

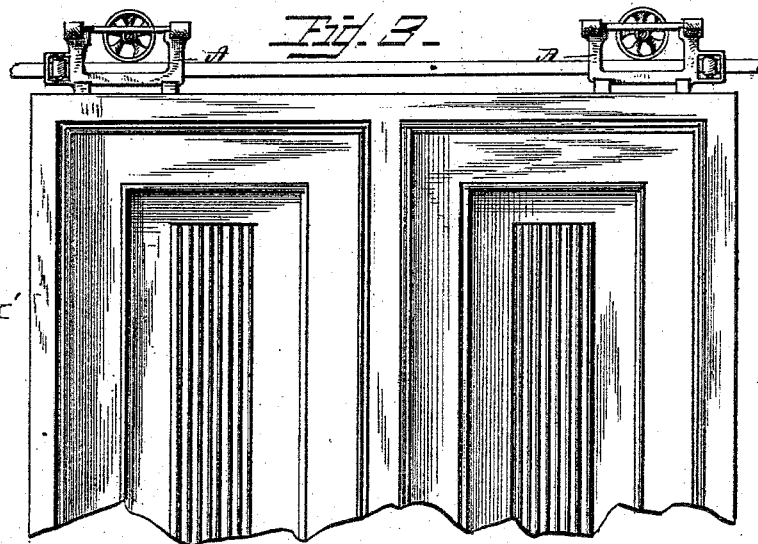
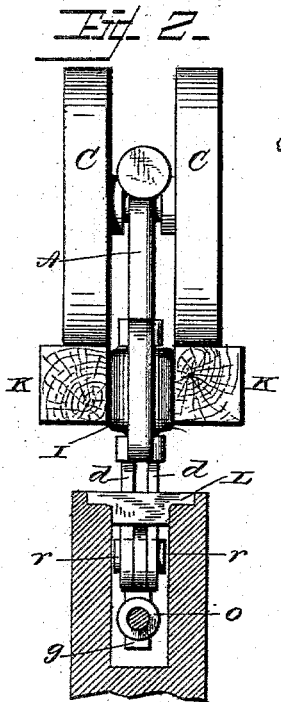
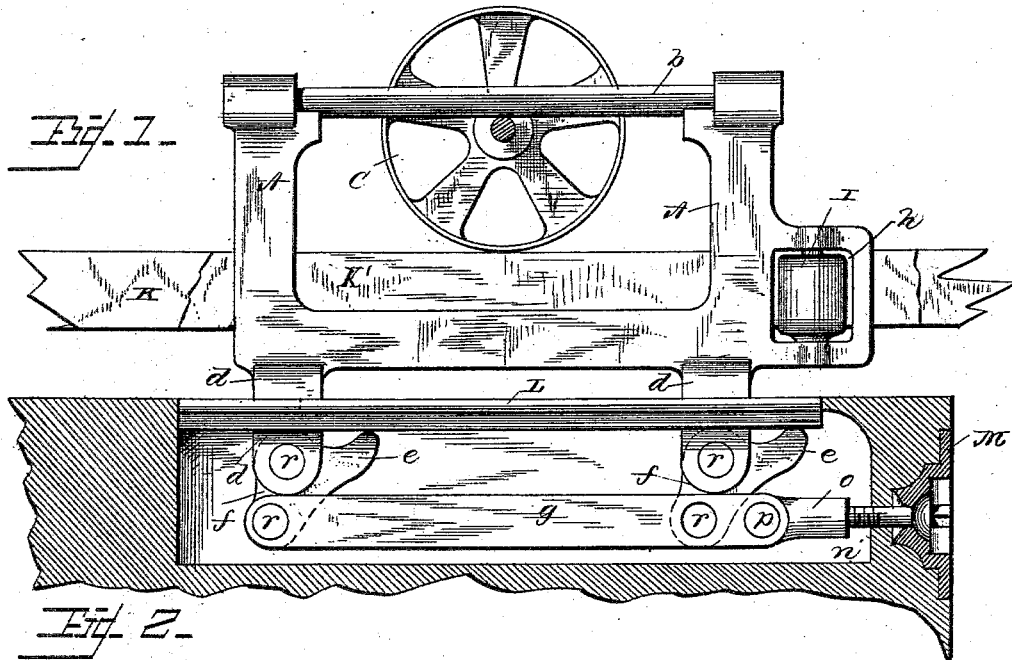
(No Model.)

E. T. PRINDLE.

DOOR HANGER.

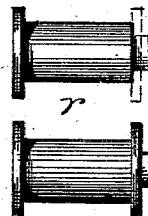
No. 301,389.

Patented July 1, 1884.



WITNESSES
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Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD T. PRINDLE, OF AURORA, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 301,389, dated July 1, 1884.

Application filed December 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. PRINDLE, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Door-Hangers for Sliding Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has for its main objects the effecting of a positive vertical adjustment of the door, so that it may always be raised or lowered correctly to an absolute certainty, regardless of the shifting position of the axle of the rollers relative to the rider-bar, the insuring that the doors shall hang true and plumb, and so that two sliding doors shall come together true and not gape at top or bottom, and while effecting these objects my invention also insures that even the largest doors may be slid easily and without "tremble," and with the minimum of friction, and that the adjusting devices are readily accessible.

Figure 1 is an elevation of one of my improved hangers as applied to the top of a door near one corner, it being understood that in practice there is a similar one near the other corner; Fig. 2, an end view of one of the hangers, with the guide-rails and the upper part of the door in section; Fig. 3, a side view of part of a parlor-door with my improved hangers attached, and Fig. 4 details of some of the bolts.

A is one of the yokes, and *b* its rider-bar, which is preferably made cylindrical and of wrought-iron or steel, and cast into the body of the yoke. It may, however, be a flat rider-bar without detriment to the general merits of the invention, as either will run equally well on the axle of the rollers C. From the bottom of each of the yokes project vertically two lugs, *d d*, one being near each end, and pivoted to the lower end of each of these lugs is a lifting lever or cam, *e e*. The shorter and lower ends, *f*, of both these levers are connected to a slide, *g*. The yoke has also made integral with it a strong projection at one end, but in a plane above the lugs, and in which is an

opening, *h*, in which is placed on a vertical axis a guide-roller, I, adapted to run between the usual guide-rails, K K, on which the rollers C travel.

L is a plate secured to the top of the door, and through which the lugs *d* project into the mortise or cavity made in the top of the door to receive them and the adjusting-slide *g*. This plate has a central longitudinal rib, which lets into the mortise in the top of the door. M is the "astragal," secured flush to the vertical edge of the door, and through which a screw-bolt, *n*, whose head is also flush with the edge of the door, projects into a threaded socket, *o*, which is jointed to one end of the slide. The adjusting screw-bolt *n* should be ball-jointed in the astragal. The pair of rollers C have no flanges, and are turned and bored true, and are pressed onto their axle "to gage," and this permits the door to move almost without noise, the rails being of hard wood, and a child can open or close the largest doors. A similar yoke and connections are similarly applied to the top of the door at its other corner, and the hangers each arranged with its rider-bar resting on the axis of its respective pair of rollers C.

The levers and their connections are preferably made of wrought-iron or steel, and may be punched out of sheets.

The guide-roller I is preferably made of hard wood, and in using it flanges on the rollers are not needed.

It will now be apparent that upon slightly turning the screw-bolt *n* to the right it will pull the slide toward the astragal or vertical edge of the door, and that this action must positively and coincidentally swing both of the lifting cams or levers *e*, and cause their upper ends equally and simultaneously to bear against the plate L, and thus raise the door, and this equality of action prevents any tilting of the rider-bar upon the axle of wheel C, no matter whether this axle may be at one or the other side of the center of such bar, for neither end of the yoke can rise or fall without the other. The joint *p*, where the socket *o* connects with slide *g*, is pivotal, or such as to allow the requisite slight adjusting movements. By turning the screw *n* in the other direction the door will be evenly and similarly lowered.

The construction of the pins or rivets *r*,

which form the several joints of the lever, is shown in the detached figures. They have a head, *s*, and a washer, *t*, to be riveted on the other end. They may be turned; but I prefer to have them drop-forged, as the most economical.

From the above it will be seen that the hangers may be sufficiently strong and rigid to carry the largest doors without any tremble; that they are as nearly anti-friction as can well be made; that the vertical adjustment is positive and not accidental, and always permits the door to be raised or lowered to an absolute certainty, regardless of the position of the axle of the rollers relatively to the rider-bar; that the doors will always come together true and hang plumb, and make a good joint when closed; that the adjustment is easy to get at; that the lugs of the yoke remain firm in the plate under all conditions, and positively prevent the yoke from tipping up at either end, whether the axle be in the center or at either end of the yoke; that there is no springing or jumping of the door, no starting of the door before the hanger moves, and no moving of the hanger after the door has come to a standstill.

I claim—

1. A yoke of a metal door-hanger, made with a round rider-bar, *b*, of wrought-iron or steel, cast into the body of the yoke, as set forth.

2. The yoke of a door-hanger, made with the two vertical projections *d d*, combined with the two lifting-levers *e e* and an adjusting slide-bar, *g*, connecting such levers.

3. The combination, with the yoke having the projections *d d*, of the levers *e e*, their connecting-slide *g*, pivoted socket *o*, and adjusting-screw *n*.

4. The yoke of a door-hanger, made with a rider-bar, *b*, with an opening formed in the body of the yoke, adapted to carry a guide-roller, and with the two vertical projections *d d*—one near each end—adapted to receive and sustain the levers, all substantially as shown and described.

5. In combination, the yoke *A*, made as shown and described, the plate *L* for the door-top, the levers *e e*, slide-bar *g*, socket *o*, and screw *n*, all substantially as set forth.

6. In combination, the levers *e e*, slide *g*, pivoted socket *o*, astragal *M*, and the adjusting screw-bolt *n*, extending through the astragal and into the pivoted socket, all substantially as set forth.

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Witnesses:

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