

No. 725,135.

PATENTED APR. 14, 1903.

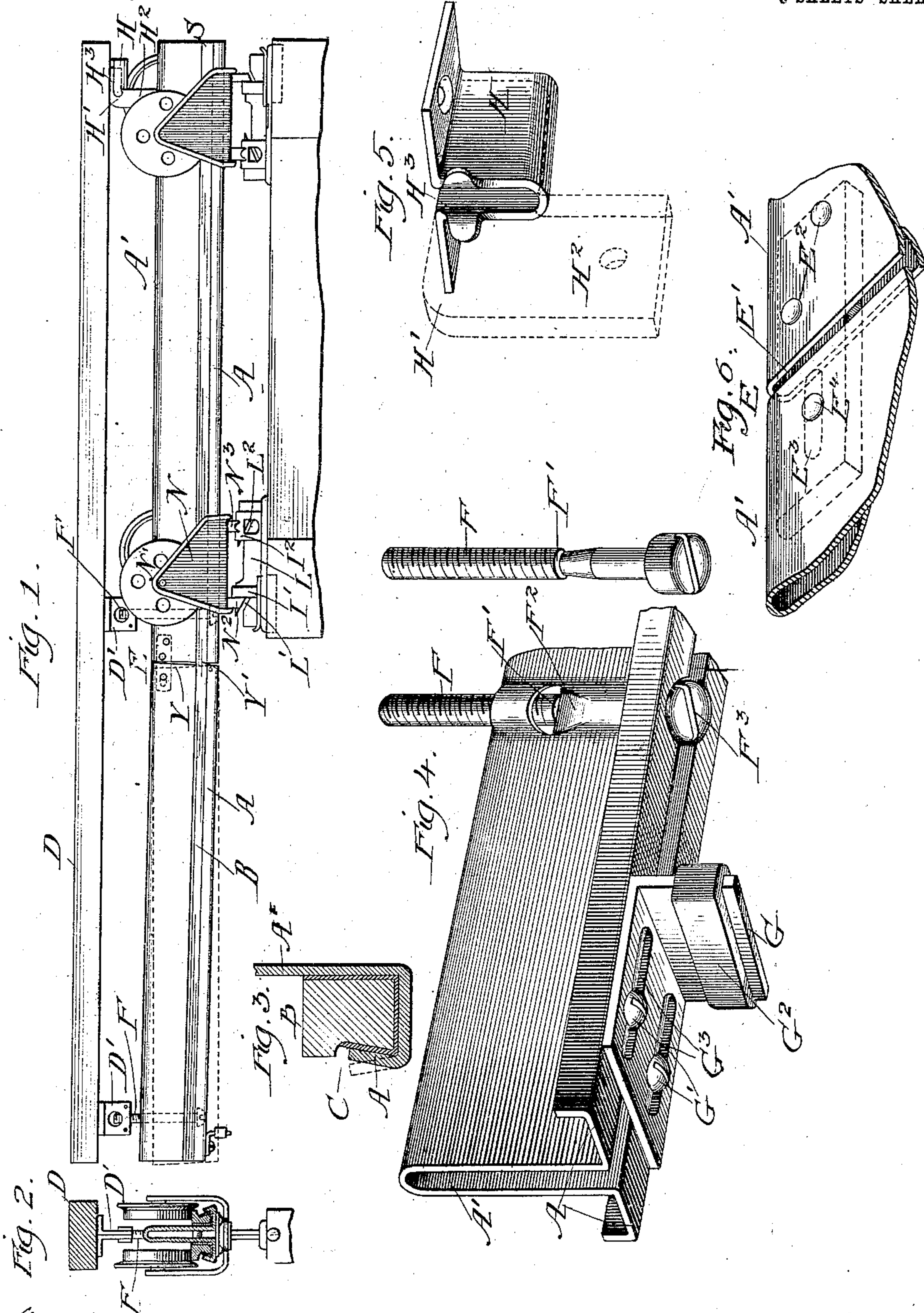
T. C. PROUTY.

SLIDING DOOR TRACK AND HANGER.

APPLICATION FILED NOV. 30, 1900. RENEWED JAN. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:

Frank Blanchard  
Lutz Alter

Inventor

Theodore C. Prouty  
By L. L. Worriam, Atty.

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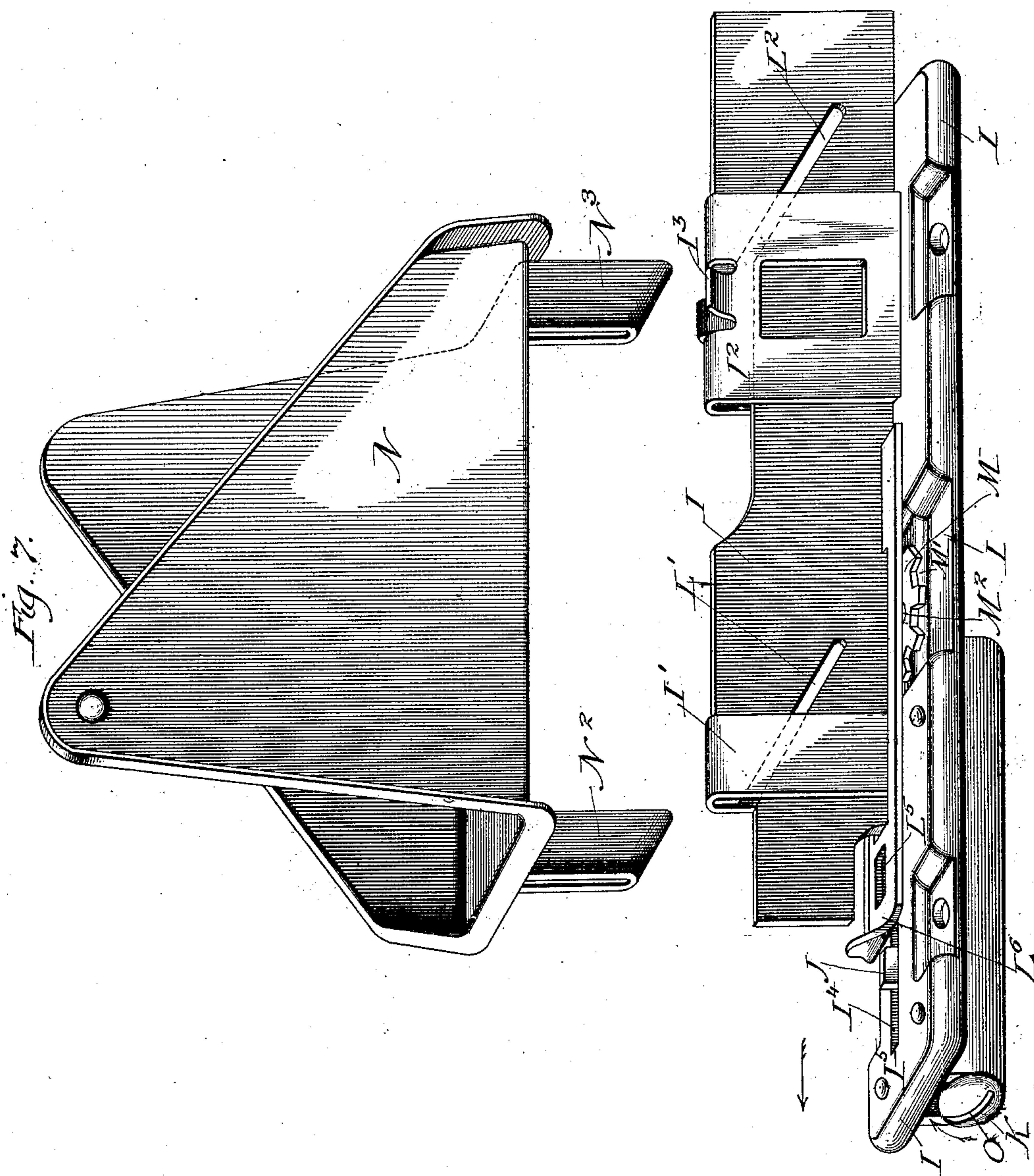
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3 SHEETS—SHEET 2.



Witnesses:

Frank Blanchard  
Lute J. Alter.

Inventor:

Theodore C. Prouty  
By L. K. Morrison,  
Atty.



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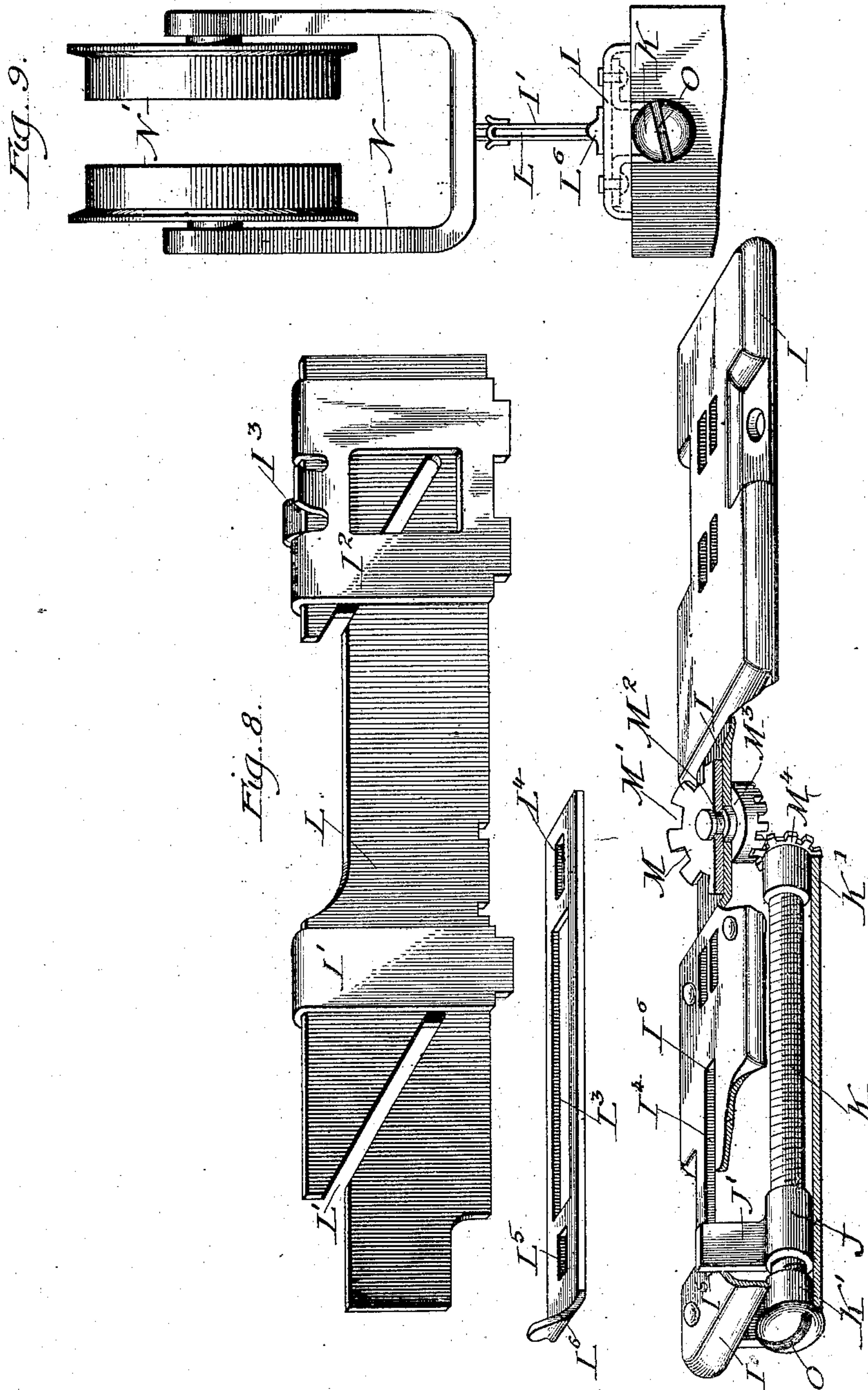
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NO MODEL.

3 SHEETS—SHEET 3.



Witnesses:  
Frank Blanchard  
Lutro J. Altier

Inventor:  
Theodore C. Prouty  
By L. L. Monnier,  
Att'y.



# UNITED STATES PATENT OFFICE.

THEODORE C. PROUTY, OF MIDLAND, MICHIGAN.

## SLIDING-DOOR TRACK AND HANGER.

SPECIFICATION forming part of Letters Patent No. 725,135, dated April 14, 1903.

Application filed November 30, 1900. Renewed January 12, 1903. Serial No. 138,861. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE C. PROUTY, a citizen of the United States of America, residing at Midland, in the county of Midland and State of Michigan, have invented certain new and useful Improvements in Sliding-Door Tracks and Hangers, of which the following is a specification.

This invention relates to sliding-door tracks and hangers; and its objects are, first, to produce a noiseless track and means for vertically adjusting the same; second, to provide means for disconnecting a hanger from the top of a door without disturbing its vertically-adjusting mechanism, and, third, to afford means for vertically adjusting a hanger by lengthening or shortening it without disconnecting it from its door.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a sliding-door track and hangers embodying my improvements. Fig. 2 is an end view of the same. Fig. 3 is a detailed end view of one rail of the track and its supporting-trough. Fig. 4 is an isometrical detail of a fragment of the rail-supporting troughs of the track, a screw for adjustably connecting such troughs with their soffit, and a front door-stop. Fig. 5 is an isometric detail of devices for supporting unadjustably one end, as S, of the track. Fig. 6 is an isometric detail of two fragments of the connecting-webs of the rail-supporting troughs and a slightly-yielding joint connecting their adjacent ends together. Fig. 7 is an isometrical detail of a complete hanger minus its wheels, the wheel-frame being disconnected from the other parts thereof. Fig. 8 is an isometric detail of the parts unassembled composing the hanger shown in Fig. 7 minus the wheel-frame. Fig. 9 is a detail of the parts of the hanger shown in Fig. 2.

Like letters of reference indicate corresponding parts throughout the several views.

A represents parallel metal troughs connected by a supporting-web A' and are preferably integral.

B represents preferably continuous rails of wood or fibrous material resting in and supported by the troughs A and projecting above the edges thereof to prevent the hanger-wheels from coming in contact therewith.

C is any suitable non-conducting or sound-deadening material, as felt or the like, interposed in sheet form between the rails B and the inner surfaces of the troughs A.

D is a soffit provided with downwardly-projecting lugs D', having threaded screw-holes extending vertically upward therethrough to receive screws, referred to hereinafter.

E, Figs. 1 and 6, is a semitoggle-joint connection between the adjacent but non-contiguous ends of the two pairs of troughs A, formed by means of a metal strap E', rigidly secured into the interior of one of the supporting-webs A' of such troughs by means of rivets E<sup>2</sup>, extending therethrough and yieldingly secured into the interior of the other supporting-web A' by means of a longitudinal slot E<sup>3</sup> in the strap E' and a rivet E<sup>4</sup>, extending through such supporting-web and slot E'.

F represents screws for suspending and vertically adjusting the completed track, Figs. 1 and 2. Each of these screws, Fig. 4, has formed thereon an annular shoulder F' adapted to engage the retaining-lip F<sup>2</sup> on the web A', which retaining-lip F<sup>2</sup> and screw-head F<sup>3</sup> insure vertical adjustment of the track by turning the screw F up or down, as may be required.

G is a door-stop secured to the bottom of the troughs A by means of screws G', provided with a rubber buffer G<sup>2</sup> and rendered longitudinally adjustable by the longitudinal slots G<sup>3</sup> therein.

H is a track-suspending loop secured to and depending from the under side of the soffit D.

H' is an L-shaped suspending-lug having its vertical arm H<sup>2</sup> secured to the web A' of the troughs A and its horizontal arm H<sup>3</sup> inserted into the loop H.

I is a base-plate having horizontal slide-ways I' I<sup>2</sup> thereon, the latter also having a longitudinal slot I<sup>3</sup> in the top thereof to admit a part to be described hereinafter.

I<sup>4</sup> is a longitudinal way in the base-plate I, terminating at its ends in stops I<sup>5</sup> I<sup>6</sup>.

J is an interiorly-threaded nut having a stud J' projecting up through and adapted to travel in the way I<sup>4</sup> in the base-plate I and is limited in its travel by the stops I<sup>5</sup> I<sup>6</sup> therein.

K is an adjusting-screw inserted through and actuating the nut J and its stud J' and



journalled in the bearings K' on the base-plate I parallel to the longitudinal axis thereof.

L is a longitudinally-movable adjusting-slide having inclined parallel slots L' L<sup>2</sup> extending transversely therethrough and opening upward mounted in the slideways I' I<sup>2</sup> on the base-plate I.

L<sup>3</sup> is a hasp rigidly secured at one end L<sup>4</sup>, Fig. 8, to the lower edge of the slide L and having a slot L<sup>5</sup> extending through the other and free end L<sup>6</sup> thereof to admit and engage the stud J' on the nut J on the adjusting-screw K.

M is a disk notched or knurled on its periphery M' and rotatably mounted on an axis M<sup>2</sup> on the base-plate I and parallel thereto.

M<sup>3</sup> M<sup>4</sup> are gear-wheels mounted, respectively, on the lower end of the axis M<sup>2</sup> of the disk M and on the inner end of the adjusting-screw K and meshing to form a gear connection between them.

N is a wheel-frame having wheels N' mounted therein and provided with downwardly-projecting loops N<sup>2</sup> N<sup>3</sup>, adapted to enter the inclined slots L' L<sup>2</sup> in and thereby engage the adjusting-slide L, whereby the base-plate I and a door connected therewith may be vertically adjusted.

Slight yielding of the semitoggle-joint E, operating in conjunction with the flexibility of the rails B, renders the track, Fig. 1, vertically adjustable. As indicated by the dotted line Y, the rails B contribute no part to the track adjustment except to flex slightly at Y'.

The employment of sheet-felt C or like material between the rails B and their supporting-troughs A prevents the transmission of sound-vibrations from the hanger-wheels N' through the track to the structure supporting the latter, thereby avoiding noise from that source.

Fig. 1 shows a complete hanger operatively connected with the top of a door in the usual manner.

Fig. 7 shows the base-plate I disconnected from the wheel-frame N of the hanger. If the wheel-frame N, Fig. 7, be lowered until its loops N<sup>2</sup> N<sup>3</sup> rest upon the upper edge of the adjusting-slide L and the latter be slid in the direction indicated by the straight arrow until the free end L<sup>6</sup> of the hasp L<sup>3</sup> is forced over the top of the stud J' on the nut J and the latter enters, by reason of the resiliency of such hasp L<sup>3</sup>, the slot L<sup>5</sup> therein, such loops N<sup>2</sup> N<sup>3</sup> will then have been engaged with the adjusting-slide L through the inclined slots L' L<sup>2</sup> therein. If now the adjusting-screw K be rotated in the direction indicated by the curved arrow either by applying a screw-driver to the head O thereof or by applying it to the periphery M' of the disk M and rotating it, the adjusting-slide L will continue to travel in the direction of the straight arrow until the nut J, and through it such adjusting-slide L, is arrested by the stop I<sup>5</sup>, Fig. 8. Obviously if the adjusting-screw K

be next rotated in the opposite direction the adjusting-slide L will be thereby driven toward its original position until the nut J, and through it such adjusting-slide L, is again arrested by the stop I<sup>6</sup>. The stops I<sup>5</sup> I<sup>6</sup> in the base-plate I limit the back-and-forth travel of the adjusting-slide L, which cannot be detached from the loops N<sup>2</sup> N<sup>3</sup> of the wheel-frame N so long as the nut J is in engagement with the slot L<sup>5</sup> in the hasp L<sup>3</sup>. The latter must therefore be disengaged from such nut J and the adjusting-slide L be slid back to the position shown in Fig. 7 in order to disconnect it and its base-plate L from the lugs N<sup>2</sup> N<sup>3</sup> of the wheel-frame N. Sometimes the head O of the adjusting-screw K is not accessible. The disk M is then resorted to to rotate such adjusting-screw in both directions.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a door-hanger, in combination, a base-plate having horizontal slideways thereon, a longitudinally-movable adjusting-slide—having inclined parallel slots extending transversely therethrough and opening upward—mounted in the slideways on the base-plate, a wheel-frame provided with downwardly-projecting loops adapted to enter the inclined slots in, and thereby engage, the adjusting-slide, and means for operating said longitudinally-movable adjusting-slide, substantially as and for the purpose specified.

2. In a door-hanger, in combination, a base-plate having horizontal slideways thereon, an interiorly-threaded nut provided with an upwardly-projecting stud, an adjusting-screw, inserted through and actuating said nut and its stud and journalled on said base-plate parallel to the longitudinal axis thereof, a longitudinally-movable adjusting-slide mounted in the slideways on the base-plate and connected, through said stud, with the nut on the adjusting-screw, and a wheel-frame, adjustably connected with the adjusting-slide, substantially as and for the purpose specified.

3. In a door-hanger, in combination, a base-plate having horizontal slideways thereon, an interiorly-threaded nut provided with an upwardly-projecting stud, an adjusting-screw—inserted through and actuating said nut and the stud thereon—journalled on the base-plate parallel to the longitudinal axis thereof, a notched or knurled disk rotatably mounted on the base-plate and parallel thereto, a gear connection between the axis of the disk and the inner end of the adjusting-screw, a longitudinally-movable adjusting-slide mounted in slideways on the base-plate and immediately connected with the nut on the adjusting-screw and a wheel-frame adjustably connected with the adjusting-slide, substantially as and for the purpose specified.

4. In a door-hanger, in combination, a base-plate having horizontal slideways thereon, an adjusting-screw—inserted through and actuating a nut, having an upwardly-projecting



stud thereon—journale<sup>d</sup> on said base-plate  
parallel to the longitudinal axis thereof, a  
notched or knurled disk rotatably mounted  
on the base-plate and parallel thereto, a gear  
5 connection between the axis of the disk and  
the inner end of the adjusting-screw, a lon-  
gitudinally-movable adjusting-slide—having  
inclined parallel slots extending transversely  
therethrough and opening upward—mounted  
10 in the slideways on the base-plate and con-  
nected with the stud on the nut on the ad-  
justing-screw, a wheel-frame adjustably con-

nected with the inclined parallel slots in the  
adjusting-slide, and a detachable hasp con-  
nection between the stud on said nut and ad- 15  
justing-slide, substantially as and for the  
purpose specified.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

THEODORE C. PROUTY.

Witnesses:

FREDERICK C. GOODWIN,  
JEROME W. MILLINGTON.