W. S. TROWBRIDGE.

SPRING DAMPENER AND WEAR PLATE FOR CAR TRUCKS.

APPLICATION FILED OCT. 29, 1915.

1,173,397. Patented Feb. 29, 1916.

Fig. 1.

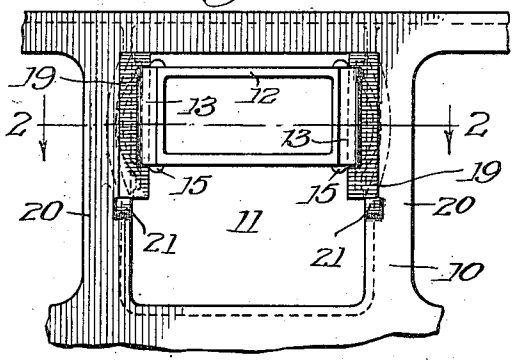


Fig. 2.

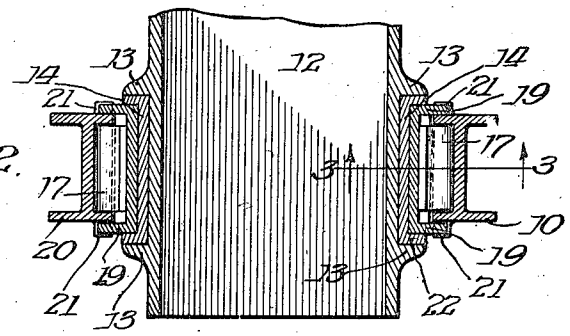
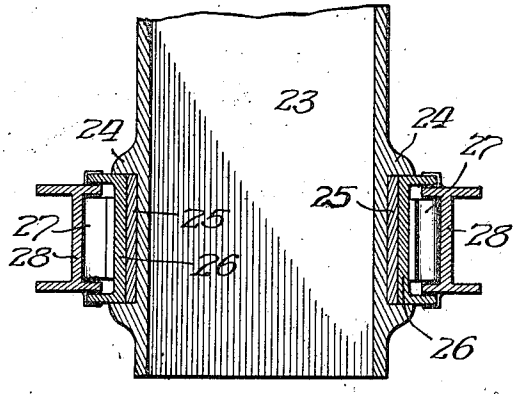


Fig. 4.



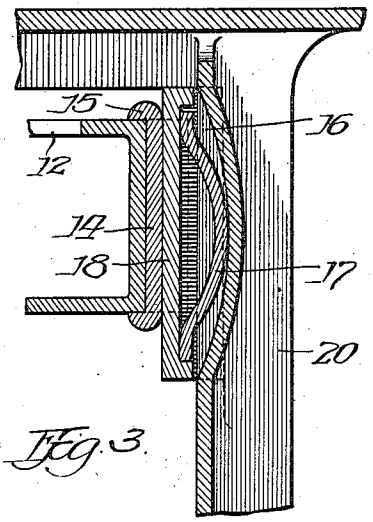


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

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SPRING-DAMPENER AND WEAR-PLATE FOR CAR-TRUCKS.

1,173,397. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed October 29, 1915. Serial No. 58,526.

To all whom it may concern:

Be it known that I, WILLIAM S. TROWBRIDGE, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Spring-Dampeners and Wear-Plates for Car-Trucks, of which the following is a specification.

My invention relates to car trucks for railroad cars and has particular reference to a novel spring dampener for use in connection therewith.

It has been found by a series of tests that the vibration of springs due to inequalities in the roadbed are or tend to become cumulative; that is, under certain conditions the vibration of the spring progresses cumulatively until the springs are compressed solid, after which the action is commonly repeated. It has been found that by interposing friction means in the supporting devices this action is avoided.

I am aware that many different forms of spring dampeners have been suggested, all of which are inherently subject to wear due to the frictional resistance of one element on the other. This is well understood, and one of the objects of the present invention is to provide means by which a certain amount of frictional resistance to the vertical motion of the device supported by the spring may be induced, the frictional-resisting devices being so located as to be readily renewable when required.

The invention will be more readily understood by reference to the accompanying drawings wherein:

Figure 1 is a partial end elevation of a side frame and bolster to which my improvement has been applied; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 2 the view being somewhat enlarged; and Fig. 4 illustrates a slight modification of the construction shown in the preceding figures.

In the drawings it will be seen that I have illustrated a side frame 10 having a central opening 11 within which the spring (not shown) and bolster 12 are mounted. The bolster is provided with guide lugs or lips 13 between which is mounted a wear plate 14 and the top and bottom of which is bent to provide lugs or ribs 15 which lie above and beneath the bolster respectively and prevent longitudinal movement of the wear plate with respect to the bolster. As best shown in Fig. 3, the columns of the side frame are provided with arcuate depressions 16 within which depressions are seated leaf springs 17. Interposed between the springs 17 and the wear plate 14 is a friction plate 18 against which the ends of the springs 17 are contacted. The plate 18 is provided with side lugs 19 which engage outside of the columns 20 of the side frame. A lug 21 is cast on the columns on each side thereof, these lugs acting as abutments to prevent vertical movement of the plate 18 and spring 17.

In the construction just described, wear plate 14 is shown as provided with side flanges 22 interposed between the lugs or ears 13 on the bolster. In this manner wear which would otherwise occur on lugs is taken up by the plate. In the construction shown in Fig. 4, however, I have provided for a construction in which the flanges on the wear plate are eliminated, as shown. The construction of the bolster 23 is the same as that shown in the preceding figures except in that the flanges 24 are spaced somewhat closer. The wear plate 25 is secured to the bolster in the same manner and the spring-advanced plate 26 including the spring 27 and the side frame columns 28 are all identical with those shown in Figs. 1 to 3.

Obviously other modifications might be made in the construction shown and such modifications as are within the scope of my claims I consider within the spirit of my invention.

I claim:

1. In car truck construction, the combination of car truck columns, a bolster mounted between said columns, wear plates carried by said bolster and columns, said wear plates carried by said columns being mounted for lateral movement toward and away from said columns, and springs acting upon said wear plates and carried by said columns and adpted to develop frictional resistance to the vertical reciprocation of the bolster, substantially as described.

2. In car truck construction, the combination of a side frame having columns provided with recesses near the upper ends thereof, a bolster having side guides and mounted between said columns, a guide plate mounted on each of said columns and held against vertical movement, and a spring

mounted in the recesses in said columns and acting to force said guide plate into engagement with said bolster, substantially as described.

3. In car truck construction, the combination of a side frame having columns, a bolster mounted between said columns, said bolster being provided with side guides, a liner for the space inclosed by said side guides, a guide plate carried by each of said columns and a spring acting upon each of said guide plates and tending to develop frictional resistance to the vertical reciprocation of the bolster, substantially as described.

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