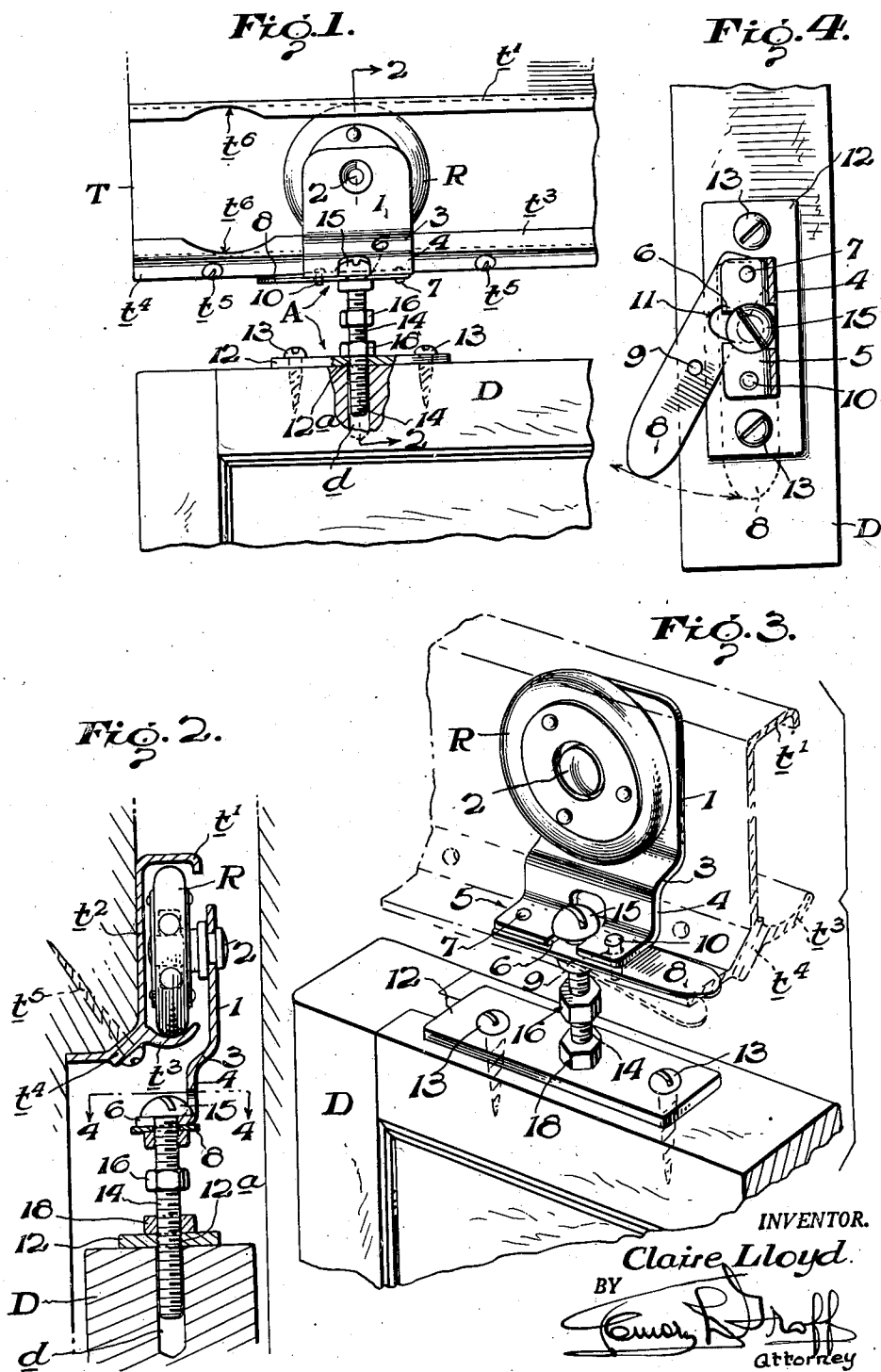


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DOOR HANGER

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DOOR HANGER

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This invention relates to a hanger for sliding doors, and has special reference to a simple, practical and inexpensive two-part hanger which may be readily taken apart for application to the track and door, and likewise readily assembled to install the door in the doorway.

One of the objects of the invention is to provide a hanger comprising a roller carrying bracket and a door supporting unit, the latter including an adjustable suspension member which engages with the roller carrying bracket in such a way that it may be readily locked in service position, and yet readily unlocked or released when desired. That is to say, the present construction contemplates an adjustable hanger assembly wherein the door may be vertically adjusted relative to the roller carrying bracket, and the member which effects the adjustment may be positively locked and released relative to the bracket by the manual manipulation of novel latch means.

A further object is to provide a hanger assembly wherein the door supporting unit has the capacity to swivel at the point where the suspension member thereof is releasably interlocked with the roller carrying bracket.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings in which:

Figure 1 is a detail side elevation, partly in section, illustrating the hanger assembly applied to a track and door.

Figure 2 is a vertical sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a perspective view, on an enlarged scale, further illustrating the invention and showing how the latch means for the adjustment member may be releasably interlocked with the roller carrying bracket.

Figure 4 is a horizontal sectional view taken on the line 4—4 of Figure 2.

Similar reference characters designate corresponding parts throughout the several figures of the drawing.

Referring to Figure 1, it will be observed that the track T receives the roller R of the hanger assembly designated generally as A and which adjustably and movably connects the door D with the track.

The track T includes an upper inverted channel

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guard portion t' connected by web t^2 with a roller groove t^3 . Substantially at the junction of the web t^2 and the groove t^3 , the track is provided with an obliquely disposed attaching portion t^4 provided with suitable openings and receiving fastenings t^5 to connect the track with the framework of the doorway. It will also be observed from Figure 1 that the guard flange t' and the grooved track element t^3 are provided respectively with the notches t^5 and t^6 which permit the roller R being inserted therein during the initial stage of installation.

The hanger assembly A includes a bracket 1, preferably made of a metal stamping and provided with an axle stud 2 for carrying the roller R. The bracket 1 is medially offset as indicated at 3 and then extends downwardly as at 4 to terminate in a horizontally disposed laterally offset supporting flange 5. The flange 5 is provided with a notch 6 leading inwardly from the outer edge thereof, and preferably, though not necessary, extending upwardly into the portion 4 of the bracket 1.

One side of the supporting flange 5 has pivotally connected thereto as indicated at 7, a leaf spring strip or latch element 8. This latch element is provided with a stud 9 adapted to engage with a keeper opening 10 in the flange 7 at one side of the notch 6. Thus, with the arrangement described, it will appear from Figures 3 and 4 that the leaf spring latch element 8 may be swung horizontally on the pivot 7 and into and out of substantially registering relation with the supporting flange 5. The leaf spring latch element 8 is also provided with a notch 11 leading inwardly from the inner edge thereof, that is, the edge which faces the roller carrying bracket plate 1, said notch being a complement of the notch 6 to embrace the adjustment member, as will presently appear.

The door supporting unit of the hanger assembly consists of an attaching plate 12 which may be secured to the upper edge of the door D by screws or equivalent fastenings 13, said attaching plate having a threaded opening 12^a for receiving the adjustment member or suspension bolt 14. This bolt, or screw, has an elongated threaded shank portion and a head 15. The lower end of the threaded shank portion of the bolt adjustably engages with the threaded opening 12^a of the attaching plate, and, in order to enable the bolt to freely move vertically relative to the plate, the upper portion of the door is provided with a socket d . The shank portion of the bolt 14 is also provided with a rigid non-circular tool engaging por-

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tion 16 and an adjustable nut 18. The purpose of the non-circular tool engaging portion 16 is to permit of the bolt being turned for adjustment in the opening 12^a and the attaching plate while the nut 18 serves as a lock nut for fixing or setting the bolt 14 in a selected adjusted position with respect to the attaching plate.

Referring more particularly to the assembled structure, and its functions and operation, it may be observed that the suspension bolt 14 of the door attaching unit is intended to be releasably locked with and carried by the supporting flange 5 of the roller bracket 1. That is to say, the shank portion of the suspension bolt adjacent the head 15 is intended to be inserted into the notch 6 of the support flange so that the underside of the head 15 rests on such flange. To accomplish this result, the leaf spring latch member 3 is swung outwardly on the pivot 7 so that the open edge of the notch 6 is accessible to the bolt. After the bolt is once inserted in the notch 6, the leaf spring latch element is moved back into registering relation with the flange 5 so that the notch 11 of the latch straddles the upper shank portion of the suspension bolt beneath the head thereof. To effect the registering relation above referred to, leaf spring latch element 3 is pressed downwardly to the dotted line position shown in Figure 3 so that the lug 9 thereof may clear the underside of the flange 5 and make its way to the keeper opening 10 of the flange. Thereupon pressure on the outer end of the spring member is released and the latter moves to the full line position shown in Figure 3. The suspension bolt 14 is then positively locked to the supporting flange 5 of the roller carrying bracket 1.

If it is desired to vertically adjust the door, a suitable wrench or other tool is applied to the non-circular tool engaging portion 16 which is rigid with the shank of the bolt and the bolt is thus rotated in the threaded opening 12^a of the attaching plate 12. If the door is to be lifted by turning the bolt 14, it will of course be understood that the lock nut 18 is first backed away from the surface of the plate 12, and then after the adjustment is effected the lock nut 18 is turned back into engagement with the plate. If the door is to be lowered, it is of course immaterial whether the lock nut 18 is first backed off of the plate, but, after the desired adjustment has been effected, the lock nut 18 is turned down into contact with the plate.

The manipulation or rotation of the suspension bolt 18 while it is supported by the flange 5, is, of course, made possible by the fact that the shank of the bolt is free to swivel in the notch 6. This swivel action between the suspension bolt and the supporting flange also enables the roller carrying bracket 1 and the door to readily adjust themselves as the roller R moves along the trackway. In other words, the swivel movement prevents the roller from binding in the track.

From the foregoing it will be apparent that the present construction provides a door hanger

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assembly including a roller carrying bracket and a door supporting unit which may be readily separated to permit the roller to be fitted in the track and said unit applied to the door. These parts may then be readily reassembled after the fashion previously described and the shank of the suspension bolt locked or secured to flange 5 by the spring latch element 8.

It will, of course, be understood that minor changes may be resorted to within the scope of the appended claims.

I claim:

1. A hanger for sliding doors comprising a bracket having a notched supporting part, a suspension member including a shank for entering said notch and also including means engaged by said supporting part when said shank is in said notch, and means connected to said bracket part on one side of said notch and movable to a position bridging said notch and connectible to said bracket part on the other side of said notch when in bridging position.

2. A hanger for sliding doors comprising a bracket having a notched supporting part, a suspension member including a shank for entering said notch and abutment means to engage said suspension part when the shank is in the notch, a member pivotally connected to said bracket part on one side of said notch adapted to move to a position bridging the notch, and means for releasably securing said pivotally connected member in a bridging position.

3. A hanger for sliding doors comprising a bracket having a notched supporting part, a suspension member including a shank for entering said notch and abutment means to engage said suspension part when the shank is in the notch, a member pivotally connected to said bracket part on one side of said notch adapted to move to a position bridging the notch, complementary means carried by said bracket and said pivotally connected member for releasably securing them against relative pivotal movement.

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