

Sept. 18, 1951

G. E. DATH

2,568,059

SNUBBED BOLSTER TRUCK

Filed Oct. 17, 1949

2 Sheets-Sheet 1

Fig. 1

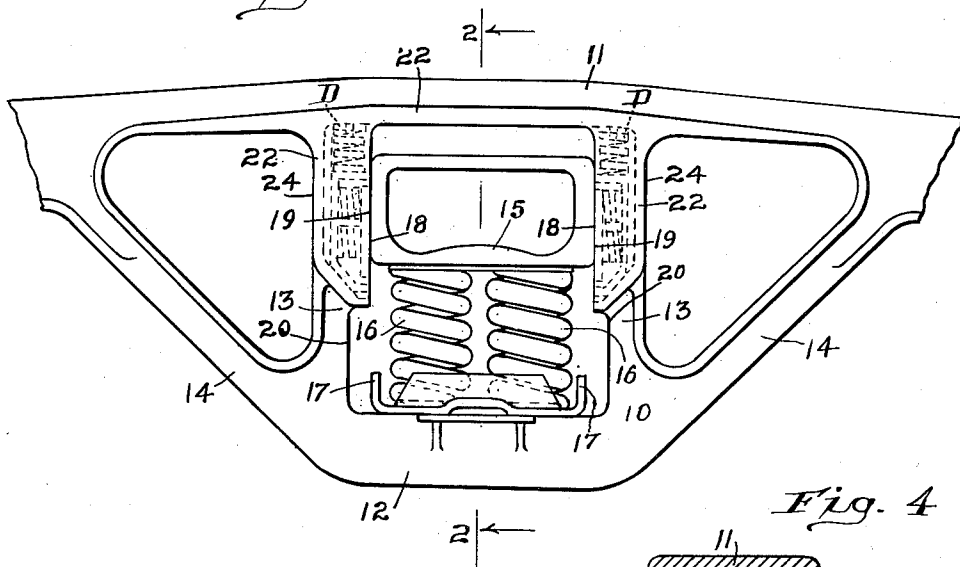


Fig. 2

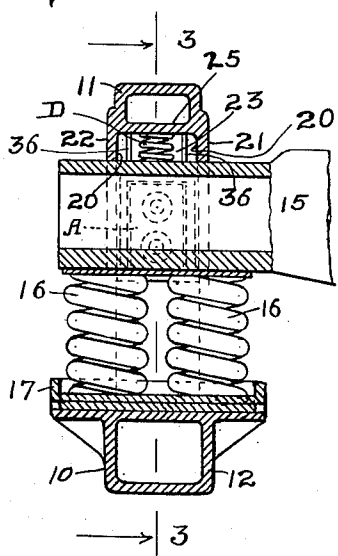
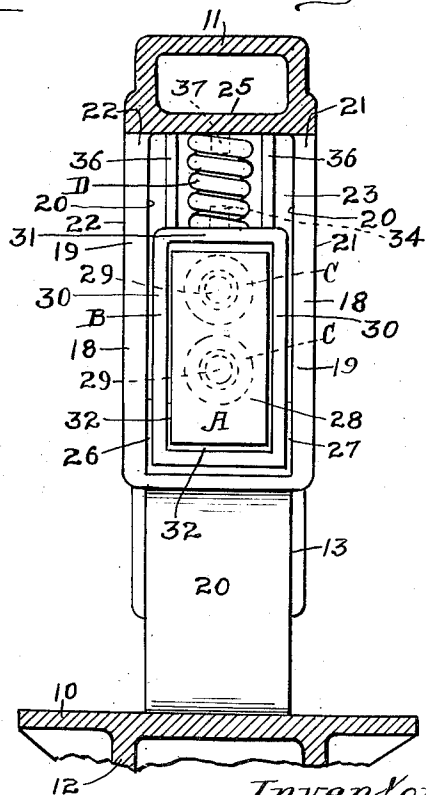


Fig. 4



Inventor:
George E. Dath.
By Henry Fuchs
Attor.

Sept. 18, 1951

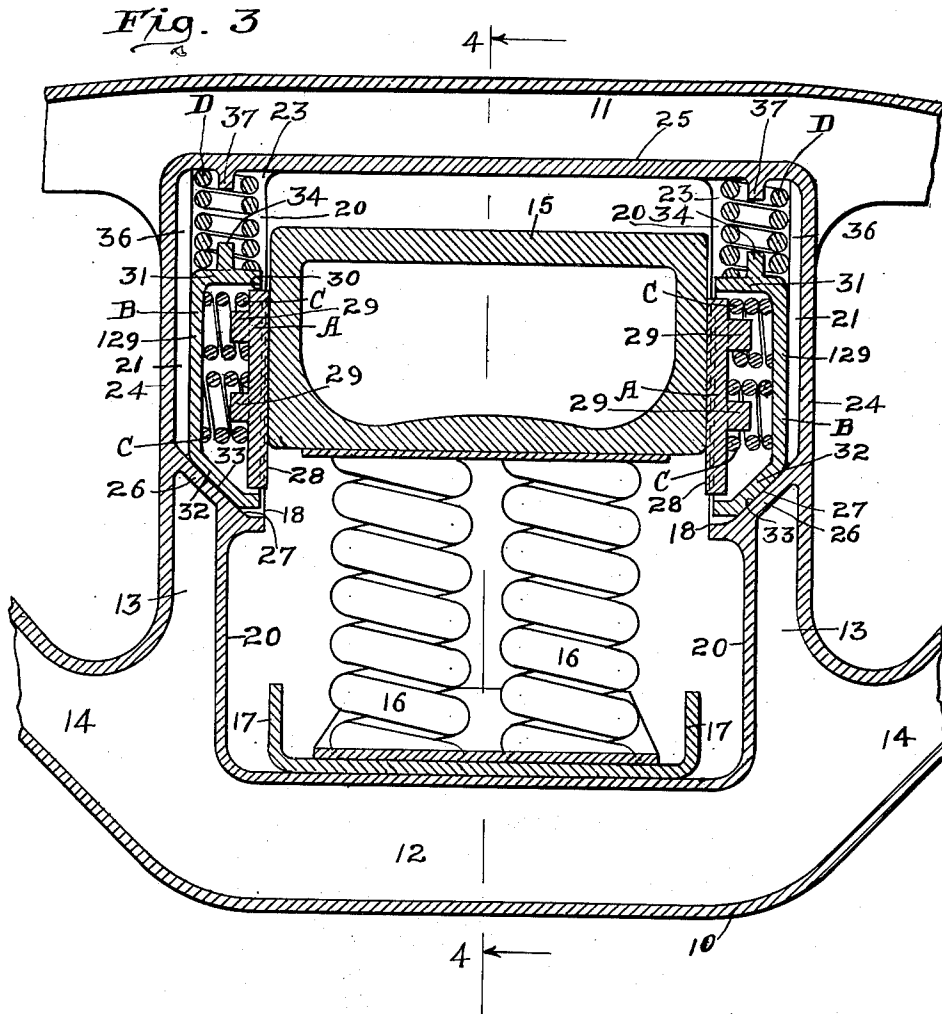
G. E. DATH

2,568,059

SNUBBED BOLSTER TRUCK

Filed Oct. 17, 1949

2 Sheets-Sheet 2



Inventor
George E. Dath.
By Henry Fuchs.
Atty.

UNITED STATES PATENT OFFICE

2,568,059

SNUBBED BOLSTER TRUCK

George E. Dath, Mokena, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware

Application October 17, 1949, Serial No. 121,788

4 Claims. (Cl. 105—197)

1

This invention relates to improvements in snubbed bolster trucks.

One object of the invention is to provide in a railway car truck, means for effectively snubbing the action of the usual truck springs by frictionally resisting upward and downward movement of the truck bolster of the car.

A more specific object of the invention is to provide friction means for snubbing or dampening the action of truck springs of a railway car, comprising spring actuated friction blocks, mounted on the truck side frames, with which the truck bolster has sliding frictional engagement, wherein means is provided for compensating for wear of the friction blocks and cooperating friction faces of the bolster.

Other objects of the invention will more clearly appear from the description and claims hereinafter following.

In the accompanying drawings forming a part of this specification, Figure 1 is a side elevational view, partly broken away, of a portion of one of the side frame members of a railway car truck and the associated bolster and truck springs, illustrating my improvements in connection therewith. Figure 2 is a transverse, vertical sectional view, corresponding substantially to the line 2—2 of Figure 1. Figure 3 is a longitudinal, vertical sectional view, on an enlarged scale, corresponding substantially to the line 3—3 of Figure 2. Figure 4 is a transverse, vertical sectional view, corresponding substantially to the line 4—4 of Figure 3, with the bolster and truck springs omitted.

In said drawings, 10 indicates one of the side frame members of a railway car truck. The side frame member 10 is in the form of a casting and has top and bottom, horizontal members 11 and 12 connected by spaced, vertically disposed sections 13—13, and inclined sections 14—14. As will be understood by those skilled in this art, the truck includes two side frame members 10—10, a truck bolster 15, and the usual truck springs 16—16, comprising two clusters at opposite sides of the truck, supported on the lower members 12—12 by the usual spring plank 17. The opposite ends of the bolster are guided between the sections 13—13 of the truck side frames, and the bolster is supported by the springs 16—16. The truck bolster, in turn, supports the body bolster of the car.

As shown in Figures 1 and 3, the sections 13—13 have inwardly offset portions at their upper ends, which provide guides 18—18 at opposite sides of the bolster 15 on which the latter is

2

vertically slidable. The vertical side faces at opposite sides of the bolster 15, which cooperate with the guides 18—18, are substantially flat and provide friction surfaces 19—19. The vertical sections 13—13 of each side frame casting 10 include vertical side walls 20—20 and inner and outer webs 21 and 22, which are at right angles to each side wall.

Referring to the drawings, my improved snubbing means comprises broadly a pair of friction shoes A—A, carried by each side frame member, having frictional contact with the bolster at opposite sides thereof; a pair of hollow wedge blocks B—B in wedging engagement with wedge faces 15 on the side frame, and carrying the shoes A—A; springs C—C reacting between the wedge members and the shoes for pressing the latter against the friction surfaces of the truck bolster of the car; and springs D—D reacting between the side frame and the wedge blocks to force the latter against the wedge faces of the side frames.

In carrying out my invention, as illustrated in the drawings, I provide pockets 23—23 in the side frame member at each side of the bolster opening thereof. Each pocket 23 is formed by the inner and outer webs 21 and 22 of the section 13 of the side frame, a vertical rear or back wall 24, a horizontal top wall 25, provided by the top web of the side frame, and an inclined bottom wall 26, presenting a wedge face 27.

The shoes A—A are two in number for each side frame member, four such shoes being provided in each truck. The shoes A—A are all of similar design and are arranged in pairs at opposite ends of the truck bolster 15. Each shoe A is in the form of a flat plate, having a flat, vertically disposed friction surface 28 on its outer side and a pair of laterally projecting, spring centering lugs 29—29 on its inner side. Each shoe A is carried by the corresponding hollow wedge block B.

The wedge blocks B—B are also four in number for each railway car truck and are slidably mounted in the pockets 23—23 and 23—23 of the two side frame members of the truck. Each wedge block B is in the form of a rectangular, boxlike cage open at its outer side and having a vertically disposed, back wall 29, vertically disposed side walls 30—30 extending at right angles to said back wall, a horizontal top wall 31, and an inclined bottom wall 32, presenting an outer wedge face 33. A wedge block B is slidably mounted in each of the pockets 23 of the side frame members, being arranged vertically in said pocket and having its wedge face 33 in wedging

3

engagement with the wedge face 27 of said pocket, the block being guided for vertical movement by the vertically extending guide ribs 36—36 projecting from the back wall 24 of the pocket. The wedge block B is forced against the wedge face 27 of the corresponding pocket 23 by one of the springs D, which is interposed between the top wall 31 of the wedge block B and the top wall 25 of the pocket 23, being held in centered position by lugs 34 and 37 projecting from said top wall 31 of the wedge block B and said top wall 25 of the pocket.

As hereinbefore mentioned, each hollow wedge block B carries one of the friction shoes A, the shoe A being arranged in the opening of the hollow wedge block for lateral movement inwardly and outwardly of said hollow block, and held yieldingly pressed against the corresponding side of the bolster by the springs C, two of which are employed in connection with each shoe A and cooperating hollow wedge block B. The two springs C—C are arranged one above the other, in horizontal position, with their inner and outer ends bearing on the inner side of the shoe A and the inner side of the back wall 129 of the wedge block B, being held centered by rearwardly projecting lugs 29—29 on the shoe A. In the assembled condition of the mechanism, all of the springs C and D are under initial compression. The spring D of each wedge block thus forces the latter downwardly against the wedge face 27 of the corresponding pocket, and the springs C—C force the shoe A outwardly of the wedge block B against the friction surface at the corresponding side of the bolster.

The action of the truck springs 16—16 of the railway car are effectively snubbed by the frictional resistance against movement of the bolster 15 afforded by the friction shoes A—A, which are pressed tightly against the bolster friction surfaces by the springs C—C. As wear occurs on the cooperating friction surfaces of the bolster and shoes, the springs D—D, acting on the wedge blocks B—B, wedge the latter outwardly along the wedge faces 27—27, thereby tightening the springs C—C against the shoes A and thus compensating for wear of the friction surfaces.

I claim:

1. In a railway car truck, the combination with side frames provided with bolster guides, a truck bolster, and springs supporting said bolster on the truck side frames between said guides; of pockets in each side frame at opposite sides of the bolster at said bolster guides; a friction shoe in each pocket having sliding frictional engagement with the corresponding side of the bolster; a hollow wedge block in each pocket in which said shoe is laterally displaceable; springs in said hollow wedge block pressing against said shoe for forcing the same against said bolster; a wedge face in each of said pockets with which the wedge block has wedging engagement to force said block outwardly of the pocket toward said bolster; and a spring within each of said pockets pressing against the corresponding wedge block to force the same toward the wedge face of said pocket.

4

2. In a railway car truck, the combination with side frames provided with bolster guides, a truck bolster, and springs supporting said bolster on the truck side frames between said guides; of pockets in each side frame at opposite sides of the bolster at said bolster guides; a friction shoe in each of said pockets bearing on the corresponding side of the bolster; spring means bearing at one end on said shoe and pressing it against the bolster; a member in each pocket bearing on the other end of said spring means; and spring actuated means wedging said member against said spring means for tightening said spring means against said shoe as wear occurs on the engaging portions of said bolster and shoe.

3. In a railway car truck, the combination with truck side frame members, a truck bolster, and springs supporting said bolster on said side frame members, said side frame members being provided with bolster guides; of a vertically disposed, laterally opening pocket in one of said side frame members at the bolster guide, said pocket having an inwardly and downwardly inclined wedge face at its lower end; a hollow wedge block having a wedge face at its lower end engaged with the wedge face of said pocket; a spring within said pocket pressing against said block to force the wedge face of the latter against said wedge face of said pocket; a vertically disposed friction shoe in sliding frictional contact with the bolster, said shoe being displaceable laterally inwardly and outwardly of said hollow wedge block; and a spring reacting between said block and shoe for forcing the latter against the bolster.

4. In a railway car truck, the combination with truck side frame members, a truck bolster, and springs supporting said bolster on the side frame members, said side frame members being provided with bolster guides; of a vertically disposed, laterally inwardly opening pocket in one of said side frame members at the bolster guide, said pocket having a vertically extending back wall, a horizontal top wall, and a bottom wall inclined downwardly away from said back wall; a hollow wedge block, said block being arranged vertically in said pocket and guided on said back wall, said hollow wedge block having a wedge face at its bottom end in wedging engagement with said bottom wall; a spring within said pocket interposed between the upper end of said block and said top wall, and bearing at opposite ends on said block and top wall; a friction shoe mounted within said hollow wedge block in sliding frictional engagement with said bolster; and springs within said hollow wedge block reacting between said shoe and block to force the former against said bolster.

GEORGE E. DATH.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,378,414	Light	June 19, 1945