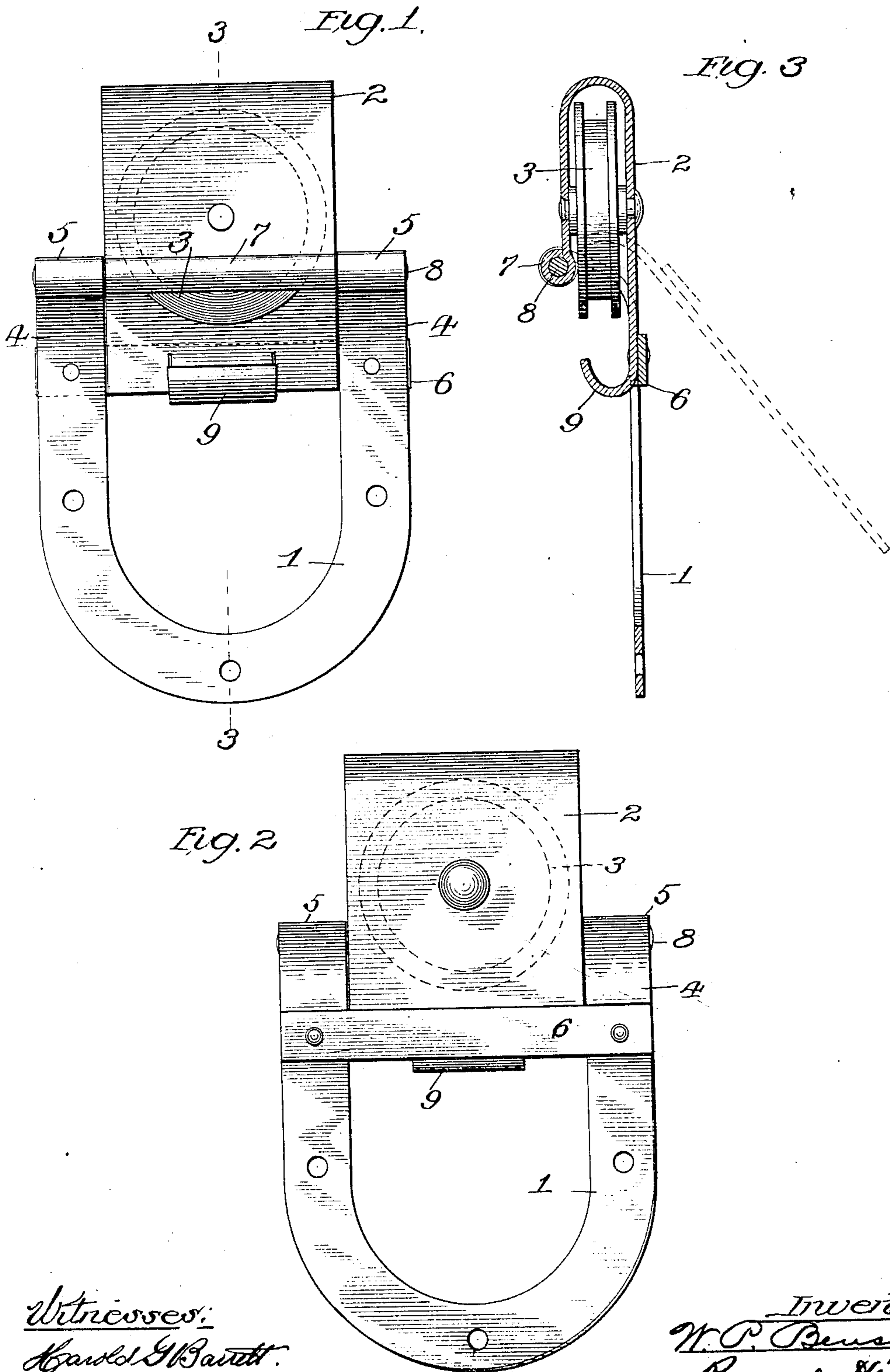


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W. P. BENSON.
DOOR HANGER.

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UNITED STATES PATENT OFFICE.

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DOOR-HANGER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM P. BENSON, residing at Sterling, Whiteside county, Illinois, have invented certain new and useful
5 Improvements in Door-Hangers, of which the following is a specification.

My invention relates to door-hangers such as commonly used for barn-doors; and the object thereof is to provide a novel and efficient device of this character whose features of advantage will be apparent from the description hereinafter given.

In the drawings, Figures 1 and 2 are elevations of opposite sides of the hanger, and Fig. 3 a sectional elevation thereof on line 3 3 of Fig. 1.

Like reference characters indicate like parts throughout the different figures of the drawings.

20 My improved hanger, which is preferably, but not necessarily, made from sheet metal, comprises a lower bracket portion 1, adapted to be secured to the door as usual, and an upper wheel-supporting frame or hood hav-
25 ing journaled in it the usual grooved track-wheel 3. The bracket 1 and frame 2 are hinged together by a pin or pintle 8, which passes through eyes 5, formed upon the upper inwardly-bent ends of the side arms of the bracket 1, and through an intermediate
30 bearing 7, formed upon the lower edge of the inner side of the hood or frame 2. This bearing 7 is formed in the present instance by rolling up the lower edge of said side of the
35 frame into tubular form and is located at the inner side of the track-wheel 3 between the axis and periphery of the latter, the inward bend or extension of the upper ends of the side arms of the bracket 1 permitting the
40 body of the latter to normally hang in the vertical plane of the opposite or outer side of the frame or hood 2. This outer side of the frame or hood 2 extends downwardly below the wheel 3 and has projecting inwardly from
45 its middle a curved guard 9, which travels beneath the track-rail upon which the wheel 3 rests and prevents displacement of the wheel from the rail.

The opposite arms of the bracket 1 are
50 connected, near their upper ends, by a cross-bar 6, which normally rests against the outer face of the outer side of the frame or hood 2, as shown in Fig. 3. The contact of this cross-bar 6 with the lower end of the frame 2, as in
55 Fig. 3, limits the inward movement of the bracket 1; but the bracket is free to be swung

outward and upward, as indicated in the dotted lines in Fig. 3, independently of the frame 2 and the wheel carried thereby. Inasmuch as the door is secured to the inner side of the
60 bracket 1 and is usually of such thickness as to project inward beyond the vertical plane of the wheel 3, the hinging of the bracket to the frame 2 at a point at the inner side of the plane of said wheel and the contact between
65 the depending extension of the frame and the cross-bar of the bracket will cause the bracket and frame 2 to hang in a substantially vertical plane and in line with each other, as in Fig. 3, and prevent any tilting or
70 binding of the grooved wheel 3 upon the track-rail. The provision of the cross-bar 6 and the depending extension of the frame 2 cooperating with it and limiting inward movement of the bracket 1 independently of
75 the frame makes my hanger, in effect, a solid hanger except when it is desired to swing the door outwardly and upwardly. For the purposes of hanging the door upon the track-rail and sliding it longitudinally thereof, there-
80 fore, my hanger embodies the advantages of a solid or one-piece hanger, while by the hinged connection of the lower part of the hanger with the upper it is, in effect, a hinged
85 hanger.

Inasmuch as both the upper and lower portions of the hanger may be and in practice are stamped out of sheet-steel and their bearings for the hinge-pintle formed by simply rolling up their ends, the hanger may be cheaply made and is at the same time of simple construction and great strength.

By reason of the hinging of the bracket at a point above the lower edge or tread of the
95 track-wheel and at one side of the vertical plane thereof the door has a tendency to assume a vertical position in proximity to the building or door-opening, but not to contact the same, inasmuch as the door will hang sus-
100 pended in a vertical plane passing through the pintle on which it is pivoted, besides which the stop arrangements hereinbefore referred to will limit the inward movement of the door. Moreover, the advantage is ob-
105 tained of providing a full door-opening when the door is raised and used as an awning.

Having thus fully described my invention, I claim—

1. A door-hanger comprising a frame hav-
110 ing a track-wheel journaled therein, and a depending bracket hinged to said frame at the

inner side of said wheel, whereby the door has a tendency to assume a vertical position in proximity to the building; substantially as described.

5 2. A door-hanger comprising a frame having a track-wheel journaled therein, and a depending bracket hinged to said frame at the inner side of the track-wheel and above the lower edge thereof, whereby the door has
10 a tendency to assume a vertical position in proximity to the building; substantially as described.

3. A door-hanger comprising a frame having a track-wheel journaled therein, a depending bracket hinged to said frame, and means
15 arranged on the door-hanger for limiting the inward movement of said bracket relatively to said frame while permitting its free outward movement independently of said frame;
20 substantially as described.

4. A door-hanger comprising a frame having a track-wheel journaled therein, a depending bracket hinged to said frame at the inner side of the track-wheel, and means for limiting
25 the inward movement of said bracket relatively to said frame while permitting its free outward movement independently of said frame; substantially as described.

5. A door-hanger comprising a frame having a track-wheel journaled therein, a depending bracket hinged to said frame at the inner side of the track-wheel and above the lower edge thereof, and means for limiting the inward
30 movement of said bracket relatively to said frame while permitting its free outward movement independently of said frame; substantially as described.

6. A door-hanger comprising, in combination with a track-wheel, a frame in which
40 such wheel is journaled and which extends thereover as a hood, a depending bracket hinged to said frame at the inner side of the track-wheel, said frame having an extension projecting below the wheel, and means for
45 limiting the inward movement of the depending bracket relatively to the wheel-frame while permitting its free outward movement independently of said frame; substantially as described.

7. A door-hanger comprising in combination with a track-wheel, a frame in which
50 such wheel is journaled and which extends thereover as a hood, a depending bracket hinged to the inner end of the frame or hood, said frame having an extension projecting below the tread of the wheel, and a cross-bar on the bracket and arranged in the path of movement of said extension to limit the inward
55 movement of the bracket; substantially as described.

8. The combination of a frame or hood 2 having a track-wheel 3 journaled in it and provided at one side of the said wheel with the bearing 7, the bracket 1 provided with
65 the upwardly-extending side arms 4 embracing

ing the frame 2 and having the bearings 5 at their upper ends, and the pintle 8 extending through the bearings 5 and 7; substantially as described.

9. The combination of the frame 2 having
70 a track-wheel journaled therein and provided upon one side of the said wheel with the bearing 7 and having its opposite side depending below the axis of said wheel, the bracket 1 having its upwardly-extending side arms provided with the bearings 5, the pintle 8 extending through the bearings 5 and 7, and the stop-bar 6 carried by the bracket 1 and cooperating with the depending extension of the
75 frame 2; substantially as described.

10. A door-hanger comprising a frame having a track-wheel journaled therein, and a depending bracket hinged to said frame at the inner side of the track-wheel, a portion of said
80 frame being arranged in the path of movement of said bracket to limit its independent inward movement and prevent the door from contacting the building; substantially as described.

11. A door-hanger comprising a frame having a track-wheel journaled therein and provided with a depending extension and a depending bracket hinged to said frame and provided with a cross-bar arranged to contact
85 said depending extension and to be limited thereby as to further independent movement; substantially as described.

12. A door-hanger comprising a frame having a track-wheel journaled therein and substantially inclosed by the frame and a depending
90 bracket hinged to said frame at the inner side of the track-wheel and at a point intermediate the plane of the tread of the wheel and its axis; substantially as described.

13. A door-hanger comprising a frame substantially inverted-U-shaped and having a track-wheel journaled therein and substantially inclosed thereby, and a depending
95 bracket hinged to said frame at the inner side of the track-wheel; substantially as described.

14. A door-hanger comprising a frame substantially inverted-U-shaped and having a track-wheel journaled therein and substantially inclosed thereby, and a bracket depending in the plane of the outer member of the U-
100 shaped frame and hinged at its upper end to the other or inner member of said U-shaped frame and at a point above the tread of the wheel; substantially as described.

15. A door-hanger comprising a frame having a track-wheel journaled therein, and a depending bracket hinged to said frame at the inner side of said track-wheel, said bracket having a portion normally lying against said
105 frame at the other side of said track-wheel, whereby the movement in one direction of said bracket relative to said frame is limited.

16. A door-hanger comprising a track-wheel, a frame therefor, a downward extension from said frame at one side of the wheel,
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said extension being constructed to engage the track-rail to prevent derailment of said wheel, and a bracket having a hinged connection with said frame at the other side of said wheel, a portion of said bracket being adapted to engage said downward extension, whereby the movement of said bracket in one direction is limited.

17. A door-hanger comprising a frame having a track-wheel journaled therein, and a

bracket hinged to said frame at one side of the central plane of said wheel, said frame and bracket having engaging parts adapted to limit their relative movement due to the offset hinging of said bracket.

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Witnesses:

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