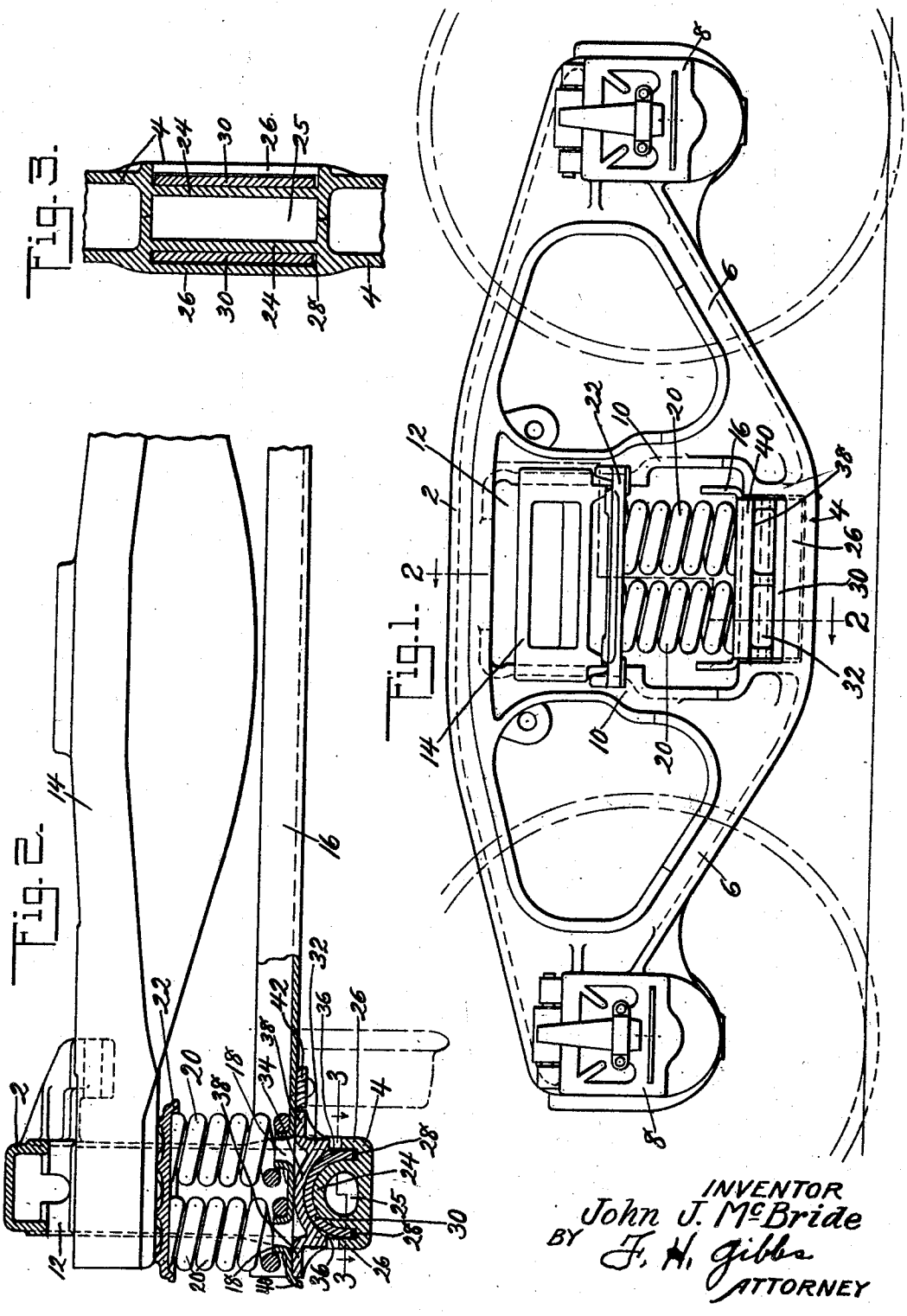
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SIDE FRAME FOR CAR TRUCKS

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SIDE FRAME FOR CAR TRUCKS

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This invention relates to side frames for railway car trucks and has particular reference to means for supporting the spring plank.

A cast side frame sometimes presents defects in casting among which is the fact that oftentimes the sill of the frame at the bolster opening is not positioned as to support the spring plank parallel, with the journal box. In other words, in casting the frame, the sill at the bolster opening is not parallel with the journal box bearing portion. In the event of such a defect the weight of the car will force the spring plank seat to a position parallel with the rails and this, in effect, causes the entire frame to be tilted in order that the spring plank may be properly seated. This changes the line of application of force or weight away from the normal line, as will be apparent, causing an improper application of force on the journal boxes at the end of the frame and consequently hot boxes and uneven wear on the journal bearings result.

One object of the present invention is the provision of a new and improved side frame for railway car trucks.

Another object of the invention is the provision of means for properly seating the spring plank in a railway car truck.

Still another object is the provision of a self-adjusting spring plank support.

A further object of the present invention is the provision of means for obtaining an accurate positioning of the spring plank with respect to the journal box bearing portion of a side frame.

A still further object of this invention is the provision of a mounting for a spring plank which is shiftable transverse to the length of a side frame for obtaining an accurate positioning of a spring plank with respect to the journal box bearing portions of the side frame.

Other objects and advantages of this invention will be apparent from the following description taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevation of a side frame formed in accordance with the present invention;

Fig. 2 is a sectional view on the line 2—2, Fig. 1, and

Fig. 3 is a sectional view on the line 3—3, Fig. 2.

Referring now more particularly to the drawings in which similar characters of reference designate similar parts in the several views, the side frame shown in elevation in Fig. 1 is illustrated merely by way of example, as obviously the present invention may be applied to other types of side frame. The side frame shown is a casting of truss form, having the compression and tension members 2 and 4 respectively, the latter having diagonals 6 which merge at their ends with the ends of the compression member 2 to form bearing portions for journal boxes 8. The side frame also includes the columns 10 which define the bolster opening 12 through which the bolster 14 and the spring plank 16 extend; the spring plank having at its ends the lugs 18 for positioning the springs 20 which latter carry spring caps 22 on which the bolster 14 rests.

That portion of the tension member 4 at the bolster opening is termed the sill, and the sill in the present instance is shown clearly in section in Fig. 2 and comprises a central supporting portion 24 which is hollow as shown at 25 and which in external contour is curved or arcuate. The supporting portion 24 extends the full width of the bolster opening between the lower ends of the columns 10 as clearly shown in Fig. 1 and the sill 4 is further provided with upturned flanges 26, one arranged on each side of and spaced from the supporting portion 24 to define recesses 28 which receive the lower edges of a wear plate 30 which has its interior complemental with the curve of the supporting portion 24 whereby to seat on the latter.

The wear plate 30, as before mentioned, is curved or arcuate in shape and supports a saddle indicated generally at 32 and which latter comprises a central portion 34 which in the instance shown is curved on a greater arc than the curve of the wear plate 30 to provide a clearance 36 at each side thereof.

It is not absolutely essential that the center portion 34 of the saddle 32 be curved on a greater arc than that of the wear plate 30 as the center portion 34 may be curved on the same arc as that of the wear plate 30 to closely fit said wear plate if desired. The saddle 32 also includes the oppositely extending side flanges 38 on which the spring plank 16 is supported. The spring plank has its end downwardly flanged as shown at 40 to lie adjacent the edge of the outer flange 38 and said spring plank is also provided adjacent the inner flange 38 with an abutment 42.

In use, it will be apparent that should there be any inaccuracy or defect in casting the sill of the side frame such as would normally result in the spring plank 16 and journal box 8 being out of parallel relation it will be apparent that the saddle 32 may shift on the wear plate 30, transversely of the side frame and thereby support the spring plank in its proper position and in parallel with the journal box; this resulting in a construction in which the journal boxes are accurately maintained in their bearing portions at the ends of the side frame whereby uneven wear on the boxes is prevented and the life thereof lengthened.

The drawings herein are merely by way of example and obviously various changes in the form and proportions of the construction shown herein may be made within the scope of the appended claims without departing from the spirit of the invention.

What is claimed is:

1. In a side frame for car trucks, compression and tension members, and means for supporting a spring plank comprising a saddle supported by the tension member and on which the spring plank rests, said saddle being capable of only transverse shifting upon application of weight to the side frame.

2. In a side frame for car trucks, compression and tension members, columns connecting said members and defining an opening, said tension member having a sill at the opening comprising a supporting portion, a wear plate mounted on the supporting portion, and a saddle supported by the wear plate and on which the spring plank of the truck rests, said saddle being loosely mounted on the wear plate whereby to shift transversely of the side frame to permit the spring plank to be properly seated.

3. In a side frame for car trucks, compression and tension members, columns connecting said members and defining an opening, said tension member having a sill at the opening comprising a supporting portion, a wear plate mounted on the supporting portion, and a saddle supported by the wear plate and on which the spring plank of the truck rests, said saddle being loosely mounted on the wear plate whereby to shift transversely of the side frame in an arc.

4. In a car truck, a side frame comprising compression and tension members the ends of which merge to provide journal box receiving portions, columns defining a bolster opening, a sill formed with the tension member at the bolster opening, and a spring plank support carried by the sill and adapted to shift only transversely thereof to support the spring plank in parallel with the journal boxes.

5. In a side frame for car trucks, compression and tension members, a sill formed with the tension member and comprising a supporting portion, a wear plate mounted on the supporting portion, said wear plate having its outer surface curved, and a saddle supported on the wear plate having its contacting area curved on a greater arc than that of the wear plate whereby it may shift on said wear plate transversely to the side frame, said saddle having side flanges to support a spring plank.

6. A side frame for car trucks comprising a truss structure having a sill formed with the tension member thereof, and a spring plank supporting saddle mounted by the sill and automatically shiftable only transversely thereof upon application of weight to the frame.

7. In a car truck, a cast truss side frame having journal box receiving portions at its ends, and a bolster and spring plank opening, means providing an automatically adjustable spring plank support comprising a saddle mounted on the sill of the tension member of the side frame and on which the spring plank is removably supported, said saddle being shiftable in an arc transverse to the side frame upon application of a car body to the truck whereby the spring plank is supported in parallel with the journal box receiving portions of the side frame.

8. In a side frame for car trucks, compression and tension members, and means for supporting a spring plank comprising a sill formed with the tension member and including a central supporting portion arranged longitudinally of the tension member, a longitudinally extending flange on each side of the supporting portion and spaced from the latter to define longitudinal recesses, a wear plate mounted on the central supporting portion and having its side edges arranged in said recesses, and an automatically adjustable spring plank support comprising a saddle mounted on the wear plate and shiftable transversely of the side frame, said saddle including oppositely arranged supporting flanges upon which the spring plank rests.

In witness whereof I have hereunto set my hand.

JOHN J. McBRIDE.