Jan. 16, 1945. D. M. LIGHT 2,367,510

CAR TRUCK

Filed Dec. 1, 1941 3 Sheets-Sheet 1

Fig. 2.

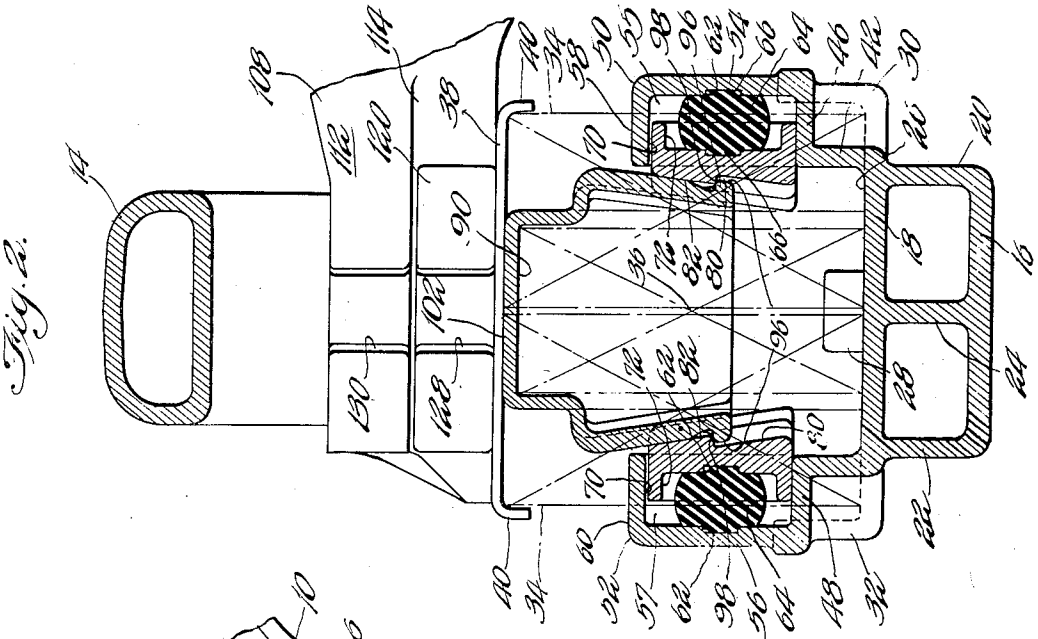
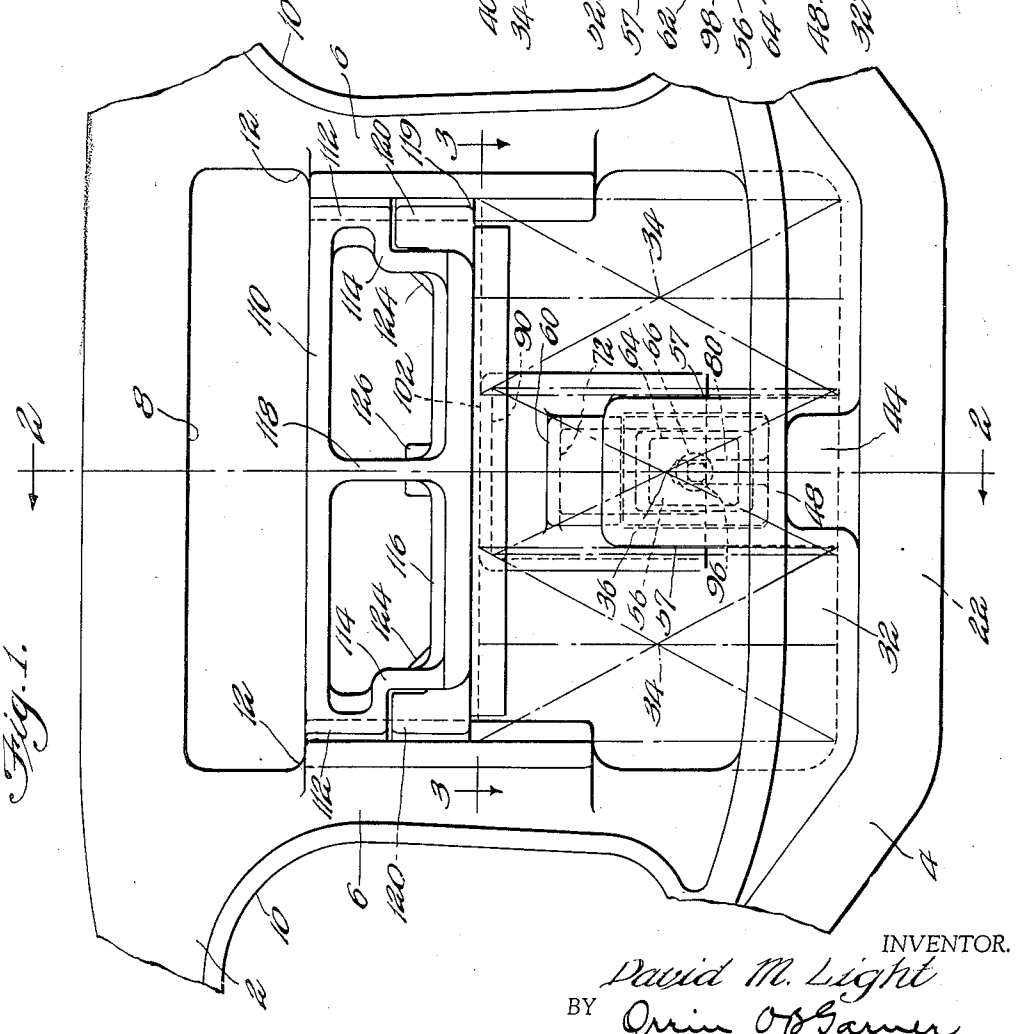


Fig. 1.



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Fig. 3.

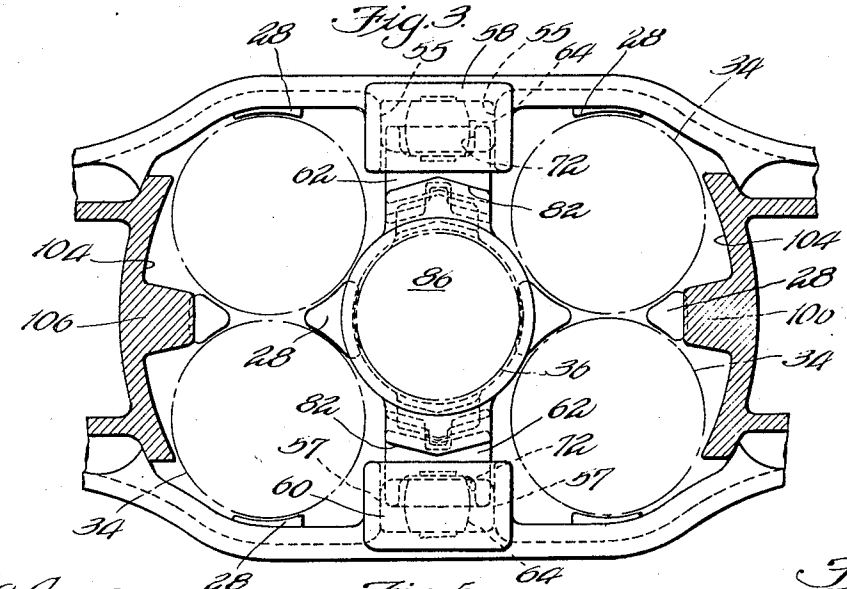


Fig. 4.

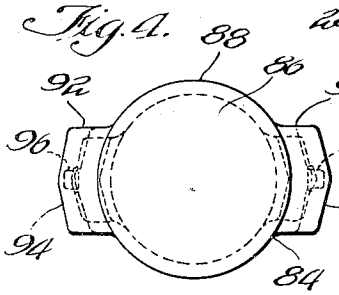


Fig. 5.

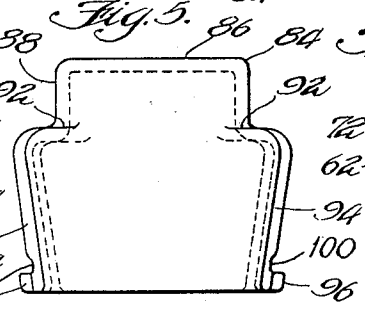


Fig. 6.

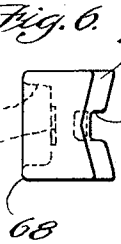


Fig. 7.

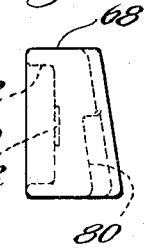
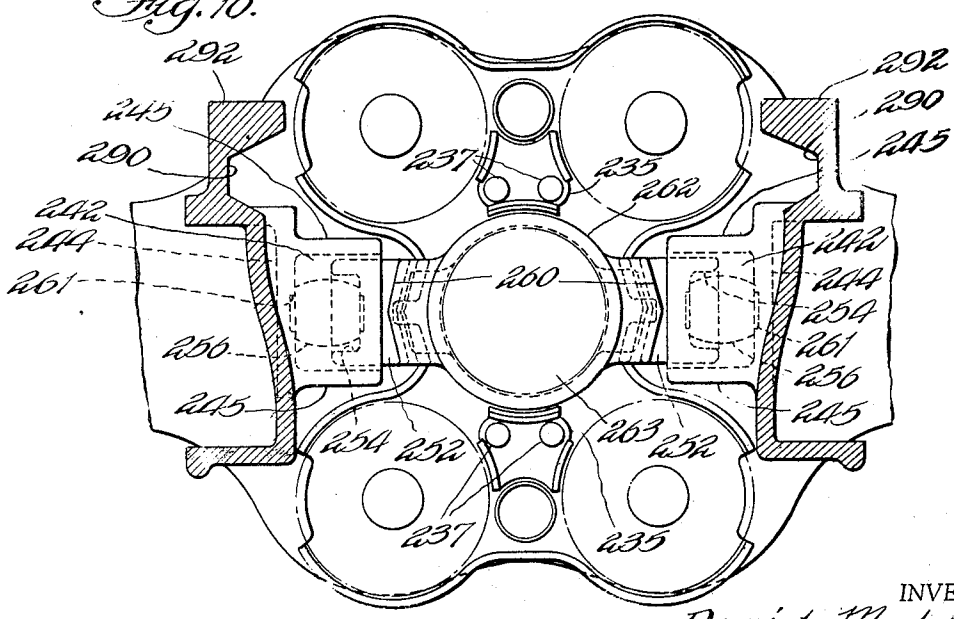


Fig. 10.



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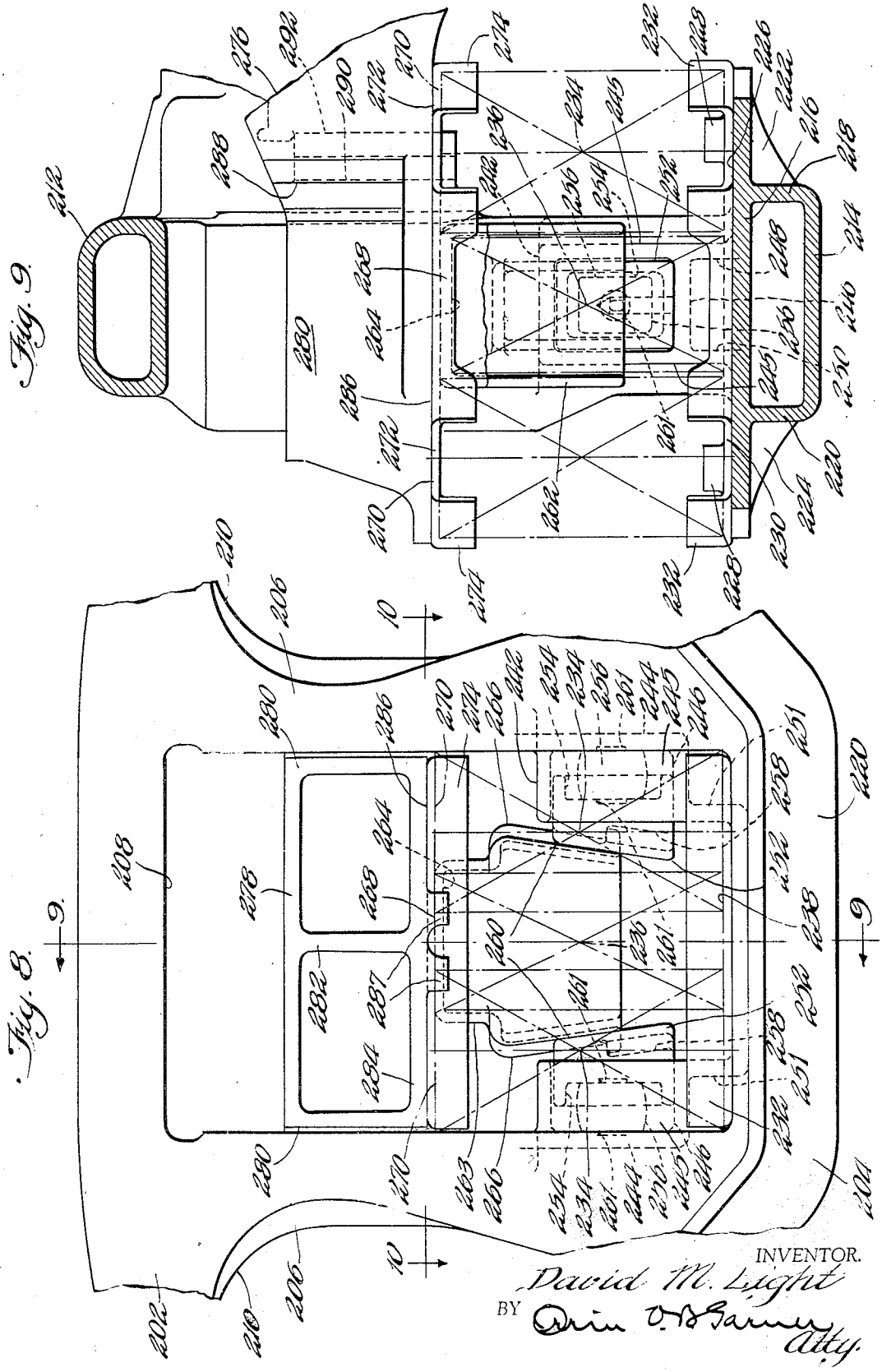


Fig. 9.

Fig. 8.

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Patented Jan. 16, 1945 2,367,510

UNITED STATES PATENT OFFICE

2,367,510

CAR TRUCK

David M. Light, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application December 1, 1941, Serial No. 421,138

29 Claims. (Cl. 105—197)

My invention relates to railway car trucks and particularly to a form of four wheel railway car truck of quick wheel change type comprising spaced side frames and a connecting bolster, said bolster being so arranged as to facilitate its removal from the bolster opening of the frame when wheel change is contemplated.

The general object of my invention is to devise a quick wheel change truck in which a snubbing arrangement may be used in conjunction with a coil spring group in such manner that it will be relatively simple to remove the bolster from the bolster opening of the side frame without disturbing the snubber arrangement.

A further object of my invention is to design a novel side frame of truss type form in which the tension member comprises integral friction shoe housings formed at opposite sides of the bolster opening in one modification and at the inboard and outboard edges of the bolster opening in another modification, said housings receiving therewithin resilient means and friction shoes formed and arranged for frictional engagement with an associated wedge member.

Still another object of my invention is to design a novel upper wedge, said wedge comprising a spring housing for reception of one of the bolster supporting coil springs and diagonal V-shaped friction surfaces at opposite sides thereof in engagement with complementary surfaces on friction shoes supported from the tension member as above described, and said wedge also comprising means cooperating with means on said shoes to retain the snubbing device in normal assembled relationship.

In the drawings,

Figure 1 is a side elevation of a car truck embodying my invention, the ends of the truck being cut away inasmuch as they are not pertinent to said invention.

Figure 2 is a sectional view of the structure shown in Figure 1 taken substantially in the transverse vertical plane bisecting the truck and as shown by the line 2—2 of Figure 1.

Figure 3 is a further sectional view of the structure shown in Figures 1 and 2, said view being taken in the transverse horizontal plane indicated by the line 3—3 of Figure 1, the spring plate being removed in order more clearly to illustrate the structure therebeneath.

Figures 4 and 5 show in detail the novel upper wedge and spring housing utilized in my arrangement, Figure 4 being a plan view thereof and Figure 5 a side elevation taken from the bottom as seen in Figure 4.

Figures 6 and 7 show in detail one of the identical friction shoes utilized in my novel arrangement, Figure 6, being a plan view thereof, and Figure 7 a side elevation taken from the bottom as seen in Figure 6.

Figures 8, 9, and 10 illustrate a modified form of my invention, Figure 8 being a fragmentary side elevation of a railway car truck embodying my novel arrangement, Figure 9 being a sectional view of the structure shown in Figure 8 and taken in the transverse vertical plane indicated by the line 9—9 of Figure 8, and Figure 10 being a further sectional view taken in the transverse horizontal plane indicated by the line 10—10 of Figure 1, the spring plate being removed in order more clearly to illustrate the snubbing arrangement therebeneath.

Describing my structure in detail, my novel car truck comprises a truss type side frame comprising a compression member 2, a tension member 4, and spaced columns 6, 6 defining therewith a bolster opening 8 and spaced window openings 10, 10 fragmentarily shown in Figure 1. The bolster opening is widened at each side thereof as at 12, 12 in order to facilitate the removal of the associated bolster therefrom as hereinafter more particularly described. The compression member over the bolster opening is of box-section as best seen at 14 in the sectional view of Figure 2, and the tension member beneath said opening is also of box-section comprising the bottom chord 16, the top chord 18, inboard and outboard walls 20 and 22, and the longitudinal vertical reinforcing rib 24. The top chord 18 is widened beneath the bolster opening to form a spring seat 26 with spring positioning means formed thereon and indicated as at 28, 28 as best seen in the sectional view of Figure 3. The top chord 18 also comprises inboard and outboard flanges 30 and 32 serving as further positioning means for the bolster supporting springs diagrammatically indicated at 34, 34 and for the auxiliary spring diagrammatically indicated at 36. The springs 34, 34 are seated at the upper ends thereof against the spring plate 38, said plate being flanged as at 40, 40 in order to confine and position said springs, and the spring 36 is seated at the upper end thereof against the top wall of the upper wedge in a manner hereinafter more particularly described.

Beneath the bolster opening and centrally thereof the inboard and outboard flanges 30 and 32 are offset as at 42 and 44 respectively and reflanged as at 46 and 48 respectively, the flanges 46 and 48 forming the bottom walls of inboard

and outboard friction shoe housings generally designated 50 and 52 (Figure 2), said housings also comprising end walls 54 and 56 respectively, lateral walls 55, 55 and 57, respectively, and top walls 58 and 60 respectively, each end wall 54 and 56 being recessed as at 62, said recess serving as positioning means for the associated rubber-like springs 64, 64.

Each rubber spring 64 is of generally rectangular form and comprises annular lugs 66, 66 on opposite sides thereof positioning said spring with respect to the associated friction shoe housing and with respect to the friction shoe therein by projecting into recesses 62, 62 in said shoe and said housing.

Each friction shoe 68 is received within the associated housing as at 70 and comprises a recess 72 for reception of a portion of the associated spring as may best be seen in the sectional view of Figure 2. On the opposite side of said shoe is a diagonal V-shaped friction surface 78 (Figure 6) slotted as at 80 and in frictional engagement as at 82 (Figure 2) with a complementary surface on the top wedge 84.

The upper wedge or spring housing generally designated 84 is shown in detail in Figures 4 and 5 and comprises an annular spring pocket defined by an annular top wall 86 and the annular vertical wall 88, the upper end of the auxiliary spring 36 being seated as at 90 against said top wall 86 as heretofore described and beneath said annular pocket at opposite sides thereof the wall 86 is outwardly extended as at 92, 92 to form the V-shaped friction surfaces 94, 94 in complementary frictional engagement as at 82, 82 with the surfaces 78, 78 on the friction shoes 68, 68. At the bottom of each friction surface 94 on the upper wedge is formed a lug 96 guidably received within the slot 80 in the associated friction shoe and abutting said shoe at the top of said slot on the release stroke as at 98 to retain the shoe and the wedge in normal assembled relationship, each friction surface 94 being relieved as at 100 above said lug in order to afford clearance for the associated friction shoe, as will be clearly apparent to those skilled in the art. The top wall 86 of the upper wedge is seated as at 102 against the spring plate 38.

The columns 6, 6, as may be best seen in Figure 3, comprise the arcuate bolster guide surfaces 104, 104 interrupted by the vertical guide lugs 106, 106, said surfaces and said lugs serving a purpose hereinafter more fully described.

The bolster generally designated 108 comprises the top wall 110, the side walls 112, 112 formed and arranged for guiding engagement with the surfaces 104, 104 on the associated columns as hereinafter more particularly described and offset as at 114, 114, the intermediate transverse wall 118 parallel with the side walls 112, 112, and the bottom wall 116. Recessed in the bottom wall 116 is the interlocking member generally designated 119 (Figure 1) and comprising end portions 120, 120 extending beyond the offset portion 114 of each side wall 112 of the bolster and formed and arranged for engagement with the surfaces 104, 104 on the columns as hereinafter more fully described. The interlocking member also comprises the triangular webs 124, 124 and a central upstanding lug 126, said webs and said lug serving to position said interlocking member with respect to the bolster as will be apparent to those skilled in the art. Each end portion 120 of the interlocking member is slotted as at 128 (Figure 2), and the associated side wall 112 of the bolster is slotted as at 130, said slots 128 and 130 being vertically aligned and receiving the guide lug 106 on the associated column, thus positioning the bolster with respect to said column. It will be apparent that the widened portions 12, 12 of the bolster opening are of sufficient depth to permit the raising of the bolster in said opening and the removal therefrom while the interlocking member, the supporting spring group and my novel friction device associated therewith remain in normal assembled relationship.

Another modification of my invention is shown in Figures 8 to 10 inclusive and comprises a truss type side frame having a compression member 202, a tension member 204, and spaced columns 206, 206 defining a bolster opening 208 and spaced window openings 210, 210, fragmentarily indicated in Figure 8. The compression member over the bolster opening is of box-section as best seen at 212 in the sectional view of Figure 9, and the tension member below said opening is also of box-section comprising the bottom chord 214, the top chord 216, inboard and outboard walls 218 and 220 and triangular inboard and outboard reinforcing ribs 222 and 224. The top chord is widened beneath the bolster opening to form a spring seat 226 with positioning means 228, 228 for an associated bottom spring plate 230. The bottom spring plate 230 is flanged as at 232, 232 in order to confine and position the coil springs diagrammatically indicated at 234, 234 and the auxiliary coil spring diagrammatically indicated at 236, said springs being seated on said bottom spring plate as at 238, and said bottom plate also comprises positioning means 235, 235 (Figure 10) secured thereto as at 237, 237 and serving to further position the springs 234, 234 and 236. In this modification the friction shoe housings are integrally formed with the columns as may best be seen in the sectional view of Figure 10 and each housing comprises a top wall 242, an end wall 244, side walls 245, 245 and a bottom wall 246 reinforced and supported by inboard and outboard legs 248 and 250 and the transverse web 251 formed on the top chord 216 of the tension member.

Each friction shoe generally designated 252 is identical with those employed in the modification shown in Figures 1 to 7 inclusive and comprises a recess 254 for the reception of a rubber-like spring 256 and on the opposite side thereof a diagonal V-shaped friction surface slotted as at 258 and in frictional engagement as at 260 with a complementary surface on the top wedge as hereinafter more fully described. The rubber-like spring 256 is compressed between each shoe 252 and the end wall 244 of the associated friction shoe housing and is positioned with respect to said shoe and said housing as at 261, 261 in the manner described for the previous modification. The top wedge generally designated 262 (Figure 10) is identical with that employed in the previous modification and comprises, briefly, an annular spring cap 263 affording a seat for the upper end of the auxiliary spring 236 as at 264 and V-shaped friction surfaces 266, 266 at opposite sides thereof and in frictional engagement as at 260 with the complementary surfaces on the associated friction shoes. The upper wedge and the springs 234, 234 are seated as at 268 and 270, 270 respectively against the top spring plate 272, said plate being flanged as at 274, 274 in order to confine and position said springs.

The bolster generally designated 276 comprises the top wall 278, side walls 280, 280 and the in-

termediate transverse vertical web **282** parallel with said side walls, and the bolster also comprises the bottom wall **284** seated as at **286** upon the top spring plate **272**, said bottom wall comprising the depending lugs **287**, **287** (Figure 8) serving as positioning means for said bolster with respect to the supporting spring group. Each side wall **280** comprises a vertical guide lug **288** received within a slot **290** in the bracket **292** formed on the associated column, as best seen in the sectional view of Figure 10, and thereby positioning the bolster **276** with respect to the side frame as will be clearly apparent to those skilled in the art. Each lug **288** and the associated bracket **292** are of such depth that the bolster may be raised in the bolster opening **208** thereby disengaging the lug **288** from the bracket **292** so that said bolster may be removed from the bolster opening without disturbing the spring group therebeneath and my novel friction absorbing device associated therewith.

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. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings in said opening and integrally formed with said tension member and with respective columns, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising diagonal V-shaped friction surfaces at opposite sides thereof, friction shoes received within respective housings, resilient means in said housings and urging said shoes into complementary frictional engagement with said surfaces, a spring plate seated on said wedge and other of said springs, and a bolster end seated on said spring plate and comprising side walls having vertical lugs, brackets formed on respective columns and cooperating with said lugs to retain said end within said bolster opening, said lugs and said brackets being of limited depth so that said bolster end may be raised within said bolster opening and removed therefrom in a quick wheel change.

2. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings formed on said tension member and extending within said bolster opening, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising friction surfaces at opposite sides thereof, friction shoes received within respective housings and comprising friction faces with slots therein, rubber-like pads under compression between said housings and the associated shoes and urging said faces into frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge and other of said springs, said wedge comprising lugs received within said slots and operative to retain said wedge and said shoes in normal assembled relationship.

3. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings formed on said tension member in said opening, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising V-shaped friction surfaces, friction shoes received within respective housings, resilient means under compression between said housings and the associated shoes and urging said shoes into complementary frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge and other of said springs.

4. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings formed on said tension member in said bolster opening, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising diagonally arranged V-shaped friction surfaces at opposite sides thereof, friction shoes received within respective housings, resilient means under compression between said housings and the associated shoes and urging said shoes into complementary frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge and other of said springs.

5. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings extending into said opening and integrally formed with said tension member and with respective columns, a coil spring in said opening and seated on said tension member, a wedge supported on said spring and comprising friction surfaces at opposite sides thereof, friction shoes received within respective housings, resilient means under compression between said housings and the associated shoes and urging said shoes into frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge above said shoes.

6. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings in said opening and formed on said tension member, a coil spring in said opening and seated on said tension member intermediate said housings, a wedge supported on said spring and comprising friction surfaces at opposite sides thereof, an interlocking member supported by said wedge and engaged with said columns, a bolster end seated upon and engaged with said interlocking member and with said columns, said bolster opening comprising a widened portion at the top thereof to permit the removal of said bolster end in a quick wheel change, and friction members resiliently mounted in respective housings and in frictional engagement with respective of said friction surfaces.

7. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings formed on said tension member in said opening, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising friction surfaces, friction shoes received within respective housings, resilient means under compression

between said housings and the associated shoes and urging said shoes into frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge and other of said springs.

8. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe housings formed on said tension member in said bolster opening, resilient means in said opening and seated on said tension member, a wedge supported on said resilient means and comprising friction surfaces at opposite sides thereof, friction shoes received within respective housings, rubber-like springs under compression between said housings and the associated shoes and urging said shoes into frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge.

9. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe support means in said opening and formed on said tension member, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising diagonal V-shaped friction surfaces at opposite sides thereof, friction shoes resiliently mounted on respective support means and in complementary frictional engagement with said surfaces, and a bolster end received within said opening and seated upon said wedge and other of said springs.

10. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe retaining means formed on said tension member in said bolster opening, a plurality of coil springs in said opening and seated on said tension member, a wedge supported on certain of said springs and comprising friction surfaces at opposite sides thereof, friction shoes supported by respective retaining means and in frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge and other of said springs.

11. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe support means formed on said tension member adjacent inboard and outboard edges of said bolster opening, a coil spring in said opening and seated on said tension member, a wedge supported on said coil spring and comprising friction surfaces at opposite sides thereof, friction shoes resiliently associated with said support means and in frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge.

12. In a railway car truck, a truss side frame comprising a compression member, a tension member, and spaced columns defining therewith a bolster opening, friction shoe support means formed on said tension member adjacent inboard and outboard edges of said bolster opening, a coil spring in said opening and seated on said tension member, a wedge supported on said spring and comprising friction surfaces, friction shoes resiliently associated with respective support means and in frictional engagement with said surfaces, and a bolster end received within said bolster opening and seated upon said wedge.

13. In a railway car truck, a side frame comprising a bolster opening, a plurality of coil springs seated on said frame in said opening, a spring cap seated on certain of said springs and comprising friction surfaces at opposite sides thereof, a spring plate on said cap and the other of said springs, a lug formed on said cap at the bottom of each friction surface, and friction shoes beneath said plate in said bolster opening, said shoes being resiliently supported from said frame and in frictional engagement with respective surfaces, each of said shoes comprising a slot guidably cooperating with the associated lug on the spring cap.

14. In a railway car truck, a side frame having spaced columns partly defining an intervening bolster opening, a spring seat on said frame, resilient means on said spring seat in said opening, friction means supported from said resilient means, a bolster supported on said friction means, oppositely spaced spring abutment surfaces on said frame and disposed beneath said bolster at inboard and outboard sides of said bolster opening, said surfaces being angularly disposed with respect to said seat, friction shoes engaging said friction means, resilient means compressed between each shoe and the adjacent of said surfaces, and means interlocking said shoes and said frame against relative vertical movement therebetween.

15. In a railway car truck, a side frame having spaced columns partly defining an intervening bolster opening, a spring seat on said frame, resilient means on said spring seat in said opening, friction means supported from said resilient means, a bolster supported on said friction means, spaced spring abutment surfaces on said frame beneath said bolster, said surfaces being angularly disposed with respect to said seat, friction shoes engaging said friction means, resilient means compressed between each shoe and the adjacent of said surfaces, means interlocking said shoes and said frame against relative vertical movement therebetween, and means interlocking said shoes with said friction means to limit upward movement of the latter with respect to said shoes.

16. In a railway car truck, a truss side frame comprising tension and compression members and spaced columns defining therewith a bolster opening, a plurality of coil springs on said tension member in said opening, a spring cap supported on certain of said springs and comprising friction surfaces at opposite sides thereof, a bolster supported on said cap and other of said springs, friction housings on said frame disposed beneath said bolster, and resilient means and a friction shoe engaged therewith in each housing, said shoe being frictionally engaged with the associated friction surface.

17. In a railway car truck, a truss side frame comprising tension and compression members and spaced columns defining therewith a bolster opening, a plurality of resilient means on said tension member in said opening, a spring cap seated upon and housing the upper end of certain of said resilient means and comprising friction surfaces at opposite sides thereof, a bolster supported on said cap and other of said resilient means, spaced friction housings on said frame disposed beneath said bolster, resilient means and a friction shoe engaged therewith in each

housing, said shoe being frictionally engaged with the associated friction surface.

18. In a railway car truck, a side frame comprising spaced columns partially defining a bolster opening, a plurality of coil springs on said frame in said opening, a spring cap supported on certain of said springs and comprising friction surfaces at opposite sides thereof, a bolster supported on said cap and other of said springs, spaced friction housings on said frame disposed beneath said bolster, a resilient member in each housing, and a friction shoe received within each housing in abutment with the associated resilient member and comprising a flange partially housing said last-mentioned member, each shoe being frictionally engaged with the associated friction surface on said spring cap.

19. In a railway car truck, a side frame comprising spaced columns partly defining a bolster opening, a plurality of coil springs on said frame in said opening, a spring cap seated upon and confining the upper end of one of said springs and comprising friction surfaces at opposite sides thereof, a spring plate seated on said cap and the other of said springs, a bolster supported on said plate, spaced friction housings on said frame, said friction housings being disposed below and spaced from said spring plate, and a friction shoe resiliently mounted on each housing and in engagement with the associated friction surface.

20. In a railway car truck, a side frame comprising spaced columns partly defining a bolster opening, a composite spring group on said frame in said opening, said spring group comprising a plurality of coil springs, a spring cap seated upon and confining one of said coil springs and comprising spaced friction surfaces at opposite sides thereof, a spring plate seated on said cap and the other of said coil springs, spaced housings formed on said frame in said bolster opening beneath said spring plate and spaced therefrom, friction means resiliently mounted in respective housings and engaged with respective of said friction surfaces, and complementary interlocking means on said bolster and said columns, said interlocking means being of limited depth whereby said bolster may be elevated in said bolster opening and removed therefrom during a quick wheel change.

21. In a railway car truck, a side frame comprising spaced columns partly defining a bolster opening, a plurality of springs on said frame in said opening, a spring cap seated upon and confining the upper end of one of said springs, said cap comprising friction surfaces at opposite sides thereof, a spring plate seated on said cap and the rest of said springs, a bolster supported on said plate, spaced friction shoe support means on said frame, said support means being disposed below and spaced from said spring plate, and friction shoes resiliently mounted on respective support means, said shoes being in frictional engagement with the associated friction surfaces.

22. In a side frame for a railway car truck, tension and compression members and spaced columns defining therewith a bolster opening and spaced window openings, and oppositely spaced housings formed on said frame in said bolster opening and adjacent the bottom thereof, each of said housings having top and bottom walls and a rear wall affording a spring seat within said housing.

23. In a side frame for a railway car truck, tension and compression members and spaced columns defining therewith a bolster opening, and oppositely spaced friction shoe housings disposed within said bolster opening adjacent the bottom thereof, said housings being integrally formed with respective columns adjacent their juncture with said tension member.

24. In a side frame for a railway car truck, tension and compression members and spaced columns defining therewith a bolster opening, said tension member being of box section beneath said bolster opening with the top chord of said box section formed as a spring seat and having upstanding inboard and outboard flanges, and friction shoe housings integrally formed with respective flanges, each of said housings comprising top and bottom walls and a rear wall affording a spring seat for an associated spring.

25. In a railway car truck, a side frame including tension and compression members and spaced columns defining therewith a bolster opening, oppositely spaced friction shoe housings on said frame disposed within said bolster opening adjacent the bottom thereof, said housings being integrally formed with respective columns adjacent their juncture with said tension member, resilient means on said tension member in said bolster opening, a spring cap on said resilient means, a bolster supported from said cap, and friction shoes resiliently mounted in respective housings in frictional engagement with said cap, said bolster comprising integral side walls having interlocking means in engagement with complementary means on respective columns.

26. In a railway car truck, a side frame comprising tension and compression members and a column partially defining therewith a bolster opening, a friction shoe housing carried by said frame adjacent the bottom of said opening, said housing being integrally formed with said column adjacent its juncture with said tension member, resilient means on said tension member in said bolster opening, wedge means supported by said resilient means, a bolster supported by said wedge means and comprising a side wall having integral interlocking means in engagement with complementary means on said column, and friction means comprising a friction shoe resiliently mounted in said housing in frictional engagement with said wedge means.

27. In a railway car truck, a side frame including tension and compression members and spaced columns defining therewith a bolster opening, oppositely spaced friction shoe housings disposed within said bolster opening adjacent the bottom thereof, said housings being integrally formed with respective columns adjacent their juncture with said tension member, resilient means on said tension member in said bolster opening, wedge means supported by said resilient means, a bolster supported by said wedge means, friction shoes resiliently mounted in respective housings in frictional engagement with said wedge means, and means on said shoes slidably interlocked with complementary means on said wedge means for limiting upward movement of the latter.

28. In a railway car truck, a side frame including top and bottom members and spaced columns defining therewith a substantially rectangular bolster opening, opposed friction shoe housings on said frame adjacent the lower corners of said bolster opening, resilient means on said frame in said opening, a friction member supported on said resilient means, friction shoes resiliently mounted in respective housings in frictional engagement with said friction member,

and a bolster supported from said friction member, said bolster having side walls including guide means slidably engaged with interlocking means on respective columns.

29. In a railway car truck, a side frame including top and bottom members and spaced columns defining therewith a substantially rectangular bolster opening, opposed friction shoe housings on said frame adjacent the lower extremity of said bolster opening, resilient means on said frame in said opening, a friction member supported on said resilient means, friction shoes resiliently mounted in respective housings in frictional engagement with said friction member, a bolster supported by said friction member, said bolster having side walls including guide means slidably engaged with interlocking means on respective columns, and other resilient means affording support for said bolster independently of said friction member.

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