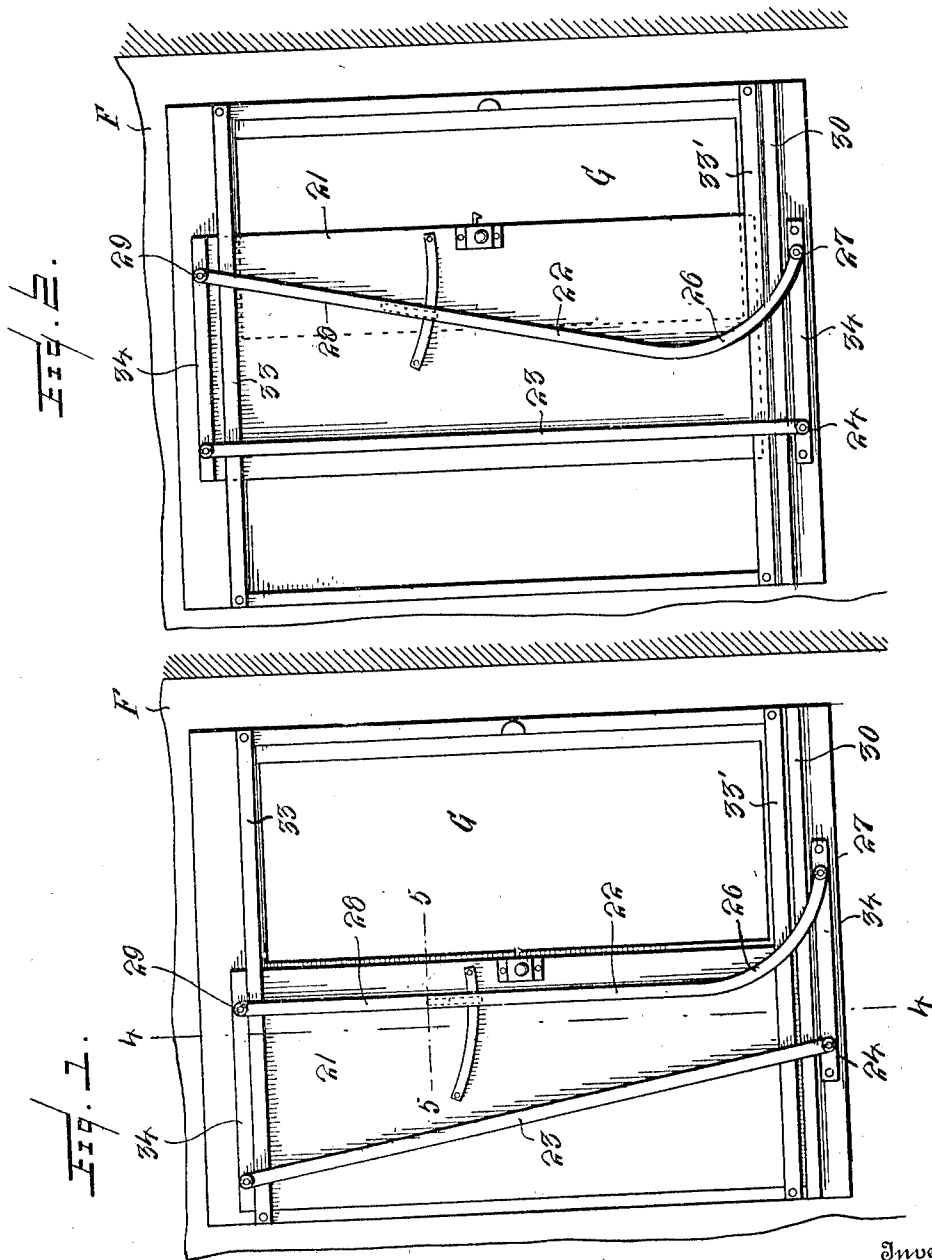


E. P. GOLDEN.
HANGER FOR SLIDING DOORS.
APPLICATION FILED JAN. 17, 1911.

Patented Aug. 22, 1911.

2 SHEETS-SHEET 1.

1,001,586.



Inventor
Ephraim P. Golden

Witnesses
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James A. Koebe

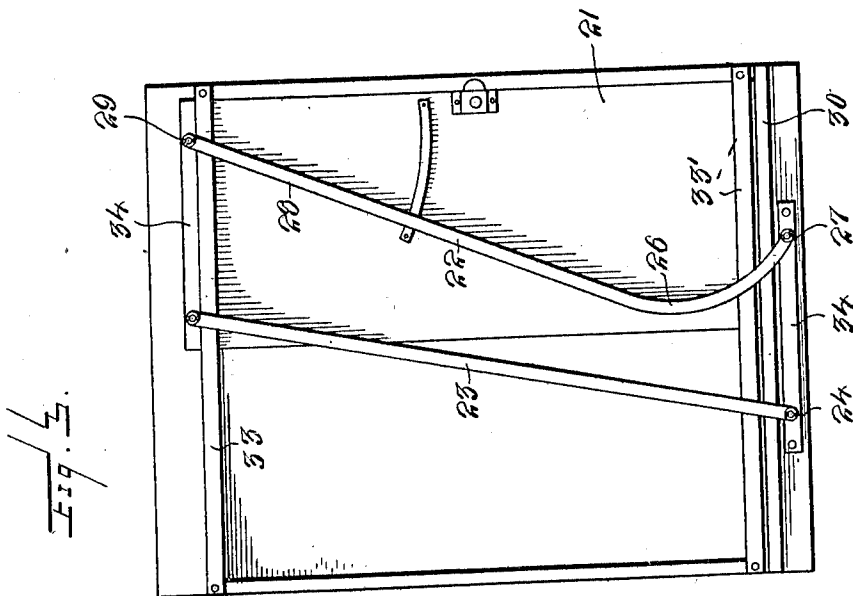
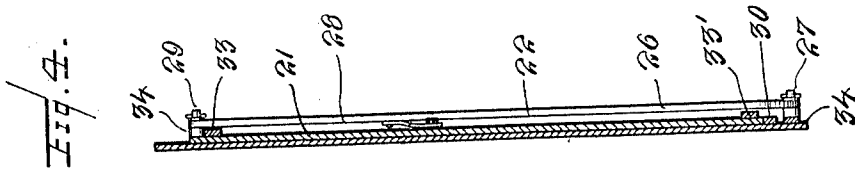
By Victor J. Evans
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UNITED STATES PATENT OFFICE.

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HANGER FOR SLIDING DOORS.

1,001,586.

Specification of Letters Patent. Patented Aug. 22, 1911.

Original application filed April 12, 1910, Serial No. 554,994. Divided and this application filed January 17, 1911. Serial No. 603,126.

To all whom it may concern:

Be it known that I, EPHRAIM P. GOLDEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Hangers for Sliding Doors, of which the following is a specification.

This invention relates to hangers for sliding doors, and has for an object to provide improved mechanism of this character consisting of companion pivotally supported links operatively connected with the door and supporting the same so as to cause it to move on an arc of a circle and to move automatically when the door is slightly past its neutral position, the construction of the links so as to cause the door to move on an arc of a circle being such as to entirely eliminate frictional engagement of the door with the door frame or casing.

In the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a view in section through a portion of an elevator shaft showing the application of my improved door to the door opening of the shaft and showing the door in a full open position. Fig. 2 is a similar view showing the door in a neutral position. Fig. 3 is a similar view showing the door in its full closed position. Fig. 4 is a section on line 4—4 of Fig. 1.

The elevator shaft F shown herein is provided with a door opening G. The door 21 is hung and supported by links 22 and 23, the former being of angular form and the latter being formed preferably of a straight bar. The link 23 is pivoted, as at 24, to a fixed support in the shaft immediately beneath the door opening. The upper end of the link is pivoted to the door preferably on the inner side thereof and near one of its vertical edges. The link 22 has its short arm 26 pivoted, as at 27, to a fixed support in the shaft at a point beneath the door opening and on a line with the pivot 24 of the link 23. The long arm 28 of the link 22 is pivotally connected, as at 29, to the door near the upper outer edge thereof. When the door is in the closed position shown in Fig. 3, its lower edge rests on the horizontal support 30 which is provided for the pur-

pose of relieving strain on the pivot of the links.

Upon reference to Fig. 2 of the drawing, it will be observed that the door is in its neutral position so that the upper and lower pivots of the links are in vertical alignment, one above the other. In this position of the door the lower edge thereof is disposed wholly out of contact with and above the support 30 so as to be entirely free from frictional engagement therewith on movement of the door to an open or closed position. Upon a slight application of pressure manually or otherwise to the door in one direction it will move automatically by its own gravity in an arc of a circle as described by the dot and dash lines in the drawings, assisted by the weight of the links to the full open position shown in Fig. 1. It will of course be understood that when it is desired to close the door pressure is exerted thereagainst in an opposite direction to that just described.

A bracket guide 33 is mounted in the shaft above the door opening, and as shown in Fig. 4, it embraces the door and it operates to guide the same in its movement and to hold it operatively associated with the door opening. A similar bracket guide 33' is mounted in the shaft below the door opening and immediately at one side of the door at the lower edge thereof to embrace the same and to cooperate with the first guide bracket 33 to prevent sagging of the door away from the opening.

As shown in Fig. 4 of the drawings, the upper end of the door and the inner face thereof is provided with an inwardly extending shoulder 34 on which the pivot studs for the upper ends of the links 22 and 23 are mounted. One wall of the shaft is provided with a similar shoulder 34 on which the pivot studs for the lower ends of the links are mounted.

I claim:—

1. In a door hanger, the combination with a door, of a link of angular construction having a long arm pivoted to the door and having a short arm pivoted to a fixed support beneath the door, and a second link pivoted at its lower end to a fixed support beneath the door and having its upper end pivoted to the door at a point on line with

the upper pivot of the long arm of the first link.

2. In a hanger the combination with a door, and a structure having a door opening therein, the door being movable across the opening, of companion links, pivoted respectively at their upper ends to the door near the opposite vertical edges thereof, said pivots being arranged in horizontal alinement with each other, the said links having their lower ends pivoted to fixed supports beneath the door opening and having their lower pivots arranged in alinement with each other.

3. In a door hanger, the combination with a door, of a hanger movably supporting the

door and operating to cause the door to move on an arc of a circle, the said hanger comprising a straight link pivoted at its upper end to the door and at its lower end to a fixed support beneath the door, and a second link extending at an angle to the first link and pivoted at its upper end to the door and at its lower end to a fixed support beneath the door.

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

EPHRAIM P. GOLDEN.

Witnesses:

JACOB H. HOCKSTON,
CHARLES W. FAGER.

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