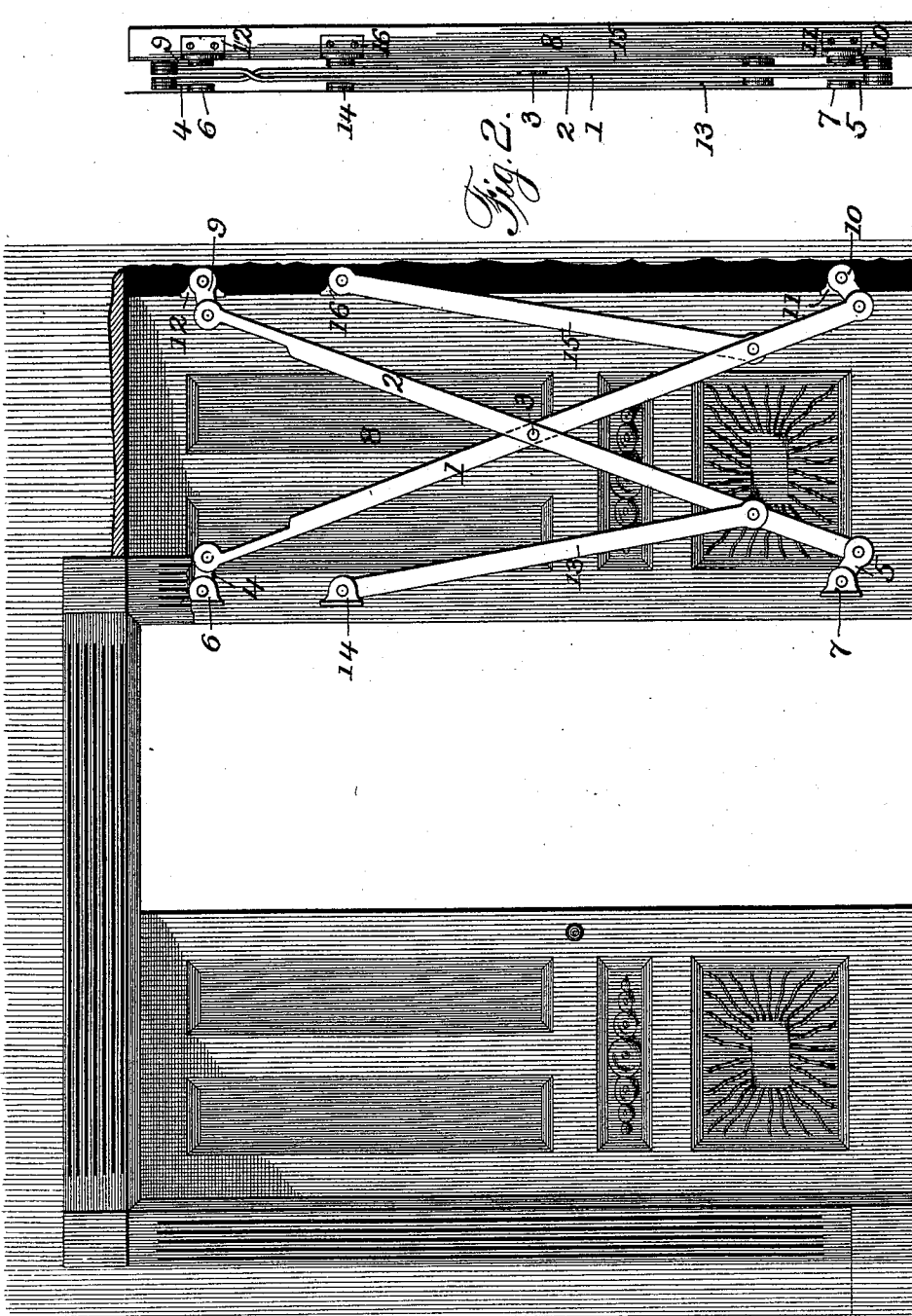


(No Model.)

C. W. BULLARD.
DOOR HANGER.

No. 529,642.

Patented Nov. 20, 1894.



Witnesses:
John Enders, Jr.
James L. Wallin

Fig. 1.

Inventor:
Charles W. Bullard,
by Robert Burns
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES W. BULLARD, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BULLARD & GORMLEY COMPANY, OF SAME PLACE.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 529,642, dated November 20, 1894.

Application filed August 30, 1894. Serial No. 521,737. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BULLARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Door-Hangers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates to that class of trackless door hangers in which a sliding door is supported on a series of connected levers, and bars, so as to move in a horizontal rectilineal direction, and more particularly to the Prescott type of such hangers, as shown in Letters Patent Nos. 238,310 and 283,279; and the present improvement has for its object to provide a simple, light and durable construction and arrangement of the hanger parts, in which the hanger parts are arranged at the sides of the door, and at all times concealed from view. An attachment of the fixed pivots of the hanger is effected at the edge of the wall pocket, so as to be convenient of access in attaching the door in place, &c. An entire avoidance is attained, of the sliding or rubbing action of the ends of the hanger members in parallel guides; and a distribution is effected of the strain or load created in supporting the door, so that the same will be, mainly, of a pulling nature upon the hanger members, and any portion of such strain having a thrust or pushing nature will be applied close to the fulcrum points of the parts. Accordingly all tendency to bending of the members in use is avoided, and in consequence the parts can be made very light and yet possess ample strength. I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1, is an elevation, of a sliding door, &c., illustrating my present invention, a portion of one of the wall pockets being broken away to disclose the hanger mechanism; Fig. 2, an end elevation of the door and hanger mechanism.

Similar numerals of reference indicate like parts in both views.

Referring to the drawings 1 and 2, represent a pair of counterpart levers that cross each other and are pivoted together at their point of intersection, and midway of their length by a pivot bolt or rivet 3. The upper end of the lever or member 1, and the lower end of the lever or member 2, are attached to the door jamb or upright by means of the small radius links 4 and 5, that are pivotally attached to such lever ends, and to the pivot brackets 6 and 7, attached to the door jamb, while the lower end of the lever or member 1, and the upper end of the lever or member 2, are attached to the rear end of the sliding door 8, by means of the small radius links 9 and 10, that are pivotally attached to such lever ends and to the pivot brackets 11 and 12, attached to the sliding door 8.

13, is a suspension bar pivoted to a pivot bracket 14, arranged a distance beneath the pivot bracket 6, and to the lever 1, at a point removed from the lower end of the same, as shown.

15, is a suspension bar pivoted to a pivot bracket 16, arranged upon the rear end of the door, a distance beneath the bracket 11, and to the lever 2, at a point removed from the lower end of the same. This pair of suspension bars, 13 and 15, act in the present improved construction to restrict and govern the movement of the pair of levers 1 and 2, so that their central pivot will move in a horizontal rectilineal direction, and in like manner the pivotal axis of the door brackets, 6 and 7, and the door itself.

In the present improvement it is of importance that the pair of radius links 4, 9, and 5, 10, have a swinging movement in opposite directions, to wit: the upper ones 4, 9, in an upward direction, and the lower ones 5, 10, in a downward direction.

It is within the province of my present invention to use the mechanism comprising the crossed levers 1 and 2, and suspension bars 13 and 15, in connection with the vertical guide slots or slideways of the before mentioned Prescott patents, but such an arrangement will not possess the same simplicity and efficiency as the construction heretofore described and illustrated in the drawings.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A door hanger, comprising in combination, the crossed levers 1 and 2, pivoted together at their points of intersection, with their ends attached to the jamb and to the sliding door, attaching means for the same that is adapted to permit a movement of the upper and lower lever ends to and from each other, and the pair of suspension bars, attached to the door jamb, the door, and the levers 1 and 2, substantially as set forth.

2. A door hanger, comprising in combination, the crossed levers 1 and 2, pivoted together at their points of intersection, with their ends attached to the door jamb and to the sliding door, attaching means for the same consisting of the radius links 4, 5, 9, and 10,

and means for restricting the movement of the pair of levers 1 and 2, so that their central pivot will move in a horizontal rectilinear direction, substantially as set forth.

3. A door hanger, comprising in combination, the crossed levers 1 and 2, pivoted together at their points of intersection, with their ends attached to the door jamb, and to the sliding door, attaching means for the same consisting of the radius links 4, 5, 9 and 10, and the pair of suspension bars 13 and 15, attached to the door jamb, the door, and the levers 1 and 2, substantially as set forth.

In testimony whereof witness my hand this 25th day of August, 1894.

CHARLES W. BULLARD.

In presence of—

GEORGE E. COOK,

JAMES H. GORMLEY.