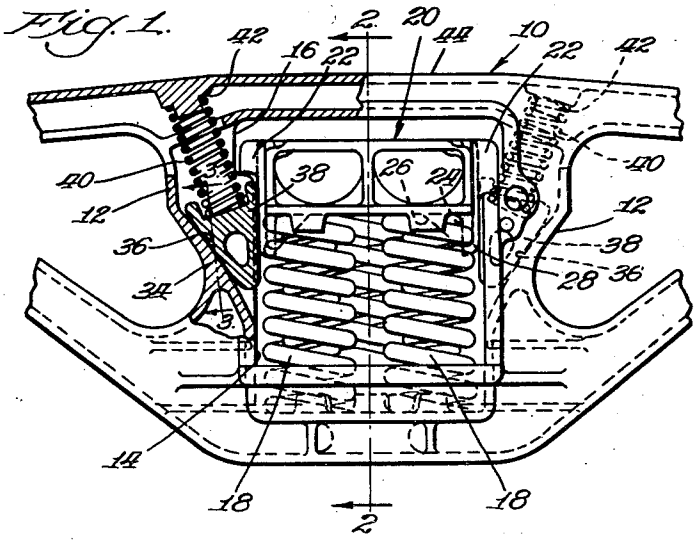
Jan. 4, 1949. W. L. SCHLEGEL, JR 2,458,210

SNUBBED TRUCK

Filed Sept. 4, 1947

Fig. 1.



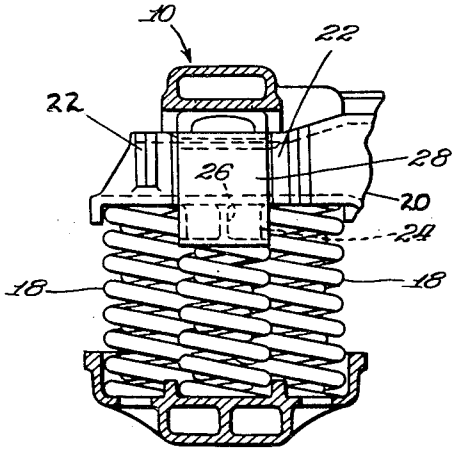
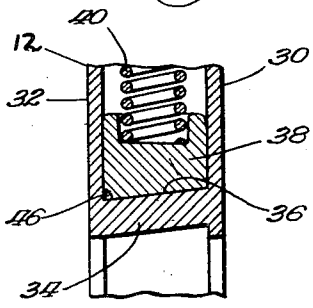


Fig. 2.

Fig. 3.



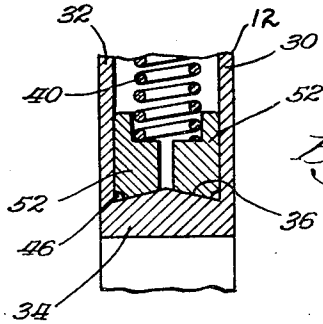


Fig. 4.

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SNUBBED TRUCK

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11 Claims. (Cl. 105—197)

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This invention relates to railway car trucks and more particularly to a novel friction device wherein friction shoes carried by the side frame are associated with opposite sides of the truck bolster for damping oscillations of the same.

A general object of the invention is to afford a simple snubbing or damping mechanism for the bolster wherein the friction shoes are carried by the side frame in wedge engagement therewith to prevent chattering of the shoes during vertical bolster oscillations.

Another object of the invention is to provide means for preventing lateral shifting of the shoes during corresponding movements of the bolster.

Still another object of the invention is to control out-of-square movements of the bolster with respect to the side frame by frictionally resisting such movements along cooperating wedge surfaces of the friction shoe and side frame.

A further object of the invention is to prevent twisting or cocking of the shoes within the side frame pockets which house the same.

The foregoing and other objects and advantages of the invention will become apparent from a consideration of the following specification and the accompanying drawings, wherein:

Figure 1 is a fragmentary side elevational view of a railway car truck embodying the invention, portions of the structure being shown in central vertical section;

Figure 2 is a fragmentary transverse sectional view taken on the line 2—2 of Figure 1 with the bolster shown in elevation;

Figure 3 is a cross-sectional view taken in the transverse vertical plane indicated by the line 3—3 of Figure 1; and

Figure 4 is a cross-sectional view comparable to Figure 3 but illustrating a modification of the invention.

Describing the invention in detail and referring first to Figures 1 to 3, the side frame, generally designated 10, comprises spaced columns 12 defining a bolster opening 14 with a widened upper portion 16 serving a purpose hereinafter described. The frame 10 supports springs 18 which in turn support a box-section bolster, generally designated 20. The bolster comprises inboard and outboard gibs 22 at each side thereof embracing one of the columns 12 to afford an interlock therewith, the outboard gibs being of less depth than the portion 16 of the bolster opening whereby the bolster may be elevated

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therein and removed therefrom during a quick wheel change.

Each side wall of the bolster is provided with a depending extension 24 reinforced by a gusset or arm 26 on the bottom of the bolster, said extension affording support for a wear plate or liner 28 overlapping the top of the bolster, as best seen in Figure 2

Each column 12 is adapted to contain a friction device, hereinafter described in detail, and is formed for this purpose with inboard and outboard walls or webs 30 and 32 (Figure 3) and an intervening transverse web 34 sloping toward the bolster opening, as best seen in Figure 1, and having a crowned top surface 36 affording a seat for a friction shoe 38 engaging the associated liner 28 and actuated into engagement therewith by a spring 40 seated against and positioned by a boss 42 integrally formed with the under side of the top compression member web 44 of the side frame.

The spring 40 is arranged with its axis or longitudinal center line disposed diagonally with respect to the vertical, thereby urging the shoe 38 into tight engagement with the surface 36 and the associated liner 28.

It may be noted that in an arrangement such as that above-described, the crowned surface 36 is adapted to insure a downwardly sliding movement of the shoe 38 into engagement with the bolster friction surface; however, it has been found that in such an arrangement vertical oscillations of the bolster tend to rock the shoe and also to lift the same from the surface 36 during upward movement or rebound of the bolster, thereby producing a chattering effect.

To overcome these defects, each column wall 34 is formed with the surface 36 sloping toward one side of the frame, as best seen in Figure 3, wherein this surface slopes toward the outboard side of the frame, causing the shoe to seat against the column web 32 along complementary flat surfaces thereby developing friction therealong to prevent rocking of the shoe as well as chattering thereof and lateral shifting during corresponding bolster oscillations.

Also, as best seen in Figure 3, out-of-square movements of the bolster are resisted not only by friction developed at 36 but also by pressure of the spring 40 which holds the shoe in squared relationship against the surface 36 and the column web 32.

The shoe is preferably relieved as at 46 (Figure 3) on its lower edges to insure proper seating against the surface 36 and the web 32.

Figure 4 shows a modification wherein the web 34 is formed with a V-shaped wedge surface 36 in transverse vertical cross section, and two shoes 52 are provided, one bearing against the surface 36 at each side of the apex of the V. Thus one shoe engages the outboard web 32 and the other engages the inboard web 30 to prevent chattering of the shoes as well as lateral shifting and out-of-square movements thereof as is the previously described embodiment.

It is to be understood that I do not wish to be limited by the exact embodiments of the device shown which are merely by way of illustration and not limitation as various and other forms of the device will, of course, be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

I claim:

1. A railway car truck comprising a side frame with spaced columns, a bolster spring-supported therebetween, and friction means associated with at least one of said columns comprising a substantially vertical surface thereon extending longitudinally of the frame, a substantially vertical friction surface on the bolster extending transversely of the frame, a wedge surface fixed in the column sloping toward said bolster and also sloping transversely of the frame toward the first-mentioned surface, friction shoe means, and spring means carried by the frame for urging said shoe means against all of said surfaces.

2. A railway car truck comprising a side frame with spaced columns, spring means supported by said frame, a bolster supported by said means between said columns, each of said columns comprising inboard and outboard walls and a transverse web with a fixed surface sloping toward said bolster and also sloping toward one of said walls, a friction shoe engaging said surface, said one wall, and a surface of said bolster, and a spring sloping downwardly toward said bolster, the upper end of said spring bearing against said frame and the lower end of said spring bearing against said shoe.

3. A railway car truck comprising a side frame with spaced columns, a bolster spring-supported therebetween, and friction means associated with at least one column comprising a surface thereon extending longitudinally of the frame toward the bolster, another surface on said column fixed with respect thereto and extending transversely of the frame toward the first-mentioned surface and sloping toward the bolster, a surface on the bolster extending transversely of the frame, a friction shoe, and spring means for urging said shoe into tight engagement with all of said surfaces.

4. A railway car truck comprising a side frame with spaced columns, spring means on said frame, a bolster supported by said means between said columns, and friction means comprising a wedge surface on each column fixed with respect thereto and sloping toward said opening and also sloping transversely of said frame, friction shoe means engaging said surface and a longitudinally extending surface of said column, and spring means independent of the first-mentioned spring means compressed between said frame and said shoe means for urging the latter against said surfaces and against said bolster.

5. A railway car truck comprising a side frame including spaced columns, a bolster spring-supported from said frame between said columns, each of said columns comprising a wedge face fixed with respect thereto and sloping toward said opening and also sloping transversely of said frame, a friction shoe associated with each column in frictional engagement with the wedge face thereof and with a surface thereof extending longitudinally of the frame, and spring means compressed between said shoe and a portion of said frame for urging the same along the associated wedge face and column surface against said bolster.

6. A railway car truck, according to claim 5, wherein the wedge face is crowned in longitudinal vertical cross section and is flat in transverse vertical cross section.

7. A railway car truck comprising a side frame with a column, a bolster spring-supported from said frame, said column comprising inboard and outboard walls, and a transverse web with a pair of integral wedge faces sloping toward said bolster and each sloping toward one wall, a friction shoe engaging each face and the associated wall, and spring means compressed between said frame and said shoes for urging the latter against said faces and walls and against said bolster.

8. A railway car truck comprising a side frame, a bolster spring-supported thereby, a wedge surface on the frame fixed with respect thereto and sloping toward the bolster and also sloping transversely of the frame, a friction shoe engaging said surface and an angularly related surface of said frame, and spring means compressed between the shoe and the frame for urging the shoe against said surfaces and against the bolster.

9. A railway car truck comprising a side frame, a bolster spring-supported thereby, a pair of angularly related faces on the frame fixed with respect thereto and sloping toward the bolster, friction shoe means, and spring means carried by the frame and operatively connected to said shoe means for tightly urging the same against said faces and said bolster.

10. A railway car truck comprising a side frame, a bolster spring-supported thereby, an integral crowned wedge surface on said frame sloping toward the bolster and toward one side of the frame, friction shoe means engaging said surface and said bolster, and resilient actuating means associated with said shoe means.

11. A railway car truck comprising a frame, a bolster spring-supported thereby, a friction surface on the frame, another friction surface on the frame fixed with respect thereto and sloping toward the bolster and toward the first-mentioned surface, and friction means frictionally engaging both surfaces and the bolster for damping oscillations of the latter.

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