No. 862,561. PATENTED AUG. 6, 1907.

M. E. HUNT.

ROLLING DOOR HANGER.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

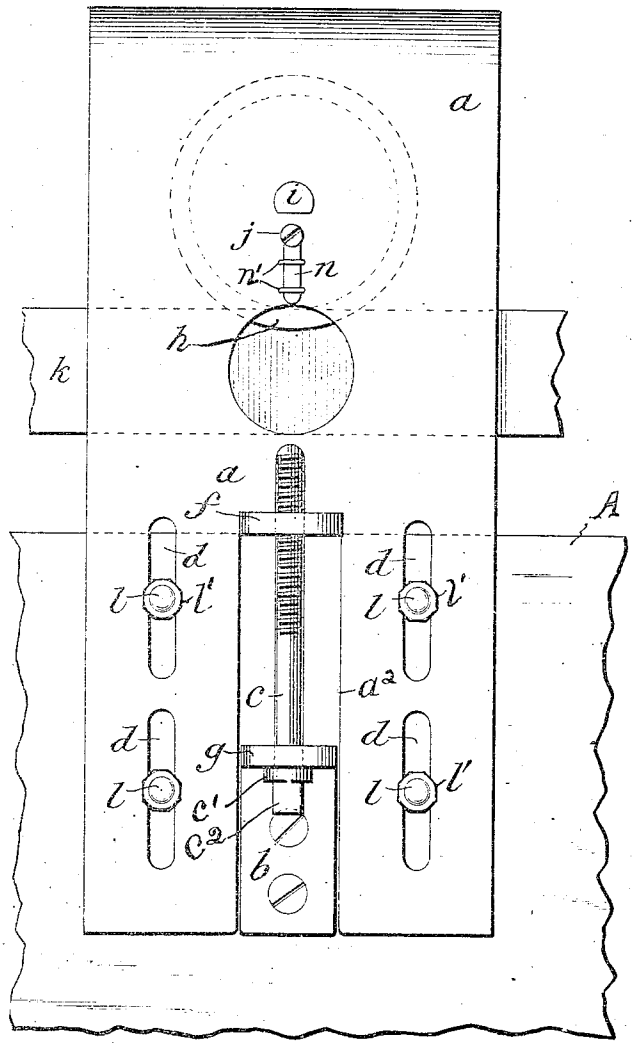


Fig. 2.

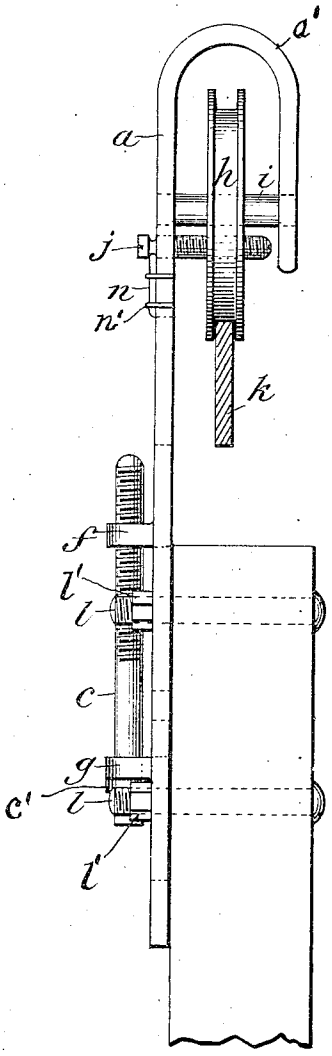


Fig. 3.

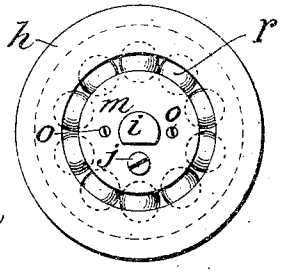
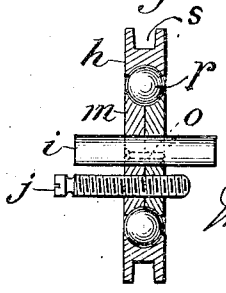


Fig. 4.



Witnesses:

John E. Nelson.

Harry E. Green.

Inventor:

Milton E. Hunt

UNITED STATES PATENT OFFICE.

MILTON E. HUNT, OF WATERVILLE, MAINE.

ROLLING-DOOR HANGER.

No. 862,561. Specification of Letters Patent. Patented Aug. 6, 1907.

Application filed July 17, 1905. Serial No. 270,284.

To all whom it may concern:

Be it known that I, MILTON E. HUNT, a citizen of the United States, residing at Waterville, in the county of Kennebec and State of Maine, have invented a new and useful Rolling-Door Hanger, of which the following is a specification.

This invention relates to improvements in rolling door hangers and one of the objects is to provide means for adjusting the door longitudinally or vertically with relation to the hanger so as to cause the lower edge thereof to be brought to the proper position where it will neither bind, by reason of being too long, nor present a crack or space at the bottom by reason of being too short; thus obviating the necessity of cutting off the door or of changing the position of the hanger.

Another object is to provide means for adjusting the door laterally so as to throw it away from or toward the building without changing its support or affecting its operation thereon.

With these and other objects in view the invention consists in the construction, combination and operative aggroupment of parts, all as will be described hereinafter, illustrated in the accompanying drawings and finally pointed out in the appended claims.

In the drawings:—Figure 1 is a front elevation of my improved hanger applied to the door. Fig. 2 is an end elevation thereof with the track or support shown in section. Fig. 3 is a detail in elevation of the roller, and Fig. 4 is a vertical transverse section thereof.

Making renewed reference to the drawings, wherein like character of notation indicate corresponding parts throughout the several views, A designates a portion of the sliding or rolling door and *k* designates a suitable support or track designed to be secured in any suitable way to the building above the door.

The hanger frame as a whole is designated *a* and consists of a plate bent at its upper end, as at *a'*, to provide a casing or housing for the roller, and at its lower end it is cut away or slotted longitudinally, as at a^2, a portion of the metal so cut away being bent outwardly to form an outstanding ear *f*. Upon each side of the central slot a^2 are smaller longitudinal slots *d* through which bolts *l* extend. These bolts are preferably driven through the door from the side opposite the plate *a* so that the threaded ends will receive clamping nuts *l'* which engage the outer face of the plate adjacent to the slots, the plate being permitted to be moved longitudinally or vertically on the door when the nuts are released from binding engagement therewith, as will be obvious.

Secured to the door in the cut away portion of the hanger *a* is a bracket *b* having an outstanding ear *g* in vertical alinement with the ear *f* of the plate *a* but separated therefrom. Loosely mounted in an aperture in the ear *g* is an adjusting rod *c* having a collar *c'* on the lower end thereof and having its upper end threaded into a threaded aperture in the ear *f* of the plate and, thus when a wrench is applied to the angular end c^2 of the adjusting bolt and the latter rotated, plate *a* will follow up and down on the rod *c* and thereby adjust the bracket vertically with relation to the door on which it is slidably mounted.

The roller for the hanger is mounted in the upper end of the plate *a* between its face and its bent end *a'* upon a shaft *i* which is fixed against rotation in said parts and is preferably provided with a flat face to key the hub member of the roller thereon. This hub member *m* is shown in Figs. 3 and 4, as consisting of two parts separable longitudinally, but held together by means of screws *o*. The periphery of the two part hub is formed with a groove to constitute a bearing for the balls *r* which are arranged circumferentially thereabout. Revolubly mounted upon these balls is a ring *h*, the inner periphery of which is provided with a groove coincident with the groove of the hub and the outer periphery of which is also provided with a groove or guide-way *s* for the supporting track *k* which fits into said groove, as shown in Fig. 2.

From the description thus far given, it will be seen that the roller is provided with a ball bearing which is interposed between the revoluble ring or rim and the two part hub, which is rigidly secured or keyed to a non-rotatable shaft and thus when the door is moved the ring member *h* is the only element that rotates. It will also be seen that the two part hub facilitates the introduction and removal of the balls and the assembling and separation of the parts, it being understood that new balls may be inserted by removing the screws *o* and sliding one of the parts of the hub longitudinally upon the shaft *i*.

After the hanger has been applied to the door it is often found that the door is too close to the building or too far away from the same, and thus the necessity of providing a lateral adjustment therefor. In my present invention I am able to adjust the door so as to position it nearer to or further away from the building without removing any of the parts of the hanger or the supporting track *k*. This adjustment is effected by providing the two part hub *m* with a threaded aperture in which is let a threaded adjusting screw *j* the end of which is swiveled in the plate *a* of the door, any suitable swiveling means being employed, but, as shown in the drawings, I prefer to have the head of said screw provided with an annular groove in which the end of the pin *n* engages, the pin being secured to the plate by staples or other fastening devices *n'*, as shown in Figs. 1 and 2 and the end of the screw preferably having means for rotating it in the plate.

It will be apparent that when the screw *j* is turned in the plate *a* and in the hub *m*, the hanger plate carrying the screw will move laterally and the shaft *i* will slide through the hub which, being fixed with rela-

tion to the rim and track, causes the entire hanger to be moved transversely of the supporting track *k*, thereby adjusting the door relatively to the wall of a building.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a door hanger, the combination with the hanger member and a supporting track, of a shaft connected to said hanger member, a hub member secured to the shaft, a ring revolubly mounted upon the hub member, bearing elements between the hub and ring, and means whereby the hanger and door may be adjusted laterally of the track.

2. In a door hanger, the combination with the hanger member and a supporting track; of a roller carried by the hanger and provided with a non-rotatable hub; and rotatable means mounted in the hanger member and engaging said hub to adjust the hanger and door laterally of the track.

3. In a door hanger the combination with the hanger member bent upon itself at its upper end, and a supporting track; of a roller carried by the hanger member between its body and bent portion and provided with a non-rotatable hub, and means mounted in the hanger member and engaging said hub to adjust the hanger and door laterally of the track.

4. In a rolling door hanger, the combination with a hanger member and a supporting track; of a roller carried by the hanger member and provided with a non-rotatable hub; an adjusting screw swiveled in the hanger member and having threaded engagement with the hub of the roller, whereby the hanger member and door may be adjusted laterally relatively to the track.

5. In a door hanger, the combination with the hanger member and a supporting track, of a shaft fixed in said hanger member, a hub member keyed to said shaft, a ring revolubly mounted upon said hub member, a ball bearing between the hub and the ring, and an adjusting screw swiveled in the hanger member and having a threaded engagement with the hub member.

MILTON E. HUNT.

Witnesses:
JOHN E. NELSON,
WILLIAM J. LANIGAN.