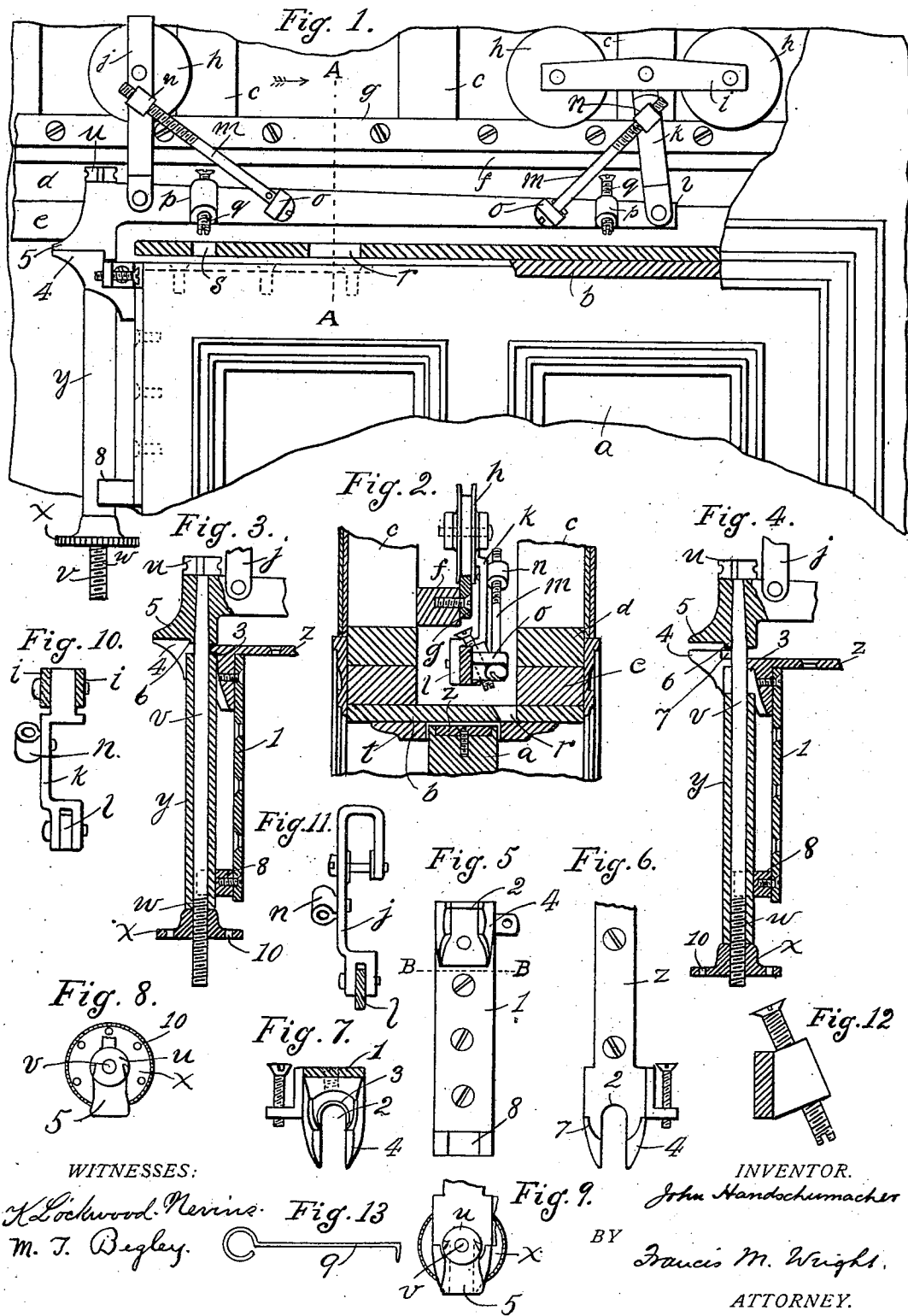


J. HANDSCHUMACHER.

DOOR HANGER.

(Application filed July 11, 1901.)

(No Model.)



WITNESSES:

H. Lockwood. Merins.
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Fig. 13

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JOHN HANDSCHUMACHER, OF SAN FRANCISCO, CALIFORNIA.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 689,395, dated December 24, 1901.

Application filed July 11, 1901. Serial No. 67,908. (No model.)

To all whom it may concern:

Be it known that I, JOHN HANDSCHUMACHER, a citizen of Austria-Hungary, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Sliding-Door Hangers, of which the following is a specification.

My invention relates to improvements in sliding-door hangers comprising improvements upon the construction described and claimed in my patent granted August 6, 1901, No. 672,962.

The object of my invention is to provide a construction which shall be stronger and more durable and at the same time simpler to adjust.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved sliding-door hanger, the jamb being broken away to show the construction of the hangers and of the connection thereof with the door. Fig. 2 is a cross-section on the line A A of Fig. 1 looking in the direction of the arrow. Fig. 3 is a longitudinal vertical section through the stem forming the connection between the door and the hanger-arm. Fig. 4 is a similar view showing the door lowered. Fig. 5 is a front view of the plate which is attached to the door and supports the same from the hanger-arm. Fig. 6 is a plan view of said plate. Fig. 7 is a section on the line B B of said plate looking upward. Fig. 8 is a plan view of the end of the hanger-arm removed from the door. Fig. 9 is a plan view of the same in position. Fig. 10 is an end view of the front hanger, showing the carrier in section. Fig. 11 is a similar view of the rear carrier. Fig. 12 is an enlarged detail of the adjusting-screw or stop, and Fig. 13 is a detail of the hook for revolving the nut x .

Referring to the drawings, a represents the door, and b the jamb therefor. At the top said jamb comprises the studs c , the rough headers d , secured to the lower ends of said studs, and jamb-header e , secured on the under side of rough headers. To the studs c on

one side is secured a beam f , to which is attached the track g . Upon the said track roll the wheels h , whose axles are pivoted on carriers $i j$. The front carrier i carries two of said wheels and is pivotally mounted upon a hanger k , pivotally secured at its lower end to a hanger-arm l , while the rear carrier j itself forms a hanger and is also pivotally attached to said hanger-arm l .

In order to adjust the angle of inclination of the hanger-arm l with the track g , upon which the wheels roll, there are provided adjusting-screws m , which are screwed through eyes n , pivotally attached to the hangers $j k$, the heads of said screws being held in eyes o , pivotally attached to the hanger-arm. Said heads are slotted, so that by screwing said screws the angle of inclination of the hangers to the hanger-arm may be varied as desired, and thus may also be varied the angle of inclination of the hanger-arm to the track. By this construction also the height of the door relative to the track may be varied, for it will be readily seen that by making the angle between the hangers and the hanger-arm more acute the hanger-arm will be raised, and, on the other hand, by making it more nearly a right angle the hanger-arm will be lowered. Thus it will be seen that by screwing the screw m at either end so as to make the angle between the hanger at that end and the hanger-arm more acute that end will be raised, and by making it more nearly a right angle that end will be lowered. If at both ends the angle is made more acute, the whole arm and the door will be raised. If at both ends the angle is made more nearly a right angle, the whole door will be lowered. If at one end only the angle is made more acute, the door will be raised at that end only. By this construction, therefore, either the inclination of the door to the track may be varied or the door may be raised or lowered, as desired. Said hanger-arm is formed with bosses or projections p , through which are screwed adjusting-screws or stops q , the heads of which lie beneath the under edge of the rail or track and prevent the hanger-arm tilting. In order to make the above adjustments without having to tear down any part of the jamb to obtain access to said hanger, the jamb-header is

formed with an elongated aperture r , through which a screw-driver can be passed to engage the headed end of the screws m to adjust the same, and similarly the adjusting-screws or stops may be reached by means of a screw-driver passed through an aperture s in said jamb-header. These apertures are normally covered by the jamb-finish t , which may be readily removed to obtain access to said apertures and replaced after adjustment has been made.

To the hanger-arm is suspended, by means of nut u , a stem v , threaded in its lower portion, as shown at w , and carrying on said threaded portion a nut x , supporting a sleeve y . By screwing said nut up or down on the stem v the sleeve y may be raised or lowered to correspondingly raise or lower the door. The door is supported on the sleeve y by means of an angle-plate z , countersunk in the top edge of the door and having a vertical member 1 attached to the rear edge thereof. Said plate is formed with a socket 2, fitting around the stem v and having a shoulder 3 resting upon the upper edge of the sleeve y . Said socket has projections or horns 4, upon which rest corresponding horns 5, formed upon the end of the hanger-arm. When the door is raised into place, which is done by screwing up the nut x , the top of the door is prevented from falling away from the stem v by reason of an annular downward extension 6 from said hanger-arm end around said stem v fitting within and in front of curved shoulders 7, extending upwardly from the socket 2. When the sleeve and door are lowered, the shoulders 7 can pass under and away from said extension 6. The lower end of the member 1 of the plate z carries a bracket 8, which abuts against the sleeve y and maintains the door in proper relation thereto.

This construction is an improvement over that shown in my application above referred to in that the tendency of the stem v to bend owing to the weight of the door is now avoided, said bending being resisted by the abutment of the horns 4 on the socket against the horns 5 on the end of the hanger-arm.

The sleeve y can be raised without removing the frame of the door by inserting a hook 9 in the interstice between the door and frame and engaging thereby apertures 10 in the nut

x , thus revolving the latter and raising the sleeve y and the door.

I claim—

1. In a sliding-door hanger, the combination with a track, of front and rear wheels rolling on said track, hangers supported from the pivotal axes of said wheels, a hanger-arm, a door connected with said arm, and front and rear oblique screw-stays, said screws working through eyes pivotally attached to the hanger-arms and hanger at a distance from the pivotal connection of the hanger-arm and hanger whereby the screw-stay, hanger-arm and hanger form a triangle, and the angle between the hanger-arm and hanger is varied by securing the screw-stay, substantially as described.

2. In a sliding-door hanger, the combination with the track, of the rollers thereon, the hangers supported from said rollers, the hanger-arm adjustably secured to said hangers and having lateral projections, and screws in said projections arranged to lie beneath said track, substantially as described.

3. In a sliding-door hanger, the combination with the track, of the rollers thereon, the hanger-arm suspended from said rollers, the stem suspended from said hanger-arm, the nut on said stem, the sleeve supported by said nut, and the door-plate supported upon said sleeve, said door-plate and hanger-arm having rearward projections adapted to engage each other when the nut is screwed up to adjust the door in place, substantially as described.

4. In a sliding-door hanger, the combination, with the track of the rollers thereon, the hanger-arm suspended from said rollers, the stem suspended from said hanger-arm, the nut on said stem, the door and the plate thereon, said plate being supported by the nut on the stem, and the socket carried by said plate having the upwardly-extending shoulder, the hanger-arm having a downward extension arranged to fit within and in front of said shoulder, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN HANDSCHUMACHER.

Witnesses:

FRANCIS M. WRIGHT,
K. LOCKWOOD-NEVINS.