Jan. 5, 1937. F. W. MOORE 2,066,994

ANTIJUMPER FOR SLIDING DOORS

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Fig. 1.

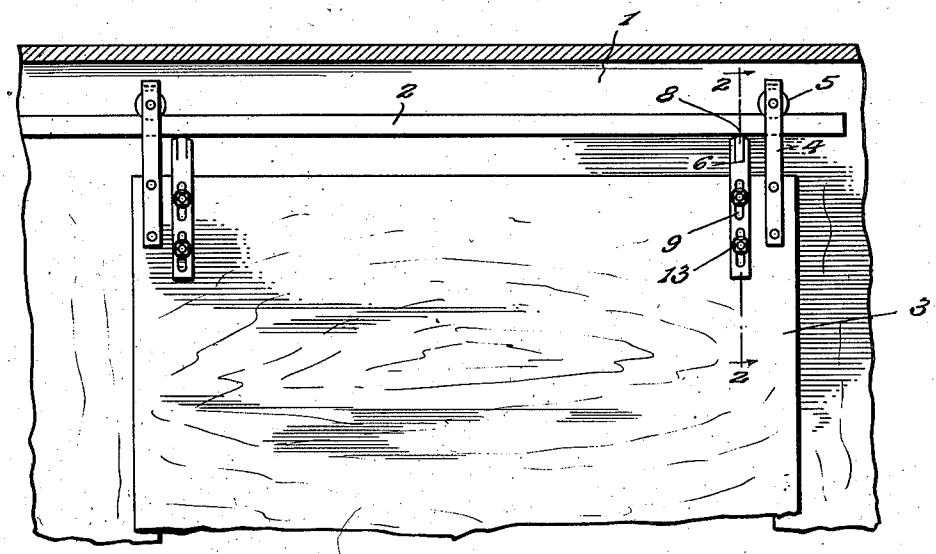


Fig. 2.

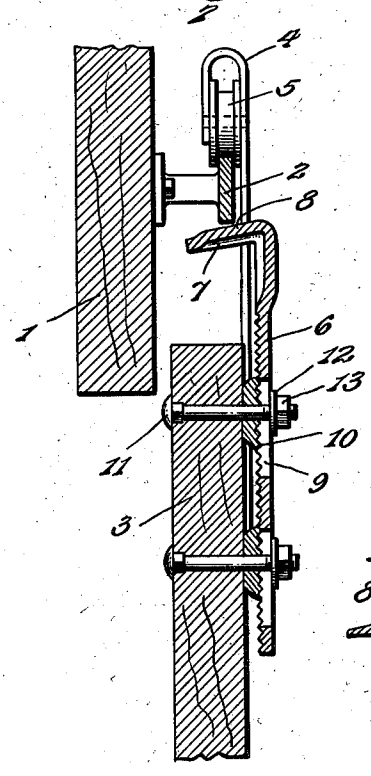


Fig. 3.

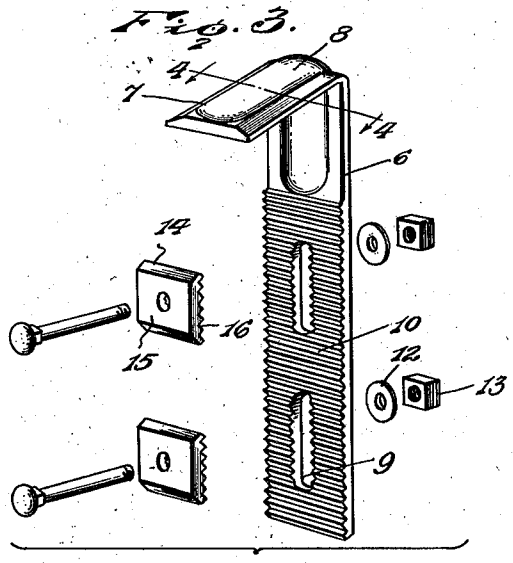


Fig. 4.



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Fig. 5.

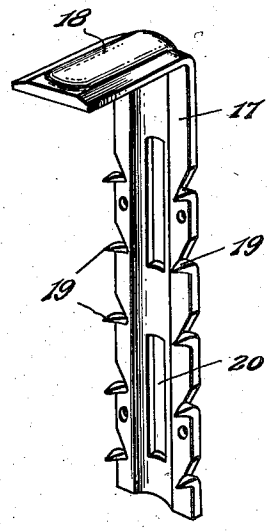


Fig. 6.

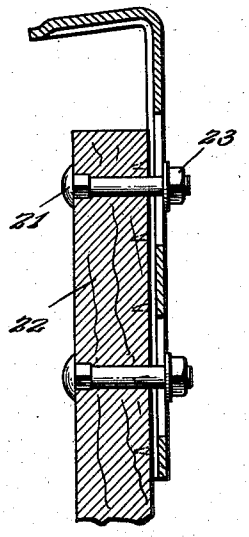


Fig. 7.

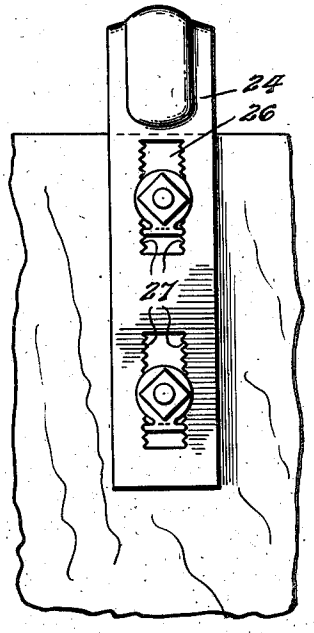


Fig. 8.

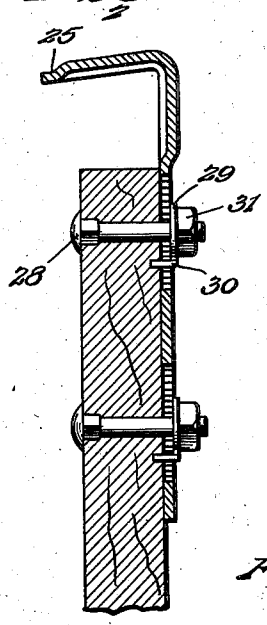


Fig. 9.

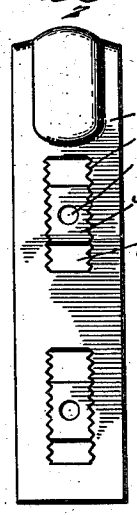
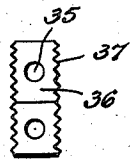


Fig. 10.



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2,066,994

ANTIJUMPER FOR SLIDING DOORS

Frank W. Moore, Lennon, Mich.

Application April 1, 1935, Serial No. 14,154

5 Claims. (Cl. 16—106)

This invention relates to an improved anti-jumper, and seeks, among other objects, to provide a device of this character which is preferably intended for use with sliding doors and which will prevent upward shifting or jumping of the door with consequent derailing thereof from the track.

Another object of the invention is to provide an anti-jumper which may be adjusted to various set positions on the door so that it may be readily adapted for use with various types of door hangers.

A further object of the invention is to provide an anti-jumper wherein the upper end thereof is reinforced so that bending thereof, which might be caused by repeated contact with the track, will be prevented.

And a still further object of the invention is to provide a device of this character which will be characterized by utmost simplicity and which, after installation, will require little or no attention.

Other and incidental objects of the invention, not specifically mentioned in the foregoing, will be apparent as the description of the invention proceeds.

In the drawings,

Figure 1 is a front plan view showing a pair of the devices properly installed on a sliding door,

Figure 2 is an enlarged vertical sectional view of the device taken on the line 2—2 of Figure 1, looking in the direction indicated by arrows.

Figure 3 is an enlarged perspective view of the device itself,

Figure 4 is an enlarged vertical sectional view taken on the line 4—4 of Figure 3, looking in the direction indicated by arrows,

Figure 5 is a perspective view of a modified form of my invention,

Figure 6 is a vertical sectional view showing the modified form shown in Figure 5 in installed position,

Figure 7 is a side elevation showing a still further modified form of the invention,

Figure 8 is a vertical sectional view of the device shown in Figure 7,

Figure 9 is a side elevation of a still further modified form of my invention, and

Figure 10 is a fragmentary view showing a pair of the locking members before separation.

Referring now more particularly to the drawings, the numeral 1 indicates a portion of a door jamb, on which is mounted a straight track 2. Associated with the door jamb 1 is a sliding door 3 and shiftably connecting the door with the track are hangers 4 having rollers 5 in engagement with the track 2. It is to be understood that the track and hangers are of more or less conventional construction and sliding door constructions of various types may be employed, as I do not limit myself to this specific construction.

My anti-jumpers are preferably mounted in pairs, but as they are identical in construction, a description of one of them will suffice. In carrying my invention into effect, I employ an oblong plate 6 which is provided at its upper end with a laterally extending slightly downwardly inclined guard tongue 7. The plate 6 is bowed outwardly at its upper end portion and this bowed portion extends throughout the length of the laterally extending guard tongue 7, as indicated by the numeral 8, the bowed portion 8 reinforcing the upper end of the plate 6 and said tongue so that danger of bending or other mutilation, particularly at the junction of the plate and tongue, such as might be caused by repeated contact with the track, will be reduced to a minimum. Formed in the plate 6, medially of its width, are spaced longitudinally extending oblong slots 9. Formed in the inner face of the plate 6, throughout the major portion of its length, are laterally extending teeth or serrations 10. As best seen in Figure 3 of the drawings, the serrated portion terminates at the lower end of the bowed portion 8.

Connecting the plate 6 with the door 3 are bolts 11 which extend through the slots 10 and are provided with washers 12. Nuts 13 are screwed on the outer ends of the bolts. Carried on the bolts 11 and disposed between the plate and the door are locking plates 14, each of which is provided with a smooth surface 15 to lie against a surface of the door and a serrated or toothed surface 16 which is adapted to engage in the serrations 10. It is to be understood that, by loosening the nut 13 sufficiently, the plate 6 and the teeth or serrations 10 may be disengaged from the serrations 16 of the locking plate 14 so that the plate 6 may be shifted upwardly or downwardly, it, of course, being understood that the device will be permitted to shift due to the fact that the bolts 11 are located in the longitudinal slots 9. As best seen in Figure 2 of the drawings, the device is mounted so that the guard tongue 7 is disposed in close spaced relation to the lower edge of the track so that although the tongue does not normally make contact with the door as it slides along the track, should undue upward pressure to be placed upon the door, the guard tongue will contact the lower edge of the track

and will prevent the door from shifting sufficiently to disengage the flanges of the rollers 5 from the track. It is to be noted, in this connection, that the distance between the lower edge of the track 2 and the point of contact of the guard tongue is less than the length of the flanges of the rollers. This feature is important for the reason that the tongue will contact the lower edge before the flanges are permitted to disengage the track.

Attention is directed to the fact that, as wear upon the door takes place, the device may be readily shifted to assume a new adjusting position by simply loosening the screws and shifting the plate 6, in the manner hereinbefore described. It is emphasized that the bowed portion 8 will provide reinforcement and largely prevent bending of the guard tongue, which otherwise might be caused by repeated contact with the lower edge of the track.

Attention is further directed to the fact that, inasmuch as the guard tongue 7 is slightly inclined downwardly, shifting of the hanger toward the door jamb, with consequent bending of said hanger and mutilation of the jamb, will be reduced to a minimum in view of the fact that contact will be made along the surface of the bowed portion 8 of the tongue 7 before inward shifting can take place.

As shown in Figure 1 of the drawings, the device is preferably mounted in close spaced relation to the hangers, but if desired, disposition may be altered to suit prevailing conditions.

The modified form of my invention, as shown in Figure 5, includes a body plate 17 having a laterally extending and slightly downwardly inclined guard tongue 18. The body plate 17 is nicked along its opposite edges to define horizontally alined pairs of inwardly directed anchoring barbs 19. Formed in the body plate 17 longitudinally thereof are oblong openings 20 which are adapted to receive bolts 21 extending through the upper end of a door 22. Nuts 23 are, of course, screwed on the outer ends of the bolts. It will be seen that, in this modification of my invention, all that is necessary to do is to place the device in proper position overhanging the upper end of the door and force it inwardly so that the barbs 19 will bite into the wood of the door. The nuts are then screwed in place on the bolts so that the device will be firmly anchored in position. The barbs will, of course, limit the device against vertical movement. The function of the device, as shown in this modification, is identical with that of the preferred form.

Referring now to the modificaiton of the invention, as shown in Figure 7 of the drawings, the numeral 24 indicates an oblong body plate which is provided with a guard tongue 25. Formed in the oblong body plate longitudinally are vertically alined oblong openings 26 which are provided at their opposite corresponding edges with teeth 27. In Figure 8, this modified form of the device is shown in section and in mounted position with securing bolts 28 extending through the upper part of the door. Fitting over the outer end portion of the bolts are locking washers 29, each of which is formed with an integral locking tongue 30 which extends between corresponding pairs of teeth 27 and has its inner end extending into the wood of the door so that the locking washers will firmly anchor the device in a set adjusted position. It should be understood that, when it is desired to change the position of the device, it is only necessary to remove the nuts, remove the locking washers, and insert their tongues between different pairs of the teeth 27, and again place the nuts in position for again locking the device against vertical displacement. This form of the device is identical with the function of the preferred form and the hereinabove described modification of said device.

Referring now to the modification of the invention, as shown in Figure 9 of the drawings, I employ an oblong body plate 32 which is provided with oblong slots 33 having teeth 34 at their opposite corresponding edges. The oblong slots are preferably stamped from the plate and the portion stamped from the slots is preserved, as shown in Figure 10 of the drawings, and is apertured at 35 and divided medially of its length. The portions stamped from the slots define locking members 36, one of each of which is interposed in a slot with its teeth 37, which are formed simultaneously with the teeth 34 of the slots, meshing with certain opposite groups of teeth in each of the slots. Bolts similar to the bolts 28 are passed through the aperture 35 and serve to anchor the device against longitudinal shifting movement. It should be understood that, when it is desired to shift the position of this modified form of the device, it is only necessary to unscrew the nuts on the bolts and free the locking members 36 from the slots, when the device may be shifted longitudinally to assume a new position. The locking members are again intermeshed and the nuts are tightened in position for again locking the device in an adjusted position. As stated with regard to the hereinbefore described modification, this modified form of the device functions in a manner similar to that of the preferred form.

It is believed that, from the foregoing, it will be understood that I have provided a simple and highly efficient anti-jumper for doors which may be manufactured cheaply and which will greatly lengthen the life of a door to which it is attached, as derailing and consequent damage to the door will be practically eliminated.

Having thus described the invention, I claim:

1. An anti-jumper for doors comprising a plate having a laterally extending downwardly inclined guard tongue thereon and being provided with longitudinal slots, and means adapted to be carried on a door and engageable through the slots for adjustably connecting the plate to the door, said laterally extending downwardly inclined guard tongue being engageable with a track for preventing derailing and outward shifting of the door.

2. A device of the class described including a body plate having a laterally directed guard tongue formed integrally therewith, longitudinally disposed slots formed in the body plate, the body plate being nicked at its opposite edges to define rigid barbs for engagement with a surface, and means extending through a door and through the body plate for retaining the barbs in engagement with the surface whereby the device will be locked against shifting movement, said guard tongue being adapted to engage a sliding door track as the door is shifted upwardly for preventing derailing of the door.

3. A device of the class described including a body plate having a laterally directed tongue adapted for engagement with a sliding door track, said plate having longitudinally disposed slots

formed with teeth, bolts extending through the upper end of the door and through said slots, locking washers carried by the bolts and locking tongues thereon, said locking tongues extending into the slots between corresponding pairs of teeth and being projected to engage within the surface of the door whereby longitudinal shifting of the device will be prevented, and securing means overlying the locking washers and retaining said washers and tongues in operative position.

4. In an anti-jumper for doors, a plate having a laterally extending downwardly inclined guard tongue, and means adapted to be carried on a door and engageable with the plate for connecting the plate to the door, said guard tongue being engageable with a track for preventing derailing and outward shifting of the door.

5. In an anti-jumper for sliding doors, a body plate having a laterally directed guard tongue, the body plate being nicked at its opposite edges to define rigid barbs for engagement with a surface, and means extending through the body plate for securing the device to a door and projecting the barbs into engagement with the surface whereby the device will be locked against shifting movement, said guard tongue being adapted to engage a sliding door track for preventing derailing of the door.

FRANK W. MOORE.