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2,746,744

SNUBBER

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Fig. 1.

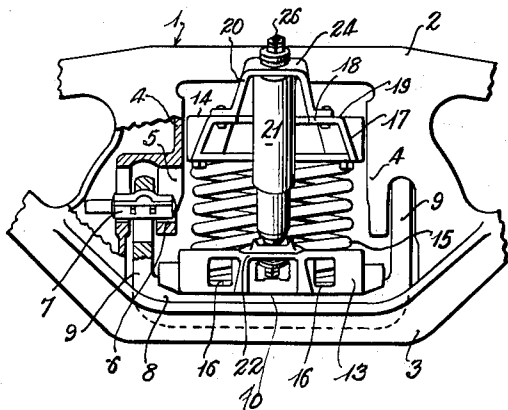


Fig. 3.

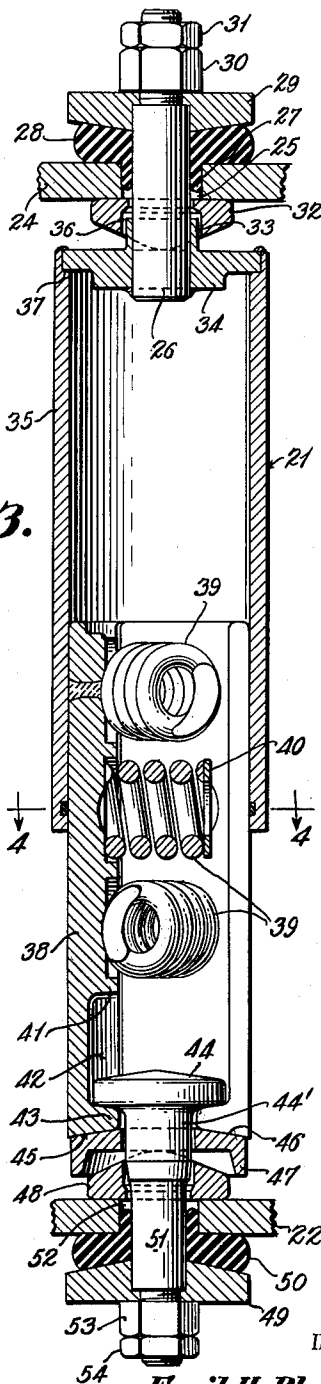


Fig. 2.

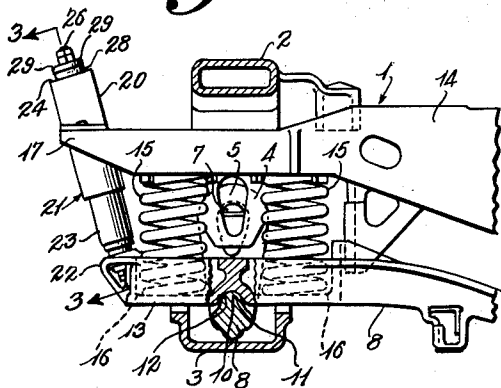
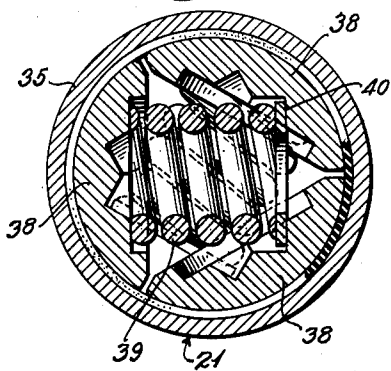


Fig. 4.



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2 Claims. (Cl. 267—9)

This invention relates to car trucks and more particularly to snubbing means adapted to be interposed between the spring plank and bolster of a bolster type truck.

The principal object of the invention is to provide a snubbing device in which the friction produced by relative movement of the parts of the device will remain substantially constant during the entire travel of the parts of the mechanism.

Other objects of the invention will be hereinafter pointed out in connection with the detailed description and the particular embodiment of the invention selected for illustration in the accompanying drawing, in which:

Figure 1 is a side elevational view of the central portion of a car truck of the bolster type showing the invention applied thereto.

Figure 2 is a longitudinal sectional view, parts of the mechanism being shown in elevation, of the structure shown in Figure 1.

Figure 3 is a transverse vertical sectional view of the snubbing mechanism and its attaching means, the view being taken on lines 3—3 of Figure 2.

Figure 4 is a transverse horizontal sectional view of Figure 3, the view being taken on lines 4—4 of Figure 3, the direction of view being indicated by the arrows.

Throughout the specification and drawings like parts are designated by like reference characters.

The numeral 1 designates generally the side frame of a bolster truck having a compression member 2, a tension member 3 and bolster guide columns 4. In the present embodiment of the invention illustrated the guide columns are each provided with a recess 5, the bottom wall 6 of which serves to support a pintle 7 on which a yoke 8 is supported.

The yoke 8 is, of course, provided with arms 9, the arms 9 being slotted for the reception of the pintles 7 and the central portion 10 of the yoke 8 is provided with a boss 11 which seats in a recess 12 formed in the spring plank 13. Interposed between the spring plank 13 and the bolster 14 are a plurality of springs 15, the lower portion of the springs being seated in correspondingly formed recesses 16 in the spring plank. The outer end 17 of the bolster 14 is bifurcated as shown in Figure 1 at 18 and secured to the upper face 19 of the bolster is a bracket 20 which forms a support and securing means for the upper end of the shock absorber or snubber 21, as will hereinafter be more fully described.

The spring plank is likewise provided with a seating portion 22 to which the lower end 23 of the snubber 21 is secured. The bracket 20 is provided at its upper face 24 with an opening 25 through which a bolt 26 is adapted to extend. The opening 25 is of greater diameter than the bolt 26 and interposed between the bolt and the side walls of the opening 25 is a collar 27 of an elastic washer 28, the latter being maintained in position by a washer 29 and a nut 30 and lock nut 31.

Immediately beneath the portion 24 of the bracket 20 there is provided a metallic washer 32 surrounding the bolt

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26 and also surrounding the collar 33 which extends upwardly from the closure member 34 of the casing 35. The lower face of the washer 32 is convex so that the casing 35 may rock on the washer within the limits provided by the distance between the side wall of the collar 33 and the recess 36 in the washer 32. The closure member 34 is preferably welded to the lower end of the bolt 26 and to the adjacent end of the casing 35, the latter having a counterbored recess 37 into which the member 34 is adapted to fit.

Slidably received within the casing are a plurality of friction shoes 38. Since the upper portion of these shoes are identical with the shoes shown in the Blattner Patent 2,233,396, dated March 4, 1941, no further description is deemed necessary other than to point out that the three springs 39 are so arranged that each spring bears at one end against a single friction shoe and at the opposite end by reason of the followers 40 which contact each of the other adjacent shoes. By this means the pressure of the springs is equally divided and each friction shoe bears against the interior of the casing with the same force.

The friction shoes beneath the lowermost spring 39 are provided with shoulders 41 and with a recess 42 terminating in an inturned shoulder 43. Extending into this recess is the headed end 44 of a bolt or like rigid member 44', the underside of the head being adapted to seat on the shoulders 43. The opening formed by the inner ends of the projection of the shoulders 43 is slightly larger than the diameter of the bolt and is clearly shown in Figure 3. The bottoms of the shoes are frusto-conical, as shown at 45, to engage the correspondingly formed face 46 of the washer 47. Beneath the washer 47 is a member or washer 48 corresponding in shape and function to the washer 32. The lower face of the washer 48 seats on the portion or seat 22 formed on the spring plank and interposed between the lower face of the spring plank seat and the washer 49 is an elastic washer 50, the collar of which surrounds the stem 51 of the bolt 44' and extends between the sides of the stem and the adjacent walls of the opening 52 in the spring plank seat 22. The washer 49 is maintained in position by a nut and lock nut, 53 and 54, respectively.

The operation of the device is believed to be obvious from the foregoing description. The relative movement of bolster and spring plank will cause the friction shoes to move in one or the other direction within the casing 35, thus generating constant friction which serves to dampen the harmonic vibration of the bolster-supporting springs 15 and causes the car to ride smoothly under all conditions.

Having described my invention, what I claim and desire to secure by United States Letters Patent is:

1. The combination with a side frame, of a snubber unit comprising a hollow cylinder open at one end, a threaded bolt extending outwardly of said closed end, a rocker member carried by said bolt and bearing against the closed end of said cylinder, a set of friction shoes extending within the open end of said cylinder, yieldable means acting on said shoes for urging said shoes into frictional engagement with said cylinder, a headed bolt mounted within said shoes, a cap member collaring said headed bolt and engaging the outer ends of said shoes, and a second rocker member carried by said headed bolt and engaging said cap member, said bolts serving to connect the snubber unit to the adjacent bolster and spring plank members of said side frame.

2. The combination with a side frame, of a snubber unit comprising a hollow cylinder open at one end, a threaded bolt extending outwardly of said closed end, a rocker member encircling said bolt and bearing against the closed end of said cylinder, a set of friction shoes extending within the open end of said cylinder, a headed

bolt extending within the inner walls of said shoes, a cap member engaging the outer ends of said shoes, a second rocker member engaging said cap member, said cap and the second rocker members encircling said headed bolt, said bolts serving to connect the snubber unit to the adjacent bolster and spring plank members of said side frame, and a plurality of spring members within said shoes for forcing the same against the inner wall of the said cylinder.

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References Cited in the file of this patent

UNITED STATES PATENTS

1,185,434	Peycke	May 30, 1916
2,059,503	Webb	Nov. 3, 1936
2,233,396	Blattner	Mar. 4, 1941
2,524,893	Dentler	Oct. 10, 1950
2,574,788	Janeway et al.	Nov. 13, 1951