(Model.)

B. F. BLYE.

Door Hanger.

No. 239,362. **Patented March 29, 1881.**

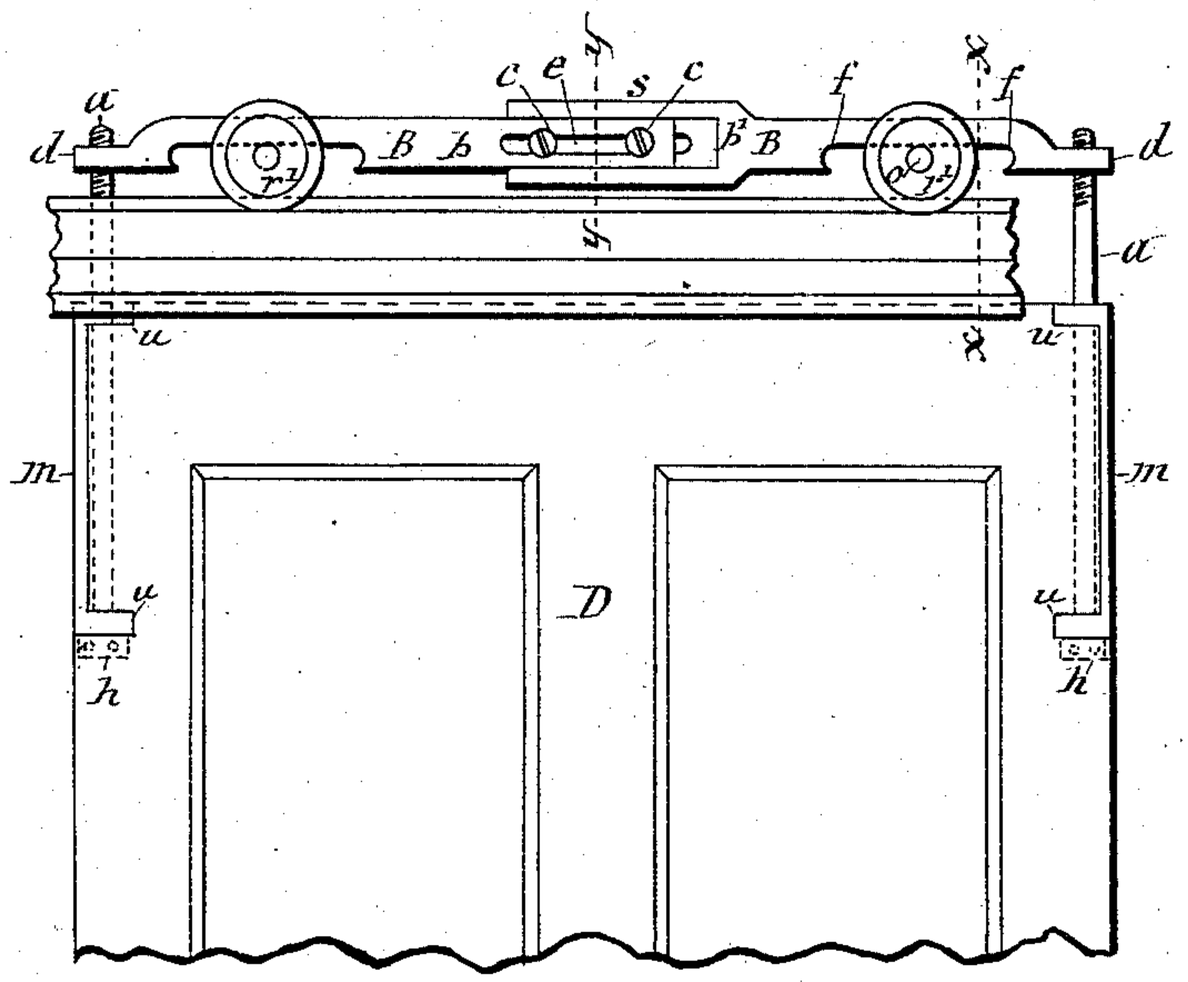

Fig. 1

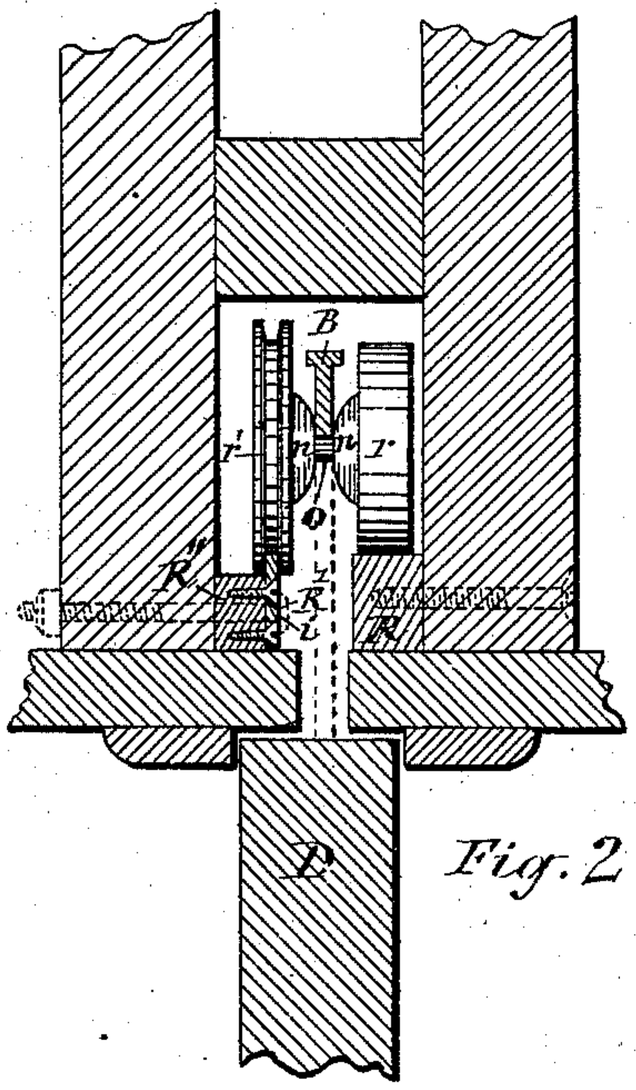

Fig. 2

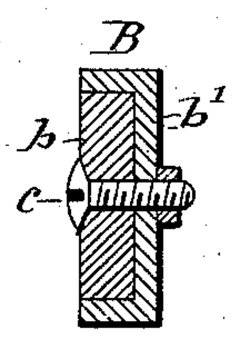

Fig. 3

WITNESSES:

Wm. L. Raymond.

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per Duell, Laass & Aby

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UNITED STATES PATENT OFFICE.

BENJAMIN F. BLYE, OF SYRACUSE, NEW YORK.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 239,362, dated March 29, 1881.

Application filed December 28, 1880. (Model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. BLYE, of Syracuse, in the county of Onondaga, 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 which suspend the door from a bar riding on the axle of independent rollers mounted on stationary tracks above the door.

The invention consists in a novel, simple, and comparatively inexpensive construction of a door-suspending frame, possessing superior stability and great facility of adjustment to the width of the door to which it is to be applied; and it also consists in a peculiar construction and combination of devices for supporting and guiding the door-suspending frame when in operation, all as hereinafter more fully described.

The accompanying drawings fully illustrate the invention.

Figure 1 is a front view of my improved door-hanger; Fig. 2, an enlarged transverse section on line *x x*; and Fig. 3 an enlarged transverse section on line *y y*.

Similar letters of reference indicate corresponding parts.

D denotes the door, designed to be suspended. In the side edges of said door is countersunk and rigidly secured a strap, *m*, having offsets or lugs *u*, with a hole through which the suspension-rod *a* passes, said rod being provided at its lower extremity with a head, *h*, which engages the bottom of the lower lug, *u*, and thus supports the door. The upper extremity of the suspension-rod *a* is screw-threaded and passes through a correspondingly female-threaded eye, *d*, on the end of the carrier-bar B, and thus affords a simple and effective means for adjusting the elevation of the door.

The carrier-bar B, I form of metal and of two sections, *b b'*, spliced by overlapping each other, and braced by flanges on one section embracing the edges of the other section, as shown at *s*, and clamped by bolts *c c* passing through a slot or slots, *e*, in one or both sections *b b'*, said described connection affording a convenient and effective means for adjusting the hanger to various widths of doors without impairing the stability of the hanger. Each of said sections has its bottom edge formed with an elongated and straight recess terminating with abrupt offsets *f f*, which serve as stops for limiting the movement of the bar B, said bar riding with the aforesaid recess on the axle *o* of the rollers *r r'*, and the collision of the offsets *f f* with the axles *o* determining the movement of the bar, as aforesaid. The rollers are sufficiently apart to prevent frictional contact of same with the bar B. By means of a hub or boss, *n*, on the inner side of the respective rollers abutting against the sides of the bar B, the latter is steadied and guided. Heretofore both rollers *r r'* have been either flanged and made to serve as guide-rollers, or were made smooth-faced and traveled on a plain track-rail, as shown at R, and were guided either by additional rollers or stays connected to the suspension-rods between the track-rails. The first-mentioned arrangement, however, requires both track-rails to be perfectly true and parallel to each other, inasmuch as the bending or deviation of either rail tends to bind the rollers and impede their movement. The other arrangement increases the cost of manufacture and adds to the device frictional bearings which are difficult of access for lubricating, and consequently subject the same to wear and abrasion, which soon render the door-hanger defective or inoperative. To obviate these defects, I make one roller, *r'*, with a narrow grooved tread and mount it on a guide-rail, R', formed of a straight bar or piece of band-iron, *i*, secured edgewise to a wooden rail, R'', as best seen in Fig. 2 of the drawings. The described combined carrying and guide roller, in conjunction with the metal guide-rail, dispenses with the usual extra rollers and other devices heretofore applied to the door-hanger for guiding the door in its movement, and is nearly or quite free from friction, wear, and noise. The other roller, *r*, is smooth-faced, and travels on a plain smooth track-rail, R. Said roller being thus relieved of all obstructions in its movement, and guided by the roller *r'*, on the opposite side of the hanger, it becomes immaterial whether the rail R is perfectly true and parallel with the

guide-rail R′, thereby saving to a great extent time, labor, and expense in applying the device to a doorway.

I do not claim, broadly, the combination of two rollers connected by a rigid axle and a carrier-bar traveling on said axle, as I am aware the same is not new; but

What I do claim as a specific improvement in that class of devices is—

1. The within-described door-suspending frame, consisting of the bar B, composed of sections *b b′*, having the splice *s*, with slot *e* and bolts *c*, and provided with the stops *f f*, and with the female-threaded eye, *d*, and the suspension-rods *a a*, having their upper extremity screw-threaded, and their lower extremity provided with the head *h*, all constructed and adapted to be applied to a door, substantially in the manner described and shown.

2. The improved means for carrying and guiding a suspended door, consisting in the combination, with the carrier-bar B, of the plain track-rail R, guide-rail R′, provided with the bar *i*, the plain-faced roller *r*, and grooved roller *r′*, connected by a rigid axle and mounted, respectively, on the rail R and bar *i*, substantially in the manner described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 21st day of December, 1880.

BENJAMIN F. BLYE. [L. S.]

Witnesses:
C. BENDIXON,
WM. C. RAYMOND.