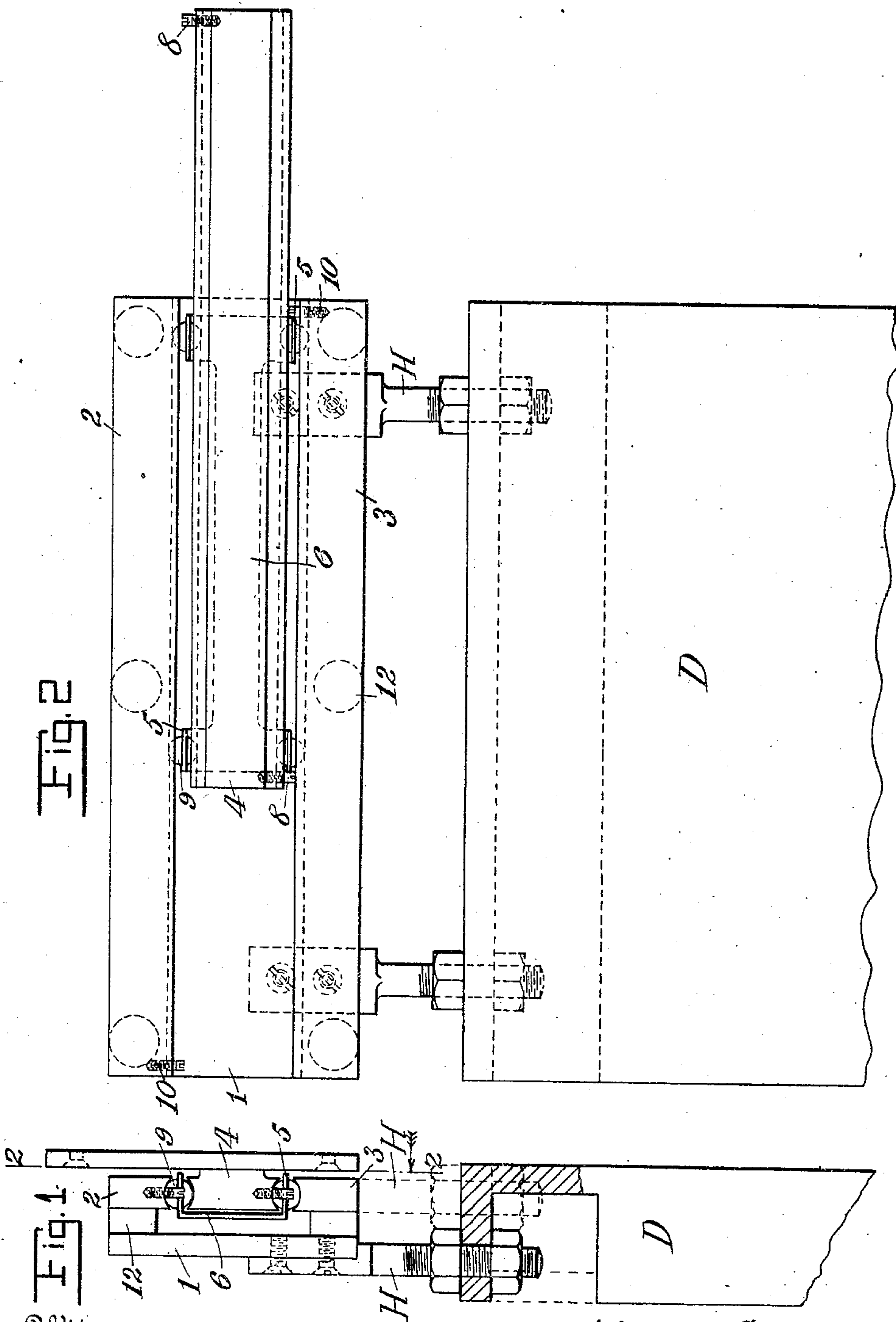


M. COSSEY.
DOOR HANGER.

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954,933.

Patented Apr. 12, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

MYRON COSSEY, OF NEW YORK, N. Y., ASSIGNOR TO RELIANCE BALL BEARING DOOR HANGER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

DOOR-HANGER.

954,933.

Specification of Letters Patent.

Patented Apr. 12, 1910.

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To all whom it may concern:

Be it known that I, MYRON COSSEY, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Means for Door-Hangers, of which the following is a specification.

My invention relates to means for hanging laterally movable doors and other closures.

In the accompanying drawings, Figure 1 is an end view of the means for hanging a laterally movable door and embodying my invention. Fig. 2 is a back elevation of that portion of my device situated to the left of the plane 2, 2 of Fig. 1.

Similar characters of reference designate corresponding parts in all of the figures.

I will premise that in this class of devices, where the part from which the door or other closure is suspended on anti-friction devices, it is important that the anti-friction devices while left perfectly free to roll or travel along their tracks or supports, should be kept in proper relative positions, or should the anti-friction devices be arranged in sets, the sets should be kept in proper relative positions. When this is accomplished a much better support is obtained for the door or other closure at all points of its travel. It is also important that the anti-friction devices or sets of anti-friction devices should be in position to support the door at the end of each full lateral movement of the door or other closure.

Referring to the drawings, 1 designates a suitable plate, 2 and 3 bars or rails extending longitudinally of the plate 1, and secured thereto by fastenings upon which are the collars 12 for separating the plate from the bars or rails. 4 is a third bar or rail extending longitudinally of the bars 2 and 3. The bars 2, 3 and 4 are adapted to have movement relatively to each other. That is to say, the bar 4 may be fixed against movement and the bars 2 and 3 have movement along the bar 4. The door or other closure is suspended from the movable bars. The movable bars may be termed the sliding member and the bar 4 the fixed member, and for convenience I shall hereafter refer to these parts as such.

D designates a closure here shown as being in the form of a door, which is suspended

from the sliding member in any convenient manner, by hangers H which may be as shown in the drawing in dotted lines suspended from the bar 3, or by the full lines as suspended from the plate 1.

The bars 2 and 3 of the sliding member and the fixed member 4 have grooves or raceways along their adjacent edges, to receive an anti-friction device or anti-friction devices, which as here shown are in the form of balls 9. The anti-friction device or devices between the bars 2 and 3 and the bar 4 constitute what may be termed a set. In the case of at least four anti-friction devices they will preferably be arranged in pairs having one anti-friction device in each pair, arranged above another anti-friction device of the same pair. In such a case each pair of anti-friction devices may constitute a set.

In order that the anti-friction devices may be kept in their relative positions, I provide suitable carriers, also called carriages. The carriages or carriers preferably comprise cages and means or devices by which the cages may be spaced apart. There may be any number of cages which may be spaced in any desired manner. In any case there should be at least three anti-friction devices and therefore at least 3 cages. In the preferred form of my invention I employ four anti-friction devices arranged two in each set.

Referring now to Figs. 1 and 2, the carriage comprises 2 vertically arranged pieces, each provided with two cages 5 and a longitudinally extending spacing strip 6, which is suitably joined to the two pairs, or it may be integral with the two pieces. Each cage 5 is provided with an aperture 5 in which an anti-friction device 9 is placed. The form of cage 5 shown in the drawings has one cage above the other, but many other forms could be used if desired. One or more detents 8 is provided at or near the end of the fixed member 4, to prevent the carriage passing out from between the fixed and sliding members.

It will be seen that upon a movement of the door D laterally in either direction the anti-friction devices on both sides of the fixed member 4 will move to support the door in any position to which it may be moved, and by reason of the spacing of the anti-friction devices relatively to each other and maintaining this spacing at all times a

uniform support for the door is always provided.

Should the anti-friction devices be prevented from moving with the door, as for example by their sticking in the grooves of the fixed member, so that the sliding member will have a movement relatively to the held anti-friction devices, I provide means for causing the anti-friction devices to be moved by the sliding member upon a full lateral movement of the door in either direction. As shown, this may be accomplished by providing pins or studs 10 at the ends of this member, which engage with the carriage to cause it to move with it. These pins or studs 10 act in connection with the detents 8 to always have the anti-friction devices in the position which will afford the best support for the door. In practice the proper position for the anti-friction devices is dependent mainly upon the door and is determined in part by the position of the sliding member to the fixed member when

the door is in an extreme position. After this proper position has been determined in each case the pins 10 and detents 8 may be so arranged that the anti-friction devices will be moved by them, in case the anti-friction devices should not always move with the door to their proper position.

What I claim as my invention and desire to secure by Letters Patent is:—

A door-hanger, comprising a fixed member having longitudinal raceways in its upper and lower edges, a carriage, balls movable with the carriage and engaging said raceways, and a sliding member having upper and lower raceways for receiving said balls.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

MYRON COSSEY.

Witnesses:

J. C. CONRADT,
HENRY R. BAUER.