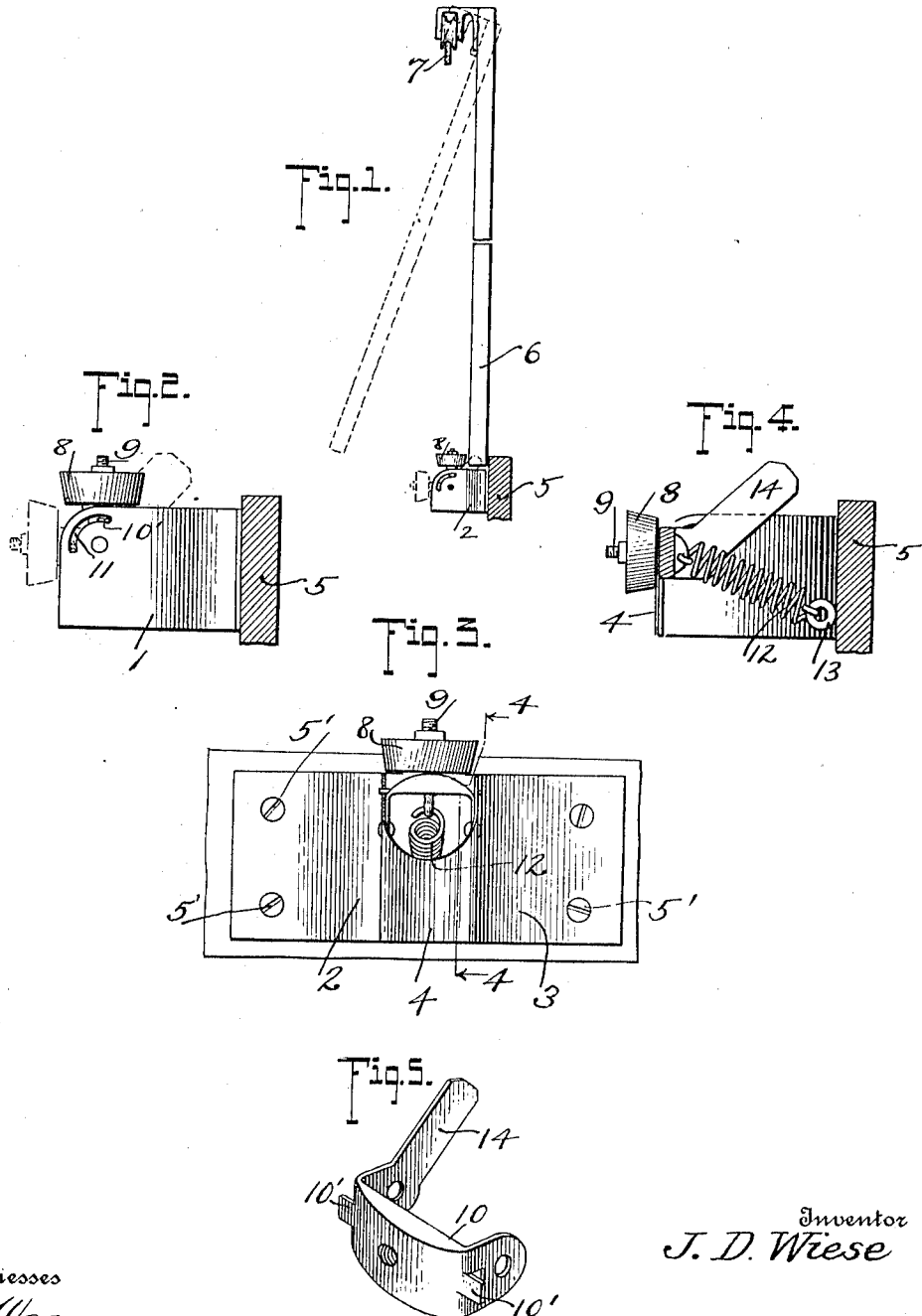


J. D. WIESE.
 AUTOMATIC DOOR GUIDE.
 APPLICATION FILED FEB. 12, 1912.

1,040,829.

Patented Oct. 8, 1912.



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JOHN D. WIESE, OF MANSON, IOWA.

AUTOMATIC DOOR-GUIDE.

1,040,829.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed February 12, 1912. Serial No. 676,951.

To all whom it may concern:

Be it known that I, JOHN D. WIESE, a citizen of the United States, residing at Manson, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Automatic Door-Guides, of which the following is a specification.

This invention has for its primary object the provision of a simple device, which under normal conditions acts as a guide for sliding doors in their longitudinal movements, while at the same time permitting release of said door in respect to abnormal movement thereof.

As is well known, the ordinary sliding door when in closed position is often subjected to lateral or outward pressure, such for instance as caused by stock, confined within a building attempting to gain their liberty, resulting in damage to the door or its hangings.

An object, therefore, of this device is to release the door under such conditions to permit it to yield to such lateral pressure thereagainst, means being also provided for automatically restoring the device to its normal operative position when it rebounds.

For a full understanding of the present invention, reference is to be had to the following description and the accompanying drawings, in which—

Figure 1 is a side elevation of my invention, showing the guide in its normal position adjacent a door and in dotted lines the abnormal movement in releasing said door. Fig. 2 is a side elevation of my invention alone. Fig. 3 is an end elevation of the same. Fig. 4 is a longitudinal sectional view taken about on the line 4—4 of Fig. 3 and showing the guide in abnormal position, and Fig. 5 is a perspective view of the U-shaped supporting member to which the roller bearing is secured.

Throughout the following detailed description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Specifically describing my invention, 1 denotes a bracket or support comprising the

spaced sides 2 and 3, and the end portion 4, said bracket being of substantially U-shape in form and adapted to be suitably secured as by means of the screws 5' to the sill 5 adjacent the bottom of the door 6 which is suspended in the ordinary manner from a track 7.

Adapted to guide the door 6 in its normal longitudinal movements, is a roller bearing 8 secured by means of an eye-bolt 9 to the U shaped supporting member 10 pivotally mounted between the spaced sides 2 and 3 of the bracket 1. Preferably stamped from the body of the supporting member 10 at either side thereof are the lugs or ears 10' which project into the curved slots 11 formed in the spaced sides 2 and 3, the purpose of said slots being to limit the movements of said member 10. A spring 12 is fastened at one end in the eye of the bolt 9 and secured at the other end in a screw-eye 13 screwed into the sill 5, said spring tending to swing the supporting member 10 and the bearing 8 to the limit of their movements.

As will be apparent, when the lateral pressure is exerted against the door 6, the bearing 8 normally held by the spring 12 in the position shown in full lines in Figs. 1 and 2 of the drawings, yields to release said door and permit it to swing outwardly, the spring again tending to draw the bearing 8 to the limit of its abnormal position, shown in dotted lines in said figures.

As most clearly shown in Fig. 5, one side of the U-shaped supporting member 10 is formed with an integral arm 14 projecting at an angle to the side of the member 10 in the vertical plane, so that when the bearing 8 is thrown into its abnormal position, said arm 14 extends slightly above the bracket 1 and into the path of lateral movement of the door. As the door returns or rebounds to its proper position it impinges against the arm 14, thereby bringing the roller 8 back to its normal position for guiding said door.

The end 4 of the bracket 1 is suitably cut out at its upper portion to accommodate for the movement of the roller 8 and said roller

is preferably beveled on its periphery to most easily permit the release of the door when said roller is impinged thereby.

Any suitable number of these devices may be located adjacent the lower portion of the door to guide the same in its movements and it will be apparent that changes may be made in the specific construction of the same without departing from the spirit of my invention and within the scope of the claims hereto appended.

Having thus described the invention, what is claimed as new is:

1. In combination, a horizontally sliding and vertical swinging door, a fixed support disposed below the same, an integral approximately U shaped support having both transverse end portions pivotally connected with the fixed support so that the same may be swung in a vertical plane to assume upper and lower positions with relation to the door, one of the transverse end portions being extended to form an element to be engaged by the door to return the approximately U shaped support to its upper position, a spring connected with the approximately U shaped support to hold the same in its upper or lower position when moved to the same, and a roller mounted upon the longitudinal portion of the approximately U shaped support and adapted, when the approximately U shaped support is in its upper position, to rotate upon a vertical axis in engagement with the door.

2. In combination, a horizontally sliding and vertically swinging door, a fixed support disposed near and below the door, a pivoted support connected with said fixed support and adapted to be moved to substantially vertical and horizontal positions, a roller mounted upon the pivoted support and adapted, when the pivoted support is in its substantially vertical position, to rotate upon a substantially vertical axis in engagement with the door to permit of the free longitudinal movement of the door and normally prevent the vertical swinging of said door, and a spring to normally hold the pivoted support in either position when moved thereto.

3. In combination with a door, an automatic guide therefor comprising a bracket having a slot therein, a supporting member pivotally mounted in said bracket, lugs carried by the supporting member adapted to move in the slot aforesaid, the extremities of which forming limits of movement of the supporting member, a roller bearing secured to the supporting member and adapted to guide the door in its normal movement, said bearing being yieldable to release the door upon abnormal movement thereof, a spring connected to the bearing and tending to swing the same to the limit of its movements, and means operable by the door to

restore the bearing from abnormal position to normal position for guiding the door.

4. In combination, a horizontally sliding and vertically swinging door, a fixed support disposed near and below the door, a pivoted support connected with said fixed support and adapted to be moved to substantially vertical and horizontal positions, a roller mounted upon the pivoted support and adapted, when the pivoted support is in its substantially vertical position, to rotate upon a substantially vertical axis in engagement with the door to permit of the free longitudinal movement of the door and normally prevent the vertical swinging of the same, a spring to normally hold the pivoted support in either position when moved thereto, the pivoted support being moved to its substantially horizontal position by the door swinging outward in engagement with the roller, and an element attached to the pivoted support to be engaged by the door upon its inward swing to swing the pivoted support to its substantially horizontal position.

5. The combination, with a horizontal sliding and vertically swinging door, of a vertically swinging pivoted support disposed below the door, a roller mounted upon the pivoted support to rotate upon a vertical axis in engagement with the door, when the pivoted support is in its vertical position, to allow of the free longitudinal sliding of the door and normally hold it against swinging movement, and means to positively limit the swinging movement of the pivoted support in both directions.

6. The combination with a vertically swinging and horizontally sliding door, of a fixed bracket disposed therebelow including spaced walls having curved slots formed therein, a swinging support mounted in the fixed bracket and pivoted thereto, extensions formed on the swinging support and operating in the slots, a roller mounted upon the swinging support and adapted, when said swinging support is in its vertical position, to rotate on a vertical axis in engagement with the door, a spring disposed in the fixed bracket and connected with the swinging support, and an element moved by the door to move the swinging support in one direction.

7. In combination, a vertical swinging and horizontally sliding door, a fixed support disposed below the door including spaced walls, a substantially U shaped vertical swinging support having its transverse end portions pivoted to the spaced walls, an element carried by one of the transverse end portions to be engaged by the door to return the swinging support to its upper position, a roller mounted upon the longitudinal portion of the substantially U shaped support and adapted, when said substantially U shaped

support is in its upper position, to rotate on
a vertical axis in engagement with the door,
and a spring extending into the substantially
U shaped support and connected with said
5 longitudinal portion thereof, to hold the
same in upper and lower positions when
moved thereto.

In testimony whereof I affix my signature
in presence of two witnesses.

JOHN D. WIESE.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."