

(No Model.)

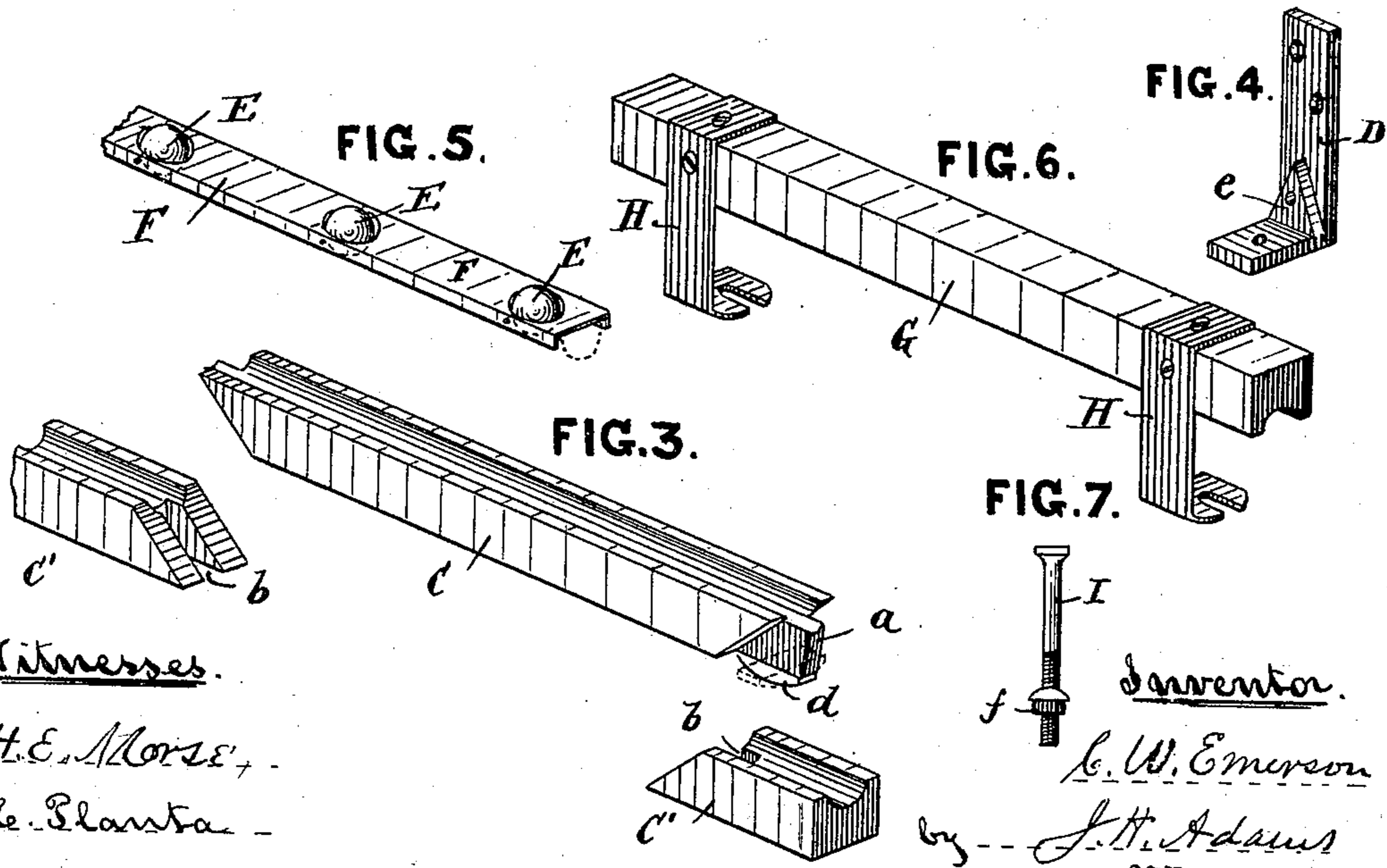
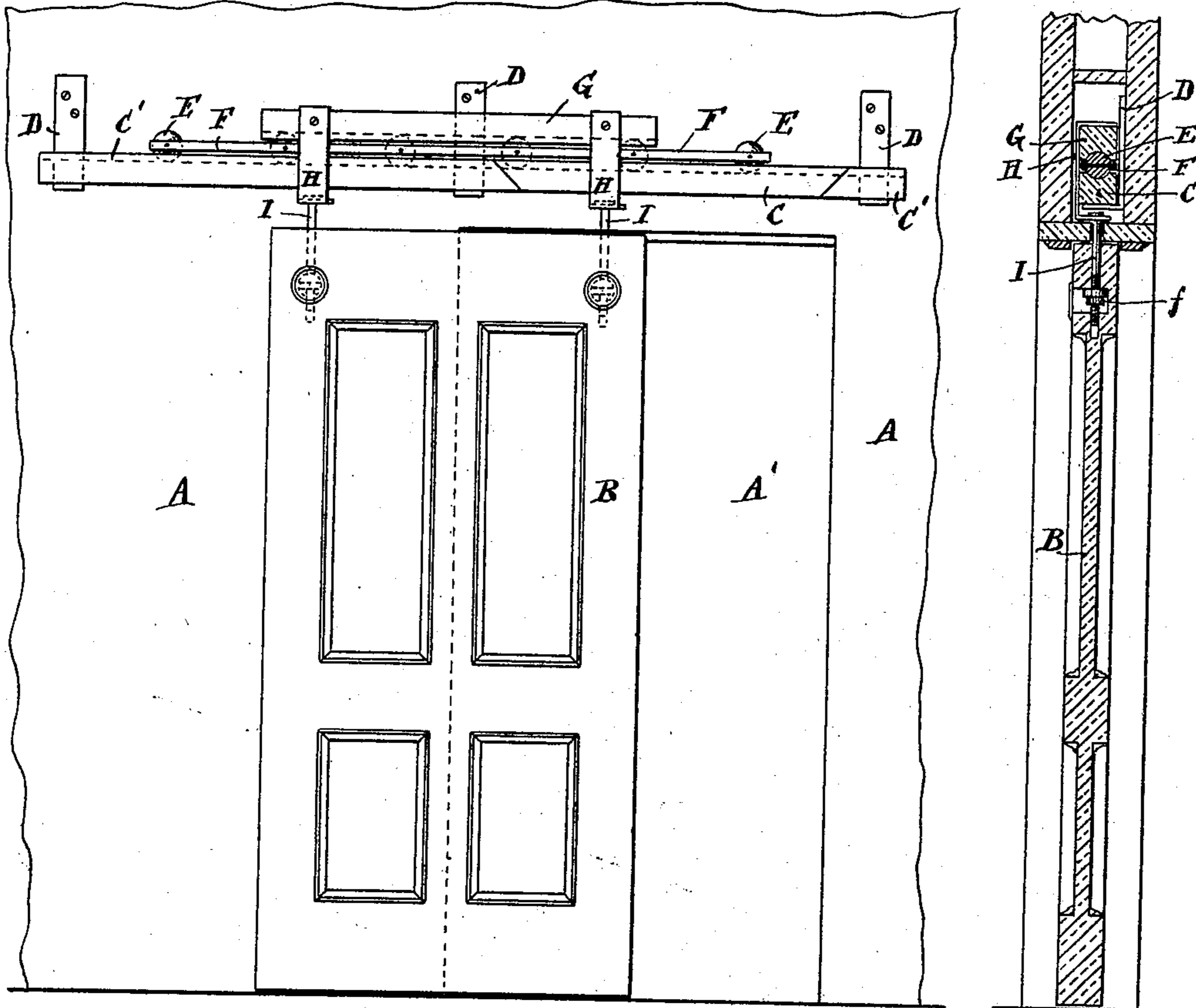
C. W. EMERSON.  
HANGING DOORS.

No. 321,198.

Patented June 30, 1885.

FIG. 1.

FIG. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

CHARLES W. EMERSON, OF BOSTON, MASSACHUSETTS.

## HANGING DOOR.

SPECIFICATION forming part of Letters Patent No. 321,198, dated June 30, 1885.

Application filed March 27, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. EMERSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful improvements in Hanging Doors, of which the following is a specification.

My invention relates to certain improvements in that class of sliding doors which are suspended from bearings above the door; and the object of my invention is to provide an improved means whereby the door may be easily opened and closed, and also a means for adjusting the door in case of any settling of the sill or floor.

The invention consists in certain details of construction and arrangement of parts, more fully hereinafter described.

Referring to the accompanying drawings, Figure 1 represents a door with my invention applied. Fig. 2 is a vertical section of the same. Fig. 3 represents the detachable rail-section removed from the adjacent rail. Figs. 4 to 7 are enlarged views in detail of various parts.

A represents the side of a room, building, or of a railroad-car, A' the door-opening, and B the door.

C C' represent a rail secured above the opening A' by means of hangers or brackets D, fastened to studs or other suitable supports. The rail C C' is formed with a semicircular groove in its upper edge, which constitutes a track for balls E to run in. The balls E are provided with spindles or trunnions that have their bearings in a spacer, F, composed of a piece of thin metal bent down on each side, as shown in Fig. 5.

G is a traveling bar, formed on its under side with a semicircular groove, and H H are suspenders firmly secured to the top and side of the bar G, as shown in Fig. 6.

I I are suspender-bolts or adjusters provided at the top with a head, so that when passed into the slot in the suspenders H they will be securely held. The lower ends of these adjusters are screw-threaded, and are passed down through holes in the upper part of the door, and secured by nuts, f, in suitable apertures in the side or edge of the door, which apertures may be covered by ornamental escutcheons, as shown in Figs. 1 and 2.

A detached view of one of the adjusters with its nut and washer is shown in Fig. 7.

The rail C may be made in three or more sections, three being shown in Figs. 1 and 3. The two end sections, C' C', are held firmly in position by the hangers D, and the central portion is supported upon the beveled edges of the end sections. For greater security the central section may be formed with a tongue, a, on each end, that fit into corresponding grooves, b, in the end sections. When the rail is in position, it is held by means of buttons, d, (see Fig. 3,) or the ends may be simply beveled and held together by screws inserted on the under side of the end sections and passing up into the central section.

The object of having the rail C in sections is to allow the working parts to be removed and replaced at any time without in any way interfering with the plastering or other portion of the room or building. The hangers D are formed with a A-shaped projection, e, as shown in Fig. 4, by means of which any dust or dirt falling from above will slide off at the sides and prevent any dust from being deposited upon the track.

In case of any sagging of the door or settling of the sill the door can be readily adjusted by simply turning the nuts f to raise or lower it, as required.

What I claim as my invention is—

1. In a door hanger, the combination, with the hangers D, of a track divided into three sections, C C' C', the two end sections being permanently secured in position, and the central section, C, being removable, substantially as and for the purpose set forth.

2. The combination of the door B, the adjusters I, suspenders H, bar G, balls or rollers E, spacer F, and track C C', substantially as shown and described.

3. The hangers D D, provided with the A-shaped projection e, in combination with the rail C C', of a door-hanger, as shown and described.

4. In a door-hanger, the spacer-bar F, and balls or rollers E, in combination with the track C C' and bar G, as shown and described.

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

CHARLES W. EMERSON.

Witnesses:

J. H. ADAMS,  
E. PLANTA.