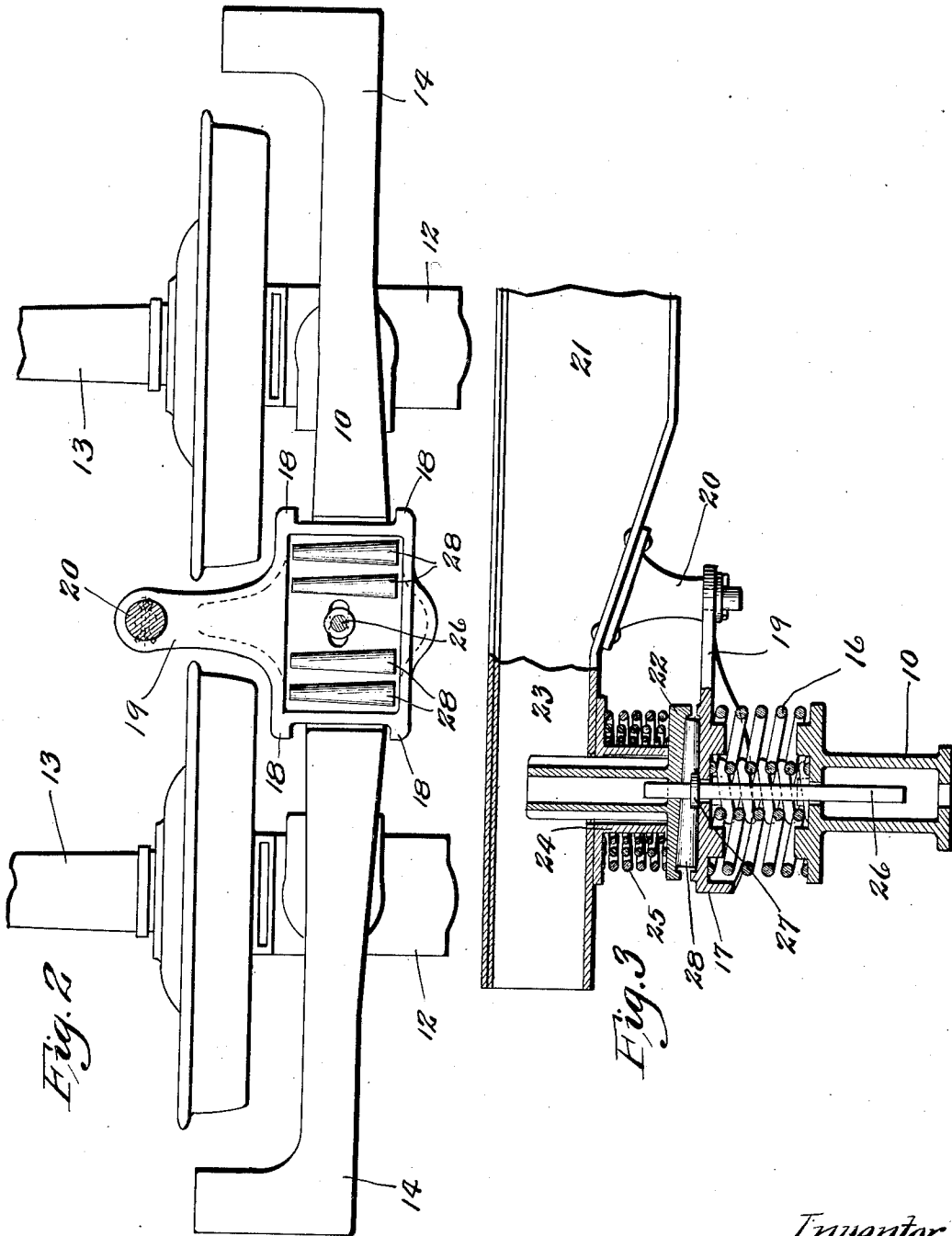


1,358,043.

Patented Nov. 9, 1920.
2 SHEETS—SHEET 2.



Inventor
Charles T. Westlake
BY *J. M. Cummings, Atty.*

UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

1,358,043.

Specification of Letters Patent.

Patented Nov. 9, 1920.

Application filed July 25, 1919. Serial No. 313,290.

To all whom it may concern:

Be it known that I, CHARLES T. WESTLAKE, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Car-Trucks, 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.

My invention relates to new and useful improvements in railway car trucks, the principal objects of my invention being to generally improve upon and simplify the existing types of car trucks; and to provide means for distributing the load of the car on the journals.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevational view of a car truck of my improved construction.

Fig. 2 is a plan view of the truck with parts thereof in section.

Fig. 3 is a vertical section taken approximately on the line 3—3 of Fig. 1.

Referring by numerals to the accompanying drawings which illustrate a practical embodiment of my invention, 10, 10 designate the side frames of my improved truck, the same being preferably cast and provided near their ends with openings adapted to receive journal boxes 12, the latter providing bearings for the ends of wheel carrying axles 13. The ends of each wheel piece are provided with extensions 14 and the outer ends of the latter serve as points of attachment for brake hangers 15.

That portion of the side frame between the journal box openings 11 is substantially U-shape and arranged in the opening within said U-shape portion and bearing on the central portion of the side frame is a series of compression springs 16 upon which is arranged a cap plate 17. The ends of this cap plate are provided with lugs or flanges 18 which overlie the adjacent portions of the side frame to the sides of centrally arranged opening therein, and formed integral with or fixed to this spring cap plate is an inwardly projecting arm or bracket 19. The

inner end of this arm or bracket is pivotally connected in any suitable manner to a bracket 20, that is carried by and depends from a body bolster 21, said bracket being located on the bolster a short distance inwardly from the adjacent side frame.

Positioned immediately above each spring cap plate 17 is a plate 22 and formed integral with or fixed thereto is an upwardly projecting hollow post 23. This post extends upwardly through a barrel or cylindrical member 24 that is secured to the underside of the body bolster 21 and inclosing said barrel and disposed between the body bolster and plate 22 is a plurality of nested compression springs 25, the same being normally under tension and tending to force plate 22 downward.

Seated in the center of plate 22 and extending downward through short longitudinally disposed slots in plate 17 and the central portion of the side frame, is a king pin 26 with which is formed integral a flange or washer 27, the same lying directly on top of plate 17. Interposed between the plates 17 and 22 to the sides of the king pin are pairs of tapered rollers 28, the same serving as anti-friction bearings between said plates when the side frame swings upon its point of pivotal connection with the body bolster.

In my improved truck, the side frames are pivotally connected to a transverse member, preferably the body bolster, the points of pivotal connection being located between the side frames and the center of the bolster, and as a result of such construction and while the truck is traversing curved portions of the track, the side frames will swing upon their pivotal points so as to permit the axles to assume positions which are practically radial to the curve of the track and in which position the wheel flanges lie tangent to the rails.

During the movement of the side frames upon their pivot, the rollers 28 serve as bearings between the spring cap plate 17 and the plates 22, and the latter plates will at all times be forced downward into engagement with the rollers by the springs 25 which are normally under tension.

The king pin 26 performs the functions of a tie between plate 22, plate 17, and the central portion of the side frame, and the provision of the slots in plate 17 and central portion of the side frame permits the latter

to move freely for a limited distance in both directions relative to the king pin.

It will be readily understood that minor changes in the size, form and construction of the various parts of my improved car truck can be made and substituted for those herein shown and described, without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim:

1. In a car truck, a bolster, and truck side frames pivotally connected thereto, the points of pivotal connection being disposed between the side frames and the center of the bolster.

2. In a car truck, a bolster, truck side frames pivotally connected thereto, the points of pivotal connection being disposed between the side frames and the center of the bolster, and yielding pressure means between the side frames and bolster.

In a car truck, a bolster, a pair of truck side frames, springs supported by said side frames, and spring cap plates supported by said springs, which cap plates are pivotally connected to the bolster.

4. In a car truck, a bolster, a pair of truck side frames, springs supported by said side frames, spring cap plates supported by said springs, which cap plates are pivotally connected to the bolster, and anti-friction supports on said cap plates for the bolster.

5. In a car truck, a bolster, a pair of truck side frames, a pair of plates arranged between each side frame and bolster, one of which plates is pivotally connected to the bolster, springs between the lowermost plates and side frames, springs between the uppermost plates and bolster, and an anti-friction bearing between said plates.

6. In a car truck, a bolster, a pair of truck side frames, a pair of plates arranged between each side frame and bolster, one of which plates is pivotally connected to the bolster, springs between the lowermost plates and side frames, springs between the uppermost plates and bolster, an anti-friction bearing between said plates, and means for tying the plates and side frames to each other.

7. The combination with a body bolster, of

truck side frames, wheel carrying axles carried by said side frames, and means connected to said side frames and pivotally connected to the bolster, the points of pivotal connection being located between the side frames and the center of the bolster.

8. In a car truck of the class described, a bolster, a pair of truck side frames associated therewith, springs supported by the side frames, spring cap plates supported by said springs and pivotally connected to the bolster so as to permit the side frames to swing in a horizontal plane, and an anti-friction bearing between the spring cap plate and the bolster.

9. In a car truck, the combination with a fixed part of the car body, of truck side frames yieldingly arranged beneath the body and pivotally connected thereto so as to swing in horizontal planes the pivotal points for said side frames being inset with respect to the vertical planes occupied by said side frames.

10. The combination with a fixed part of a car body, of separately formed and independently acting truck side frames, and a member projecting inwardly from each side frame, said members being pivotally connected to the fixed part of the underframe at points inset from said side frames, whereby the latter have swinging movement in a horizontal plane beneath the underframe.

11. The combination with a car underframe, of a pair of truck side frames, and a member yieldingly connected to each side frame and pivotally connected to a part of the underframe whereby each side frame has independent swinging movement relative to said underframe and the other side frame.

12. The combination with a car underframe, of a pair of truck side frames, a member yieldingly connected to each side frame and pivotally connected to a part of the underframe whereby each side frame has independent swinging movement relative to said underframe and the other side frame, and anti-friction bearings between the underframe and each side frame.

In testimony whereof I hereunto affix my signature this 16th day of July, 1919.

CHARLES T. WESTLAKE.