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W. J. REGAN ET AL
RAILWAY DRAFT APPLIANCE

2,003,221

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Fig. 1.

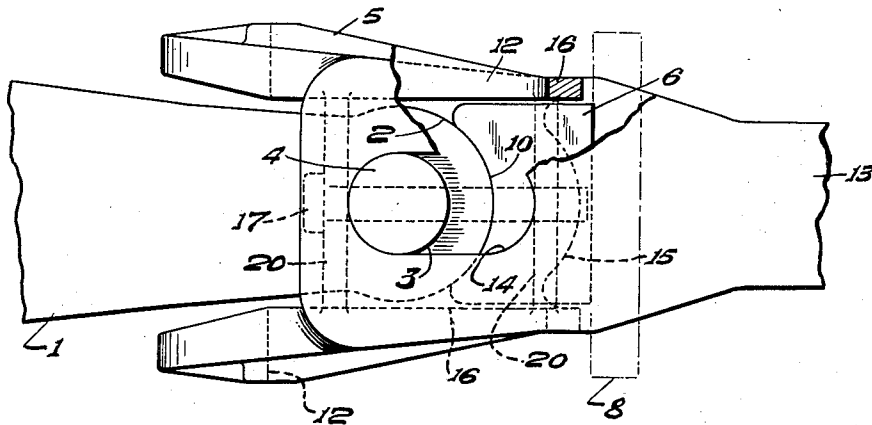


Fig. 2.

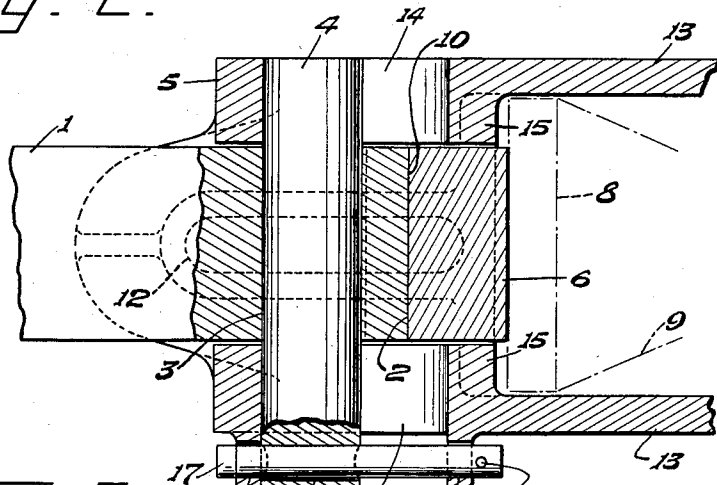
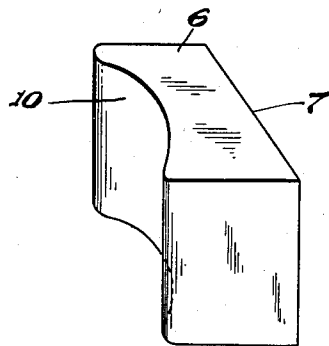


Fig. 3.



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UNITED STATES PATENT OFFICE

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RAILWAY DRAFT APPLIANCE

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2 Claims. (Cl. 213—71)

This invention relates to railway draft appliances and is particularly concerned with the provision of simple and efficient means for permitting a car coupler to swing laterally when the car upon which it is mounted passes around a curve in the track.

The principal feature of the invention consists in forming the rear end of the coupler shank with a cylindrical bearing surface which is concentric with a vertically extending aperture for receiving a tail pin by which the coupler may be connected to the draft yoke, and in associating therewith a bearing block having its front vertical wall curved to correspond to the rear end of the coupler shank, the bearing block being interposed between the coupler and the forward follower of the draft gear and the draft yoke being formed with portions serving to guide the bearing block and having longitudinally extending slots for receiving the tail pin.

There are other features of the invention pertaining to advantageous relations of parts and details of construction, as will hereinafter appear and be pointed out in the claims.

In the drawing, illustrating a preferred embodiment of the invention;

Figure 1 is a plan view of the draft appliance showing the assembled relation of the parts, portions of the draft yoke being broken away and the forward follower of the draft gear being diagrammatically illustrated in dot and dash lines;

Figure 2 is a view, partly in vertical section and partly in side elevation, of the construction shown in Figure 1, the forward follower and the cushioning unit of the draft gear being diagrammatically indicated in dot and dash lines;

Figure 3 is a perspective view of the bearing block which is operatively interposed between the shank of the coupler and the follower.

The car coupler 1 is provided at its forward end with the usual head (not shown) and is fashioned at its rear end with a vertically extending cylindrical surface 2. Adjacent its rear end the shank of the coupler 1 is formed with a vertically extending cylindrical aperture 3 concentric with the corresponding curved surface 2. The aperture 3, which may conveniently be formed by drilling or coring, receives the tail pin 4 by which the coupler is pivotally connected to the draft yoke 5.

Cooperating with the curved rear end 2 of the coupler shank is a bearing block 6 whose flat rear face 7 provides a large bearing area

against the follower 8 at the forward end of the cushioning unit 9 of the draft gear. The front vertical wall 10 of the bearing block is curved to correspond to the cylindrically curved surface 2 of the coupler shank. The block 6 thus not only provides a large bearing area against the follower or draft gear when the coupler moves rearwardly in buffing, but also affords a large bearing surface for the end of the coupler shank in the various buffing positions it may assume in service.

The draft yoke 5 preferably employed is of the hooded type and may advantageously be provided with horizontally aligned key slots 12 of standard location and size so that a coupler having a standard shank may be used for renewals whenever the special form of coupler 1 is not available. At their forward ends the arms 13 of the yoke are provided with suitable longitudinally extending slots 14 for receiving the tail pin 4, these slots being in vertical alignment and being of sufficient length to permit the coupler to have full buffing travel without necessitating rearward movement of the yoke. The forward ends of the yoke arms adjacent the tail pin slots 14 are increased in thickness to form inwardly projecting bosses 15 which not only reinforce the yoke but also afford increased bearing area for the tail pin. In conjunction with the spaced side walls 16 which connect the forward ends of the yoke arms, the bosses 15 serve as guides for the movable bearing block 6 at the rear end of the coupler 1, the block being thus constrained to move longitudinally. The block is of such length as to prevent it from passing out of the hooded portion of the yoke during buffing movements.

The tail pin 4 may be of the headless type and may be conveniently retained in assembled position by a headed pin 17 which passes through an opening 18 in the tail pin and through corresponding openings 19 in lugs 20 formed on the under side of the yoke at opposite ends of the adjacent tail pin slot 14. A cotter 21 serves to retain the supporting pin 17 in place.

We claim:

1. A railway draft appliance involving a car coupler having a curved rear end and provided with a pivot pin opening concentric with said end, a draft yoke, a bearing block of substantially uniform height and width throughout and having a rear face adapted to engage the forward follower of a draft gear and terminating at its forward end in a curved face cooperating

with the curved face of the coupler, said coupler being slidable longitudinally with respect to said block, and a tail pin extending through said pivot opening for movably connecting the coupler and yoke, said yoke being provided with vertically aligned longitudinally extending slots for receiving the tail pin and being formed with inwardly projecting bosses adjacent said slots and having laterally spaced parallel walls overlapping opposite sides of said block, said bosses and walls forming guides for said block in all operative positions of the latter.

2. A railway draft appliance involving a car coupler having a curved rear end and provided with a pivot pin opening concentric therewith, a bearing block of substantially uniform height and width throughout and terminating at its

forward end in a curved face cooperating with the curved end of the coupler, said coupler being slidable longitudinally with respect to said block, a draft yoke, and a tail pin extending through said pivot pin opening for connecting the yoke and coupler, said yoke being provided at its forward end with vertically aligned slots for receiving the tail pin and having bosses adjacent said slots and having laterally spaced parallel sidewalls between which the bearing block is movably mounted, said bosses and the inner faces of said side walls forming guides for the bearing block, and said side walls overlapping said bearing block for a distance greater than the extent of buffing movement of said coupler.

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