(No Model.)

C. W. BULLARD.

DOOR HANGER.

No. 442,950. Patented Dec. 16, 1890.

FIG. 2.

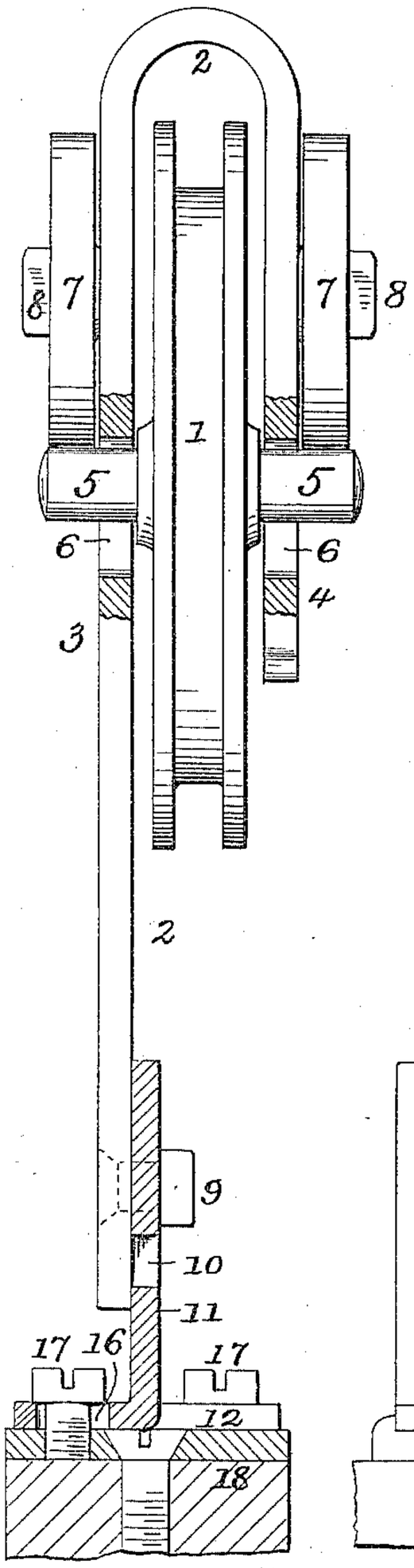
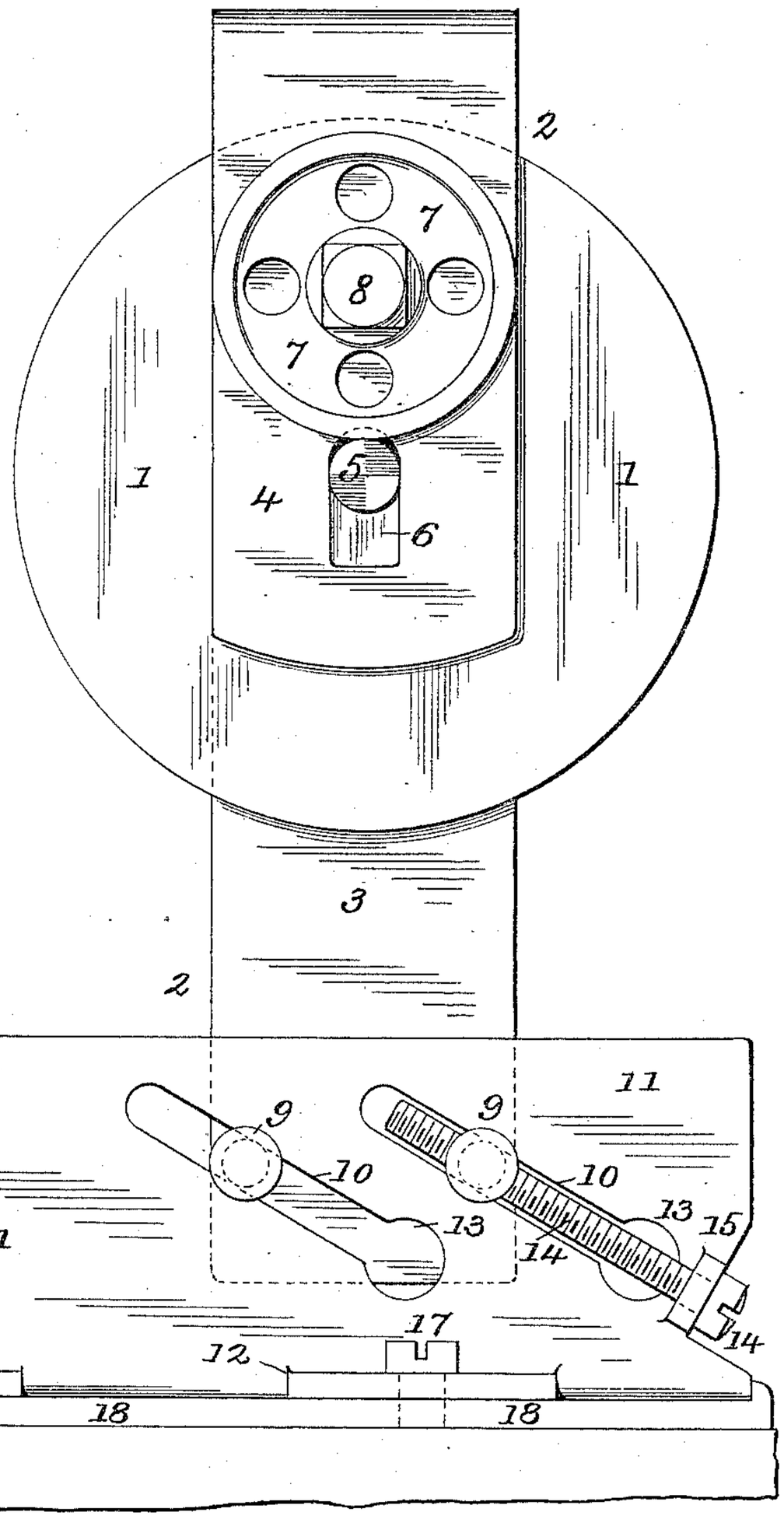


FIG. 1.



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DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 442,950, dated December 16, 1890.

Application filed July 16, 1890. Serial No. 358,953. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BULLARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that type of door-hangers in which provision is made for reducing the friction of the axles or trunnions of the track wheel or wheels.

The object of the present invention is to provide a novel arrangement of parts for attaining in a simple, cheap, and effective manner a nearly-frictionless bearing for the axle or trunnions of the track-wheel of a door-hanger.

A further object is to afford a simple and durable means of adjustment for the track-wheel with relation to the top of the door, both in a vertical and lateral direction, to enable the adjustment of the door to its proper position in a quick and convenient manner.

I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a door-hanger embodying my present improvements; and Fig. 2, an end elevation of the same, partly sectionized.

Similar numerals of reference indicate like parts in both views.

In the present type of anti-friction door-hangers as heretofore constructed the upper or anti-friction wheels were invariably connected together by a cross shaft or axle, which was necessarily located above the crown or rim of the lower or track wheel. In consequence thereof the diameter of the track-wheel was necessarily restricted, owing to the fact that in a majority of cases the overhead-room above the track is so limited in height as to preclude the use of a hanger having an excessive projection above the track. In order to avoid any such excessive projection above the track and at the same time admit of the use of a track-wheel of a large diameter, the present invention involves the following novel arrangement of parts.

Referring to the drawings, 1 represents the track-roller, suitably grooved around its periphery to fit and ride upon the usual track or rail, and 2 the yoke-shaped suspension-strap between the main and overhanging members 3 and 4, of which the track-roller 1 is located with its axle or trunnions 5 arranged to play loosely in a vertical direction in vertically-arranged elongated slots 6 in said members, as illustrated in Figs. 1 and 2.

In the present invention the axles or trunnions 5 are formed of some length, so as to project out past the faces of the members 3 and 4 to rest under and have bearing against the periphery of the comparatively small bearing or friction-reducing rollers 7, that are arranged on stud pins or bolts 8 on the outer faces of the members 3 and 4. With this construction the size of the friction-reducing rollers 7 can be brought down to a limit that does not extend the head of the hanger too far up in a vertical direction, and (what is of equal importance) brings the bearings for the axle of the track-wheel such a distance on either side of the track and track-wheel that a tendency to a tilting of the track-wheel is entirely prevented, and in consequence the movement of the hanger is rendered smooth and uniform.

For parlor-door and like uses the yoke-strap 2 will be provided near its lower end with a pair of headed guide studs or bolts 9, that have movement in a pair of inclined slots 10 in the vertically-extending web or flange 11 on the base-plate 12, that is connected to the top of the sliding door. The inclined slots 10 receive the shanks of the bolts 9, while the heads of the same act to hold the parts together, and in order to make the parts readily attachable and detachable I form the lower end of said slots with an enlarged portion 13, that admits of the passage of the heads of the bolts 9.

The adjustment of the parts is effected by a temper or adjusting screw 14, having bearing in the fixed lug 15 on the base-plate 12 of the hanger, the screw-threaded shank of said screw working in a screw-threaded orifice in the head of one of the bolts 9, as clearly indicated in Fig. 1. The base-plate 12 is of an inverted ⊥ form, as shown, and to enable it to be adjusted in a transverse direction its horizontal portion or plate is provided with

transversely-extending elongated slots 16, through which pass the headed screws 17, that screw into a door-plate 18, fixedly attached to the top of the door, as shown.

I am aware that prior to my invention anti-friction devices have been constructed with a pair of connected superimposed anti-friction rollers that formed a bearing for the axle of the lower or track wheel. In all such prior constructions an excessive projection of the hanger-frame above the track was necessary. I therefore make no claim to such construction, broadly; but,

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A door-hanger comprising, in combination, a yoke-frame having vertical elongated slots in main and overhanging members, a track-wheel provided with elongated axles or trunnions that project through said elongated slots, and a pair of small and independent friction-reducing rollers arranged on independent studs on the outer sides of the strap members and adapted to form bearings for the outer ends of the axle or trunnions of the track-wheel, essentially as set forth.

2. A door-hanger comprising, in combination, a track-wheel, a yoke or hanger strap having a pair of headed bolts near its lower end, one of which is formed with a screw-threaded orifice, a base-plate or member having a vertical web provided with a pair of inclined slots, and an adjusting-screw journaled in the base-plate and passing through the screw-threaded orifice in one of the headed bolts, essentially as set forth.

3. A door-hanger comprising, in combination, a track-wheel, a yoke or hanger strap having a pair of headed bolts near its lower end, one of which is formed with a screw-threaded orifice, a base-plate or member having a vertical web provided with a pair of inclined slots, and a horizontal plate formed with transversely-extending slots, an adjusting-screw journaled in the base-plate and passing through the screw-threaded orifice in one of the headed bolts, a door-plate attached to the top of the door, and headed bolts passing through the transverse slots in the base-plate and screwing into the door-plate, essentially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. BULLARD.

Witnesses:

ROBERT BURNS,

JAMES H. GORMLEY.