

No. 680,996.

Patented Aug. 20, 1901.

A. S. HOOK.
DOOR HANGER.

(Application filed Jan. 28, 1901.)

(No. Model.)

FIG. 1.

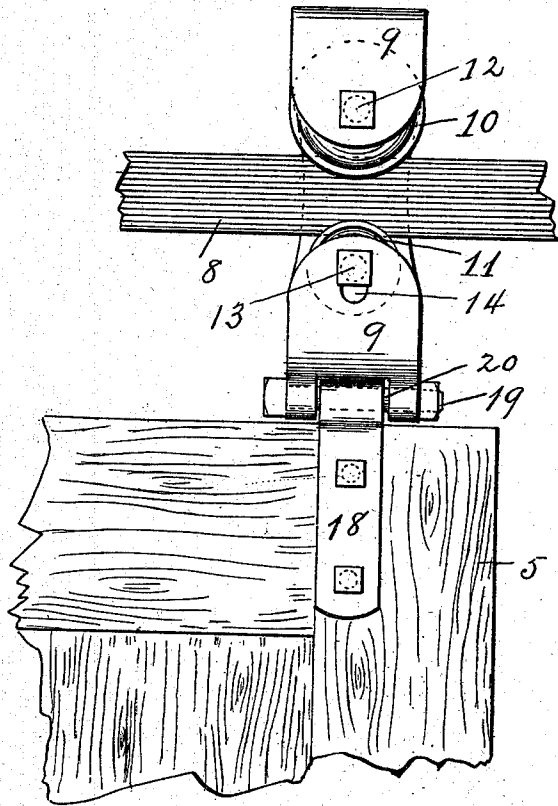


FIG. 2.

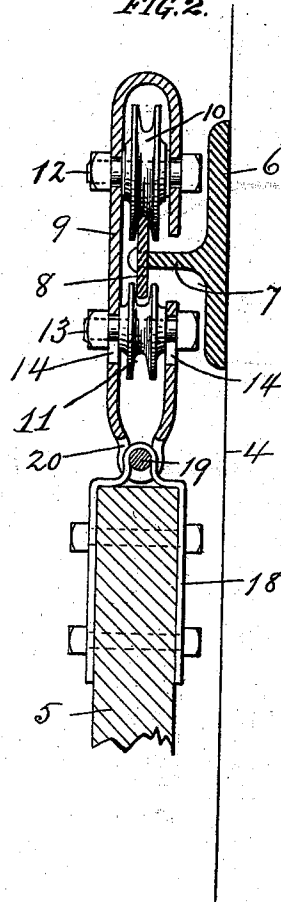
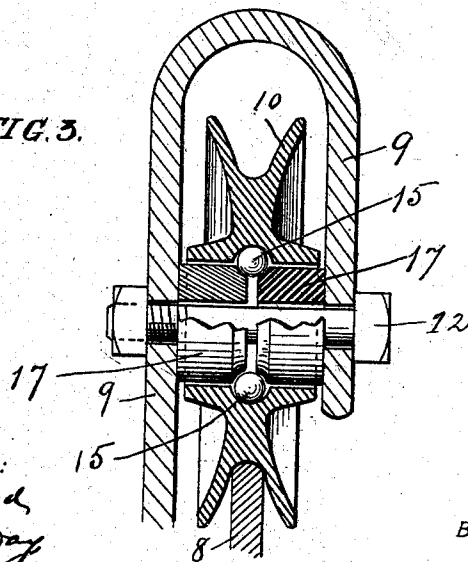


FIG. 3.



WITNESSES:

F. B. Townsend
H. W. Munday

INVENTOR.

Arthur S. Hook
BY *Mundy Evans & Adcock*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ARTHUR S. HOOK, OF OTTAWA, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 680,996, dated August 20, 1901.

Application filed January 26, 1901. Serial No. 44,822. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR S. HOOK, a citizen of the United States, residing in Ottawa, in the county of LaSalle and State of Illinois, have invented a new and useful Improvement in Door-Hangers, of which the following is a specification.

This invention relates to the construction of the hangers used upon sliding doors, and has been devised more especially for use upon the doors of barns and such buildings.

The invention is designed to afford a cheaper and better construction than has been used heretofore; and it consists in the novel features hereinafter specified, and pointed out in the claims.

Figure 1 is a partial elevation of a door provided with my improved hanger. Fig. 2 is a transverse vertical section. Fig. 3 is an enlarged section of a portion of the hanger.

In said drawings, 4 represents the side of the barn or other building, and 5 represents the door.

6 is a projecting bracket attached to the barn and having an arm 7, upon which the hanger-track 8 is supported. The track consists of a flat bar of metal arranged edgewise and supported upon a series of the brackets described. The hanger-frame is shown at 9, and consists of an integral piece of flat metal with its upper end bent over to inclose and form bearings upon both sides for the supporting-roller 10 and with its lower end bent up to inclose and form bearings upon both sides for a guide-roller 11. The supporting-roller is secured in place by the bolt 12, and the guider-roller revolves upon a bolt 13. This latter bolt passes through vertically-elongated openings 14 14 in the hanger, so that it can be adjusted at different positions to accommodate tracks of different height or dimensions. The guide-roller may, however, be wholly omitted if the bent end of the hanger is extended above the lower edge of the track in a manner which is familiar to manufacturers of these hangers.

The supporting-roller is provided with a ball-bearing consisting of a single series of

balls 15, for which a race 16 is provided in the body of the roller by grooving the central portion of the opening through the roller, as seen at Fig. 3. The balls are confined in this groove by two cones 17, one at either side of the balls, and both preferably made removable from the roller. The cones are held in position in the roller by the contact of their outer ends with the body and bent-over end of the hanger. As heretofore made by me, these cones have been loosely inserted in the roller, and the bolt 12 passes through and supports them and through them supports the balls and the roller. The bolt 12 has no threaded engagement with the cones, and, in fact, they are not fitted tight thereon. This construction of a ball-bearing is very economical in manufacture and renders the rotation of the supporting-roller very easy and comparatively frictionless.

The door is attached to the hanger by means of a strap 18, passing over a pivot bolt or pin- tle 19, lying in the lower loop of the hanger, the hanger being cut away, as shown at 20, to give room to the strap. I thus utilize the lower end of the hanger as a portion of the hinge by which the door is secured to the hanger, the strap forming one member of the hinge and the hanger the other and the pin- tle or bolt passing through both.

I claim—

1. The combination in a door-hanger of frame 9, roller 10, a single series of balls moving in a race formed centrally in the roller, independent, disconnected cones at opposite sides of the balls, and an axial bolt upon which the cones are slidingly fitted and confined by the frame, substantially as specified.

2. The door-hanger the frame whereof is bent upward at the lower end, and such bent lower end is made to support both a guiding device engaging the track, and a pivot of the hinge by which the door is supported from the hanger, substantially as specified.

ARTHUR S. HOOK.

Witnesses:

B. S. JORDAN,
R. GEDNEY.