W. E. WINE.

SIDE BEARING.

APPLICATION FILED APR. 2, 1918.

1,298,137. Patented Mar. 25, 1919.

Fig. 1.

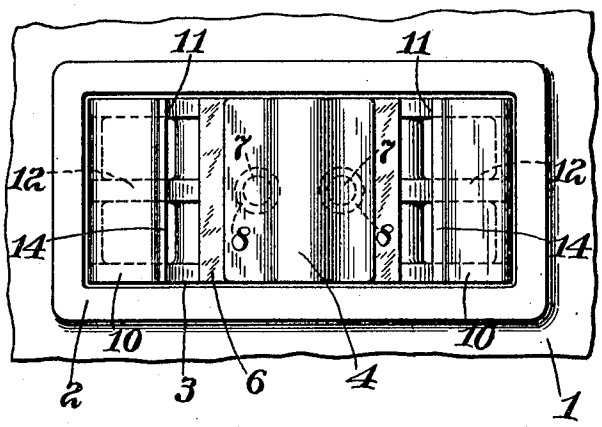


Fig. 4.

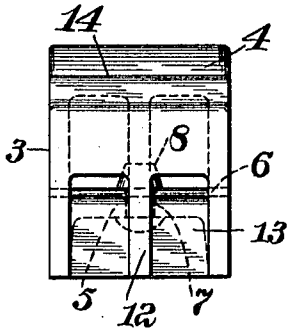


Fig. 2.

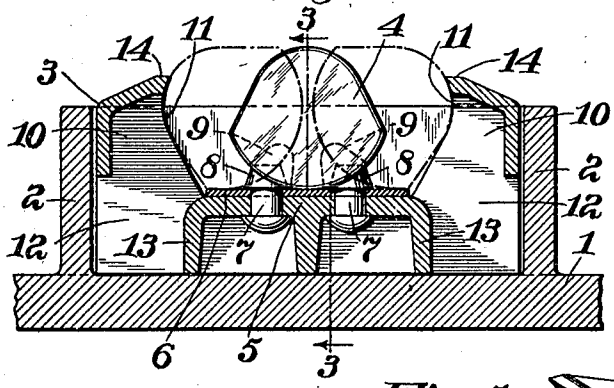


Fig. 3.

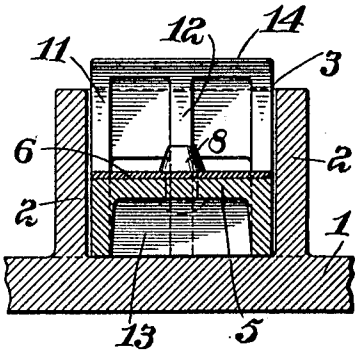
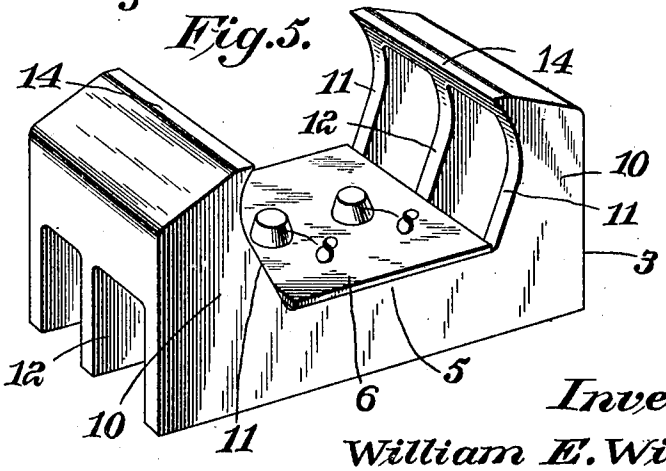


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM E. WINE, OF TOLEDO, OHIO.

SIDE BEARING.

1,298,137. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed April 2, 1918. Serial No. 226,165.

To all whom it may concern:

Be it known that I, WILLIAM E. WINE, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Side Bearings, of which the following is a specification.

My invention relates to a new and useful improvement in side bearings for railway cars, and generally to that form of side bearing that is known as the self-centering type.

A number of the truck bolsters that are in use to-day are provided with a pocket either formed thereon or formed therein, and in which there is placed a block that in turn contacts with a plate positioned above said block on the body bolster. In other words, the truck bolsters are simply provided with an integral pocket and in which is placed a block to act as a friction side bearing.

An object therefore of my invention is to so construct a self-centering side bearing that it will fit within these pockets that are already constructed on the truck bolster and take the place of the simple friction block that lacks many of the advantages of the roller or rocker type bearing.

Another object of my invention is to so construct the side bearing that all of the space between the end walls of the pocket and the rocker bearing when at the limit of its travel will be occupied. That is, it is desirable to have a housing the ends of which will fit tightly against the end walls of the pocket, thus preventing the housing from shifting from its set position.

Still another object of my invention is to so construct the housing that the side walls of the pockets will act as the side walls for the rocker, thus doing away with the necessity of providing side walls in the housing.

With these and other objects in view, my invention consists in certain new and novel constructions and combination of parts as will be hereinafter more fully described and pointed out in the claims.

In the drawings;

Figure 1 is a fragmentary top plan view of a portion of a bolster having a pocket formed thereon and the side bearing in said pocket;

Fig. 2 is a longitudinal sectional view of the same;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2, with the rocker removed for the sake of clearness;

Fig. 4 is an end view of the side bearing removed from the pocket; and

Fig. 5 is a perspective view of the housing.

Referring now to the drawings, which show a preferred embodiment of my invention, a fragmentary portion of the truck bolster 1 is shown, provided with the usual pocket 2. In this pocket a friction block is usually placed which acts as a side bearing, but my present invention contemplates the use of this pocket for holding the side bearing, which in the present invention consists of the housing 3 and the rocker 4.

This housing is preferably a cast integral structure, having a bottom 5, and on the upper surface of which is secured a hardened metal plate 6 on which the rocker 4 bears. A preferable manner of securing this plate 6 to the bottom of the housing is to pass rivets 7 through the said bottom and through said plate and also provide the rivets on their inner ends with enlarged heads 8, which may be frusto-conical in shape, which heads cooperate with indentations or sockets 9 formed in the lower surface of the rocker 4. By fastening the plate in position with the form of rivets as shown they not only secure the plate 6 to the bottom of the housing, but they also prevent the rocker from shifting laterally in the housing 3. The housing also comprises the two end portions 10, which limit the length of travel of the rocker 4 in the housing when the side bearing is in operation. As will be noticed, the rocker 4 is a self-centering one with two flat sides and with the aforementioned sockets in the lower portion.

Referring again to the housing 3 it will be seen that the end portions of their inner adjacent sides are slightly cut out as at 11 so that the rocker 4 when at either end of its travel will have a relatively large contacting surface with the adjacent end wall.

To provide a light but nevertheless strong housing 3 for the rocker 4, the end portions 10 and the bottom 5 are cored out as shown, leaving however the strengthening ribs 12 in the end portions and the lateral ribs 13 in the bottom portion. The outer surfaces of the end walls are preferably flat with no obstructions or protrusions thereon so that the housing may be made to fit snugly and tightly within the end walls of the pocket 2.

The upper surfaces of the end portions are slightly angular and their highest point 14 extends slightly above the center of the rocker when said rocker is in its either extremity.

The side walls of the pocket 2 act as the side walls for the roller 4 when the housing 3 and roller 4 are placed in position in the said pocket so that it is unnecessary to provide side walls in the housing. Furthermore, it is not necessary to have any pins passing through the roller nor is it necessary to have guiding lugs on the roller, as the side walls of the pocket 2 limit or prevent the roller from moving laterally from without the pocket, while the heads 8 cooperating with the sockets 9 in the roller keep the roller in a correctly alined position.

It is also to be noticed that when the roller has reached its limit of travel in either direction the space between the roller and the adjacent end wall of the pocket is occupied by the end portion of the housing which prevents any pounding or jarring in a longitudinal direction, or in other words practically presenting a solid surface between the roller and the end wall of the pocket.

It is to be remembered that a side bearing is subjected to very heavy loads and it is desirable to have as solid a construction as possible.

From the foregoing it will be seen that I have provided a simple and practical side bearing, comprising a housing of certain formation and a self-centering roller resting therein; the housing being designed to fit within the pockets that are already provided on a number of the body bolsters now in use; thereby doing away with the simple friction block and providing a self-centering side bearing without necessitating any change in the body bolster. Also I have provided a housing that will occupy all of the space between the roller when in its either extremity and the adjacent end wall of the pocket to thereby form as rigid a structure as possible. Also the side bearing is one that needs no side walls in the housing nor lugs nor pins in the rocker to guide the same in its path of movement.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination with a truck bolster provided with a pocket, a side bearing comprising a housing fitting snugly in said pocket, a rocker bearing in said housing, the end portions of the housing limiting the amount of the travel of the rocker in said housing, and said housing open at its opposite sides.

2. In combination with a member having a pocket thereon, a housing fitting snugly within said pocket, a rocker bearing in said housing and adapted to move from one end of the housing to the other, the space between the end walls of the pocket and the limit of travel of the rocker being occupied by the end portions of the housing.

3. In combination with a truck member having a pocket formed thereon, a side bearing fitting snugly within said pocket, said side bearing comprising a housing having end portions and a bottom and open at its sides, a friction member resting in said housing, means on the upper surface of the bottom to prevent the lateral shifting of the friction member and the side walls of the pocket acting as side walls for the housing.

4. In combination with a truck member having a pocket formed thereon, a housing adapted to fit within said pocket, a rocker bearing placed within said housing and its limit of travel defined by the end portions of the housing, the space between the end walls of the pocket and the limits of travel of the rocker being occupied by the end portions of the housing, a hardened plate on the upper surface of the bottom of the housing and means extending therethrough for securing the said plate to the housing and preventing the shifting of the rocker in said housing from its correct position.

5. A side bearing comprising a housing having a bottom and end portions and open at its side, a rocker resting in said housing and means on the upper surface of the bottom to keep the rocker in its correctly alined position.

6. A side bearing comprising a housing having end portions and a bottom and being open at its sides, a hardened plate secured to the housing by means passing through the bottom of the housing and the said plate, the upper ends of said means extending above said plate, a rocker resting in said housing having depressions formed on its under side to coöperate with the said means to correctly position the rocker, and the end portions of the housing being rounded on their inner surfaces.

7. A side bearing comprising in part a housing having a bottom and end portions and open at its sides, the outer surfaces of the end portions being plain, the inner surfaces of the end portions being curved, a plate secured to the bottom of the housing and a projection extending upwardly from said plate.

In testimony whereof I affix my signature.

WILLIAM E. WINE.