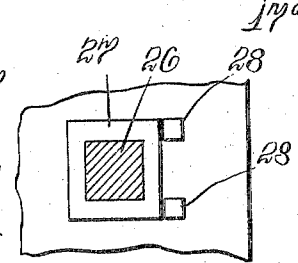
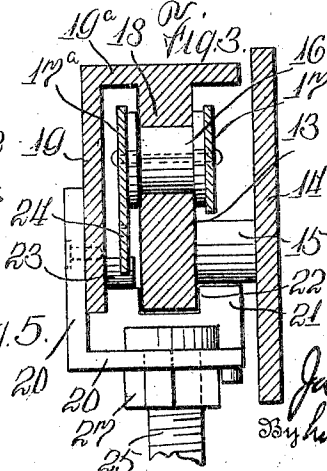
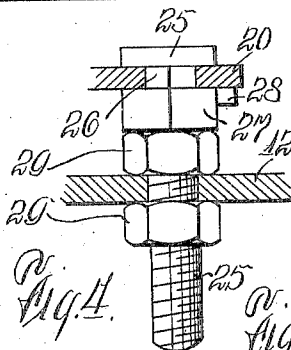
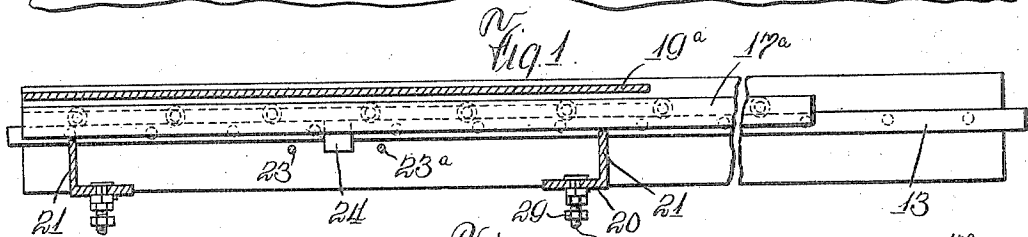
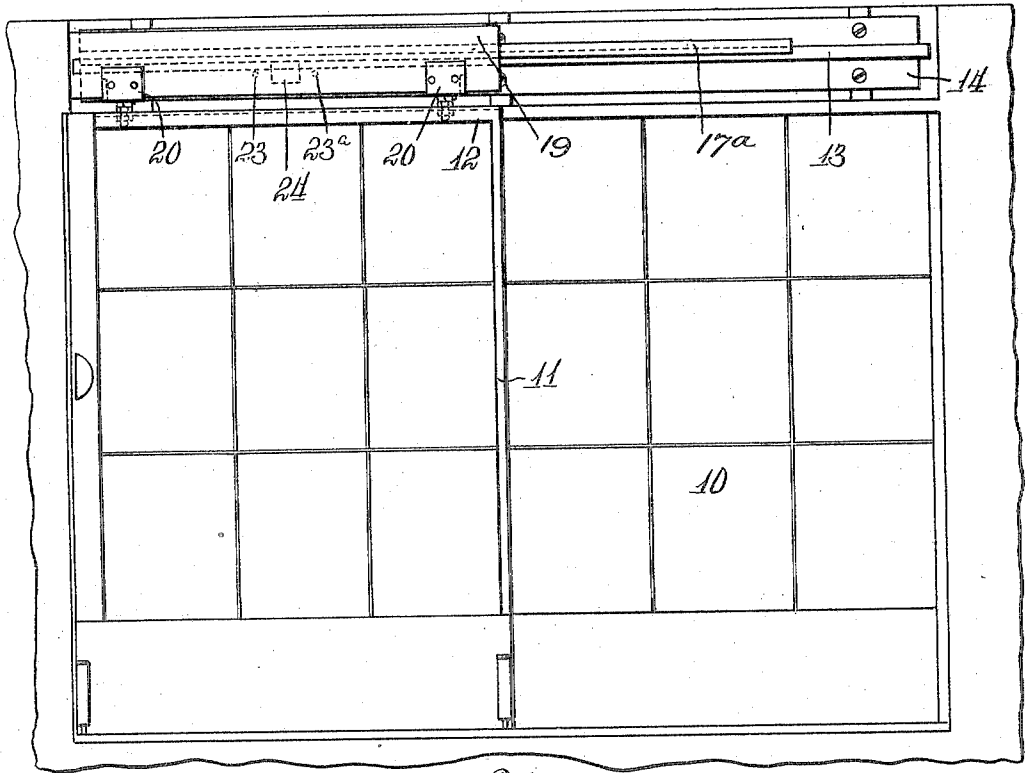


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DOOR HANGER.
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947,930.

Patented Feb. 1, 1910.



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UNITED STATES PATENT OFFICE.

JACOB OLMAN, OF NEW YORK, N. Y.

DOOR-HANGER.

947,930.

Specification of Letters Patent.

Patented Feb. 1, 1910.

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To all whom it may concern:

Be it known that I, JACOB OLMAN, of the city, county, and State of New York, have invented a new and useful Improvement in Door-Hangers, of which the following is a full, clear, and exact description.

My invention relates to improvements in door hangers and especially to hangers for the doors of elevator wells, although the invention is applicable to any sliding door.

The object of my invention is to produce a device by which a door can be hung from the top so as to be well balanced and slide easily without danger of going off the track.

The invention is intended also to distribute the weight of the door so as to make it operate easier than ordinary sliding doors.

My invention is also intended to produce a structure which can be cheaply made, easily applied to a door, and easily hung in the place where it is to be used.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a side elevation of my improved apparatus as applied to the door of an elevator well; Fig. 2 is a sectional longitudinal elevation of the invention; Fig. 3 is a detail plan view of the runner; Fig. 4 is a detail sectional elevation of one of the supporting bolts and its connections; Fig. 5 is a cross section through the apparatus, and Fig. 6 is a detail cross section of one of the supporting bolts and its locking collar.

In the drawing 10 represents the ordinary framework of an elevator well, and 11 the usual door, which latter may be of any preferred construction or design, and the door has a flanged plate at its top 12 usually of metal but not necessarily so, by which the door is supported. The door is intended to run on the overhead track 13 which is carried by the framework 14 and supported thereon and spaced therefrom by the stud 15. On this track is placed the runner comprising the grooved trucks or rollers 16 and the side frames 17 and 17^a which support the axles of the rollers and which are spaced apart by the usual spacing bolts 16^a.

The door supporting hangers comprise in their construction respectively the combination of the angle plate 19, 19^a, and 20, 21, the former comprising a depending rail or rider bar 18 adapted to fit accurately in the grooves of the rollers carried by the runner

frame, while the latter is secured by its vertical arm to the depending arm 19 of the former by bolts or otherwise, the horizontal arm thereof being provided with an upturned flange 21 having the recess 22 adapted to fit nicely but not too snugly around the track 13. This serves to guide the device at its lower edge and prevents any wobbling of the door and also prevents the structure from running off the track. This is also prevented in part by the rail 18 fitting in the grooves of the rollers 16.

The angle irons 20 serve to support the door directly, as presently described, and they move with the angle-plate 19—19^a as does also the runner above described.

The movement of the runner with the door is caused by the pins 23 and 23^a which are spaced apart so as to straddle at a little distance therefrom, the tongue 24, on the lower edge of the plate 17^a of the runner. This will be referred to again in describing the operation of the door. The door is connected to the angle irons 20 by means of bolts 25 which extend downward from the angle irons and which have squared sections 26 fitting corresponding holes in the angle irons, as shown in Fig. 4, so as to prevent the bolt from turning. This is further prevented by the collar 27 which fits the squared section 26 at a point below the angle iron 20, the collar being forced up snug against the angle iron and being prevented from turning by the studs 28 which project from the under side of the angle iron and abut with the collar. The collar is held up in place by the nut 29 (see Fig. 4) and the door top 12 is clamped snugly between the two nuts 29 as shown in said figure, the bolt passing of course through a corresponding collar in the door top. Thus when the nuts are tightened the door top is securely fastened and the collar 27 is also forced snugly against the iron 20 so as to clamp the angle iron snugly between the collar and the head of the bolt.

When the door is opened the angle plate 19 will be moved because of its connection with the door already described, and this will cause the pin 23 to strike the tongue 24, thus making the runner 17—16 roll along on the track 13, the movement being a very easy one, and when the door is closed the pin 23^a strikes the tongue 24 and the reverse action takes place.

From the foregoing description it will be

seen that the hanging apparatus is simple and reliable, that the door cannot get off the track, and that while it is particularly intended for a hanger for elevator doors, the invention can also be applied to any sliding door.

Having thus fully described my invention. I claim as new and desire to secure by Letters Patent:—

10 1. An apparatus of the kind described comprising in combination a track, a runner including grooved rollers adapted to move freely on the track, a supporting plate having a rail to fit the grooves of the rollers,
15 means for suspending a door from the supporting plate, a tongue on the runner, and abutments on the supporting plate spaced apart and adapted to engage the tongue.

20 2. An apparatus of the kind described, comprising the combination of a track, a runner having a series of rollers to fit the track and adapted to move freely thereon, an angle plate having a rail adapted to fit the grooves of said rollers, an angle iron

supported by the angle plate, and connected 25 rigidly therewith, said angle iron fitting over the lower edge of the track, and means for suspending a door from said angle iron.

3. The combination with a track, the runner thereon including rollers, and the supporting plate riding on the runner, of means 30 for suspending a door from the supporting-plate, abutments on the supporting-plate, and a tongue extending from the runner between the said abutments. 35

4. The combination with the supporting angle-iron and the door top, of the suspending bolt having a squared section fitting through the angle-iron, a collar fitting the squared section of the bolt, abutments on 40 the angle-iron engaging the collar, and nuts on the bolts to engage a door top and to support the aforesaid collar.

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Witnesses:

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