

J. STOLZ.
SLIDING DOOR HANGER.
APPLICATION FILED MAR. 31, 1913.

1,073,180.

Patented Sept. 16, 1913.

FIG. 1.

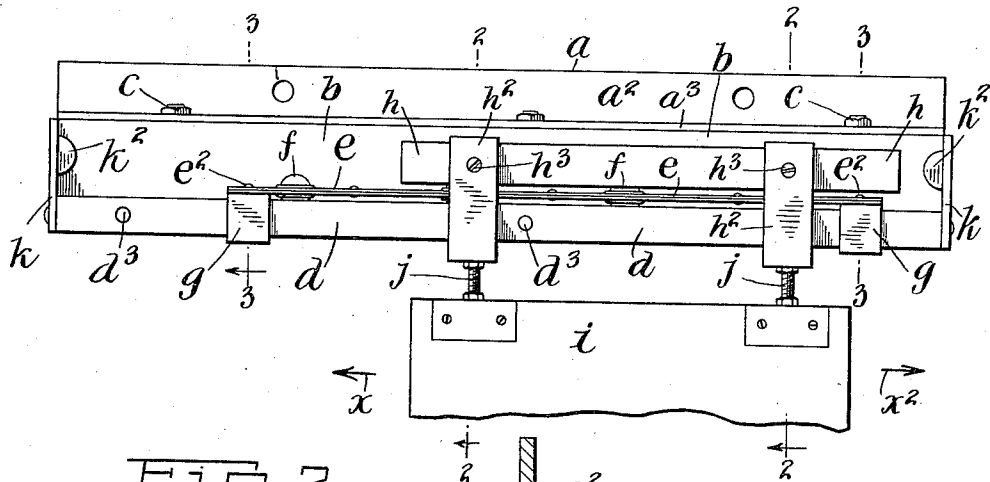


FIG. 2.

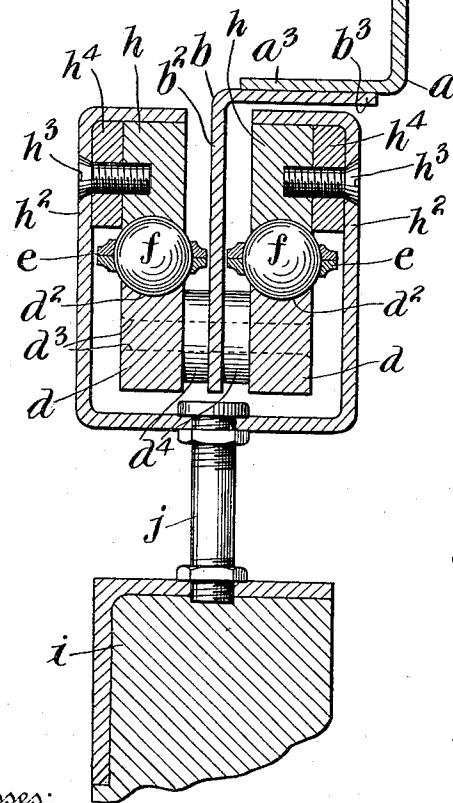
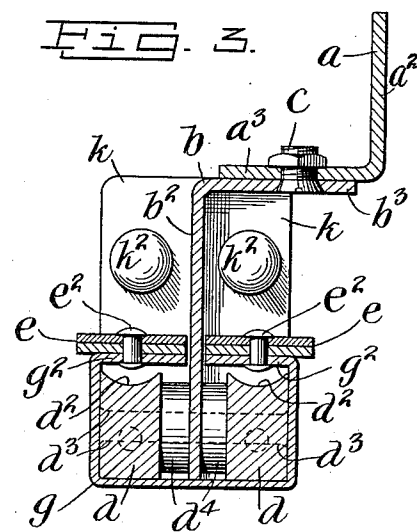


FIG. 3.



Witnesses:
H. C. Thompson.
S. Andrews.

Inventor
Joseph Stolz,
By his Attorneys
Edgar & Co.

UNITED STATES PATENT OFFICE.

JOSEPH STOLZ, OF NEW YORK, N. Y.

SLIDING-DOOR HANGER.

1,073,180.

Specification of Letters Patent.

Patented Sept. 16, 1913.

Application filed March 31, 1913. Serial No. 757,736.

To all whom it may concern:

Be it known that I, JOSEPH STOLZ, a citizen of the United States, and residing at the Bronx, in the county of New York and State of New York, have invented certain new and useful Improvements in Sliding-Door Hangers, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to door hangers for use in connection with sliding or laterally movable doors, and the object thereof is to provide an improved device or apparatus of this class which is simple in construction and operation and which will not get out of order, and by means of which the door may be more quickly and easily opened and closed than with devices or apparatus of this class as usually constructed.

The invention involves a strong and substantial horizontal frame or support having two parallel bottom bars forming tracks or ways and two longitudinally movable members mounted thereon one above another, the top movable member serving as a support for the door which is suspended therefrom, and the bottom movable member serving as a spacer and retainer for balls or ball bearings on which the top movable member rests and which rest on said tracks or ways, the construction and operation being such that in the movement of the door laterally when opening and closing the same, the top movable member and the bottom movable member move longitudinally of the frame, the top member moving more rapidly than the bottom member, which operation facilitates, as will be understood, the opening and closing of the door.

The invention is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the separate parts of my invention are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a side view of my improved door hanger and showing part of the door; Fig. 2 a transverse vertical section on either of the lines 2—2 of Fig. 1, and;—Fig. 3 a section on either of the lines 3—3 of Fig. 1.

In the practice of my invention, as shown in the drawing, I provide a strong horizontal frame or support comprising two angle iron plates a and b connected, as shown in Figs. 2 and 3, the plate a being provided

with a vertical part a^2 and with a horizontal part a^3 , and the plate b being provided with a vertical part b^2 and a horizontal part b^3 , and the horizontal parts a^3 and b^3 of said plates being secured together by rivets or bolts c , or in any other manner.

The vertical part b^2 of the angle plate b is provided at the bottom thereof and on opposite sides thereof with parallel tracks or ways d formed by parallel bars which are provided in the top surfaces thereof with longitudinal grooves d^2 which are arc-shaped in cross section, and the tracks or ways d are connected with the part b^2 of the plate b by rivet pins or bolts d^3 any desired number of which may be employed and which are shown in full lines in Fig. 1 and indicated in dotted lines in Figs. 2 and 3, and mounted on said pins or bolts between the tracks or ways d and the part b^2 of the angle plate b are spacing washers d^4 which hold said tracks or ways d in proper relative position.

Mounted on the tracks or ways d is a longitudinally movable bottom member e composed of two parts placed on opposite sides of the part b^2 of the plate b and comprising two plates, in the form of construction shown, and in which are placed ball bearings f which are spaced at regular intervals in said member e and extend above and below the same, and the ball bearings f rest in the grooves d^2 in the tracks or ways d , and it will be understood that the member e does not rest directly on the tracks or ways d , but is supported by the ball bearings f which are rotatable in said member. The bottom movable member e is secured at its opposite ends to yoke-shaped or box-shaped keepers g which are slidable on the tracks or ways d , as clearly shown in Fig. 3, and the connection between the member e and the yoke-shaped or box-shaped keepers g is made by means of rivets e^2 passed through the end portions of the members e , or the separate parts thereof, and through horizontal top members g^2 of the yoke-shaped or box-shaped keepers g , and with this construction the member e is free to slide or move longitudinally on the tracks or ways d .

The top movable member h of the hanger consists of parallel parts placed on opposite sides of the part b^2 of the plate b and resting on the ball bearings f and to the end portions of which are secured box-shaped keepers h^2 which inclose the tracks or ways d and the bottom movable member

e of the hanger, and the connection of the parallel parts of the top member of the hanger with the box-shaped keepers h^2 is made by means of screws or bolts h^3 which
5 are passed through the side portions of said box-shaped keepers and through spacing blocks or members h^4 placed between the member h and the sides of the said box-shaped keepers.

10 The door i is suspended from the bottom of the box-shaped keepers h^2 by means of bolts or other suitable hangers j , as shown in Fig. 2, and the operation will be readily understood from the foregoing description when taken in connection with
15 the accompanying drawing and the following statement thereof. When the door i is moved in the direction of the arrow a , both the top movable member h and the bottom movable member e of the hanger
20 will move in the same direction, but the top member h will move much more rapidly than the bottom member e , and when the door is moved in the direction of the arrow
25 a^2 , the operation will be the same except that the direction of the movement of the parts h and e will be reversed.

The top movable member h is preferably shorter than the bottom movable member e ,
30 and secured to the parallel tracks or ways d at the opposite ends thereof are plates k provided with buffers k^2 which limit the movement of the top movable member h of the hanger in opposite directions.

35 In mounting the movable members h and e of the hanger, the member e is placed centrally of the frame or support and the member h centrally of the member e , and in the operation of the door, or in the opening and closing of the same, the member e
40 never reaches the ends of the frame or support, the movement of said member e being limited by the movement of the member h which strikes the buffers k^2 .

45 The more rapid movement of the member h compared with the movement of the member e is produced by the method of connecting or mounting said parts, and the ball bearings f , as will be readily under-

stood, and my invention is not limited to 50 the exact construction of the frame or support, nor to the exact form or construction of the movable member e , and said movable member e may be composed of one plate if
55 desired, all that is necessary in this connection being that the ball bearings f be mounted and spaced in said movable member e and retained therein, and changes in and modifications of the construction herein described may be made, within the scope
60 of the appended claim, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention what I claim as new and desire to secure by 65 Letters Patent is;—

A door hanger comprising a suitable horizontal support provided with a depending vertically arranged and longitudinal plate member, parallel tracks placed on the op- 70 posite sides of and supported by said plate member, a horizontally movable ball carrying member composed of two parts resting on said tracks and on the opposite sides of said plate member and provided with balls 75 which are rotatably mounted thereon and which rest on said tracks; the separate parts of said member being connected by yoke-shaped keepers secured thereto and inclosing said tracks and the bottom of said 80 plate member and movable longitudinally thereon, and another horizontally movable member mounted on the ball carrying member and comprising two parallel parts which rest on said balls on the opposite 85 sides of said plate member and which are connected by depending yoke-shaped keepers secured thereto and inclosing the tracks and movable longitudinally thereon.

In testimony that I claim the foregoing 90 as my invention I have signed my name in presence of the subscribing witnesses this 28th day of March 1913.

JOSEPH STOLZ.

Witnesses:

C. MULREANY,
S. ANDREWS.