

A. K. RIDER.
Door-Hangers.

No. 141,382.

Patented July 29, 1873.

Fig. 1

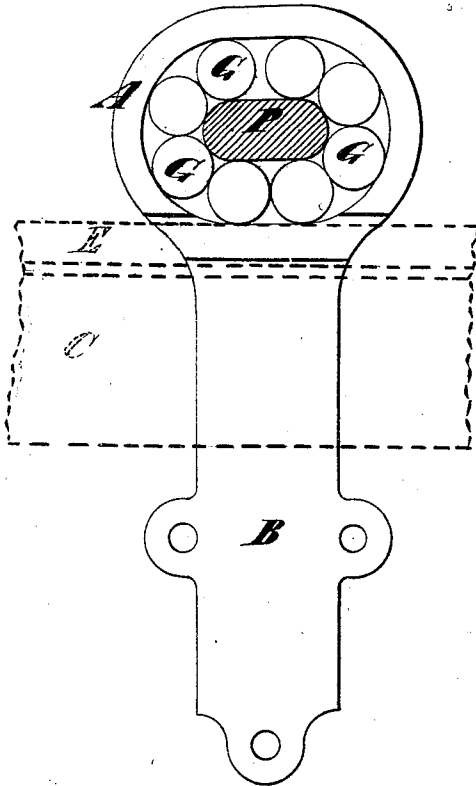


Fig. 2

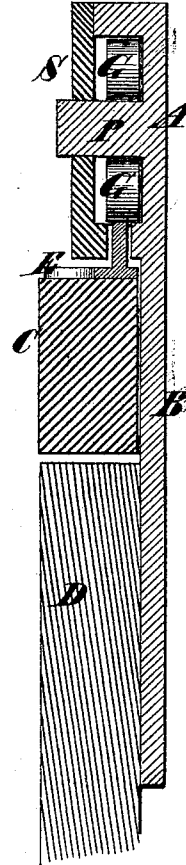
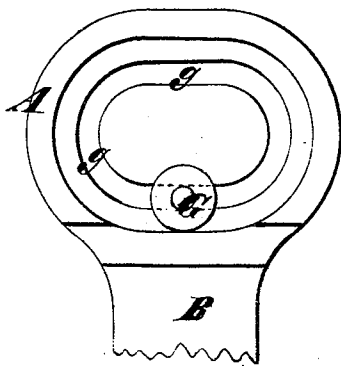


Fig. 3



Witnesses:

Michael Ryan,
Fret Warner

A. K. Rider
by his Attorney
Brown & Allen

UNITED STATES PATENT OFFICE.

ALEXANDER K. RIDER, OF WALDEN, N. Y., ASSIGNOR TO GEO. C. WOOSTER,
JAMES GOWDY, AND ALEXANDER K. RIDER, OF SAME PLACE.

IMPROVEMENT IN DOOR-HANGERS.

Specification forming part of Letters Patent No. **141,382**, dated July 29, 1873; application filed
June 16, 1873.

To all whom it may concern:

Be it known that I, ALEXANDER K. RIDER, of Walden, in the county of Orange and State of New York, have invented an Improved Hanger for Doors, of which the following is a specification:

This improved hanger is particularly designed for use on sliding barn-doors, sliding gates, and the like, which are suspended from an upper rail. The invention consists in the combination, within the hanger, of a series of friction-rollers and a flat bearing for the same, whereby not only is the rolling of the door or gate facilitated, but it is supported on a broader surface, and consequently is more stable. The same device is applicable also to parlor-doors, and others which slide or roll on the bottom edge, the case of the device being made for this purpose of suitable form to contain the rollers, and to be fitted into the lower edge of the door.

In the drawing, Figure 1 is a face view of the hanger with its cover removed. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a face view of a hanger slightly modified in form.

Similar letters of reference indicate corresponding parts in all the figures.

The hanger is made of cast metal, and is formed with an elliptical box, A, and a flat pendent shank, B, which is fastened to the upper part of the door D to be supported by means of screws passing through lugs provided for that purpose. The shape of the box is that of two semicircles united by an intermediate straight portion. In its middle there is a stud or bearing, P, conforming to the contour of the box, so as to leave a path or groove within the box for rollers to work in. A series of loose friction-rollers, G G, bear against this stud, which in reality supports the weight of the door. The rollers G G roll on the rail that suspends the door, and travel round the box in proximity to one another. They are retained within the box by its cover S.

The rail which the hanger traverses is shown in section in Fig. 2, and is also represented by dotted lines in Fig. 1. There is arranged on the top of it a track, E, which is of inverted T shape, and is furnished on one of its T-flanges with lugs that afford a means of fastening the track securely to the rail. Screws or nails are used to attain this. The box of the hanger is provided with an opening to enable the rollers to reach the track, and by this means the hanger is held in place on the rail.

When the door D is moved the friction-rollers roll round on their axes as they pass over the track E, and likewise travel round the box of the hanger one after another in a reverse direction to the travel of the door.

By this improved hanger the shifting of the door is facilitated and the surface from which it is suspended being more extended its stability is increased.

The hanger represented in Fig. 3 is in all respects the same as that just described, except that the rollers are furnished with journals, and their bearing is obtained in a groove, g, conforming to the contour of the box A.

Spherical rollers or balls might be used in the device instead of cylindric rollers, if preferable for any reason.

When the device is designed to be applied to the bottom of a door the pendent shank is omitted, and the elliptical box is fitted directly into the bottom edge of the door.

What I claim as my invention is—

In a hanger or carrier for sliding doors and gates, the combination of the series of friction-rollers G G and the flat bearing for the same, said rollers passing over the track E, substantially as and for the purpose herein set forth.

ALEX. K. RIDER.

Witnesses:

JAMES GOWDY,
JOHN L. HART.