

(No Model.)

A. J. BATES.

DOOR HANGER.

No. 330,286.

Patented Nov. 10, 1885.

Fig. 1.

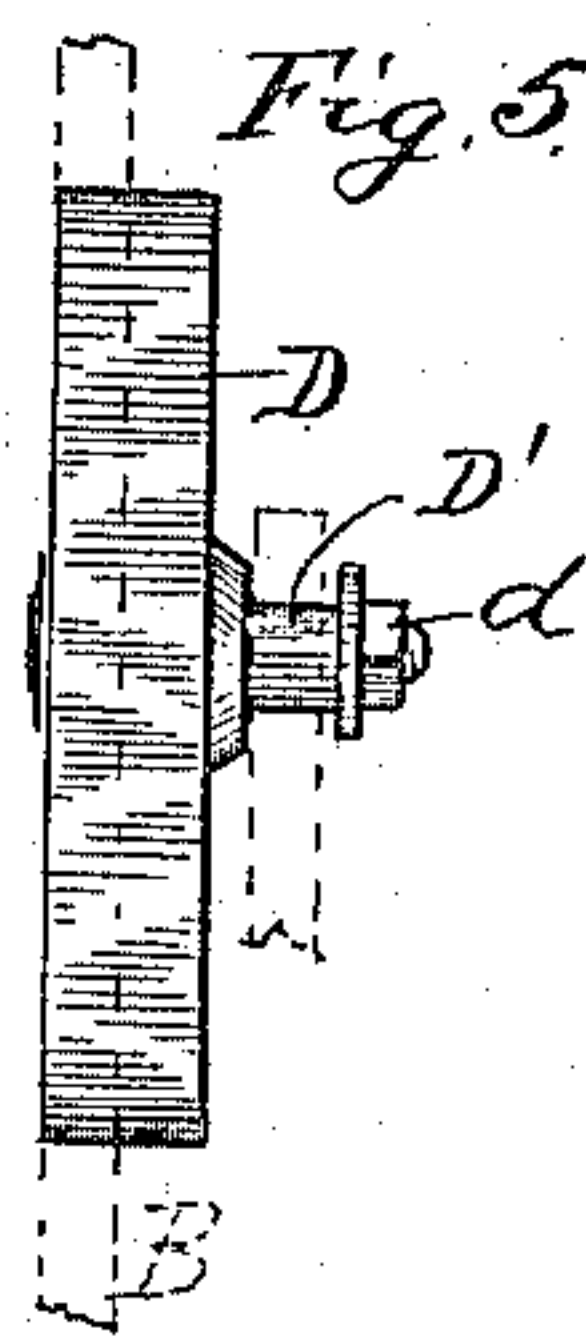
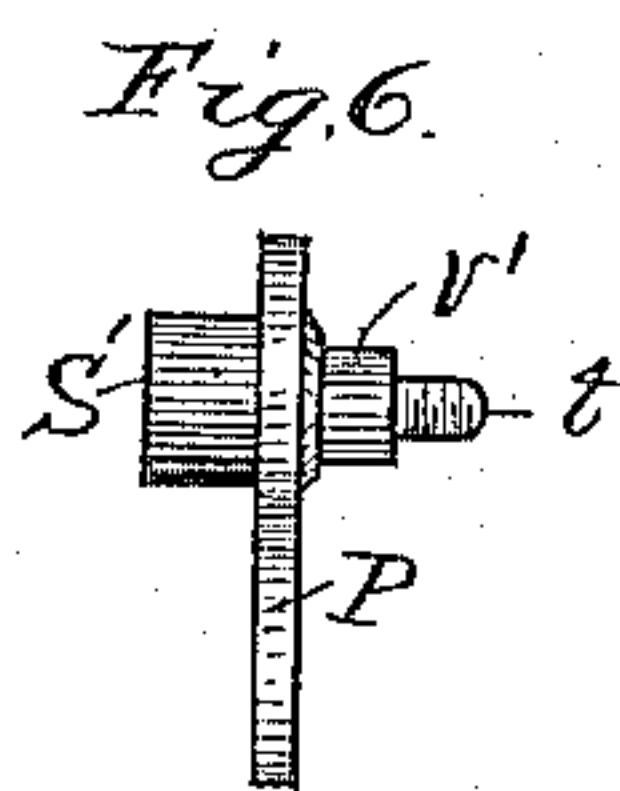
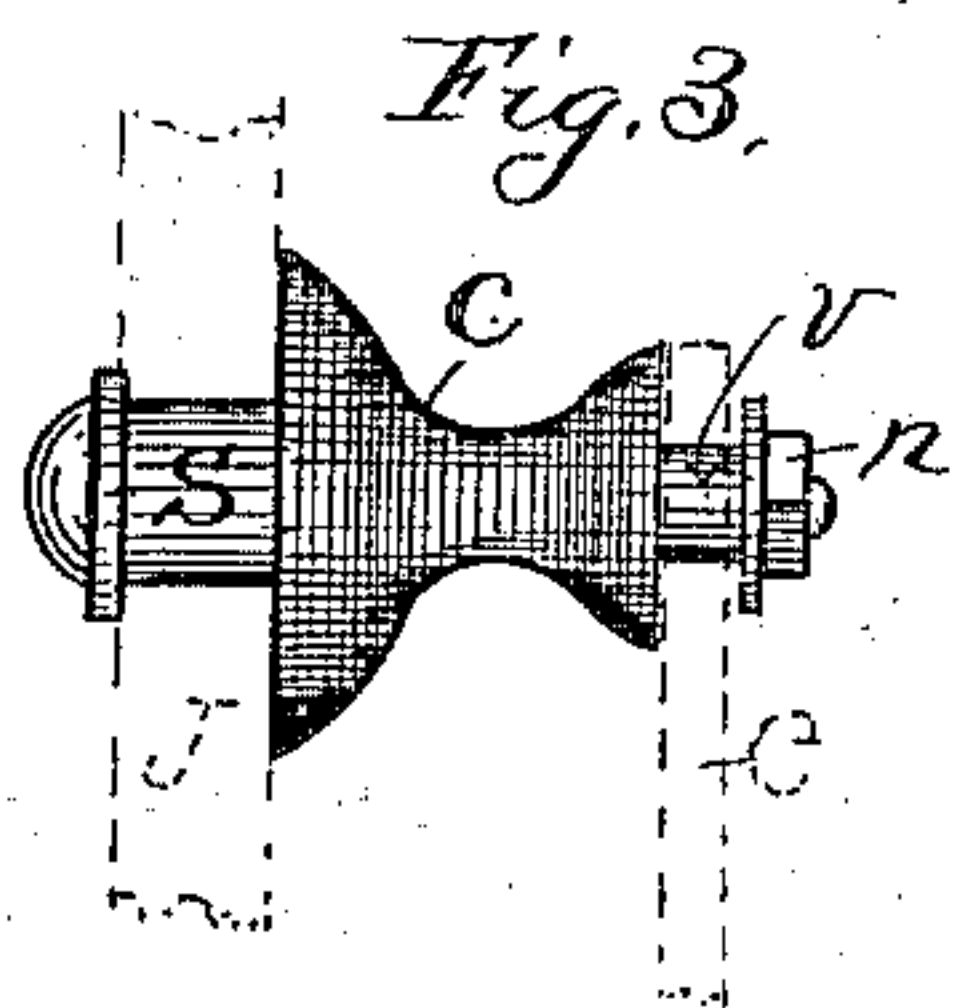
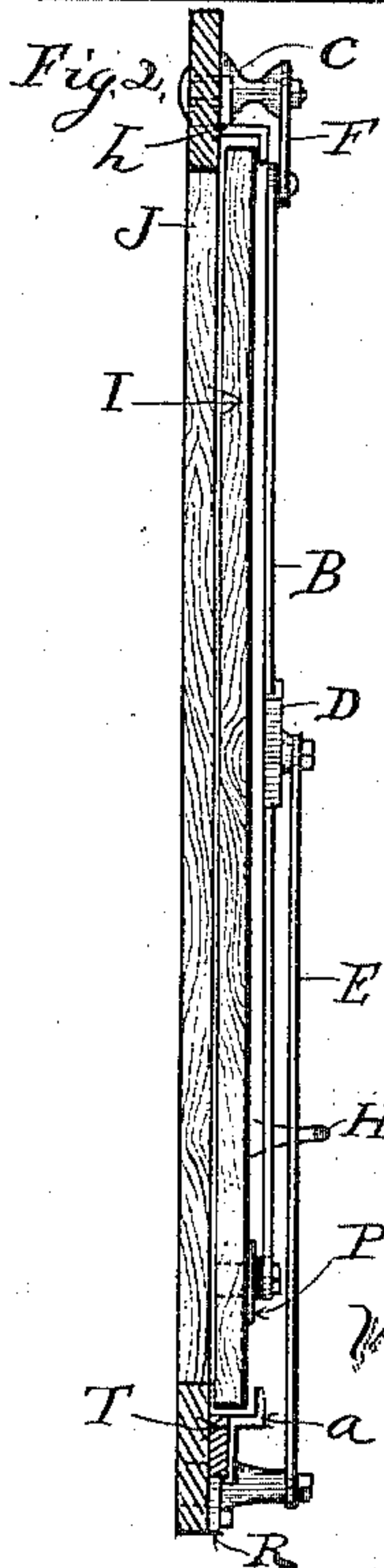
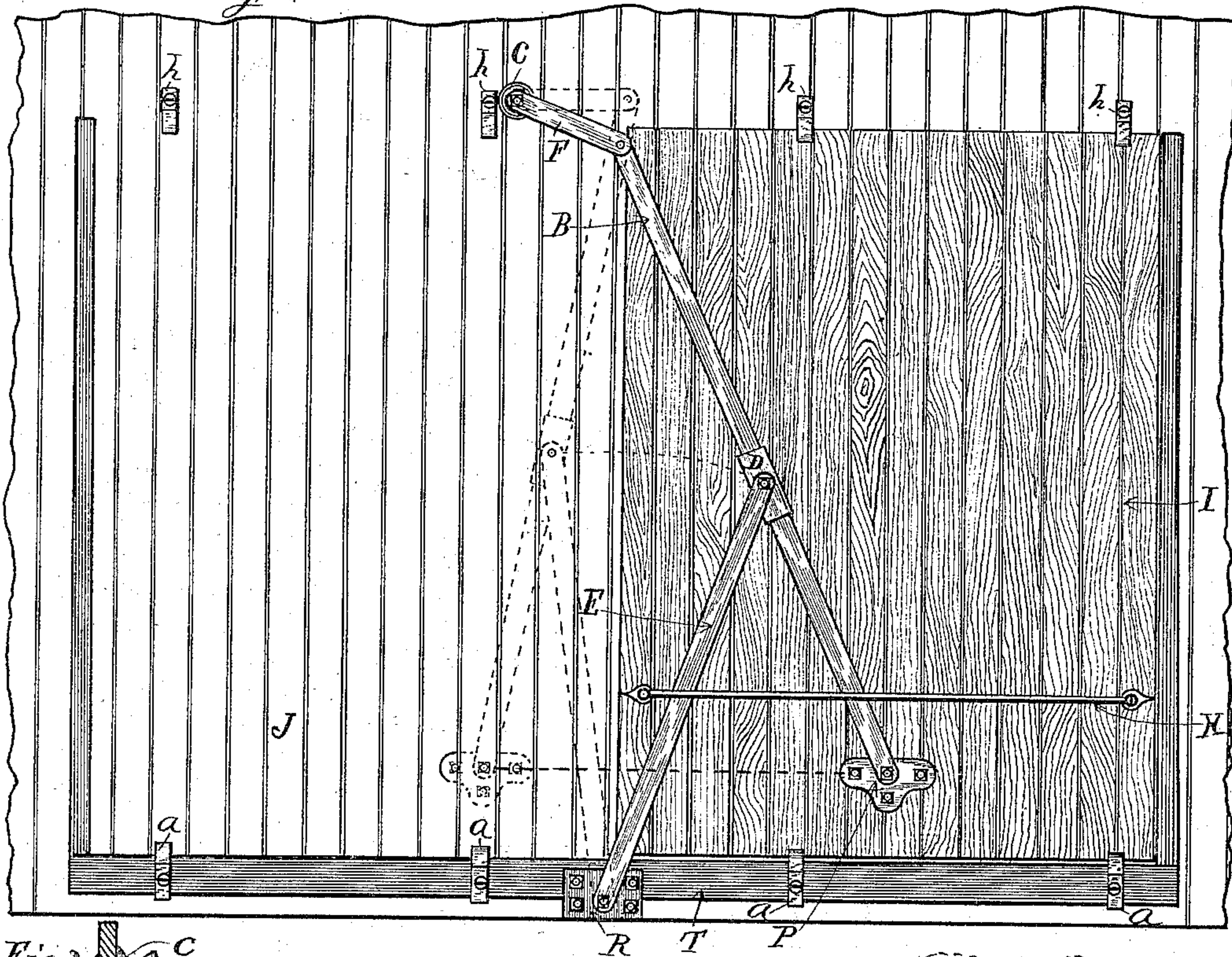
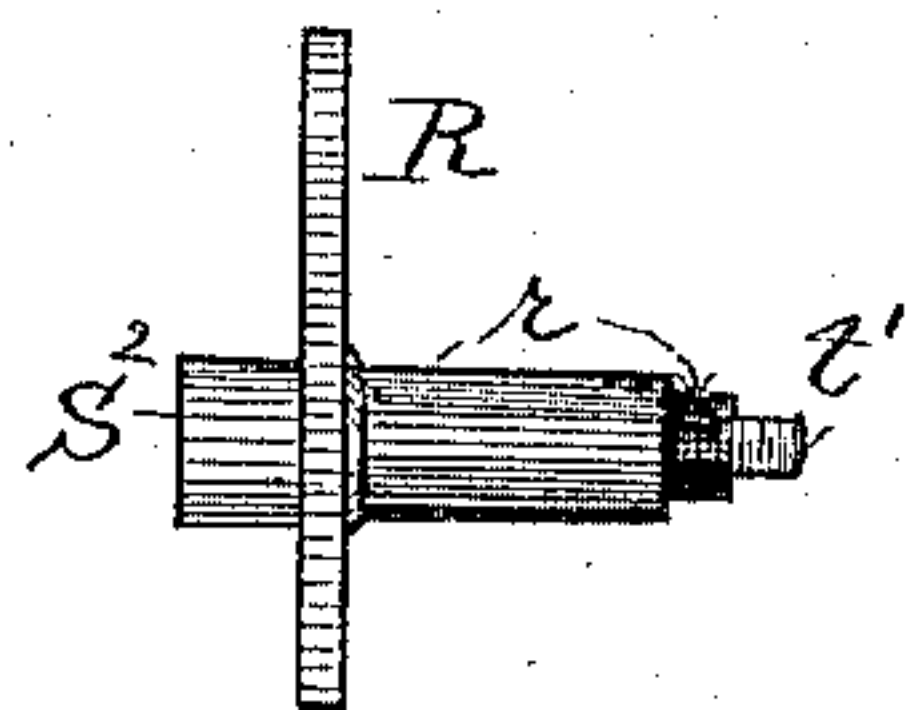


Fig. 7.



Witnesses.

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DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 330,286, dated November 10, 1885.

Application filed September 21, 1885. Serial No. 177,721. (No model.)

To all whom it may concern:

Be it known that I, ALBERT J. BATES, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation of the door and of the hanger as they appear when the door is closed. Fig. 2 is an end view of the door as it appears attached to the building by means of the hanger, looking at the rear end of the door. Fig. 3 is a side view of the stud-plate for attaching the upper end of the hanger to the side of the building. Fig. 4 is a plan view of the stud-plate on the lever for connecting it with the supporting-bar of the hanger. Fig. 5 is a side view of the same. Fig. 6 is a side view of the stud-plate for attaching the door to the lever, and Fig. 7 is a side view of the stud-plate for attaching the lower end of the supporting-bar of the hanger to the building.

This invention relates to certain improvements in door-hangers of the class wherein the door is supported and moved by means of pivoted bars and levers, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, I represents the door, and J a section of the side of a building or car. B is a lever having its lower end pivoted to the side of the door at its center, near the lower end, by means of the stud-plate P, and its upper end pivoted to the side of the building, above and near the upper inner corner of the door, through the medium of the link F and stud C.

E is the supporting-bar, having its lower end pivoted to the side of the building, below the lower inner corner of the door, by means of the stud-plate R, and having its upper end pivoted to lever B, immediately below its center, by means of the stud D' and plate D.

Stud C is constructed as shown in Fig. 3, and is provided with the shank S, for passing into a corresponding hole in the side of the building, and the secondary stud V on its outer end for the reception of link F. A bolt passing through said stud from the rear and having the nut N on its outer end, and washers

next both its head and nut, secures it to the building and secures the link on it, as shown. Stud-plate R has a rear shank, S', for entering a corresponding hole in the building, and a face-stud having a screw-threaded stem on its outer end at t' for the reception of supporting-bar E, and a nut to hold it on. This stud R is long, so as to hold the said bar out a proper distance from the building, so it will not come in contact with the adjacent parts, as shown in Fig. 2. Stud-plate P has a rear shank, S', for entering a hole in the door, and a front stud having a screw-threaded stem, t, on its outer end for the reception of the lever B and a nut to hold it on. Both these plates P and R are secured in place by means of bolts or screws, as shown in Fig. 1.

The plate D is channeled on its rear side for seating it on the lever B, and is held thereon by means of the stud-bolt d, passing through it and said lever. The plate D is provided on its outer face at its center with the stud D', for the reception of the upper end of supporting-bar E.

H is a handle secured to the face of the door, and furnishes means for moving the door and a protection for the lever and bar.

The guards a at the lower end, and h at the upper end, of the door hold it to the building, and a rail, T, at the lower end secured to the building, serves to prevent the door from having too great an oscillating motion in either direction.

The door I is suspended near its lower end centrally from the side of the lower end of lever B, through the medium of stud-plate P, a sufficient distance from rail T to clear it, as shown in Fig. 1, and said lever is in turn supported immediately below its center on the upper end of the supporting-bar E.

When the door is opened, it is moved horizontally, and the dotted lines show the position of the hanger when the door is about three-fourths open.

The manner in which the parts of the hanger are pivoted together and to the door and building permits the door to move horizontally, as shown by the lower horizontal dotted line in Fig. 1.

This hanger is intended to be applicable to barn, car, or other doors wherever it is con-

venient to use it, and by securing the said parts together, as shown and described, they are centered at each joint, which permits them to work with as little friction as is possible to obtain.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In combination with the door I, the lever B, having its lower end pivoted to the lower central portion of said door, the link F, for pivotally connecting the upper end of said lever with the building J, above and near the inner upper corner of the door, the supporting-bar E, for pivotally connecting the said lever with the building, below and near the inner lower corner of said door, and the studs and studded plates C, P, R, and D, as and for the purpose set forth.

2. In combination with the building J and door I, the lever B, link F, rail T, supporting-bar E, and studs and studded plates C, P, R, and D, as and for the purpose set forth.

3. In combination with the building J and door I, and the means shown and described for supporting and operating said door, the hand-rail H, base-rail T, and guards *a* and *b*, substantially as and for the purpose set forth.

4. In combination with the building J and door I, the lever B, link F, base-rail T, guards *a* and *b*, supporting-bar E, and studs and studded plates C, P, R, and D, as and for the purpose set forth.

5. In combination with the lever B, bar E, and link F, the stud C, having the rear shank, S, and face-stud V, and adapted to be secured to the building J by means of a bolt and nut, N, the plate P, having the rear shank, S', and face-stud V', and screw-threaded stem *t* and plate R, having the rear shank, S'', the face-stud *r*, and screw-threaded stem *t'*, and the channeled plate D, having the face-stud D', and securing nut and bolt *d*, as and for the purpose set forth.

6. In the door-hanger shown and described, the plate D, channeled on its rear side for the reception of lever B, and having the face-stud D', for pivotally connecting said lever with supporting-bar E, and arranged to be secured in place on said lever by means of a bolt passing through said parts, and a nut, *d*, turned on said bolt, as and for the purpose set forth.

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Witnesses:

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