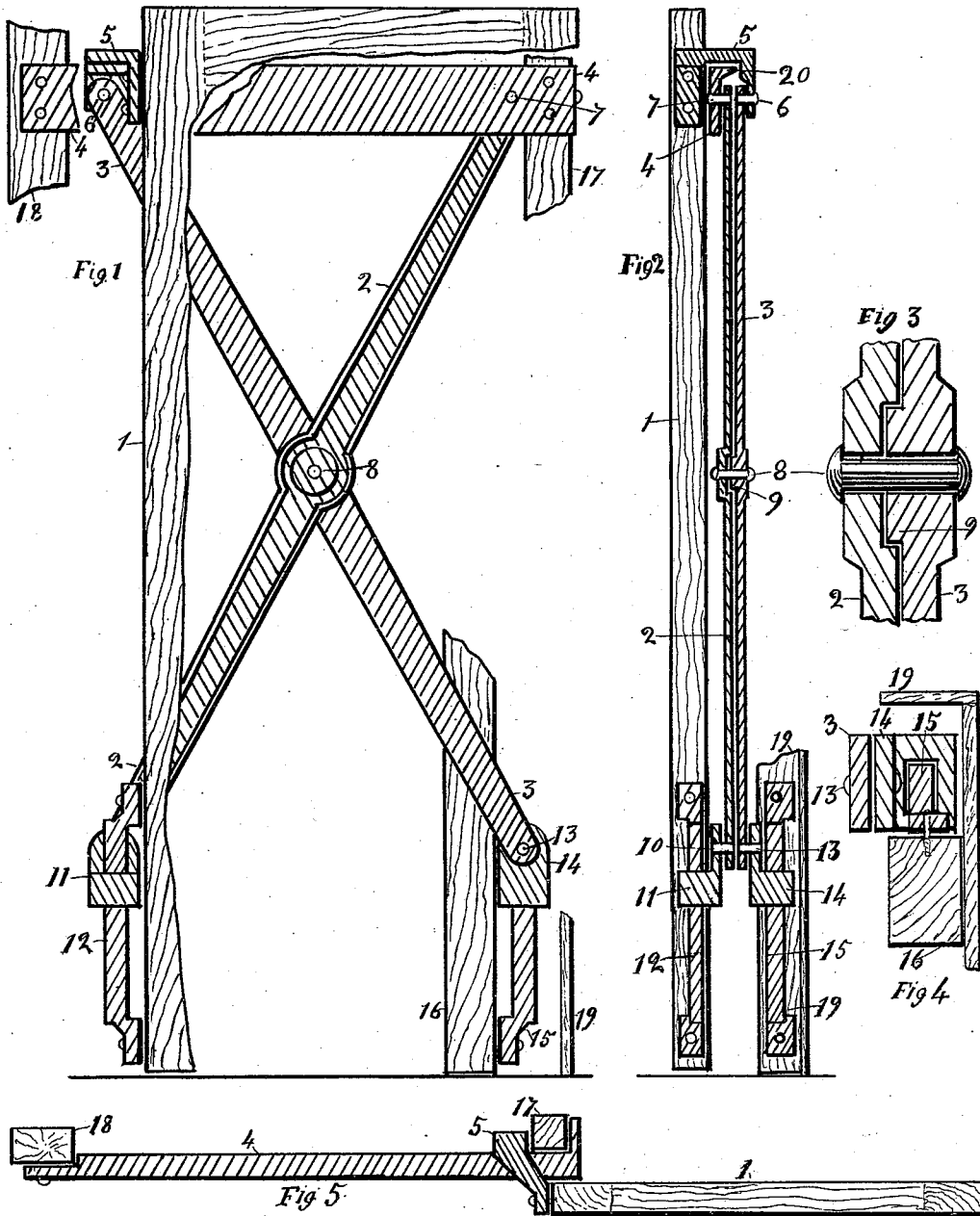


(No Model.)

J. M. TITRENT.
DEVICE FOR HANGING SLIDING DOORS.

No. 537,322.

Patented Apr. 9, 1895.



Witnesses
Josephine Mathieu
Joseph Bonarioni

Jean Marie Titrent Inventor
By his Attorney Jean A. Mathieu

UNITED STATES PATENT OFFICE.

JEAN MARIE TITRENT, OF CHICAGO, ILLINOIS.

DEVICE FOR HANGING SLIDING DOORS.

SPECIFICATION forming part of Letters Patent No. 537,322, dated April 9, 1895.

Application filed July 14, 1894. Serial No. 617,671. (No model.)

To all whom it may concern:

Be it known that I, JEAN MARIE TITRENT, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in the Way of a Device for Hanging Sliding Doors, of which the following is a specification.

My invention relates to improvements in sliding doors, and more especially to the means for hanging the doors, and has for its object to provide means for hanging the doors by means of which the friction of the operating parts is reduced to a minimum, whereby the doors may be moved noiselessly with the expenditure of but little force or power.

To this end my invention consists in the novel features and the arrangement and combination of parts hereinafter fully described and afterward definitely pointed out in the claim following the description, due reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a side elevation of my improved door hanger, a portion of the door being broken away to exhibit the construction and arrangement of the operative parts. Fig. 2 is an end elevation, the operating parts being shown in section. Fig. 3 is a detail sectional view of the pivotal connection between the levers. Fig. 4 is a horizontal section taken through the lower end of one of the levers and its slide and guide bar. Fig. 5 is a top plan view showing the door open.

Referring to the drawings, the numeral 1 indicates a sliding door, which may be one of a pair such as is commonly employed for the interior of buildings and that are arranged to slide in and out between partitions, but it will be evident that the door may be of any desired type or construction.

The numeral 4 indicates a rail rigidly secured to the door casing 17 and 18 at the upper portion thereof, and to the outer end of said rail, or to the end adjacent to the door opening, is pivotally secured by means of a pivot pin 7 a lever 2, that at its lower end is pivotally secured by means of a pivot pin 10 to a slide 11 adapted to move vertically upon a guide-bar 12 secured to the lower rear edge of the door, as will more fully hereinafter be described.

The numeral 3 indicates a lever of the same

length as the lever 2, and provided midway between its ends with a circular boss 9 that is adapted to be seated in a correspondingly shaped recess formed in the center of the lever 2, each of said levers being centrally perforated as shown, and pivoted together by a pivot bolt 8. To the rear edge of the door near its top is secured an inverted U-shaped bracket 5 to which is pivotally secured by means of a pivot pin 6 the upper end of the lever 3, said bracket overhanging or straddling the rail 4, as more clearly appears in Fig. 2. The lower end of the lever 3 is pivotally secured by a pivot pin 13 to a slide 14 adapted to move vertically upon a guide bar 15 secured to the portion 16 of the door casing. The guide bars 12 and 15 are respectively secured to the lower portion of the rear edge of the door 1 and door casing 16 so as to project therefrom, as more clearly shown in Fig. 1, and are made angular in cross-section, and are embraced by the slides 11 and 14 which are adapted to slide vertically thereon, the said slides being pivotally connected at their upper ends to the levers 2 and 3, by which means the tendency of the slides to bend upon the guide bars as they are moved up and down thereon is avoided. It will be noted that the levers are connected to the door at its rear edges only, so that the interior of buildings where the door is arranged to slide in and out between partitions no portion of the operative parts is ever exposed to view, and furthermore, that by suspending the door by means of the levers in the manner shown, that is to say, by pivoting the upper end of the lever 2 to the rail 4 and its lower end to the slide on the rear bottom edges of the door, and in like manner connecting the upper end of the lever 3 to the rear upper edge of the door and its lower end to the slide on the lower front portion of the door casing, no portion of the door or the bracket 5 rests at any time upon the rail 4, or the floor, whereby both noise and friction are reduced to a minimum. The sole function of the rail 4 is to form a guide for the door in its movement and to prevent the door from coming in contact with its casing and for the latter purpose the rail 4 is provided with a laterally projecting flange 20, or, if desired, may be formed of a metallic T-rail.

From the foregoing description the opera-

tion of my improved hanger will be readily understood. Let it be assumed that the door is open, as shown in Fig. 1. To close the door it is only necessary to apply a gentle force to
5 move it to the left, when the upper and lower ends of the levers 3 and 2 respectively will exert an equal force upon both the upper and lower portions of the door, the slides 11 and 14 sliding down the guide bars 12 and 15, the
10 door being thus caused to move in a true horizontal direction parallel to the floor, and out of contact with both the rail and floor, the entire door being supported on the pivot 7.

It will be readily apparent that with very
15 large and heavy doors the parts above described may be duplicated.

Having described my invention, what I claim is—

The combination with a sliding door, of the
20 horizontal rail 4 provided at its upper edge with a laterally projecting flange, the bracket

5 secured to the rear upper edge of the door and projecting laterally over said rail and vertically to one side thereof, the crossed levers 2 and 3 centrally pivoted together, the
25 guide bars 12 and 15 respectively secured to and projecting from the lower rear edge of the door and the door casing, and the slides 11 and 14 embracing and adapted to slide on
30 said guide bars, the lower ends of the said crossed levers being pivotally secured to said slides, and the upper end of one of them being pivoted to the rail 4 and the upper end of the other to the overhanging bracket 5, substantially as described.

In testimony whereof I have hereunto set
35 my hand this 7th day of July, A. D. 1894.

JEAN MARIE TITRENT.

Witnesses:

JOSEPHINE MATHIEU,
JOSEPH BONANOMI.