O. BUTLER.

CAR DOOR HANGER.

APPLICATION FILED DEC. 4, 1909.

1,009,221.

Patented Nov. 21, 191

2 SHEETS—SHEET 1.

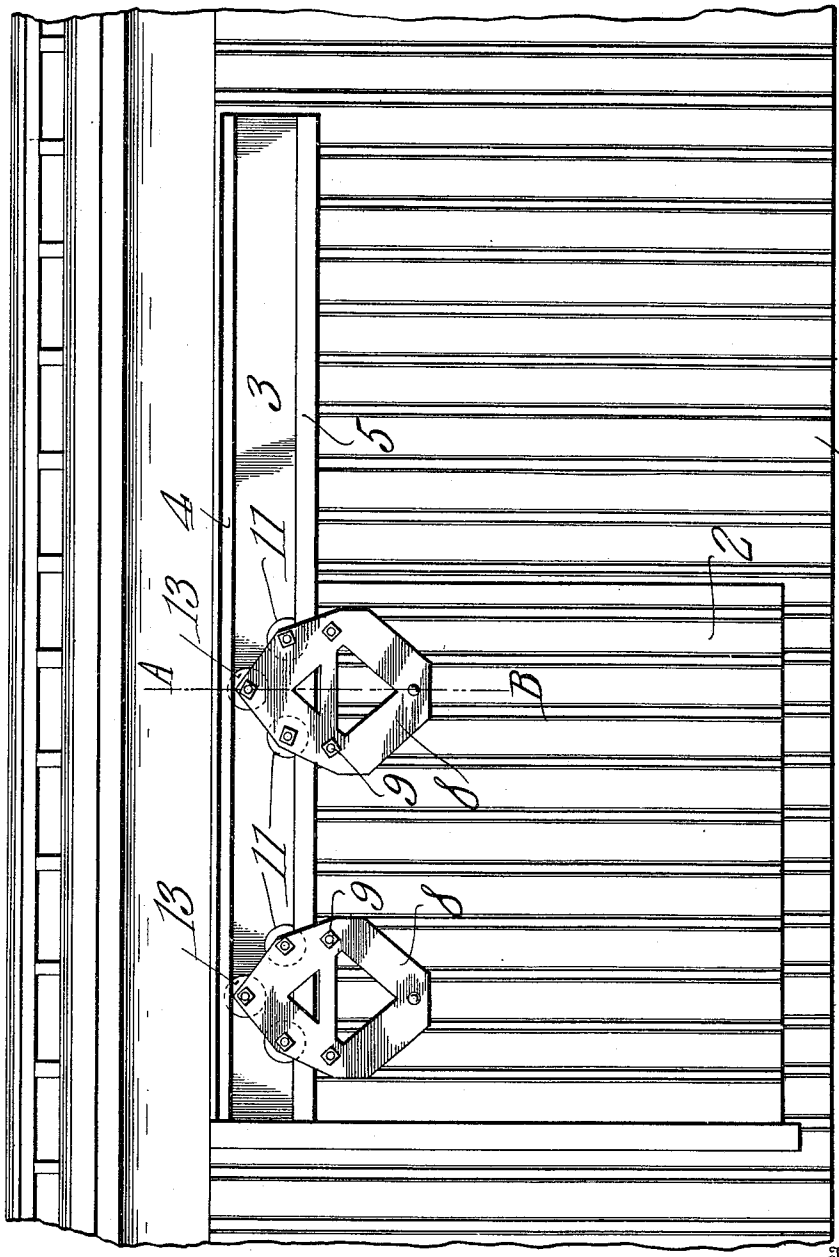

Fig. 1.

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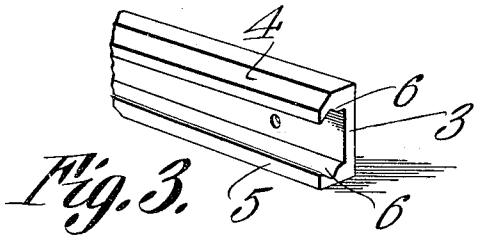


Fig. 3.

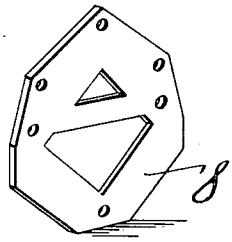


Fig. 4.

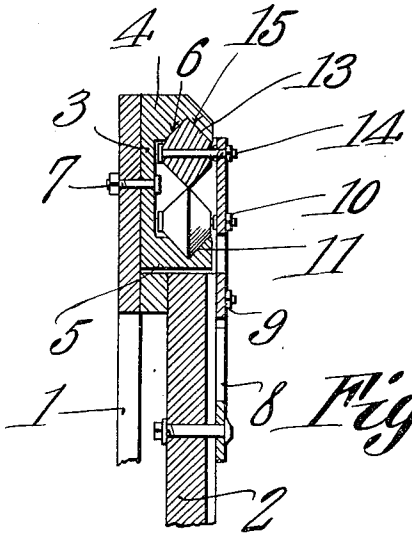


Fig. 2.

Fig. 5.

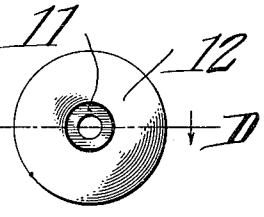
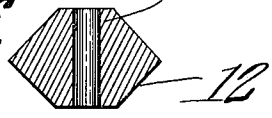


Fig. 6.



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UNITED STATES PATENT OFFICE.

OTTO BUTLER, OF PITTSBURG, KANSAS.

CAR-DOOR HANGER.

1,009,221. Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed December 4, 1909. Serial No. 531,376.

To all whom it may concern

Be it known that I, OTTO BUTLER, a citizen of the United States, residing at Pittsburg, in the county of Crawford and State of Kansas, have invented a new and useful Car-Door Hanger, of which the following is a specification.

This invention relates to door hangers, particularly to freight car door hangers; and has for its principal object to provide a simple, inexpensive and durable door hanger that will prevent the bottom of the car door from swinging outward when the moving car rocks upon its trucks.

To this end it comprises a door hanger track in the form of a channel bar, the grooved flanges of which provide rails that cannot become spread apart or distorted from their original relative position, and hanger wheels with angular tread surfaces that snugly fit correspondingly shaped grooves in the rails to guide the door in its sliding movement.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the combination with a car-door, of a hanger, stub-shafts carried thereby and arranged in triangular relation, rollers carried by the shafts and having angular peripheries, and a track embodying, in a one-piece structure, a web and a pair of flanges, the latter having like-shaped grooves to be engaged by the rollers, the track being reversible so that should the groove in the lower flange become pitted from the vibrations of the door, by transposing the position of the track, a new guide groove will be presented to the lower rollers.

In the accompanying drawing forming part of this specification, Figure 1 is a side elevation of a freight car door equipped with my improved door hanger. Fig. 2 is a longitudinal sectional view through the line A—B of Fig. 1. Fig. 3 is a fragmentary perspective view of the hanger track. Fig. 4 is a perspective view of the wheel supporting member. Fig. 5 is a side elevation of one of the wheels. Fig. 6 is a transverse sectional view taken on the line C—D of Fig. 5.

Referring now to the drawing in which like characters of reference designate similar parts in the views shown, 1 designates a portion of the side of a freight car and 2 a freight car door fitted to the same, both being of the usual and well known construction.

The car door hanger comprising the subject matter of this invention consists of a track formed from a channel bar, the web 3 of which stands upright and is rigidly secured to the side of the freight car above the door 2 and the flanges 4 and 5 of which are provided on their adjacent faces with longitudinal V-shaped grooves 6 in which travel the wheels of the door hanger. The track may be secured above the door in any preferred manner, the connection here being shown by bolts 7.

A hanger 8 of the general shape shown in Fig. 4 is rigidly secured by means of bolts or similar connectors 9 to the car door. Rotatably mounted upon stub shafts 10 carried by the hanger are a pair of spaced wheels 11 having their peripheral tread surfaces 12 angular to conform to and snugly engage the V-shaped groove 6 in the lower rail of the track. The spaced wheels 11 support the door 2 upon the lower rail 5 of the track and by snugly engaging the V-shaped groove therein permit of the door being freely moved longitudinally of the rail without any play between the tread surfaces of the wheels and wheel engaging surface of the rail so that rattling of the hanger is obviated.

For preventing the bottom of the car door from swinging outward as the rapidly moving car sways upon its trucks, a wheel 13 is rotatably mounted upon a stub shaft 14 carried by the hanger above and midway between the stub shafts of the spaced wheels 11. The peripheral tread surface 15 of the wheel 13 is also angular to conform to the outline of and snugly engage the longitudinal V-shaped slot 6 of the upper rail 4. The wheel 13 runs freely in the upper groove of the rail 4 but usually without touching it, and its sides by engaging the sides of the groove positively prevent any lateral rocking movement of the door when the latter is closed or being moved in to open or closed position.

It will be observed by reference to Fig. 3 that the wheel grooves in the two flanges are of like structure, and this arrangement secures a very important function inasmuch as it adapts the track to be reversible, so that should the groove in the lower flange

become pitted from the vibration of the door, by transposing the position of the track, a new guide groove will be presented to the lower rollers. This is an important feature, as it will not only result in a saving both of time and money, but will also cause the track to wear twice as long as if only one of the flanges were employed until useless.

A car door equipped with this hanger will be held from swinging outward at its free or bottom end when the car rounds a curve or sways upon its trucks while in rapid motion so that the door will not be caught by projections from passing trains or along the track and wrenched from the car.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction and operation of my invention will be easily understood without a more extended explanation, it being understood that various changes may be made in the form, proportion and minor details of construction without departing from the spirit of the invention or sacrificing any of the advantages.

What is claimed is:

The combination with a car-door, of a hanger, stub-shafts carried thereby and arranged in triangular relation, rollers carried by the shafts and having angular peripheries, and a track embodying, in a one-piece structure, a web and a pair of flanges, the latter having like-shaped grooves to be engaged by the rollers, the track being reversible so that should the groove in the lower flange become pitted from the vibrations of the door, by transposing the position of the track, a new guide groove will be presented to the lower rollers.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OTTO BUTLER.

Witnesses:

JNO. W. JENNINGS,

E. R. COLLINS.