(No Model.)

E. Y. MOORE & R. W. LUNDY.

DOOR HANGER.

No. 500,148. Patented June 27, 1893.

Fig. 1.

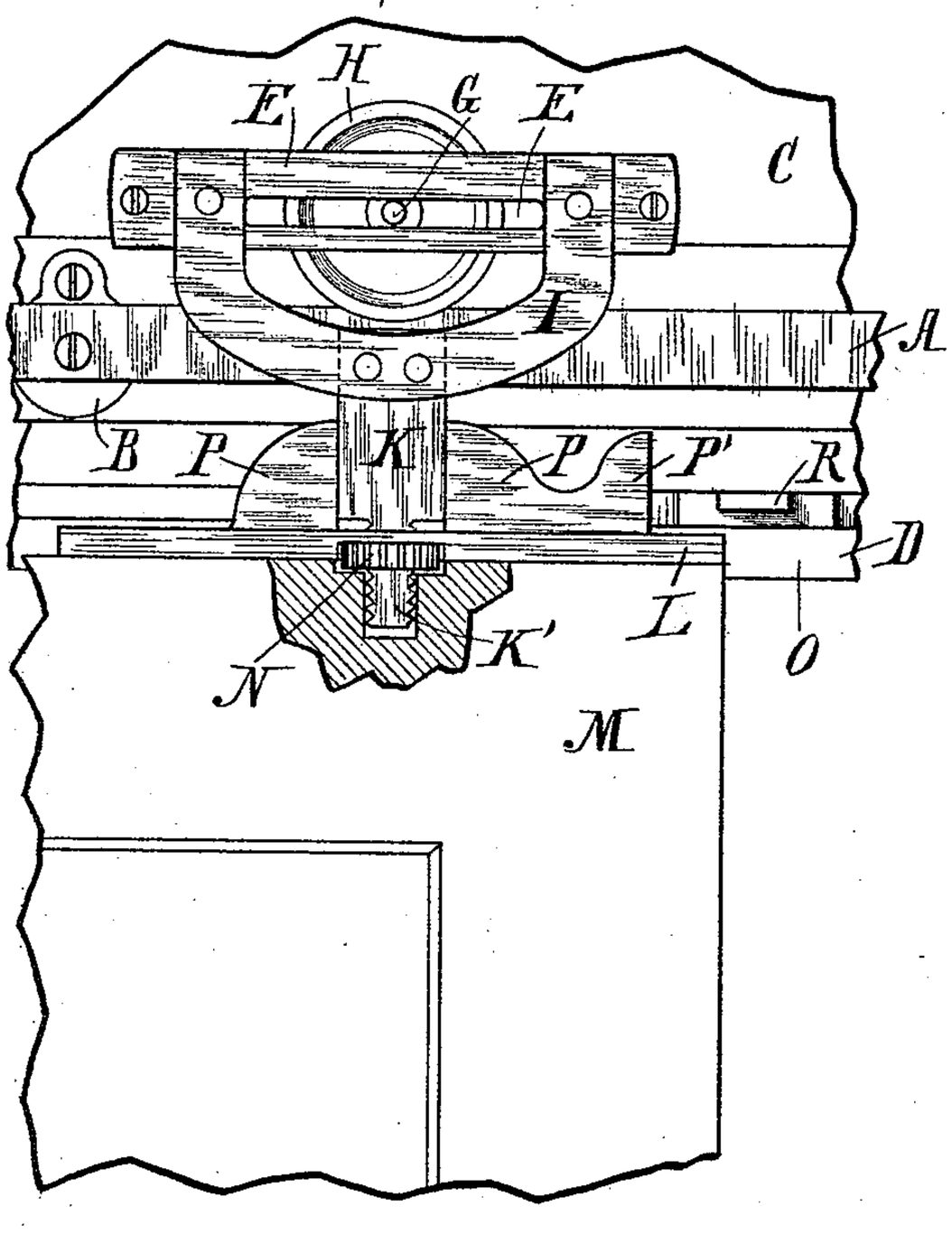


Fig. 2.

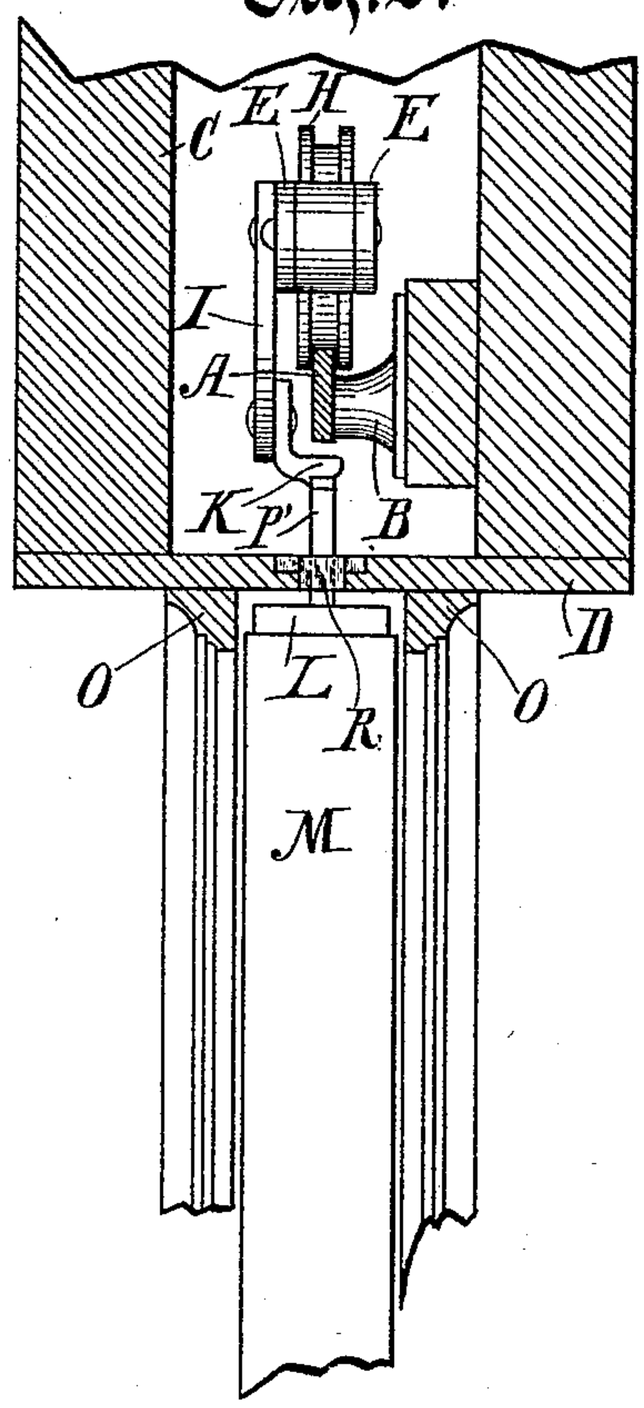
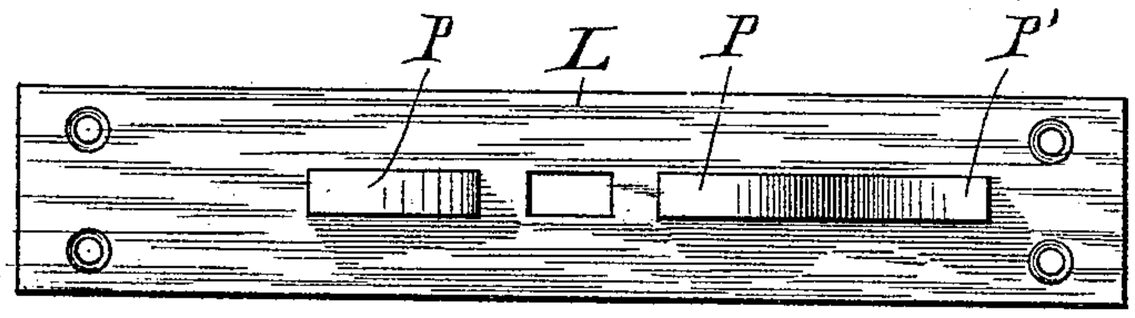


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 500,148, dated June 27, 1893.

Application filed April 13, 1892. Serial No. 428,992. (No model.)

To all whom it may concern:

Be it known that we, EDWARD Y. MOORE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, and RICHARD W. LUNDY, of South Bend, in the county of St. Joseph and State of Indiana, have invented a new and useful Improvement in Adjustable Door-Hangers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

It is common to manufacture door hangers of the class to which our invention relates and sell them in the market to such persons as have use for them. It therefore often occurs that these hangers are bought and put up by persons not well skilled in carpentery, and who are not capable of constructing and putting together the soffits, the rail and allied parts skillfully, or on true lines, and with exact and proper adjustment with reference to each other. It is also true that even where the soffits, the rails and allied parts are constructed and put up with skill and in the best possible manner, that heat and dampness, are apt to warp and twist the parts with which the door hanger is directly connected, or to which it is indirectly related. For these and other reasons it is important to have a door hanger, that is not only simple in construction, inexpensive in character, and adapted to properly support itself and the door thereon, but that also, is easily attachable to its supported door and is readily adjusted on the track and in the door, and also is, so far as it is possible, adapted to work properly and successfully under a part or all of the adverse conditions before stated.

The object of our invention is to provide a door hanger meeting all these requirements, and in which special means are provided to prevent the tilting of the hanger frame in the line of motion of the door, either in the door or on the track.

Our invention consists of the devices hereinafter described and claimed or their equivalents.

In the drawings, Figure 1, is an elevation of a door hanger and allied parts showing our improved devices, in connection with a fragment of the door frame, the track and the door. Fig. 2, is an end view of our improved door hanger and allied parts, fragments of the door frame, the track and the door being shown therewith to show the relations of the hanger thereto. Fig. 3, is a top plan view of the plate that is secured to the top of the door, which plate forms an element of our invention.

The track A is a steel bar arranged horizontally above the door aperture and secured conveniently by brackets B to the door frame C. The casing or soffit D is secured permanently to the door frame and is provided with a central longitudinal slot below and in the vertical plane of the track in which the depending stem of the hanger travels. Our improved devices are especially adapted for use with a hanger frame consisting of two parallel rider bars E E located at a little distance apart and secured rigidly together at their ends, the rider bars being provided with opposite longitudinal slots F in which the ends of the axle G of the wheel H, travel. The wheel is provided with a peripheral groove in which the track A is received, on which track the wheel travels. A yoke I is rigidly secured at its extremities to one of the rider bars and a single centrally attached stem K depends therefrom at a right angle to the horizontal bars, the stem being bent inwardly near its attachment to the yoke, so that its main and lower terminal portion is below and in the vertical plane of the track. The lower extremity K′ of the stem is diminished in size laterally and is screw threaded. This screw threaded part K′ of the stem extends movably through a plate L secured to the top edge of the door. The extremity K′ below the plate L enters a recess therefor in the door M, and a nut N turns on this part of the stem receiving thereon the bearing of the plate and thereby supporting the door. The door is arranged to travel horizontally just below the soffit D, the top edge of the door being in the channel formed by the moldings O O secured to the casing on both sides thereof. It is desirable that the door hanger should constantly maintain its position vertically above and substantially in the plane of the movement of the door especially in that class of door hangers in which the axle

of the wheel travels horizontally on rider bars. To secure this constant position of the hanger frame with reference to the door, we provide the rigid wing guides P P, integral with the plate L projecting upwardly therefrom vertically in front and at the rear of the edges of the stem K, between which guides the stem moves when the hanger is being adjusted toward and from the door by rotating the nut N, and which guides bearing against the stem prevent its tilting in the line of motion of the door, so that the hanger frame is supported constantly vertically above the door. This construction maintains the rider bars on which the axle of the wheel travels in horizontal positions. These wing guides P P are limited to such thickness as is readily admitted through the longitudinal slot in the soffit in which the stem of the door hanger travels. The wing guides are opposite to and receive the bearing of the stem K, only at the front and rear edges, so that as the stem passes loosely through plate L, a slight movement of the door laterally, is permitted on the stem K. This provision for a slight inclination or movement of the door laterally, permits of an easy and ready adjustment of the door and hanger to each other, and to the rail, soffits and adjacent parts, when by reason of imperfect construction, or on account of the shrinking, expanding, twisting, warping, expanding or contracting of any of the parts, the door would, if secured against such lateral motion rigidly to the hanger as has heretofore been the practice, bind or stick fast in the passages for it, in the soffits or door frame. It will be understood, that as the hanger has only one wheel, its tread on the rail, is perfect even if the hanger frame is swayed a little laterally, and that as the depending stem of the hanger frame, enters the door only slightly, and a little freedom of movement laterally is permitted in the connection of the stem to the door, that there is a limited amount of flexibility laterally of the parts, not found in any prior device, while at the same time the rigid wings in front and at the rear of the hanger stem at its connection with the door, prevents the tilting fore and aft of the hanger frame in the door and on the track. The hanger is thus held properly up to its work in the direction of the strain toward the front and rear, while a desirable flexibility laterally, is also obtained.

A stop R is secured to the soffit in such manner as to engage the outer end P′ of one of the wings P and prevent the farther travel of the door in that direction.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination with a door hanger frame provided with a single downwardly depending stem, of a door, a plate secured to the edge of the door through which plate the hanger stem is inserted loosely, and wing guides integral with the plate projecting therefrom alongside the front and rear edges of the stem so as to prevent the tilting of the hanger in the line of motion of the door, substantially as described.

2. The combination with a door hanger frame having rider bars, and a single downwardly depending stem a wheel journaled in slots in the rider bars and arranged to travel horizontally therein, and a track arranged horizontally on which the wheel travels, of a door, a plate secured to the door through which the stem of the door hanger passes and in which it is secured adjustably, and wing guides integral with the plate projecting upwardly therefrom alongside the front and rear edges of the stem of the hanger frame and adapted to maintain the rider bars parallel with the line of motion of the door, while providing a slight flexibility laterally substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD Y. MOORE.
RICHARD W. LUNDY.

Witnesses:
SAML. H. MOORE,
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