranged upon the opposite sides of the bolster 1. These elements constitute no part of the present invention, as they are already known in the art.

To the bottom plate or at any other suitable point on the bolster is bolted or otherwise suitably secured a spring 6. The spring 6 consists simply of a flat bar of spring material secured, preferably, centrally of its length, producing arms extending laterally beyond the bolster 1 and bent up into position for engaging the inner surfaces of the transoms 5. The ends of the arms of spring 6 are preferably flattened, as at 7, for presenting a flat bearing-surface engaging the inner face of the respective transom 5.

In assembling the parts the transoms 5 are positioned and the arms of the springs 6 are spread apart a distance somewhat greater than the distance between the transoms 5, and the bolster 1 is forced down into position upon springs 2, the arms of springs 6 being thus pressed down between the transoms 5 and engaging the same with considerable spring-pressure, the said arms being forced toward each other by their downward movement between the transoms. Thus it will be seen that I have provided a spring positioned for normally preventing longitudinal movement of the bolster because of the frictional contact of said spring with the tran-

soms; but the bolster is still free to move longitudinally under excessive strain and is not limited in the length of its stroke by the action of the spring 6. The pressure of the arms of spring 6 against the transoms 5 is of course the same, regardless of the position of the bolster, so that an unvariable resistance is afforded for preventing movement of the bolster. While I have illustrated but one spring and that spring disposed to engage the transoms of the car-truck, it is obvious, of course, that a plurality of springs may be employed and that said springs may be caused to engage other elements of the truck than the transoms, as may be found desirable.

The spring 6, as above suggested, is compressed between the transoms 5 by the weight of the bolster when the bolster is being positioned between the transoms and held by such weight in its compressed condition. By "the weight of the bolster" here is meant not only the weight of the beam *per se* constituting the bolster, but the weight of whatever body may rest upon such beam, and the claims mentioning the weight of the bolster are to be construed as meaning the weight of the beam constituting the bolster independently of or in conjunction with the weight of an object or objects sustained by the beam. It is to be noted that the spring 6 is maintained in its position by the bolster 1, said spring having an inclination to expand after released from its position, so that when the bolster is elevated from between the transoms the arms 7 spring outwardly, and when the bolster is replaced said arms must be compressed between the transoms, such compression being accomplished by the weight of the bolster, and if the bolster *per se* is not of sufficient weight for forcing the spring-arms together additional weights placed thereon may be employed for accomplishing the desired result, the spring-arms 7 being thus maintained in a compressed condition by the weight of the bolster.

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

1. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of spring-arms interposed between said transoms and bolster for frictionally resisting movement of said bolster.

2. The combination with a movably-mounted bolster and an element fixed with respect thereto, of a bodily, laterally movable spring-arm interposed between said bolster and fixed element for frictionally resisting movement of the bolster.

3. The combination with a movably-mounted bolster, of transoms arranged at the sides thereof, and a one-piece spring shaped to form spring-arms interposed between said bolster and transoms for frictionally resisting movement of the bolster.

4. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of a one-piece spring carried by the bolster and frictionally engaging said transoms.

5. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of a spring carried by said bolster and frictionally engaging both of said transoms.

6. The combination with a movably-mounted bolster, of a spring extending beneath the same and frictionally resisting movement of the bolster, said spring being bodily movable laterally with said bolster.

7. The combination with a movably-mounted bolster and a spring connected to said bolster beneath the same and extending beyond the bolster, and means frictionally contacting with said spring for frictionally resisting movement of the bolster.

8. In a truck, the combination with a pair of transoms and means for supporting the same, of a bolster swinging between said transoms, and a spring compressed by said bolster between said transoms.

9. The combination with a movably-mounted bolster and an element fixed with respect thereto, of a spring compressed by the bolster against said fixed element for frictionally resisting longitudinal movement of the bolster.

10. The combination with a movably-mounted bolster and an element fixed with respect thereto, of a spring-arm compressed by the bolster against the fixed element for resisting movement of the bolster, said arm being movable longitudinally with respect to the fixed element and laterally with respect to itself.

11. The combination with a movably-mounted bolster and transoms at the sides thereof, of a spring compressed by the bolster against said fixed element, the construction and arrangement being such that the positioning of the bolster between the transoms compresses said spring to a position for frictionally resisting movement of the bolster.

12. The combination with a bolster and an element fixed with respect thereto, of a spring interposed between said bolster and fixed element and so constructed and arranged as to be compressed by the positioning of the bolster for frictionally resisting longitudinal movement of the bolster.

13. The combination with a bolster and an element fixed with respect thereto, of a spring-arm compressed by said bolster between the bolster and arm for frictionally resisting longitudinal movement of the bolster.

14. In a truck, the combination with a fixed element and a bolster movably mounted with respect thereto, of a spring compressed between said fixed element and bolster by the weight of the bolster for frictionally resisting longitudinal movement of the bolster.

15. The combination with a bolster, of a

spring-arm compressed by the weight thereof in position for frictionally resisting longitudinal movement of the bolster.

16. The combination with a movably-mounted bolster, of a spring compressed by the weight of the bolster and retained in such position thereby for frictionally resisting longitudinal movement of the bolster.

17. The combination with a movably-mounted bolster, of a spring compressed by the weight of said bolster for frictionally resisting longitudinal movement of the bolster.

18. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of spring-arms carried by said bolster and movably engaging said transoms.

19. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of spring-arms carried by said bolster and frictionally engaging said transoms and movable longitudinally thereof.

20. The combination with a movably-mounted bolster and elements fixed with respect thereto, of spring-arms carried by said bolster and movable bodily, laterally and frictionally engaging the said fixed elements.

21. The combination with a movably-mounted bolster and transoms arranged at the sides thereof, of spring-arms carried by said bolster and compressed between said transoms, said arms being movable longitudinally of the transoms.

22. The combination with a movably-

mounted bolster and an element fixed with respect thereto, of a spring compressed by the weight of said bolster against said fixed element for frictionally resisting longitudinal movement of the bolster.

23. The combination with a movably-mounted bolster and an element fixed with respect thereto, of a spring connected with said bolster and compressed by the weight thereof against said fixed element for frictionally resisting longitudinal movement of the bolster.

24. The combination with a movably-mounted bolster and an element fixed with respect thereto, of spring-arms compressed by the weight of said bolster against said fixed element for frictionally resisting longitudinal movement of the bolster.

25. The combination with a movably-mounted bolster and an element fixed with respect thereto, of a spring compressed by the weight of said bolster into frictional contact with said fixed element for frictionally resisting movement of the bolster, the spring being bodily movable laterally with respect to itself and longitudinally with respect to said fixed element.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM G. PRICE.

Witnesses:

E. GAITHER HAYETT,
H. J. HALLERAN.