

(No Model.)

2 Sheets—Sheet 1.

G. T. BUDDLE.
DOOR HANGER.

No. 529,777.

Patented Nov. 27, 1894.

Fig. 1.

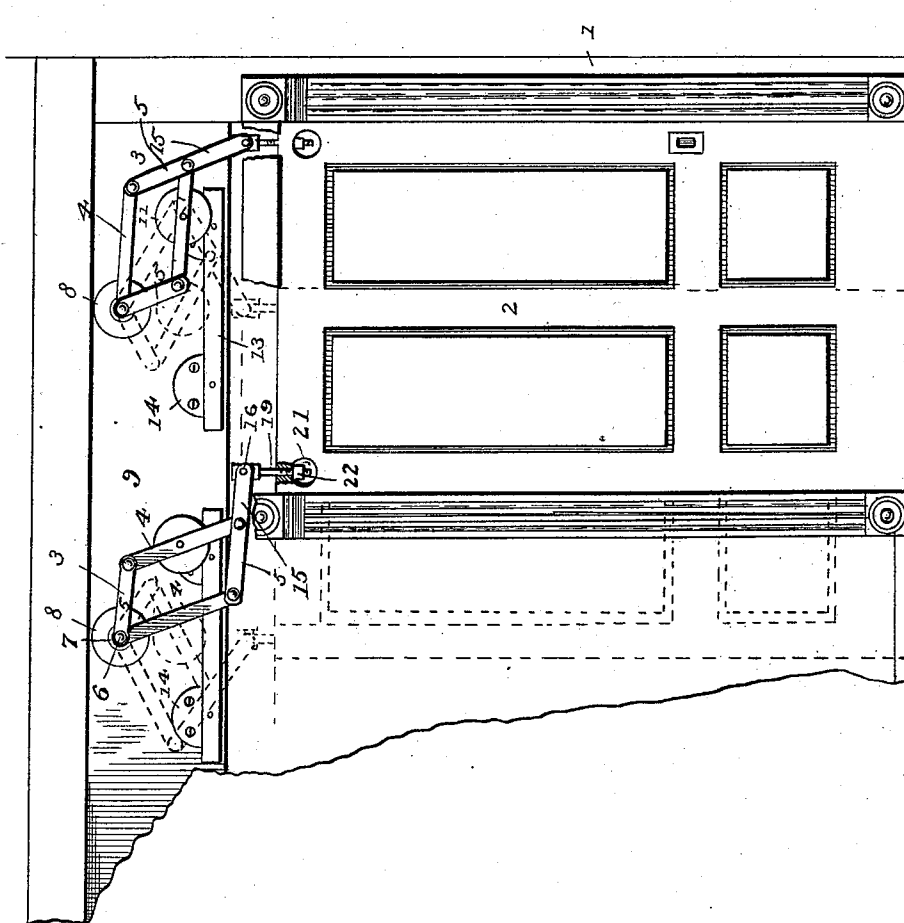
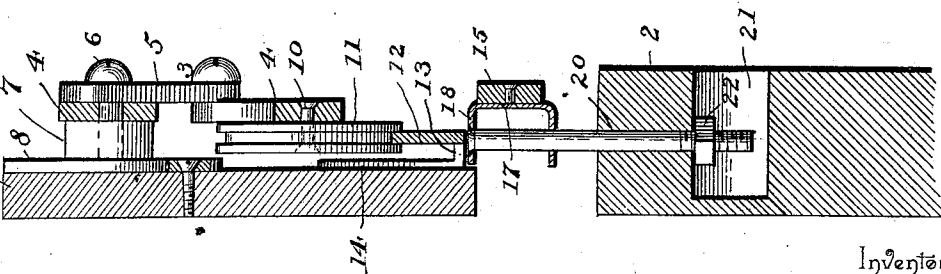


Fig. 3.



Inventor

George T. Buddle,

Witnesses

Julius Ulke, Jr.
J. P. Walchamper.

By his Attorneys.

C. A. Snow & Co.

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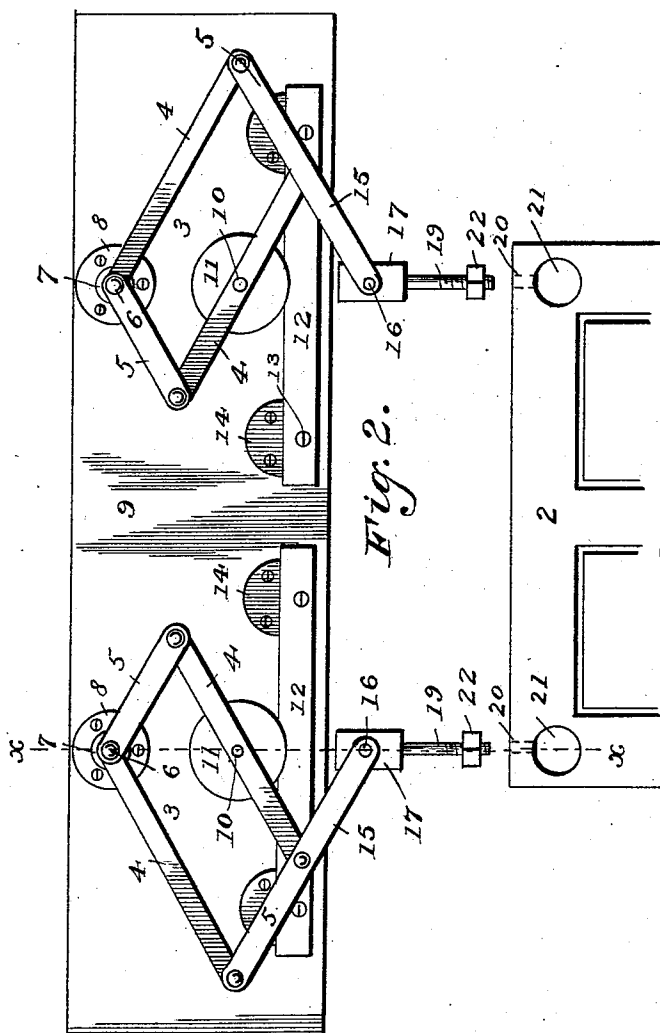


Fig. 2.

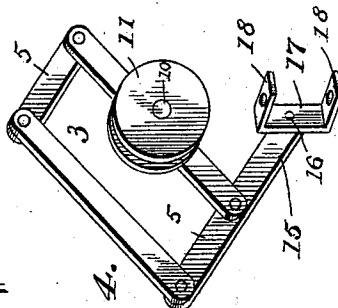


Fig. 4.

Witnesses

Julius Ulke, Jr.
S. P. Walhauser

By his Attorneys.

George T. Buddle,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

GEORGE T. BUDDLE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
EDWARD S. HARVEY, OF SAME PLACE.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 529,777, dated November 27, 1894.

Application filed April 19, 1894. Serial No. 508,194. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. BUDDLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Door-Hanger, of which the following is a specification.

This invention relates to door hangers; and it has for its object to effect certain improvements in devices of this character whereby a sliding door may be hung for an exceedingly easy movement.

To this end the main and primary object of the present invention is to provide an improved link-jointed door hanger, which, while providing a sufficiently strong hanger for properly supporting a sliding door at the same time provides a construction that steadies the door and suspends the same for an easy sliding movement, and also admitting of any adjustment of the door that may be found necessary at any time.

With these and other objects in view which will 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.

In the drawings:—Figure 1 is a front elevation of the herein described door hanger mounted in operative position in connection with a sliding door, the view showing the door casing or frame and a portion of the partition immediately around the same. Fig. 2 is an enlarged detail elevation of the pair of hangers slightly separated from the door, shown in the position occupied when the door is about half open, as shown in dotted lines in Fig. 1. Fig. 3 is a vertical sectional view on the line $x-x$ of Fig. 2. Fig. 4 is a detail in perspective of one of the quadrangular jointed door hangers.

Referring to the accompanying drawings, 1 designates a door frame and the surrounding partition wall ordinarily provided for a sliding door 2, that is arranged to slide back and forth within the wall of the partition at one side of the door frame to close and unclose the door opening, and in the present invention the sliding door 2, is designed to be supported for adjustment and a sliding move-

ment by the jointed door hangers 3. The jointed door hangers 3, are arranged in pairs to support a door, and the same consist of a quadrangularly arranged series of jointed hanger links 4 and 5, that are pivotally connected at their meeting ends at 6, to form a loosely jointed quadrangular frame and the hanger links 4, are longer than the other links 5, and may therefore be properly termed the links of the hanger while the other shorter side links 5, may be termed the end links inasmuch as said links comprise a quadrangular frame.

The quadrangularly arranged series of jointed hanger links 4 and 5 provide a loosely jointed hanger that will readily yield to any adjustment, while at the same time providing for steadying the object to which the same is connected, and at what may be termed the uppermost joint 6, between two of the hanger links 4 and 5, the quadrangular door hangers 3, are pivotally attached to the pivot bosses 7, that stand off from the supporting brackets 8, secured to a hanger cleat or beam 9, that is usually arranged above a sliding door for the support of its hangers, and journaled on the journal pin 10, at the center of one of the hanger links 4, of each door hanger, is a grooved supporting wheel 11, arranged to engage the upper edge of a vertically disposed track plate 12, secured at one side of the off-standing track brackets 13, that are provided with the flanged attachment plates 14, secured to one side of the hanger cleat or beam 9.

The vertically disposed track plates are supported in position at one side of the cleat or beam 9, at spaced points to accommodate the travel of the wheel carried by each of the jointed hangers, it being understood that the description, in reference to the supporting wheel and the pivotal support for the hangers, refers to both of the same that are employed for the support of the sliding door 2, and said vertically disposed track plates are of a length sufficient to allow the supporting wheels to travel thereon during the entire limit of movement of the sliding door while opening or closing.

The short end hanger links 5, of both door hangers, that assume the lowest position are provided beyond one of their pivotal connec-

tions with the other links with the off-standing attachment arm extensions 15, which are pivotally connected at 16, to the U-shaped hanger brackets 17, the upper and parallel
 5 flanges 18, of which are perforated to loosely receive the upper unthreaded ends of the vertically adjustable hanger bolts 19. The hanger bolts 19, are arranged or adapted to
 10 pass through bolt openings 20 formed in the top of the door 2, near opposite side edges thereof and communicating with the nut recesses 21, formed near the upper corners of the door and adapted to accommodate therein the bolt nuts 22, that adjustably engage the
 15 lower threaded extremities of the bolt that project into said nut recesses. By reason of the bolt and nut connection with opposite top edges of the sliding door, it will be obvious that the same may be readily and quickly ad-
 20 justed at any time that it may be found necessary to adjust the same for easing its movement, while the loose connection between the bolts 19, and the brackets 17, admits of a slight vertical play of the door so that the same will
 25 readily yield to any sudden jerking or pulling on the same without straining or injuring the hangers thereof.

During the opening and closing of the door the links of the jointed hangers that are op-
 30 positively disposed always remain parallel to each other so that the shape and therefore the strength of the hangers is not affected, while at the same time providing a readily yielding and rolling support for the door.

By reason of the specific construction of the quadrangular frames consisting of parallel
 35 jointed long and short links, it will be obvious that in connection with the grooved supporting wheel 11, journaled at the center of one of the long links, a very strong hanger
 40 frame is provided, throughout which the strain placed thereon is equally distributed, and at the same time admitting of a sufficient travel for the supporting wheel for the purpose of providing a rolling support for the
 45 door in every position thereof. This construction also obviates the necessity of double straps or links to provide a jointed frame sufficiently strong for the purpose of sup-
 50 porting a sliding door, but particular attention is directed to the combination involving the mounting of the supporting wheel at the center of one of the long links to equally divide or distribute the strain on all parts of
 55 the hanger frame, and also the arm exten-

sion 15, of one of the short links 5, that provides for a connection with the sliding door in such a manner whereby the same will have the greatest freedom of movement and will cause the strain to be placed directly on the
 60 wheel 11, it being noted that the disposition of said arm extension 15, provides for the exertion of a direct leverage on the wheel 11 to insure the equalization of the strain on the frame in the manner referred to.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a door hanger, the combination of a suitably arranged track, a loosely jointed
 75 hanger frame pivotally supported at one of its joints and consisting of a quadrangularly arranged series of jointed long and short links, one of the short links of the frame being provided with an arm extension adapted
 80 to connect with the top of a sliding door, and a supporting wheel journaled directly at the center and one side of one of the long links of the frame, substantially as set forth.

2. In a door hanger, the combination of a
 85 fixed supporting bracket, a loosely jointed frame attached to said bracket and consisting of a quadrangularly arranged series of jointed links, one of which is provided with an arm extension, a stationary track, a sup-
 90 porting wheel journaled directly at the center of one of the hanger links, a U-shaped hanger bracket 17, pivotally connected to the outer extremity of said arm extension and having upper and lower perforated parallel
 95 flanges, and a hanger bolt arranged to loosely work in the perforations of said flanges and adapted to be adjustably connected to the top of a sliding door, the connection of said bolt to said hanger bracket admitting of a
 100 slight vertical play for the door, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE T. BUDDLE.

Witnesses:

H. H. TEBBETTS,
 F. L. BUDDLE.