

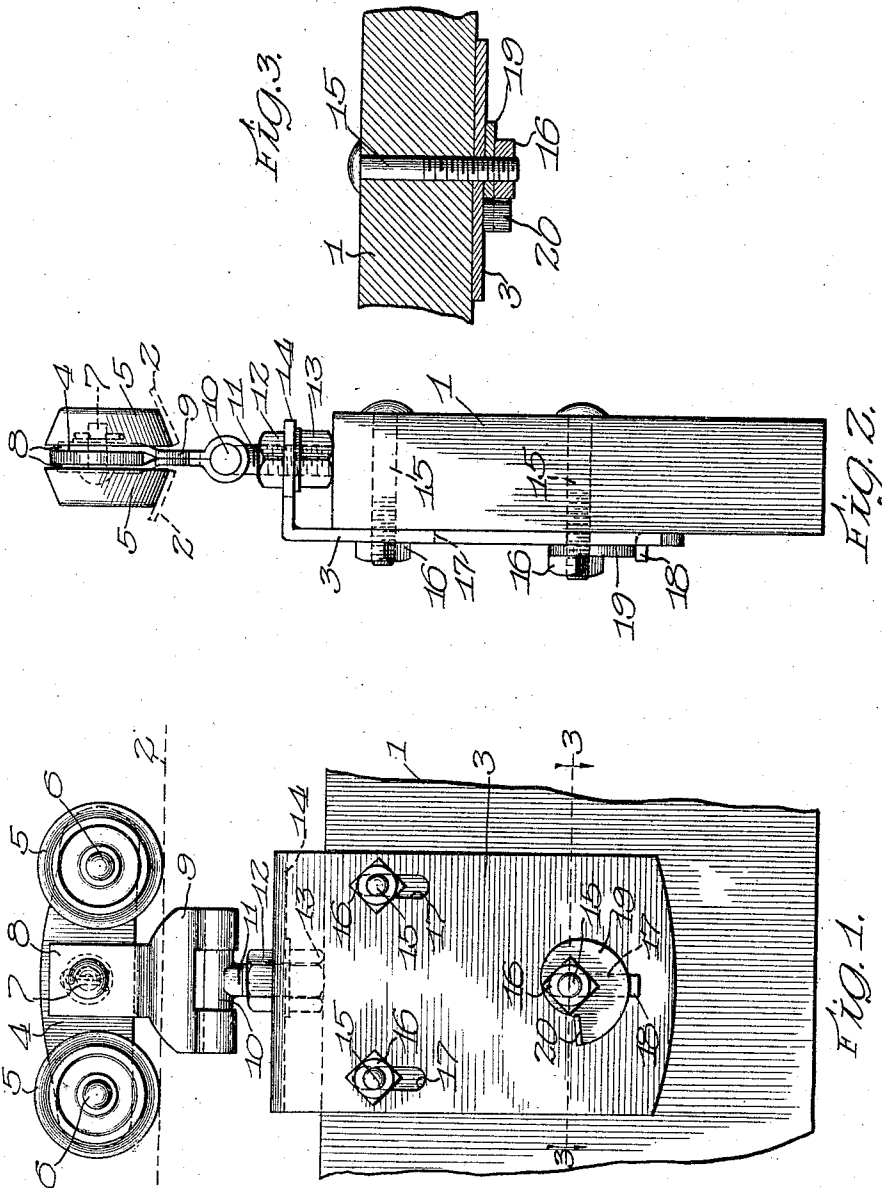
E. J. WELLS.
DOOR HANGER.

APPLICATION FILED NOV. 2, 1911.

1,066,236.

Patented July 1, 1913.

2 SHEETS-SHEET 1.



Witnesses:
H. W. Marus Jr.
R. Burkhardt.

Inventor
Edmund J. Wells
BY: Neil & Kee
Attys

E. J. WELLS.
DOOR HANGER.
APPLICATION FILED NOV. 2, 1911.

1,066,236.

Patented July 1, 1913.

2 SHEETS—SHEET 2.

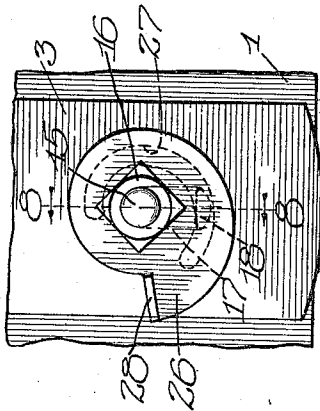


Fig. 7.

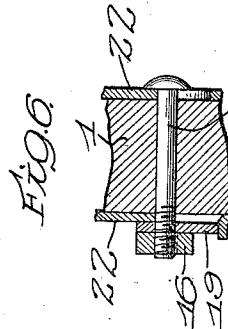


Fig. 6.

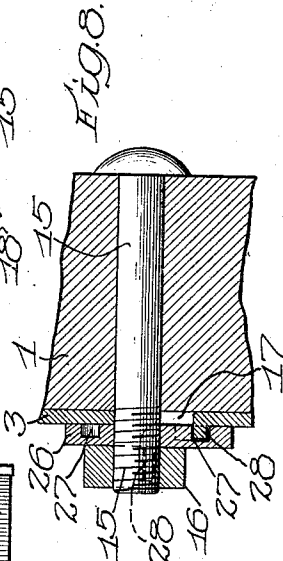


Fig. 8.

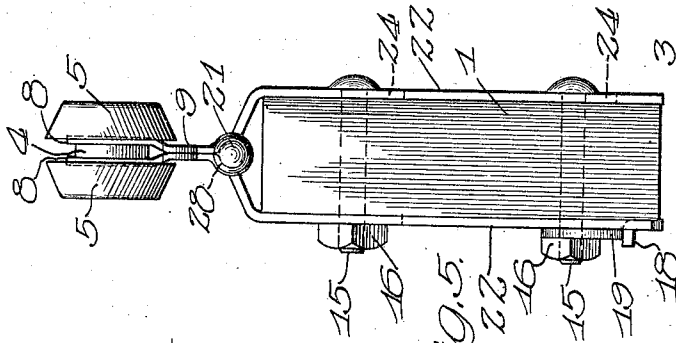


Fig. 5.

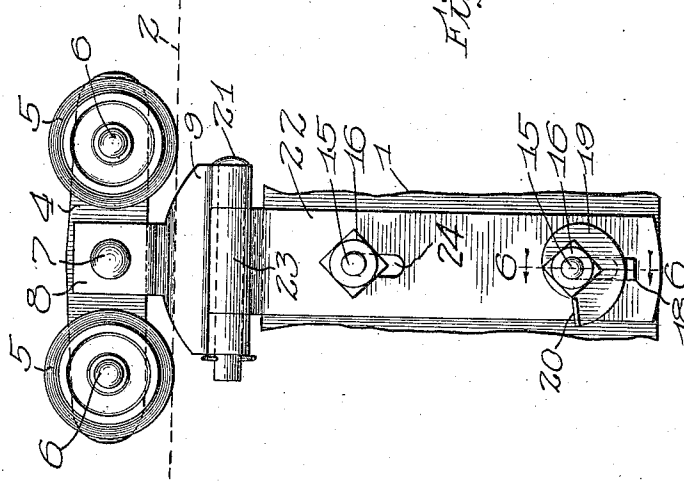


Fig. 4.

Witnesses:
G. W. Farnus Jr.
R. Burkhardt.

Inventor
E. J. Wells.
B. U. Klee & Klee, Attys

UNITED STATES PATENT OFFICE.

ELMER J. WELLS, OF GRINNELL, IOWA, ASSIGNOR TO WAGNER MANUFACTURING CO.,
OF CEDAR FALLS, IOWA, A CORPORATION OF IOWA.

DOOR-HANGER.

1,066,236.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed November 2, 1911. Serial No. 658,273.

To all whom it may concern:

Be it known that I, ELMER J. WELLS, a citizen of the United States, residing at Grinnell, in the county of Poweshiek and State of Iowa, have invented certain new and useful Improvements in Door-Hangers, of which the following is a description.

My invention relates to that class of devices known as door hangers and more particularly to an improved hanger for sliding doors, and the primary object of the present invention is the provision of an improved device of this character, which is of such a construction that the door may be readily raised and lowered without taking the door down or disconnecting it from its hangers.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claim.

In the drawings, wherein like reference characters indicate like or corresponding parts, Figure 1 is a side elevation of a portion of a door with my improved hanger arranged thereon. Fig. 2 is an end elevation of the same. Fig. 3 is a sectional view taken substantially on line 3, 3 of Fig. 1. Fig. 4 is a plan view of a slightly modified construction. Fig. 5 is an end elevation of the same. Fig. 6 is a sectional view taken substantially on line 6, 6 of Fig. 4. Fig. 7 is a plan view of a portion of the hanger, showing a modified cam construction, and Fig. 8 is a sectional view of the same taken substantially on line 8, 8 of Fig. 7.

Referring to the drawings, in which only one hanger is shown, it being understood that there may be any desired number of hangers, 1 represents a sliding door, which is carried from a suitable track 2. The carriage for carrying the door may be of any suitable construction, and is suitably connected with a hanger or strap 3, which is secured to the door so as to permit the vertical adjustment of the door. The carriage shown comprises a frame or bar 4 provided with the desired number of wheels 5, arranged on the axles 6 on the frame. A depending hanger or strap 8 is pivotally secured to the frame bar 4 at 7, the hanger being extended downwardly as at 9 and arranged to pivotally support a pin 10. The pin 10 is provided with a depending shank or bolt 11, which extends through the bent

or offset end 14 of the hanger 3, the parts being secured together by nuts 12 and 13. Any equivalent arrangement for supporting the hanger or strap 3 from the carriage 4 may be provided.

The hanger or strap 3 and the door 1 may be secured together by one or more bolts 15 and nuts 16, the bolts extending through the door and strap. The plate 3 is preferably slotted as at 17, for each of the bolts, so that the door may be raised or lowered relative to the strap without removing the bolts, it being only necessary to turn the nuts a slight distance. As is obvious, when the door is of some weight, as for example, a barn door, there will be a tendency for the door to drop, or gradually work down, so that the bolts are at the bottom of the slot 17. To positively support the door from the hanger or strap 3, and prevent its working down should the bolts become loose, either from the shrinkage of the door, wearing of the bolt holes, or the nuts coming loose, I provide a member 19 on one part arranged to cooperate with a lug 18 on the other part. As shown, the member 19 is cam shaped, and is pivotally secured to the door by mounting the same upon one of the bolts 15, the cam being adapted to cooperate with an extension or lug 18 formed on the plate 3. The cam member may be provided with an extended part 20 for convenience in operating.

If it is desired to lower the door slightly from the position shown, the nuts 16 are loosened and the cam member operated the desired distance, so as to vary the distance between the lug 18 and the bolt 15. The nuts may then be turned down so that the door is carried by the bolts and by the cam member 19 and lug 18. To raise the door and support the same at the desired height, the operations are reversed. The door will be positively supported at any point between the limits of the adjustment permitted by the parts, so that it is prevented from sagging or working down, as might be the case if the same was supported only by the frictional engagement of the plate or strap 3 and door and nut 16.

In the construction shown in Figs. 4, 5 and 6, the construction is substantially similar, except the form of strap or hanger 3 is changed, and consists of a U-shaped bar 22, which extends over a pin 21 carried by

the carriage hanger 9. In this case the strap hanger 22 is provided with slots 24 on each side through which the bolts pass.

Figs. 7 and 8 illustrate a slightly modified form of cam, applicable for use on either form of hanger. In this form the cam member 26 is provided with a groove or slot 27 on the inner face, into which the lug 18 on the hanger extends, 28 being an extension for convenience in operating the cam. With the exception of the cam being slotted, it is substantially the same as the form previously described.

As previously mentioned, there may be any number of carriages and hangers secured to the door, the construction being particularly applicable when two or more hangers are used, as the parts may at any time be adjusted without removing the bolts or boring new holes in the door. Where the track 2 sags, or the bottom of the door frame or floor warps upwardly, the door may be raised and maintained at the desired height so that the door does not drag. On the other hand, should the lower portion of the upper frame or floor sag or settle, the door may be lowered the desired distance.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention, hence I do not wish to be understood as limiting myself to the exact form, arrangement, construction or combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:—

A door hanger comprising a suitable carriage, a depending hanger carried thereby, said hanger being provided with a plurality of straight parallel slots, bolts passing through the slots in the hanger for clamping the hanger to the door, a cam member movably mounted on one of said bolts at one side of the hanger, and a portion extending laterally from one face of the hanger and coöperating with the movable cam member.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

ELMER J. WELLS.

Witnesses:

CARL E. CHILD,
G. H. WALKER.