May 5, 1936. E. A. ZETMEIR 2,039,866

DOOR HANGER

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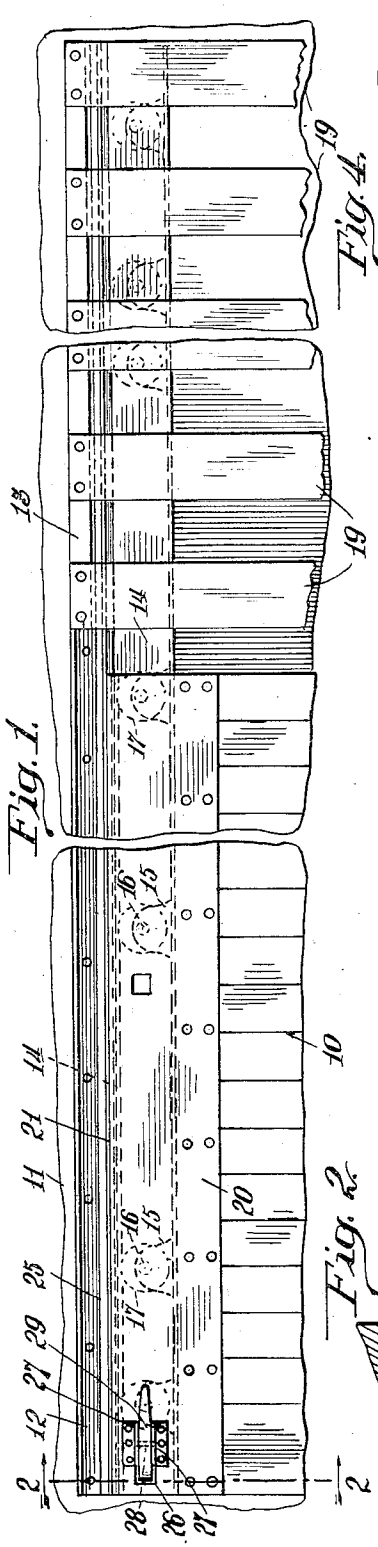


Fig. 1.

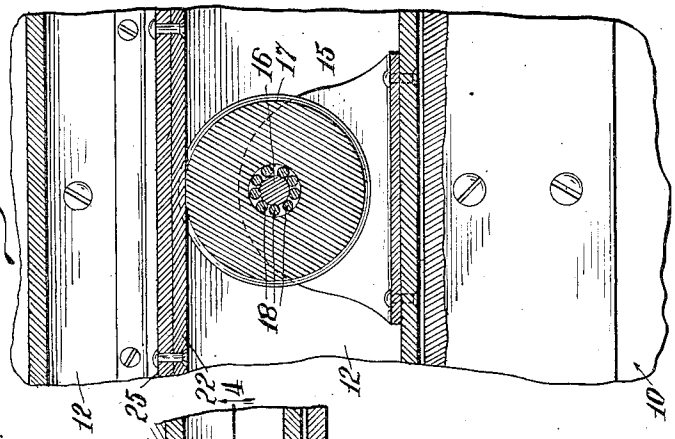


Fig. 4.

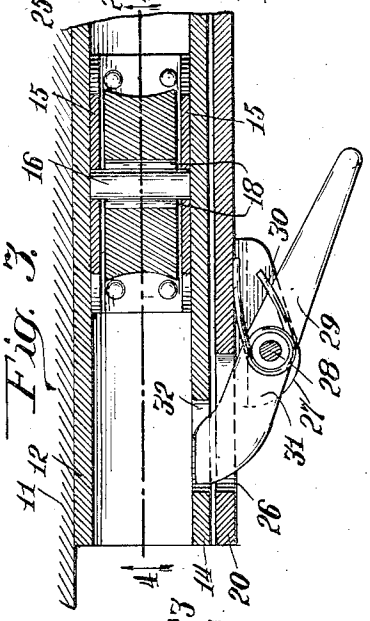


Fig. 3.

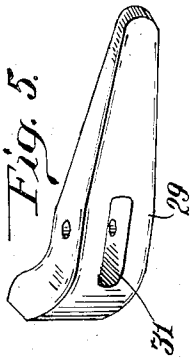


Fig. 5.

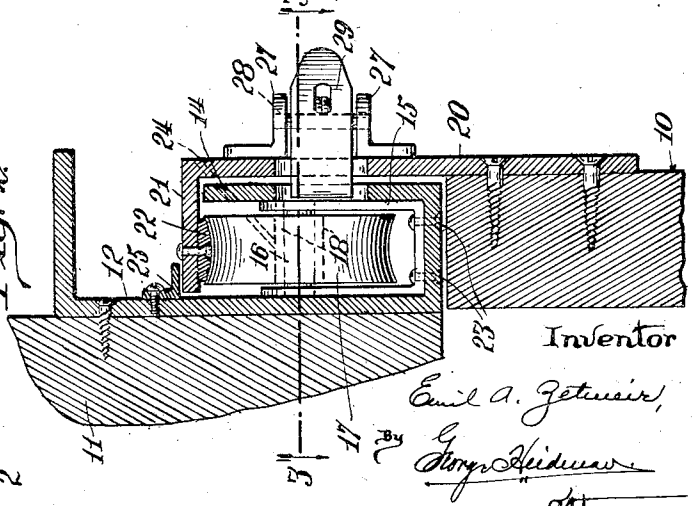


Fig. 2.

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DOOR HANGER

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Application October 13, 1934, Serial No. 748,176

1 Claim. (Cl. 16—101)

My invention relates to hangers more especially intended for baggage car doors, whereby the door is suspended at its top and provided with a track element which moves with the door and is adapted to ride along a plurality of rollers which are adapted merely to rotate about fixed axes, thus eliminating possibility of the rollers becoming misplaced or jammed.

The invention also involves means carried by the door whereby the door is automatically locked in open position and possible injury of the baggage-man or other employee through accidental closing of the door, due to vibration or jolting of the car, will be eliminated; said means, however, permitting the door to be easily and quickly released when desired.

The invention also involves a construction whereby all possibility of drag or sagging of the door is eliminated; the hanger permitting an air-tight relation at the top of the door to be provided while at the same time an easy operating door is also provided.

The invention involves other features and advantages which will be all more fully comprehended from the detailed description of the accompanying drawing, wherein—

Figure 1 illustrates in elevation the upper end of a baggage car door, with intermediate portions broken away; the door being hung by my improved hanger.

Figure 2 is a vertical sectional view taken substantially on the line 2—2 of Figure 1 as viewed by the arrows.

Figure 3 is a cross sectional view taken substantially on the line 3—3 of Figure 2 as viewed by the arrows.

Figure 4 is a detail sectional view taken substantially on the line 4—4 of Figure 3, as viewed by the arrows.

Figure 5 is a detail perspective view of the latching means.

My improved hanger is especially intended for the doors of baggage cars and therefore for purposes of exemplification, it has been shown applied to the sliding type of a baggage car door of which a portion is shown at 10 while a portion of the car wall immediately above the door opening is shown at 11.

Secured to the car wall above the door opening and extending a predetermined distance beyond the opening is a horizontally disposed channel member 12; the top at one end being shown with a depending flange portion 13, while the bottom is shown with an upstanding flange portion 14; the member being of substantially C-shape in cross-section beyond the door-opening.

The bottom of the channel member 12, at various points, is provided with the U-shape standards or brackets 15 which support the journals 16 for the large rollers 17 shown provided with a dished or concaved perimeter. These rollers 17 are preferably provided with anti-friction or roller bearings as shown at 18 in Figure 4 so as to cause the rollers 17 to revolve quite freely. A sufficient number of these rollers 17 are mounted at spaced apart points in the channel member as shown in Figure 1; both above the door opening and to the side of the door opening which is provided with the usual guard rack shown at 19 in Figure 1, secured to the depending flange 13 of member 12.

Secured to the inner face of the door 10 at the upper end so as to extend thereabove is an inverted L-shaped plate or angle 20 (see Figure 2), with the upper leg 21 disposed horizontally into the channel member 12, overlapping the leg or side 14 of the member 18 and arranged to extend over the roller 17. The horizontally disposed side 21 of the angle plate 20 is shown provided with an arcuate strip 22 adapted to ride on the concaved surface of the rollers 17.

The strip 22 extends the full length of the angle plate 20 which latter extends the full width of the door 10; the strip 22 being of thickness sufficient to cause the leg or side 21 of the angle plate 20 to clear the upstanding flange 14 of the wall member 12. As is apparent from the construction as shown in Figure 2, the strip 22 and the angle plate 20 support the door and the strip 22 rides on the rollers 17 when the door is slid to open or to closed position while the rollers 17 rotate about fixed axes.

The brackets 15 are immovably secured to the channel member 12 in any suitable manner as for example by means of rivets as shown at 23; and the angle plate 20 and the upstanding flange 14 of channel member 12 may be provided with oil introducing holes as shown at 24 at points coincident with the journals of the rollers 17; the holes in the members 20 and 12 being adapted to register when the door is in closed position.

With the overlapping portions of the channel member and of the angle member it is apparent that a box-like housing for the rollers and their bearings is provided and consequently a comparatively dirt-proof hanger provided.

After the door plate 20 with its track strip 22 has been put into place over the rollers 17,

thereby suspending the door in place, a guard strip in the form of angle iron **25** is then secured to the wall member **12** so as to lap the top of the horizontal leg **21** of the door plate **20**; the angle strip **25** being arranged in slight spaced relation with the door plate **20** so as not to interfere with the free movement of the latter.

This strip **25** at the same time effects a closure for the bearings. This strip **25**, as is apparent, will prevent improper upward movement of the door and its hanger plate **20**.

The door hanger or plate **20** is provided with a slot or hole **26**, see Figure 3; and the hanger plate **20** adjacent to this hole is provided with a pair of bracket members **27, 27**, one above the other and in spaced relation as shown in Figure 2. These members **27, 27** support a vertically disposed pin **28** on which a latching pawl **29** is pivotally mounted to swing horizontally.

The enlarged or head end of the pawl is yieldingly held in the opening **26** of the door member **20** by means of spring **30** which is coiled about the pin **28**, with one end bearing against the door plate or member **20**, while the other end of the spring is disposed through the slot **31** of latching pawl **29** and exerts outward pressure against the tail end of the pawl as shown in Figure 3.

At a predetermined point the wall member **12**, namely the upstanding flange **14** thereof, is provided with a suitable hole **32**, with which the opening **26** in the door plate or member **20** is intended to register when the door **10** has been moved to complete open position.

With the spring **30** exerting pressure against the tail end of pawl **29**, the head end of the pawl will automatically enter hole **32** as soon as the door has been opened and the hole **26** is brought to register with the hole **32**.

As is apparent from the construction as shown in Figure 3, the enlarged head of the pawl will prevent movement of the door to closed position or toward the left in Figure 3 and hence the danger of accidental closing of the door and possible injury to the baggage man or others standing in the door opening will be prevented. At the same time when it is desired to close the door, this may be very easily accomplished by simply pressing the tail end of pawl **29** toward the door, thereby causing the head end to be withdrawn from the opening **32** in the upstanding flange **14** of the wall member **12**.

As soon as the head end of the pawl **29** has been withdrawn from the opening **32** in the flange **14** of the wall member **12** and the door moved to where the opening **26** is out of register with opening **32**, the pawl may be released as the head of the pawl will slide or ride along the imperforate portion of the flange **14** until it again reaches opening **14**.

As shown in Figure 2, the roller bearings and door carrying trackway are all completely enclosed making ingress of dirt or foreign matter impossible, while at the same time the angle bar or strip **25** also prevents upward movement or wedging of the door and a more or less weather sealed relation provided.

It will be understood that the latch mechanism is preferably secured adjacent what may be termed the front end of the door so as to allow the door to be moved to complete open position between the main side wall of the car and the usual guard rack **19** and be locked in the open position by having the pawl enter the opening in the flange **14** of wall member **12**; the guard **19** forming a pocket to receive the door.

Although my improved hanger is especially adapted for the doors of baggage cars, it is equally well adapted for garage doors and the like; and while the construction shown and herein described is believed to be the simplest and best embodiment of the invention, modifications are possible and may be made without, however, departing from the spirit of my invention.

What I claim is:

A door hanger of the class described comprising a channel member adapted to be secured to the car wall above the door opening with the open side of the channel disposed laterally and the member adapted to extend horizontally beyond the door opening, the lower part of the member being substantially U-shape in cross section to provide a roller channel open at the top and located beneath the outwardly disposed leg or side of the main channel member; a plurality of brackets fixedly secured in spaced relation on the bottom of said last mentioned channel and each having a roller journaled therein; an inverted L-shape plate adapted to be secured at the top of the door with the horizontally disposed leg thereof extending across the top of the roller-receiving channel in said car wall channel member, the lower surface of said leg of the L-shape plate being provided with a roller-engaging strip coacting with said rollers to prevent lateral shifting movement and the door thereby supported on the rollers; and a guard strip removably secured to the first mentioned channel member in overlapping relation with the horizontally disposed leg of the L-shape door plate.

EMIL A. ZETMEIR.