

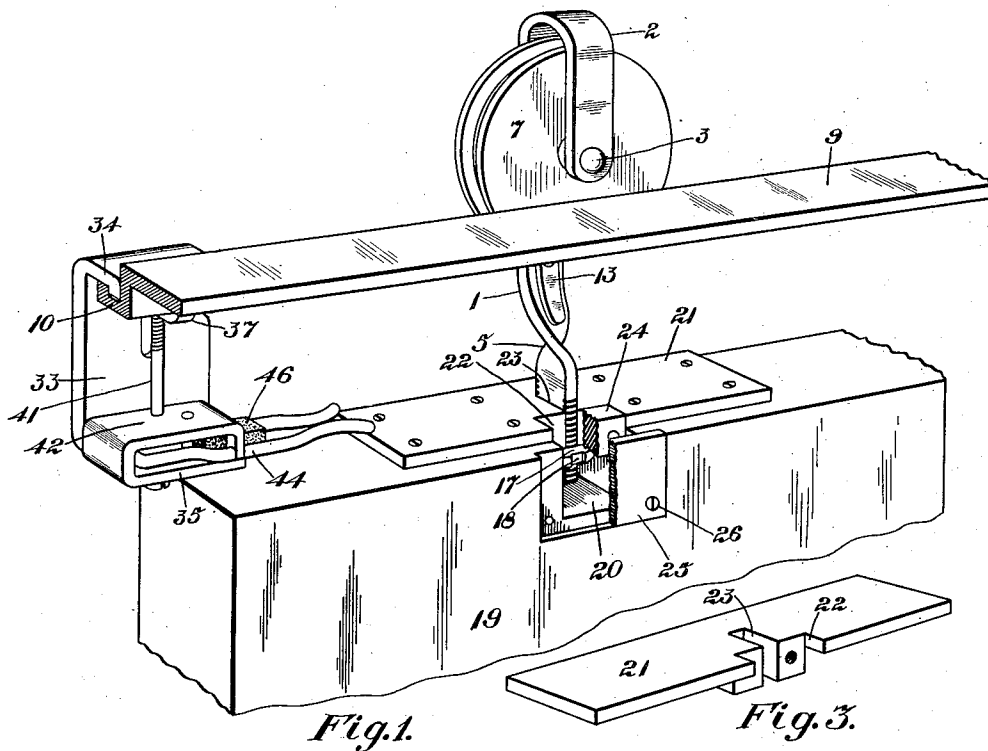
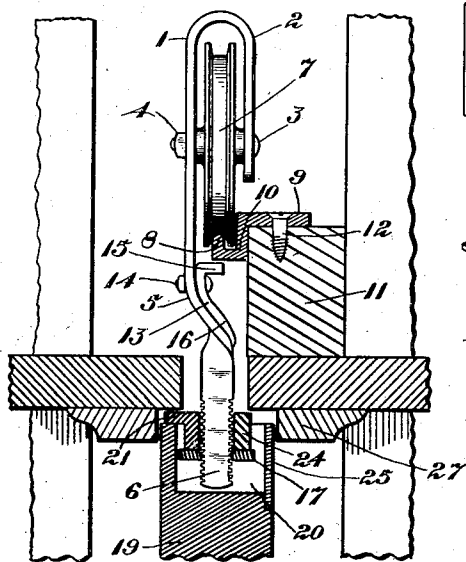
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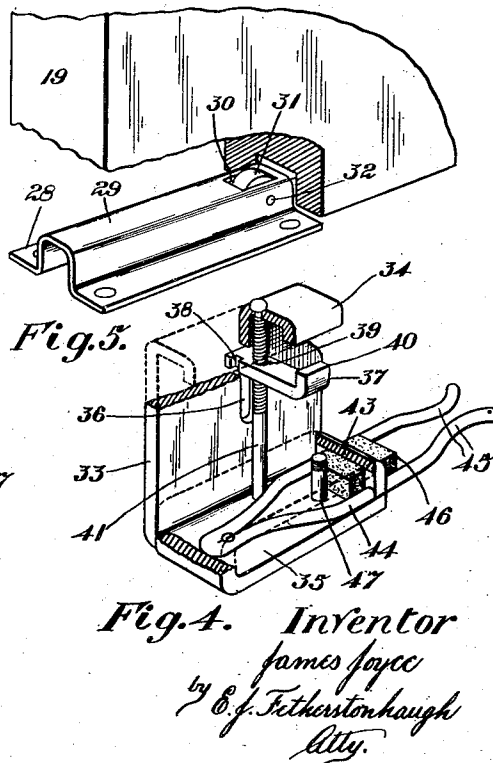
J. JOYCE.

SUPPORT FOR EDGEWISE MOVABLE DOORS.

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SUPPORT FOR EDGEWISE-MOVABLE DOORS.

No. 897,747.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES JOYCE, a subject of the King of Great Britain, residing in the city of Toronto, in the county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Supports for Edgewise-Movable Doors, of which the following is a specification.

10 The invention relates to improvements in supports for sliding doors as described in the present specification and illustrated in the accompanying drawings that form part of the same.

15 The invention consists essentially in the novel construction and arrangement of parts whereby the door is suspended from a track by a traveling support running on a track and secured to said door and adjustable therein from the side of said door, and where-
20 by the door is checked in its travel by an adjustable stop engaging said hanger.

The objects of the invention are to obtain a perfect balance of the door and conse-
25 quently insure ease of operation, and to devise a simple and durable support for sliding doors which may be quickly and accurately adjusted without disturbing the casements and will guide the door in its travel and hold
30 it securely from displacement and may be readily placed in position without injury to the door and manufactured at low cost.

In the drawings Figure 1 is a perspective view of my device shown attached to a por-
35 tion of a door and supported on the running track. Fig. 2 is a vertical sectional view through a door and its surrounding casements showing the arrangement of the support. Fig. 3 is a perspective detail of the
40 supporting plate secured to the door. Fig. 4 is an enlarged perspective detail of the stop, partly broken away. Fig. 5 is a perspective detail of the bottom guide to the door.

Like numerals of reference indicate corre-
45 sponding parts in each figure.

Referring to the drawings, 1 is a hanger preferably formed of a strip of metal having a hooked upper end 2 and an orifice near the extremity of said strip and a corresponding
50 orifice arranged directly opposite through which the bolt 3 extends, said bolt being rigidly secured in position by the nut 4. The lower end of the hanger 1 is bent at 5 and twisted so that the lower extremity 6 is
55 turned at right angles to the main portion

and centrally arranged in relation to the center line of its hooked upper end.

7 is a grooved wheel journaled between the sides of the hooked portion 2 on the bolt 3.

8 is the track upon which the wheel 7 travels, having a broad flat portion 9 and a U-shaped portion 10, the upwardly extending edge of said U-shaped portion engaging the inner peripheral surface of the said wheel. The track 8 is supported on a strip 11 secured
60 to the casement surrounding the door and held securely to said strip by the screws 12. This form of track is very rigid and supports the weight of the door independent of the holding screws.

13 is a dog pivotally secured to the bolt 14 secured in the hanger 1 at the bend 5, the said dog having a laterally extending lip 15 extending underneath the lower portion of the rail 8 and a tail portion 16. The weight
75 of the tail portion 16 retains the lip 15 close to the underside of the rail and effectually prevents the wheel 7 from jumping off the rail. The lower end 6 of the hanger 1 is threaded on its narrow edges and is provided
80 with a nut 17 turning thereon, said nut having notches 18 in the periphery thereof.

19 is the door having a recess 20 in the top thereof and opening to the side.

21 is a plate rigidly secured to the top of the door 19 and closing the top of the recess 20 and having a rectangular notch 22 formed in one side thereof and a centrally arranged vertical slot 23 opening from said notch. The lower threaded end 6 of the hanger 1 ex-
90 tends through the slot 23, the walls of which extend downwardly below the under surface of the plate 21 to form an extra support and rest on the upper surface of the nut 17 thus supporting the door from the wheel 7.

24 is a block fitting into and secured in the notch 22 with suitable screws and retaining the hanger securely in position. It will thus be seen that the flattened end of the hanger is held from lateral movement and is sup-
100 ported in such a manner that it cannot be easily bent or twisted.

25 is a plate recessed into the outer face of the door 19 and closing the side opening of the recess 20, said plate being held in place
105 by the screws 26 arranged below the lower edge of the stops 27 of the casement. Two of these hangers are preferably used on the door and it will be readily seen that the door may be raised or lowered at either end in a
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very simple manner by removing the plate 25 and turning the nut 17 with a punch or other suitable instrument and this may be done without having to remove or displace any portion of the surrounding casement.

28 is the guiding strip for the lower edge of the door having a raised central portion 29, said raised central portion having a slot 30 formed in the top thereof.

31 is a roller journaled on the pin 32 secured in the sides of the central portion 29 of the guide 28 and extending through the slot 30 so that if the door sags on its support from the top it will not stick on the lower guide but will roll on the roller 31.

In installing sliding doors it is necessary that a stop be provided to limit the movement of the door and prevent it being injured and to relieve the supporting hangers from undue strain and in order to accomplish this result I have devised a stop to be used particularly in conjunction with the form of hanger shown and described and which may be readily adjusted at any time without having to remove any portion of the casement.

33 is a bracket having a flanged upper end 34 adapted to engage the overhanging portion 10 of the track 8 and an inwardly turned bottom portion 35 and a vertical slot 36 in the upright portion.

37 is a clamp having a notched end 38 extending through the slot 36 and sliding therein and having a threaded orifice 39 and an upturned outer end 40 adapted to hook around the underside of the track 8.

41 is a screw extending from the lower inwardly turned portion 35 to the upper inwardly turned portion 34 of the bracket 33 and having its threaded portion extending through the threaded orifice 39 in said clamp, said screw being suitably flanged at the top and rotatably held in said bracket, the lower end extending below said bracket and having a suitable slotted head. The bracket 33 is hooked on to the track 8 and the clamp 37 raised to hold said bracket securely in position on the turning of the screw 41 which screw may be turned quite readily with a screw driver through the slot in the casement in which the door travels. The lower portion 35 of the bracket 33 is upwardly and inwardly flanged at one end, the extreme end of the portion 32 being bent downwardly and formed with a central tongue portion 43.

44 is a spring clip formed of a length of spring wire rigidly secured at its looped end to the portion 35 of the bracket 33 and extending past the tongue portion 43 and bent inwardly at 45 and flared outwardly at the ends.

46 is a buffer of rubber or other suitable cushion material clamped between the tongue portion 43 and the lower portion 53 of said bracket, the outer end extending beyond said bracket and between the out-

wardly extending portions of the spring clip 44. The tongue portion 43 is drawn tightly down on the said buffer by a screw 47 extending upwardly through the portion 35 and threaded into the portion 42. On the door being closed the hanger 1 strikes the flared ends of the spring clip 44, spreading them apart thus partly checking its movement. The flat side of the portion 6 of the hanger then strikes against the buffer 46, and the door brought to rest, the spring clip preventing the hanger from rebounding from the buffer.

The principal features of the present invention are that a quick and accurate adjustment of the door may be made at any time without inconvenience and without having to disturb any portion of the casement surrounding the door. Simplicity and cheapness of construction is also an important consideration.

What I claim as my invention is:—

1. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a stop clamped to said rail and having a spring clip engaging said hanger and a buffer secured between the jaws of said clip.

2. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a bracket having a hooked upper end engaging said track, a slidable clamp secured to said bracket and engaging the underside of said track, means for adjusting said clamp, spring arms secured to said bracket and adapted to engage said hanger, and a buffer of resilient material secured to said bracket.

3. In a support for edgewise movable doors, the combination with a track, a wheel running thereon, and a hanger supported from said wheel and adjustably secured to the door, of a bracket having a hooked upper end adapted to engage the said track and a vertical slot in the vertical portion thereof and a laterally turned bottom portion, a clamp having a notched end sliding in said slot and an upturned outer end and a threaded orifice, a screw rotatably held in said bracket and extending through the threaded orifice in said clamp, a pair of spring arms secured to the lower lateral portion of said bracket and having their outwardly extending ends flaring outwardly, and a buffer of resilient material fixedly secured to said bracket between said spring arms.

4. In a device of the class described, in combination, a door having a hanger stem recess made therein from the top and side edge, a hanger, and a plate recess surrounding said hanger stem recess, a plate rigidly

secured to the top edge face of said door and having a central rectangular slot there-through over said recess, and lugs extending downwardly therefrom into said recess, a
5 track rigidly secured above said door, a hanger traveling on said track and having a rectangular stem extending through said central rectangular slot in said plate and threaded on the end edge faces, a nut corre-
10 spondingly threaded and turned on said stem beneath said lugs and a plate filling in said front plate recess and closing in the side opening to said hanger stem recess.

5. In a device of the class described, in
15 combination, a door, a trolley hanger adjustably secured in said door, a track rigidly secured above said door having a channel groove and a lateral flange extending from

the top to the longer leg of the channel groove, said flange being firmly secured to
20 the support, and said trolley hanger having one flange of its wheel extending into said channel groove, and a dog pivotally secured to the stem of said trolley hanger, and at its
25 upper end arranged in close proximity to the under side of said track and adapted to be swung from said position to remove said trolley hanger from the track.

Signed at the city of Toronto, in the county of York, Province of Ontario, in the Dominion of Canada, this 12th day of March, 1908:
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JAMES JOYCE.

Witnesses:

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E. WILKIN.