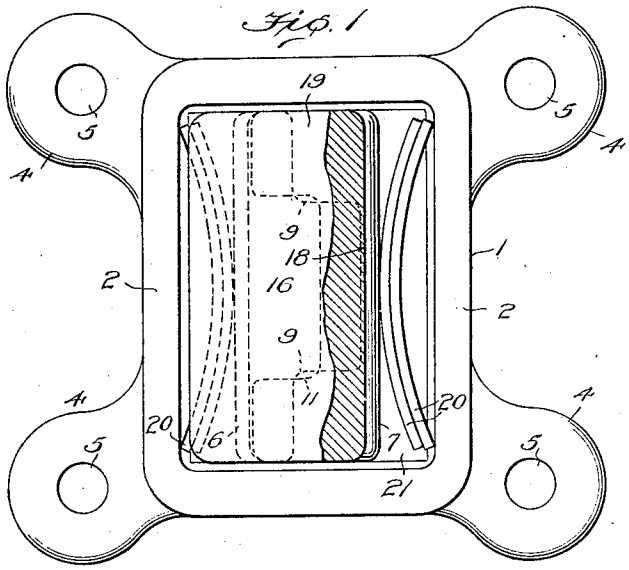
June 9, 1931. D. C. DAVIS 1,808,839

SIDE BEARINGS

Filed April 18, 1929

Fig. 1



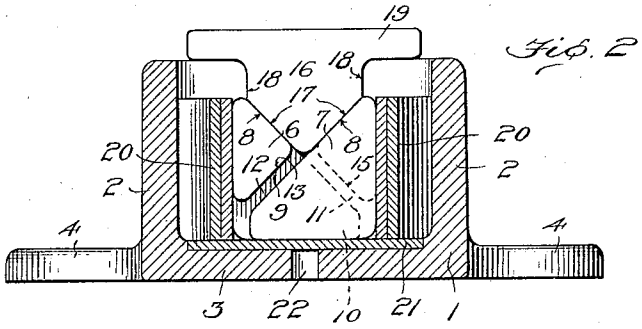


Fig. 2

Fig. 3

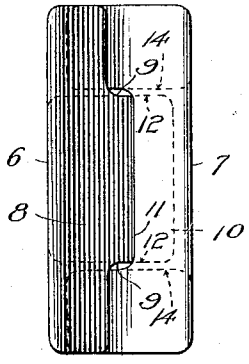
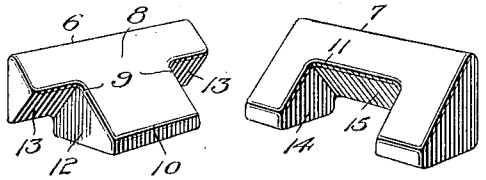


Fig. 4



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UNITED STATES PATENT OFFICE

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SIDE-BEARINGS

Application filed April 18, 1929. Serial No. 356,051.

The invention relates to side bearings and has for one of its objects to provide strong and durable means for efficiently cushioning and absorbing shocks transmitted to the truck bolster from the car body.

A primary feature of the invention consists in providing a side bearing with a plurality of movable wedge shoes and in combining therewith a wedge block for actuating them, said shoes having portions normally disposed on opposite sides of the apex of said wedge block.

A still further feature of the invention consists in constructing a side bearing with a plurality of oppositely movable shoes slidably mounted in a housing and in associating therewith a wedge block for actuating the shoes, the latter having a vertically overlapping portion and one shoe being fashioned with a projection and the other with a recess for receiving said projection.

Other and more specific features residing in advantageous combinations and relations of parts will hereinafter appear and be pointed out in the claims.

In the drawings illustrating a preferred embodiment of the invention—

Figure 1 is a plan view of the improved side bearing, parts thereof being broken away.

Figure 2 is a central transverse sectional view of the side bearing, the wedge shoes being shown in elevation.

Figure 3 is a plan view of the wedge shoes in assembled and operative position.

Figure 4 is a perspective view of each of the shoes.

In the drawings 1 indicates a housing of box-like form having side walls 2 and a base plate 3. The housing may be advantageously provided with laterally projecting lugs or feet 4 suitably apertured as at 5 to receive bolts, rivets or the like (not shown) for securing the housing to a truck bolster of any suitable design.

Disposed within the housing 1 are a plurality of wedge members or shoes 6 and 7, respectively, which, upon being actuated, are adapted to move transversely of the housing in engagement with the base plate 3 thereof. Each of the shoes is substantially triangular in section having a downwardly inclined bearing face 8. The opposite lower corners of the block 6 are cut away as at 9 forming a projection 10 and the central portion of the shoe 7 is cut away as at 11 to receive the projection 10. The walls 12 and 13 bounding the cutout portion 9 of the block 6 are respectively substantially vertical and inclined and the latter lies in a plane substantially parallel with the inclined face 8 of the block 7. Similarly, the walls 14 and 15 bounding the cutout portion 11 of the block 7 are respectively vertical and inclined and the wall 15 is disposed in a plane substantially parallel to that of the face 8 of the block 6. Thus it will be seen, as clearly shown in Figures 2 and 3 of the drawings, that when the wedge shoes are properly assembled the inclined bearing faces 8 extended on opposite sides of the point at which they intersect each other and in addition to having portions overlapping each other vertically they have portions overlapping each other transversely of their direction of movement.

A wedge block or member 16 is employed for actuating the shoes by moving them in opposite directions. The lower portion of the block 16 is provided with downwardly inclined converging bearing faces 17 adapted to be disposed in planes parallel with those of the bearing faces 8 of the shoes 6 and 7 for cooperating therewith. Each of the bearing faces 17 is preferably of a width substantially equal to that portion of the bearing face of each of the shoes between the point of intersection of the latter and the upper edge thereof. The faces 17 respectively terminate in substantially vertical faces 18 which merge into the top portion 19 of the wedge block inwardly of its side edges and the width and length of this top portion of the block is slightly less than the corresponding dimensions of the housing to permit it to move into and out of the latter. It is of course understood that the top portion 19 of the wedge block cooperates with the usual member (not shown) carried by the car body bolster.

A plurality of plate springs 20 are interposed between the side walls 2 of the housing and the adjacent wedge shoes for normally

opposing movement of the latter and for returning them to operative position after being actuated by the wedge block 16. A removable wear plate 21 of any desirable material may be inserted in the base plate 3 of the housing and the latter is provided with an aperture 22 for receiving a suitable tool which may be employed for removing the wear plate after the same has become worn.

Due to the form of the wedge shoes 6 and 7 and the manner with which they cooperate with the wedge block 16, the inclined faces of the shoes are normally disposed on opposite sides of the apex of the block. Thus it will be seen that the center of mass of the shoes is brought more nearly into coincidence with a line passing through the apex of the wedge block and normal to the plane upon which the shoes move and that portions of the surfaces 17 immediately adjacent the apex of the block are always in engagement with portions of the surfaces 8 of the wedge shoes.

When a force is imparted to the wedge block 16 tending to move it downwardly it is opposed by frictional forces generated between the wear plate 21 and the bases of the shoes, between the cooperating bearing faces of the shoes and blocks, 8 and 17 respectively, and between the plate springs 20. Movement of the shoes in opposite directions is also counteracted by the inherent resiliency of the spring plates 20.

From the foregoing it will be perceived that rugged and efficient means is provided for effectively absorbing and cushioning any shocks which may be transmitted from the body bolster to the side bearings.

What is claimed is:

1. A side bearing for railway cars involving a housing, a plurality of wedge shoes slidably mounted in said housing, a wedge block for actuating said shoes, and resilient means for opposing movement of said shoes, the latter having portions normally disposed on opposite sides of the apex of said wedge block.

2. A side bearing for railway cars involving a housing, a plurality of wedge shoes slidably mounted in said housing, a wedge block for actuating said shoes, and resilient means for opposing movement of said shoes, the latter having portions overlapping each other transversely of their direction of movement.

3. A side bearing for railway cars involving a housing, a plurality of oppositely movable shoes slidably mounted upon the base of said housing, said shoes having vertically overlapping portions, one being fashioned with a projection and the other with a recess for receiving said projection, a wedge block for actuating said shoes, and means for opposing movement of said shoes.

4. A side bearing for railway cars involving a box-like housing, a plurality of shoes mounted within the housing and slidable along the base thereof, said shoes having oppositely inclined faces, a wedge block having portions respectively cooperable with the inclined faces of said wedge shoes for actuating them and each of said faces being normally disposed on opposite sides of the apex of said wedge block, and plate spring members for opposing movement of said shoes.

5. A side bearing for railway vehicles comprising a housing with a base plate and upstanding side walls, a plurality of wedge shoes slidably mounted above said base plate, said shoes being formed respectively with a projection and a recess for receiving said projection, said shoes providing inclined friction surfaces which are continued on the projection of one shoe and on the portions of the other shoe on either side of said projection, a wedge block provided with lower inclined surfaces engaging the friction surfaces on the shoes, and resilient means disposed between said shoes and the side walls of the housing for opposing outward movement of the former.

In testimony whereof I affix my signature.

LOU BRADSHAW,
Executrix of the Estate of Donald C. Davis, Deceased.