(No Model.)

T. C. PROUTY & C. W. TURNER.

DOOR HANGER.

No. 476,068. Patented May 31, 1892.

Fig. 1

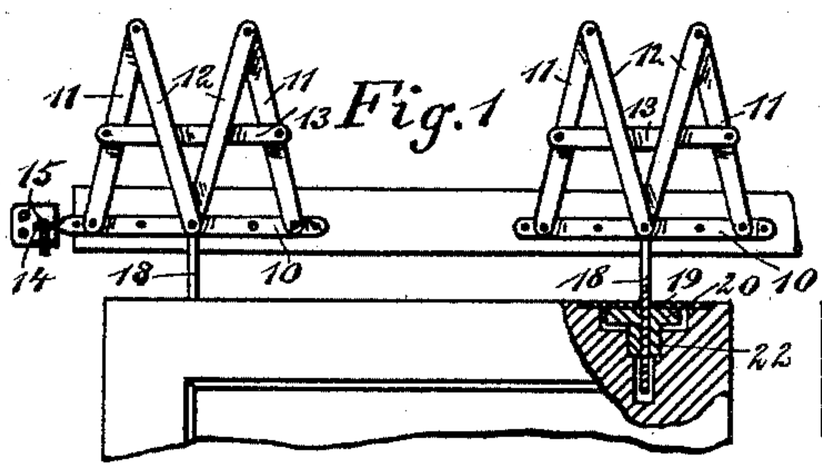


Fig. 2

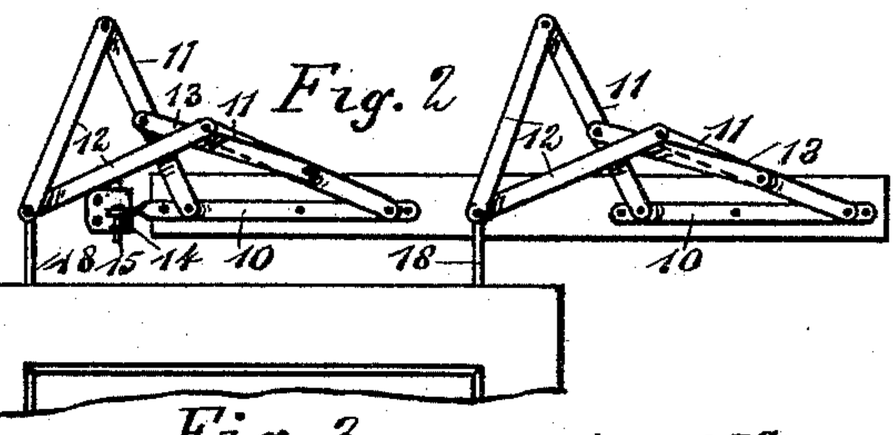


Fig. 3

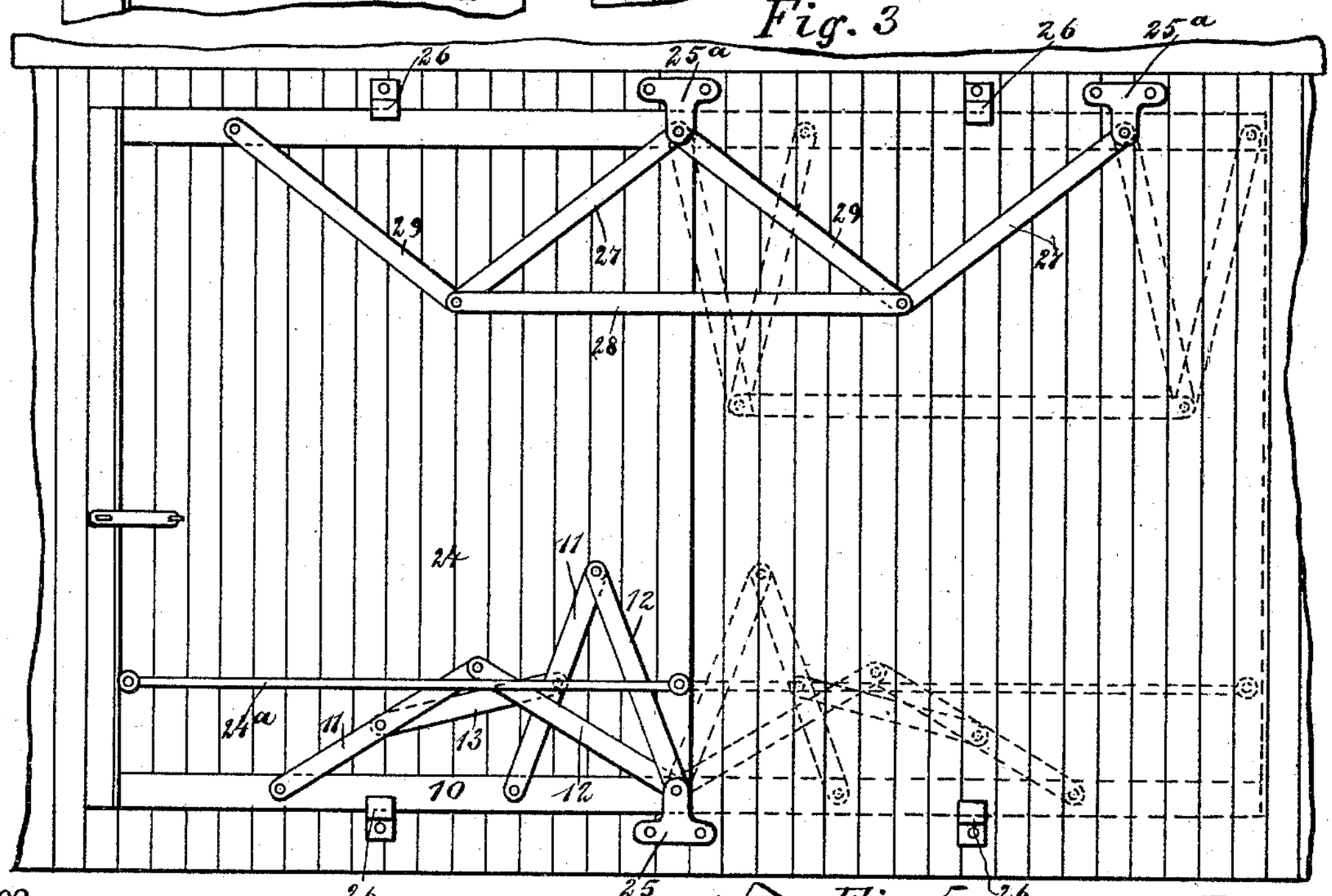


Fig. 4

Fig. 5

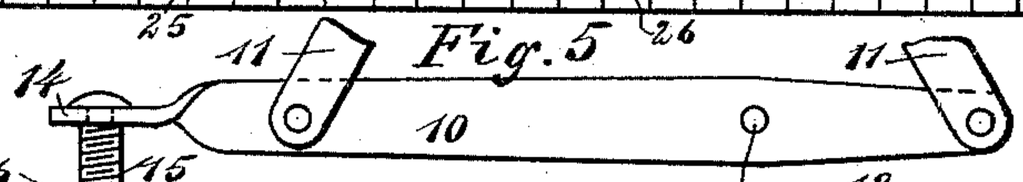
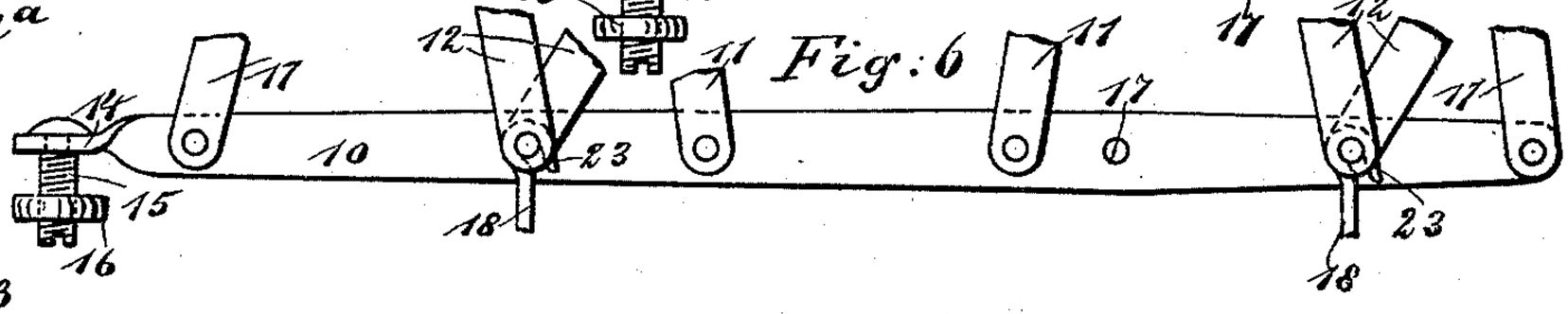


Fig. 6



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UNITED STATES PATENT OFFICE.

THEODORE C. PROUTY AND CLAUDE W. TURNER, OF EVANSTON, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 476,068, dated May 31, 1892.

Application filed October 2, 1891. Serial No. 407,551. (No model.)

To all whom it may concern:

Be it known that we, THEODORE C. PROUTY and CLAUDE W. TURNER, both of Evanston, in the county of Cook and State of Illinois, have invented a new and Improved Hanger, of which the following is a full, clear, and exact description.

Our invention relates to improvements in hangers; and the object of our invention is to produce a cheap and simple hanger which is especially applicable to doors, but which may be applied to any object which is to be held so as to reciprocate in a straight line, which when applied to a door or other object will hold the object so that it cannot move except in the line of its reciprocation, which will cause the door or other object to move very smoothly and without friction, which may be quickly and easily adjusted so as to level the article to which it is attached, which may be easily handled and secured in place, which works noiselessly, and which may be secured to any desired part of a door and still be operative—that is to say, it may be attached to the top, the bottom, or to one edge of the door.

To this end our invention consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the device as applied to a house-door, showing the hanger in its normal position and with a portion of the door broken away to show the means of attaching the hanger to it. Fig. 2 is a similar view, but with the door partially closed. Fig. 3 is a side elevation of a single hanger applied to a barn or car door, showing also the auxiliary device which takes the place of one hanger. Fig. 4 is a broken enlarged end view of the hanger. Fig. 5 is a broken enlarged side elevation of the hanger with the middle arms removed and showing in detail the means of adjustment. Fig. 6 is a similar view of a double hanger.

In connection with the house-door two hangers are preferably used and are arranged above the door, so that the door may be suspended from them, and each hanger is provided with a base-bar 10, which is adapted to be secured to a support, and pivoted to the base-bar near the ends and extending upwardly therefrom are arms 11, which slightly converge and which at their upper ends are pivotally connected with the depending and converging middle arms 12, the latter being pivoted together at a point opposite the base-bar and serving to carry the door-pendant, as described below. These middle arms 12 are bent slightly near their upper ends, as shown at 12^a, so as to make room for the cross-arm 13, which is pivotally connected with the two outside arms 11; but instead of bending the arms 12 washers may be used to hold them the requisite distance from the arms 11.

One end of one of the bars 10, the one nearest the front edge of the door preferably, is given a half-turn and formed into an eye 14, in which is secured a screw 15, which turns in the threaded eye 16 of an eyebolt which is secured in an adjacent support; but the screw may turn in any threaded bearing, and by means of it the base-bar may be quickly adjusted and the hanger brought into a position to bring the door to which it is secured into the correct position in relation to the sill. The bar provided with this screw is pivoted adjacent to one end, as shown at 17 in Figs. 5 and 6, so that it may be moved vertically. The door-pendant 18 is secured to the connected ends of the arms 12, and the pendant is screw-threaded and extends downward through a plate 19 on the top edge of the door and through a nut 20, which is mounted in a recess in the door and which has a burr 22 extending downward into the door. The nut has roughened edges which project from the edges of the door and by turning the nut its position on the pendant-rod may be changed and the height of the door adjusted. The upper end of the pendant-rod 18 is formed preferably into a hook 23, adapted to be hooked over the pivot-pin connecting the lower ends of the arms 12, and in order that the arms may be kept sufficiently far apart to permit the easy securing of the hook a washer is inserted on the pivot-pin between the arms.

On house-doors where there is sufficient room the hangers are placed above the doors, as shown in Figs. 1 and 2; but in places where there is not sufficient room the hangers may

be placed in the rear of the doors and secured to the back edges thereof. In this case the bars 10 are placed in a vertical position and the arms 12 secured to the door at their junction, and in order that the door-hangers may always be in the same relative positions the similar arms of the upper and lower hangers may be connected so that they will work in unison.

When attached to car, barn, or other rough doors, one hanger may be secured to the bottom of the door 24, as shown in Fig. 3, and an auxiliary device secured to the upper portion of the door, so that the door will move properly. In this case the arms 12 at their junction are pivoted to a support 25, which is secured adjacent to the bottom edge of the door, and the lower ends of the arms 11 are secured directly to the door. The door is held to move in keepers 26, and the upper portion of the door is provided with the auxiliary device alluded to, which comprises the parallel arms 27, which are pivoted to supports 25^a, adjacent to the top edge of the door, the arm 28, connecting the lower ends of the arms 27 and pivoted thereto, and the parallel arms 29, which are pivoted to the ends of the arm 28 and the lower ends of the arms 27, the upper ends of the arms 29 being pivoted to the door. This construction enables the door to slide smoothly and in a straight line, and it keeps the passage-way clear when the door is open, as if two hangers were used in line at the bottom or top the arms of one hanger would extend outward into the passage-way. A guide-bar 24^a is secured to the door and extends outside of the hanger and serves as a keeper for the hanger-arms.

The operation of the device is as follows: When the hangers are in the normal position, as shown in Fig. 1, the door to which they are attached will be held in a level position, and when the door is moved the arms 11 will swing on their pivots and the connected ends of the arms 12 will swing forward or backward, as the case may be, so as to carry the door in a level position. It will be noticed by reference to Fig. 2 that the upper end of one of the arms 11 remains in nearly its original position, and the tendency would thus be for the door to swing on an up-curve; but this tendency is offset by the dropping of the upper end of the other arm 11.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A hanger of the character described, comprising two swinging outside arms, a connecting cross-arm pivoted thereto, two middle arms pivoted to the free ends of the outside arms and having two of their ends pivoted together, the converging ends of the middle arms being adapted to be secured to a movable object, substantially as described.

2. A hanger of the character described, comprising a supporting-bar, a pair of outside arms pivoted on the bar and connected pivotally by a cross-arm, middle arms pivoted to the outside arms and having two of their ends pivoted together, and a pendant-rod carried by the middle arms, substantially as described.

3. A hanger of the character described, comprising a base-bar, means for adjusting the bar, a pair of outside arms pivoted to the said bar and pivotally connected by a cross-arm, middle arms pivoted to the outside arm and having two of their ends pivoted together, said middle arms being arranged between the outside arms, and a pendant-rod secured to the connected ends of the middle arms, substantially as described.

4. A hanger of the character described, comprising a base-bar adapted to be pivoted to a support and having a screw mechanism at one end to adjust it, two outside arms pivoted to the base-bar and connected pivotally by a cross-arm, middle arms pivoted to the outside arms and having two of their ends pivoted together, and a pendant-rod detachably connected with the middle arms and adjustably secured to a door, substantially as described.

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