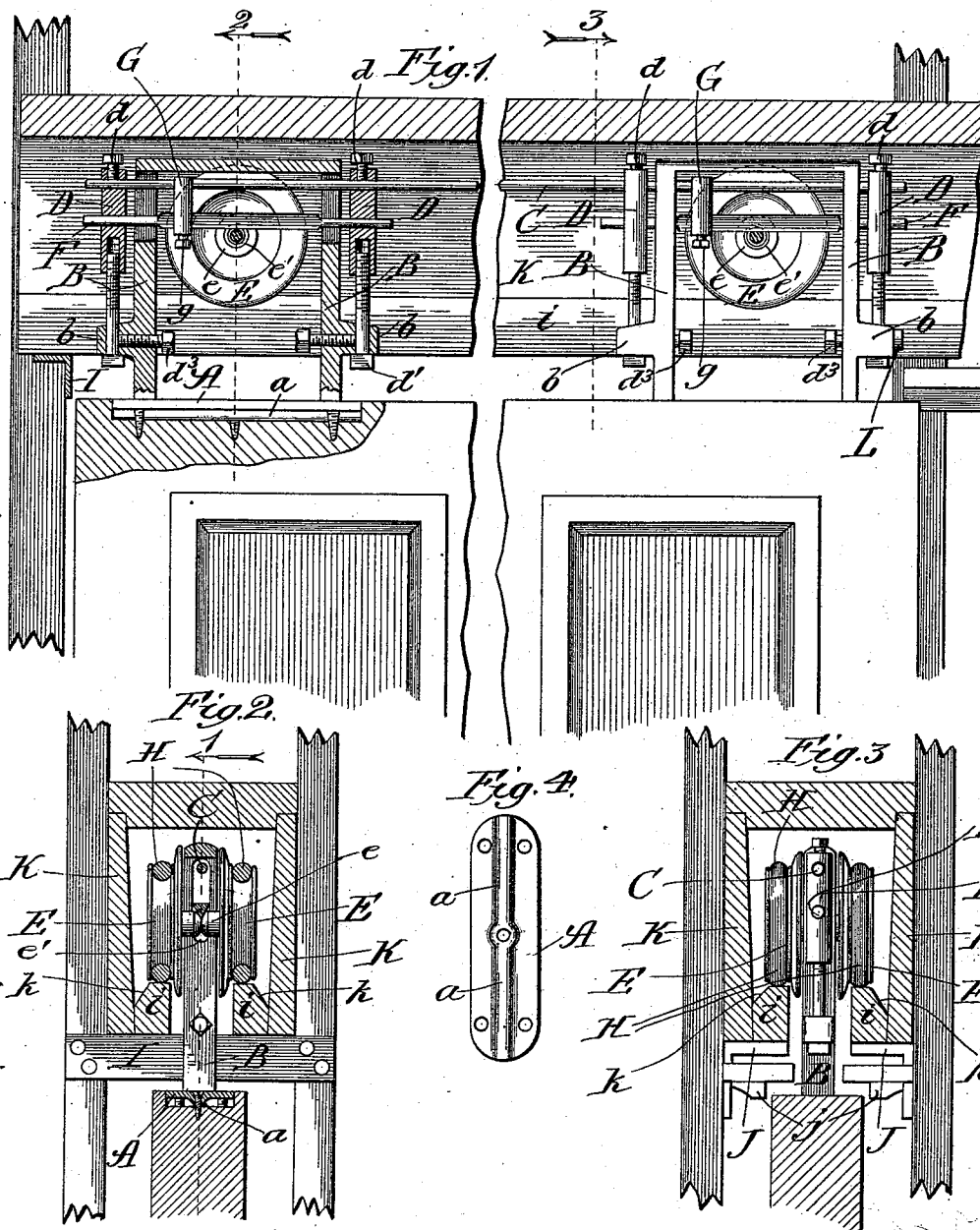


(No Model.)

W. F. BERRY.
DOOR HANGER.

No. 526,961.

Patented Oct. 2, 1894.



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UNITED STATES PATENT OFFICE.

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DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 526,961, dated October 2, 1894.

Application filed January 30, 1892. Serial No. 419,851. (No model.)

To all whom it may concern:

Be it known that I, WILBUR F. BERRY, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification.

In the drawings, Figure 1 is a side elevation, partly in section, of a door provided with my improved hanger, taken in the line 1 of Fig. 2 looking in the direction of the arrow. Fig. 2 is a transverse section taken in the line 2 of Fig. 1, looking in the direction of the arrow. Fig. 3 is a transverse section taken in the line 3 of Fig. 1, looking in the direction of the arrow; and Fig. 4 is a plan view of the hanger plate, viewed from the bottom.

In making my improved door hanger, I make a hanger plate A for attaching the door to the hanger. This plate is intended to be fitted into a recess or depression cut or mortised into the top of the door at the proper place. It is provided, on its under side, with a longitudinal bead or rib *a*, running along its center, and preferably, from one end to the other. It is provided with screw holes at desired distances apart on each side of the bead or rib, and, if desired, it may have one or more screw holes along its longitudinal center, through the rib, as shown in Fig. 4. The groove or recess mortised into the end of the door, for the reception of the hanger plate is preferably of the same depth in cross section, so that its bottom will present a smooth and level surface, as particularly shown in Fig. 2. The rib or bead on the under side of the plate, resting on the smooth or level bottom of the groove or recess in the top of the door, will serve to hold the plate, at its sides, above the bottom of the recess, so that as the screws are put in, the plate may be tipped or oscillated on its longitudinal bead as may be necessary to bring the yoke in which the trolley is mounted into the desired position of parallelism with the sides of the door. If, in fastening the hanger plate to the door, this parallelism should not in the first instance be secure, or if for any reason it is desired to change the lateral position of the yoke, all that would be necessary would be to loosen the screws on one side of the bead, and tighten those on the other, to effect the desired change or adjustment.

The yoke B is preferably cast integral with the hanger plate, so as to form one piece thereof, as particularly shown in Fig. 2. It rises the desired distance above the door, and has its end pieces the requisite distance apart to permit the trolley wheels to be inserted and to move back and forth between them the necessary distance.

The ends of the yoke are provided with laterally extending lugs or projections *b*, as particularly shown in Fig. 1. These lugs are intended to accommodate the means for adjusting the height of the door as will be presently explained.

As two yokes and two trolleys are ordinarily employed in hanging a large door, and as they are usually placed a considerable distance apart toward the respective edges of the door, it is desirable to have some means for connecting them together to insure a proper and constant alignment of the parts; otherwise, they are liable to more or less lateral displacement so as to get out of line with each other, which would interfere with their proper working. To thus connect the two yokes and trolleys together, I run a long rod or bar C through from one yoke to the other, so as to securely connect them together. To hold this rod or bar in place, as well as to afford means for adjusting the height of the door, I arrange on the outside of the ends of the yokes vertical blocks D, which for convenience may be called adjusting blocks, particularly shown in Fig. 1, through which, as well as through the ends of the yokes, the rod C passes. After it is arranged in place, it is secured and held in position by set screws *d*, preferably inserted through the ends of the blocks D. The lower ends of these blocks are screw-threaded and bolts *d'*, passing up through lugs or projections *b* and properly screw-threaded at their upper ends, engage with them. This affords the means for adjusting the height of the door before mentioned. As the bolts *d'* are screwed up or down in the adjusting blocks D, the height or vertical position of the door will be varied as desired. To accommodate this vertical adjustment, the ends of the yokes are cut away vertically where the rod C passes through them, as at *d*². After the proper adjustment has been made, by screwing the bolts *d'* in or out, they may be held

securely in the desired position by set screws d^3 . Shown in Fig. 1.

The trolley wheels E are made in pairs, as shown in Figs. 2 and 3, with a short axle e 5 fastening them together. I provide this axle with a V-shaped groove e' , as particularly shown in Fig. 2, and I mount on the blocks D a bar F, shaped in cross section to fit the groove in the axle. As shown in Fig. 2, this 10 bar is V-shaped instead of curvilinear, inasmuch as I have found that a groove of such form prevents a swaying and wobbling movement of the door, and if any slight defects exist in the construction of the parts 15 they will not affect the movements of the door, as the rider bar being also angular runs upon one point or line. There can be, therefore, no oscillation of the trolleys out of their position, and consequently no binding of the 20 sides of the door. This bar, resting in the groove in the axle, carries the weight of the door, and prevents the trolleys from oscillating out of their true position, so as always to retain them properly on the tracks or rails on 25 which they run. To adapt the same sized yoke to different sized doors, and to prevent the trolleys from running too far, I mount adjustable stops G on the bars F, through the upper ends of which the bar C also passes, 30 so that they can be moved in the one direction or the other on such bar, to regulate and limit the amount of movement permitted to the trolley wheels. After these adjustable stops have been moved to the right position, 35 they may be held securely in place by set screws g as shown in Fig. 1. The upper ends of these stops are preferably provided with holes through which the rod or bar C passes, so that they have engagement with both rods 40 F and C. I also prefer to provide the trolleys with an elastic tire or band H, to make them more easy and noiseless in their movements, as the door is slid in or out.

In Fig. 1 I have shown the parts and the 45 door broken in vertical section, but it will be understood that the parts are intended to represent a single door with its hanger attachments.

In Fig. 2, I have shown a cross piece I, connecting the studding together, to afford a support for the tracks i , while in Fig. 3, I have shown brackets J fastened to the studding for the same purpose, with the head of the door jamb j immediately above the door. By 50 reference to these figures, it will be seen that I make the side pieces K of the boxes in which the tracks are arranged sloping or beveled outward, so that the space in which the trolleys run is wider at the top than at the bot-

tom, and I slope the outer edges of the track 60 toward the sides K, so as to form troughs or pockets k between the track and the sides of the box along the top, in which dust may accumulate and be prevented from falling down. By making the space in which the trolleys 65 run wider at the top than at the bottom, I avoid the possibility of any binding between the trolleys and the sides of the box in case, owing to the settling of the building or other cause, the trolleys are tipped or leaned to- 70 ward the one side or the other.

In Fig. 1 I have shown a rubber cushion L, on the end of one of the lugs or projections b .

What I regard as new, and desire to secure by Letters Patent, is—

1. In a door hanger, a hanger plate provided with a longitudinal bead or ridge along its under side, substantially as described. 75

2. In a door hanger, the combination of a yoke, trolley wheels arranged therein, tracks 80 on which the wheels run, and a flaring box in which the tracks are laid, substantially as described.

3. In a door hanger, the combination of a yoke, trolley wheels arranged therein, tracks 85 on which the wheels run, a box in which the tracks are laid, the tracks and box being arranged to form a groove or gutter between the tracks and the sides of the box, substantially as described. 90

4. In a door hanger, the combination of a yoke, trolley wheels arranged therein, an axle connecting the wheels and provided with an angular groove, a rider bar fitting in the groove in such axle in such manner as to prevent lateral displacement between the bar 95 and the groove in the axle and provided with round bearing portions at each end to permit the door to oscillate thereon, and connections between the bar and the door to support the 100 door on the bearing portions of the bar and permit its oscillation, substantially as described.

5. In a door hanger, the combination of yokes provided with lugs or projections, adjusting blocks internally screw-threaded and carrying the rider bar and the rod, C, connecting the yokes together, and bolts screw-threaded at their ends and passing freely through the lugs and engaging the threads 110 of the blocks for moving the blocks separately toward or from the lugs by turning the bolts separately, substantially as described.

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Witnesses:

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