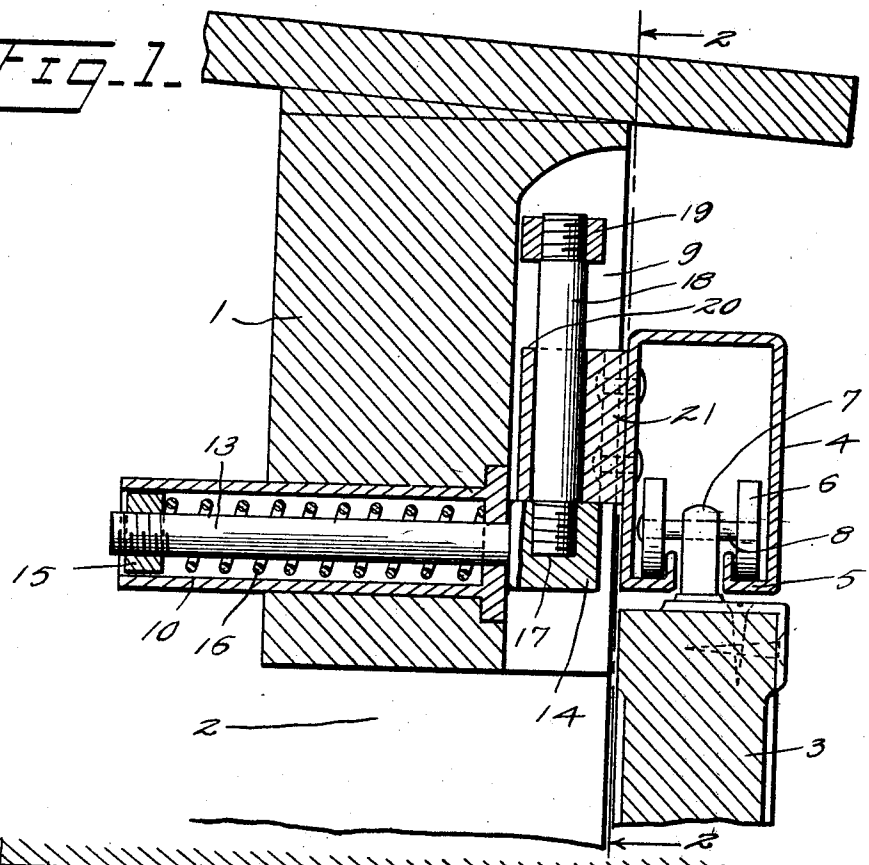
Aug. 2, 1932. J. A. DRIES 1,869,368

SUPPORTING MEANS FOR SLIDING DOOR TRACK RAILS

Filed March 8, 1932

Fig. 1.



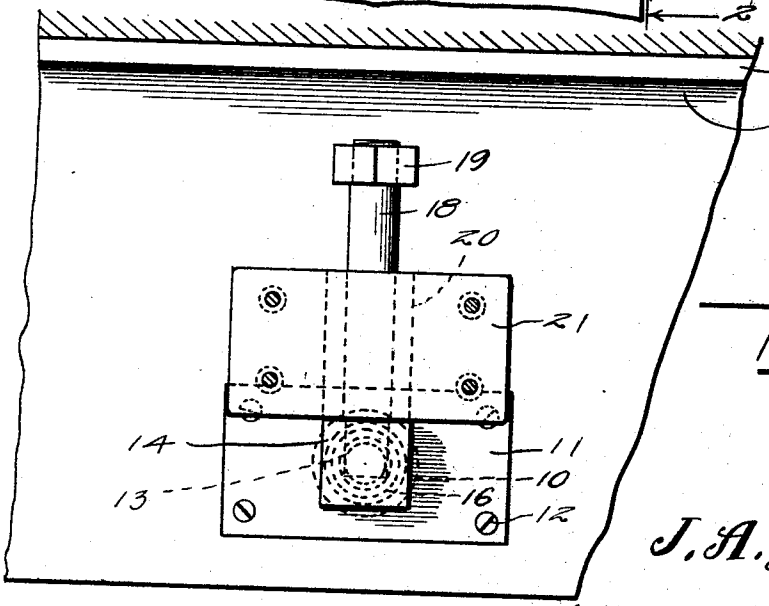


Fig. 2.

Inventor

J. A. Dries

By Watson E. Coleman

Attorney

Patented Aug. 2, 1932 1,869,368

UNITED STATES PATENT OFFICE

JAMES A. DRIES, OF EMAUS, PENNSYLVANIA

SUPPORTING MEANS FOR SLIDING DOOR TRACK RAILS

Application filed March 8, 1932. Serial No. 597,579.

This invention relates to improvements in attachments for railway box cars or like structures and pertains particularly to improvements in mounting means for the track rails of sliding doors.

The primary object of the present invention is to provide an improved mounting means for the track rails of sliding doors whereby twists or bends occurring either in the rail or in the supporting body therefor will be compensated for so as to constantly keep the track rail straight and thus make it possible to move the sliding door thereon without causing binding between the door and adjacent parts of the structure.

Another object of the invention is to provide a supporting means for a sliding door track rail, which may be readily attached to a carrying body without the necessity of making extensive alterations in the latter.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Figure 1 is a view in transverse section through the top part of a box car at one side thereof showing the structure embodying the present invention, connected therewith.

Figure 2 is a sectional view taken substantially upon the line 2—2 of Figure 1.

Referring now more particularly to the drawing wherein like numerals of reference indicate corresponding parts throughout the several views, the numeral 1 indicates the top rail or beam of the door opening of a box car, the opening being indicated generally at 2.

As is well known the track rail for the door structure, which is here indicated by the numeral 3, is usually secured directly to the outer face of the top bar rail or beam 1 so that the door 3 when suspended from the rail will slide across the outer wall of the car in being moved to open or closed position. A track rail of one of the many types employed is indicated by the numeral 4. This type of rail is substantially U-shaped in cross section and is mounted in inverted position and has the lower edges of the side portions provided with inturned flanges 5 upon the top faces of which run the rollers 6 which are housed within the track and which are connected with the top edge of the door 3 by means of the post 7, which is directly attached to the door, and the roller spindle 8.

In carrying out the present invention the outer face of the top beam 1 of the door opening is cut-out or recessed as indicated at 9 and there is provided a number of tubular bodies or cylinders 10 which are extended through the beam 1 to be supported horizontally thereby in the manner shown, the outer end of each of these cylinders 10 being closed by the plate 11 which is counter-sunk in the inner wall of the recess 9 and secured by screws 12 or in any other suitable manner.

Within the cylinder 10 there is positioned a rod 13 which extends through a suitable opening in the plate 11 and has a head 14 upon its outer end which normally abuts the plate 11 as illustrated.

The inner end of this rod is threaded and has thus connected therewith the nut 15 which holds in position in the cylinder a coil spring 16 which surrounds the rod 13.

The head 14 is provided with a tapped bore 17 which is directed upwardly and which has threadably engaged therein one end of a vertical pin 18, the other end of which is threaded also and has a nut 19 mounted thereon.

Surrounding the vertical pin 18 is a sleeve 20 which is integral with a plate 21 which is secured in any suitable manner to the track rail 4. In actual practice three or four of the units made up of the cylinder 10, rod 13, pin 18 and sleeve 20, may be employed for the support of the track rail by which the car door is carried. These units constitute the sole connecting means between the rail and the door beam 1 of the car. It will thus

be seen that any vertical buckling of the beam 1 may occur without affecting the rail 4 as when this occurs the sleeve 20 of each unit will shift itself as necessary upon the adjacent pin 18 and thus retain the track 4 in its straight condition. It will also be apparent that buckling of the car structure or the beam 1 in a horizontal direction will effect the shifting of the rod 13 of one or more of the units against the tension of the spring 16 by the tendency of the track rail 4 to maintain its straight condition and will thus allow the rail to maintain its straight character.

While in the foregoing description reference has been made solely to the use of the present device upon railway car doors it will, of course, be understood that the invention is not to be limited to such use for it will be apparent that the same may be advantageously employed in numerous other positions, as for example, upon warehouse doors or upon sliding doors of ships or other moving bodies which are subject to unusual stresses which might result in the bending or warping of the door supporting beams.

Having thus described the invention, what is claimed is:—

1. A supporting unit for sliding door track rails comprising an elongated body, a spring controlled reciprocable member carried by said body, a pin member carried by said reciprocable member and extending at right angles therefrom, and an element having limited sliding movement on said pin, said element being designed for connection with a track rail and said body being designed for attachment to a fixed structure above a door opening.

2. A sliding door track rail supporting unit comprising a carrier body designed for attachment to a fixed member at the top of a door opening and a pair of elements carried by said carrier body and having relative movement in substantially right angularly related paths, one of said elements being designed for connection with a door track rail.

3. A supporting unit for the track rail of a sliding door comprising a cylindrical body designed to be mounted horizontally in a fixed element at the top of a door opening, an elongated member reciprocably mounted in said cylinder, resilient means in the cylinder controlling said member to normally urge the same to move in one direction, a pin connected at one end to said member and extending at an angle therefrom, and a member slidably mounted on said pin and designed to be connected with the track rail of a sliding door.

4. A sliding door track rail supporting unit comprising a cylinder, a rod reciprocably mounted in the cylinder, spring means within the cylinder and surrounding the rod for normally urging the rod in one direction, a head formed upon one end of said rod and disposed exteriorly of the cylinder, a pin member secured at one end in said head and extending at an angle therefrom with respect to the rod, a sleeve slidably mounted on the pin, and a plate integral with the sleeve, said plate being designed for attachment to the track rail and said cylinder being designed for attachment in a horizontal position to a fixed part of the top of the door opening.

In testimony whereof I hereunto affix my signature.

JAMES A. DRIES.