(No Model.)

A. T. KINGSLEY.

DOOR HANGER.

No. 419,201. Patented Jan. 14, 1890.

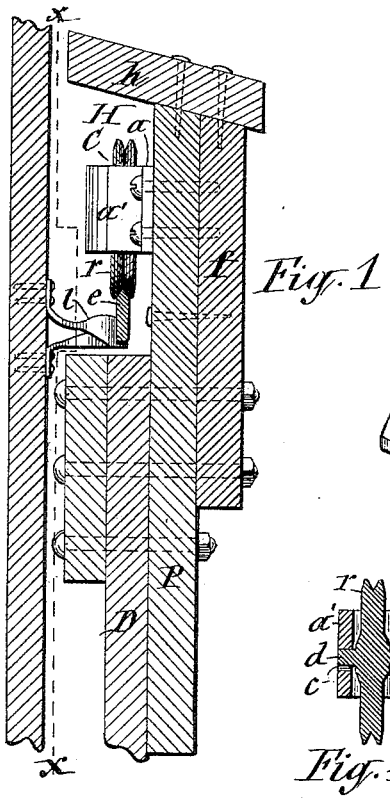


Fig. 1

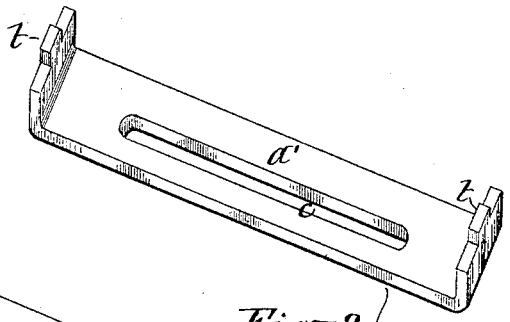


Fig. 3

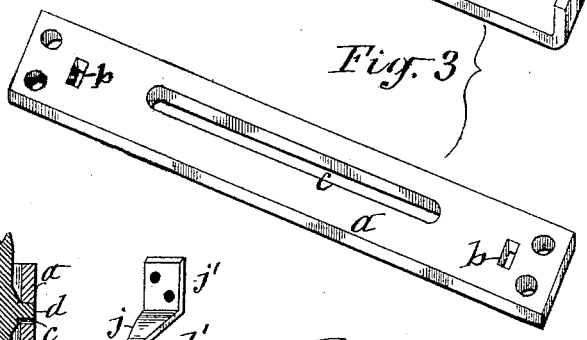


Fig. 4

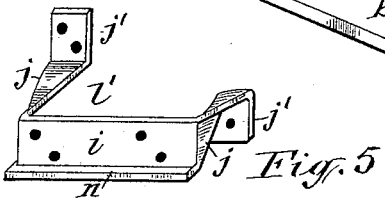
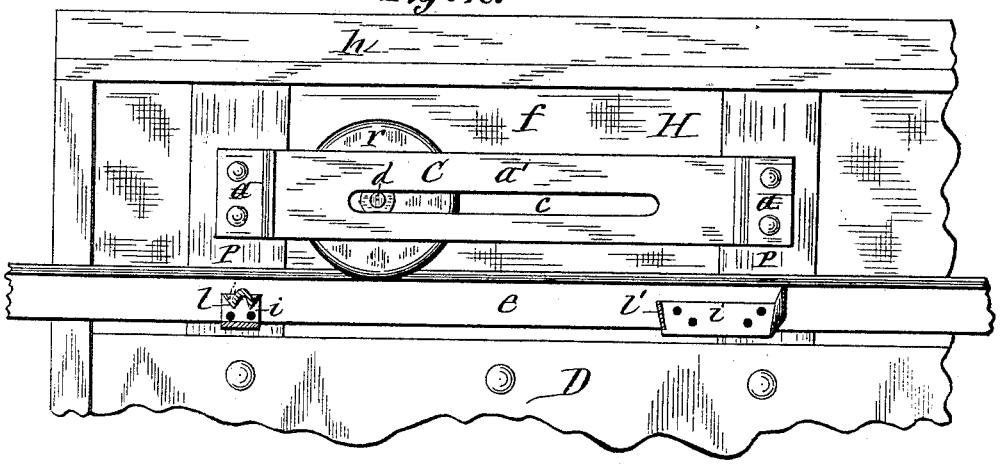


Fig. 5

Fig. 2.



WITNESSES:

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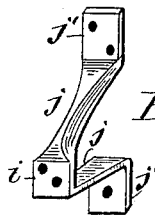

Fig. 6

INVENTOR

Alba T. Kingsley

BY

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his ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBA T. KINGSLEY, OF MILLPORT, NEW YORK.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 419,201, dated January 14, 1890.

Application filed March 9, 1889. Serial No. 302,690. (No model.)

To all whom it may concern:

Be it known that I, ALBA T. KINGSLEY, of Millport, in the county of Chemung, in the State of New York, have invented new and useful Improvements in Door-Hangers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of door-hangers in which the door is suspended from a carriage mounted on an overhead track; and the invention consists in the improved construction and combination of parts hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a vertical transverse section of a portion of a door provided with my improved hanger. Fig. 2 is an elevation of the same, taken in a plane on line *x x*, Fig. 1, and with an outward view. Fig. 3 is a detached perspective view of the bars of which the carriage is formed. Fig. 4 is a vertical transverse section of the carriage, and Figs. 5 and 6 are detached perspective views of the track-supporting brackets.

Similar letters of reference indicate corresponding parts.

D represents the door, and *e* the overhead track-rail, which latter I form of a flat metal bar placed vertically edgewise and having its top edge preferably beveled from the center of its width to opposite sides, as shown in Fig. 1 of the drawings. This track-rail is secured to brackets *l l'*, which are attached to the wall at or near the top of the door and firmly sustain said track-rail in its position. These brackets I form each in one piece struck up from a wrought-metal bar. The central portion is maintained in a vertical plane for the attachment of the track-rail *e*, and the end portions are bent laterally from the central portion to serve as attaching-arms *j j* of the brackets. When the track-rail is of the form shown in Fig. 1 of the drawings, I place the said metal bar vertically and bend the portions *j j* adjacent to the top and bottom of the central portion *i* laterally therefrom and bend the end portions *j' j'* into vertical planes in range with each other and parallel with the central portion, as shown in Figs. 5 and 6 of the drawings. The portions *j j* constitute the supporting-arms of the bracket, and in order to brace the same I crimp one or both of said arms, preferably the upper arm, as shown in cross-section, of the bracket in the left side portion of Fig. 2 of the drawings.

When the track-rail is composed of sections spliced end to end, I employ the bracket *l'* at the joint of the rail, which bracket I also form in one piece of a wrought-metal strap or flat bar, the main or central portion *i* of which is maintained straight and placed edgewise vertically and lengthwise horizontally, and the arms *j j* are formed by bending the end portions of the bar at the ends of the central portion laterally crosswise of said central portion and twisting said arms from vertical planes at their junctions with the central portion of the bar into horizontal planes at their opposite ends, where they are terminated with end portions *j' j'*, bent into vertical planes.

C denotes the carriage, which I form of two metal bars *a* and *a'*, arranged parallel side by side and provided with coinciding longitudinal slots *c c*. The bar *a*, I provide at opposite ends with mortises *b b*, and the end portions of the bar *a'*, I form at right angles to the plane of the main portion of the bar, and form the extremities of said end portions with tenons *t t*, corresponding to the mortises *b b*, into which they are inserted and clinched or otherwise firmly secured.

The roller *r*, I provide with trunnions *d d*, which are rigidly attached thereto or cast thereon, said roller being connected to the carriage by applying the bars *a a'* to opposite sides of the roller and at the same time entering the trunnions *d d* into the slots *c c* of the bars and then uniting said bars in the manner aforesaid.

The described carriage is secured horizontally to the door-suspending plates P P, which are attached to the top portion of the door and project a suitable distance above the same. Two sets of such plates, with a carriage attached to each set, are employed near the two vertical edges of the door.

In order to brace the upper or free ends of the hanger-plates P P, so as to enable them to better resist the lateral strain which they

are subjected to in opening and closing the door, I attach to the outside of the two sets of plates P P, above the door, a plate or board *f*, extending the entire width of the door, and to the top of the said brace-plate I attach a roof-board *h*, which projects over the carriage and is free from the building to allow it to move with the door. The board *h*, being nailed to the brace-plate *f* at the center of their lengths as well as at the ends, braces the plate *f*, so as to prevent its springing or warping between the hanger-plates P P, and also serves to shield the carriage from snow and ice. By attaching the said roof-board to the door so as to move with it instead of attaching it stationary to the building, as heretofore, the roof-board need not be more than half as long as said stationary roof-board.

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

1. In combination with the door D, stationary overhead track *e*, door-suspending plates P P, and carriage secured to said suspending-plates and riding on said track, the brace-plate *f*, extending across the width of the door and secured to the suspending-plates above the door, and the roof-board *h*, attached to the top of the plate *f* and projecting over the carriage, substantially as described and shown.

2. A door-hanger carriage-frame composed of the metal bar *a*, provided with the longitudinal slot *c* and with mortises *b b* at opposite ends, and the bar *a'*, provided with a corresponding longitudinal slot *c* and having its end portions formed at right angles to the plane of the main portion of the bar, and with tenons *t t* on the extremities of said end portions inserted into the mortises *b b* and fastened to the bar *a*, substantially as described and shown.

3. The improved door-hanger carriage consisting of the roller *r*, having trunnions *d d*, cast integral therewith, the bar *a*, provided with the longitudinal slot *c* and with mortises *b b* at opposite ends, and the bar *a'*, provided with a corresponding longitudinal slot *c* and having its end portions formed at right angles to the plane of the main portion of the bar and formed with tenons *t t* on the extremities of said end portions, said bars being applied to opposite sides of the roller *r* and receiving the trunnions *d d* in the slots *c c* and united by the aforesaid tenons entering the mortises and fastened to the mortised bar, substantially as set forth and shown.

In testimony whereof I have hereunto signed my name this 7th day of March, 1889.

ALBA T. KINGSLEY. [L. S.]

Witnesses:
C. H. DUELL,
C. L. BENDIXON.