

G. FRISTAD.
FLUSH DOOR HANGER.
APPLICATION FILED MAR. 26, 1909.

931,052.

Patented Aug. 17, 1909.

3 SHEETS—SHEET 1.

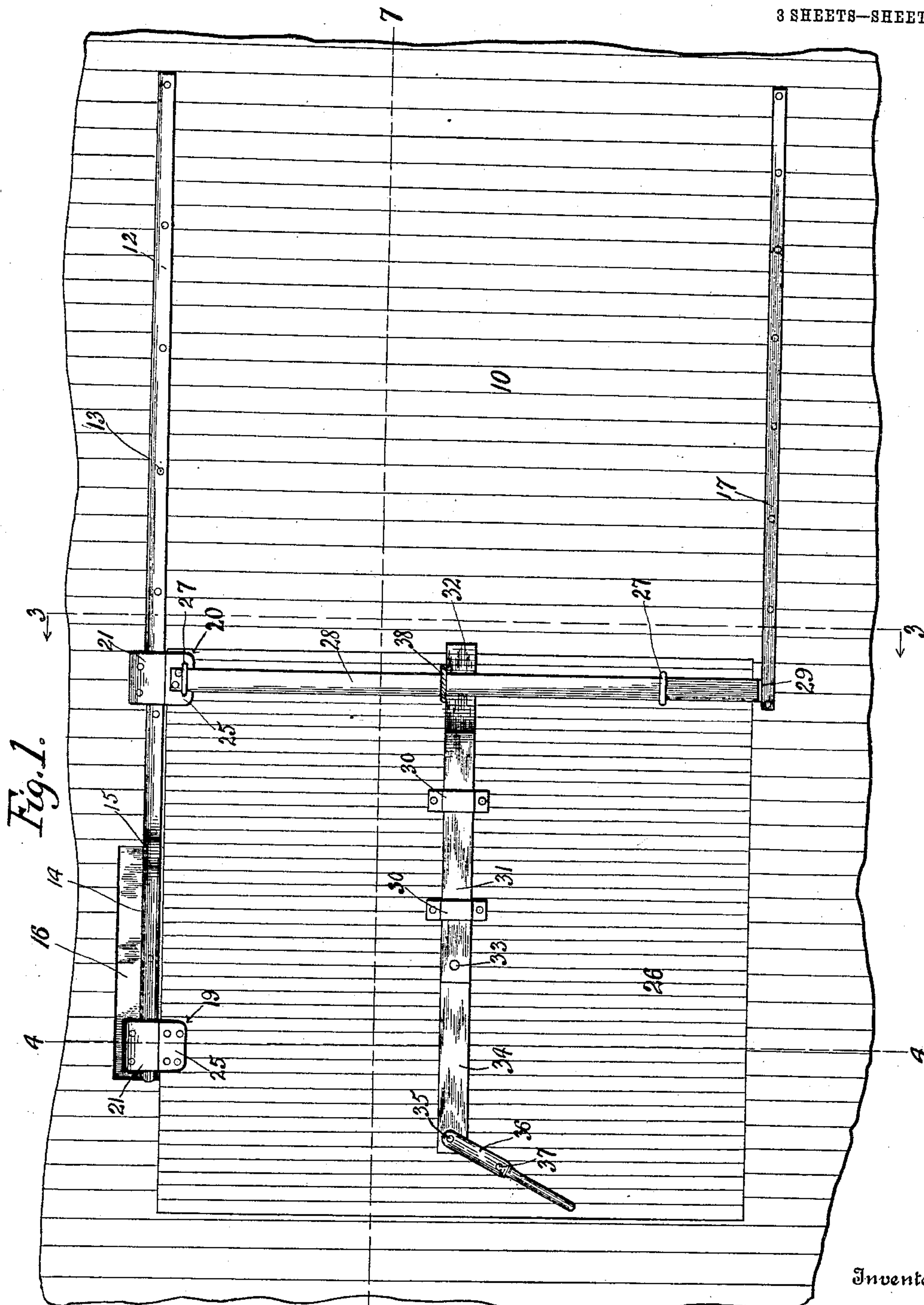


Fig. 1.

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Witnesses

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By

Handwritten signatures of the attorneys.

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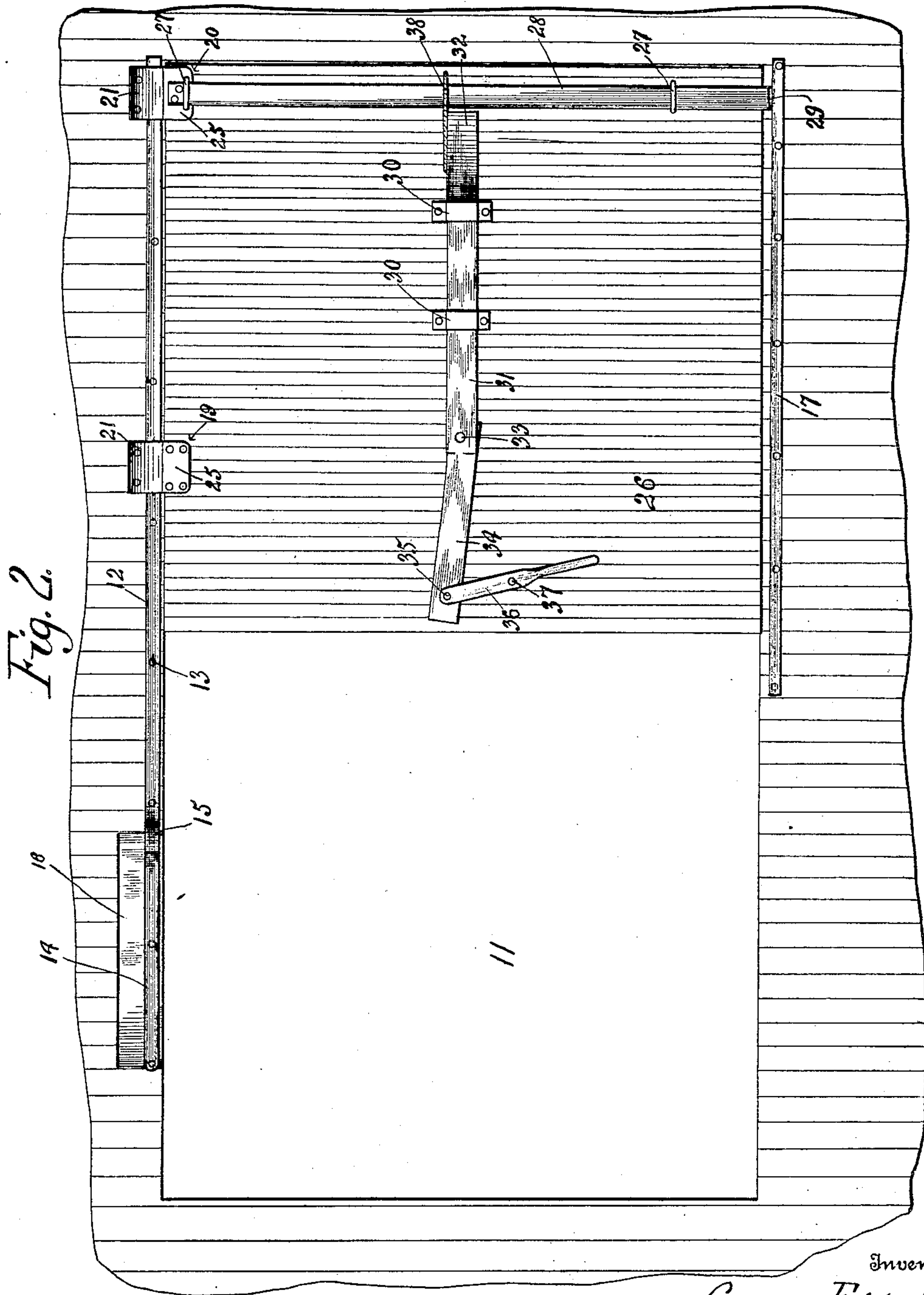


Fig. 2.

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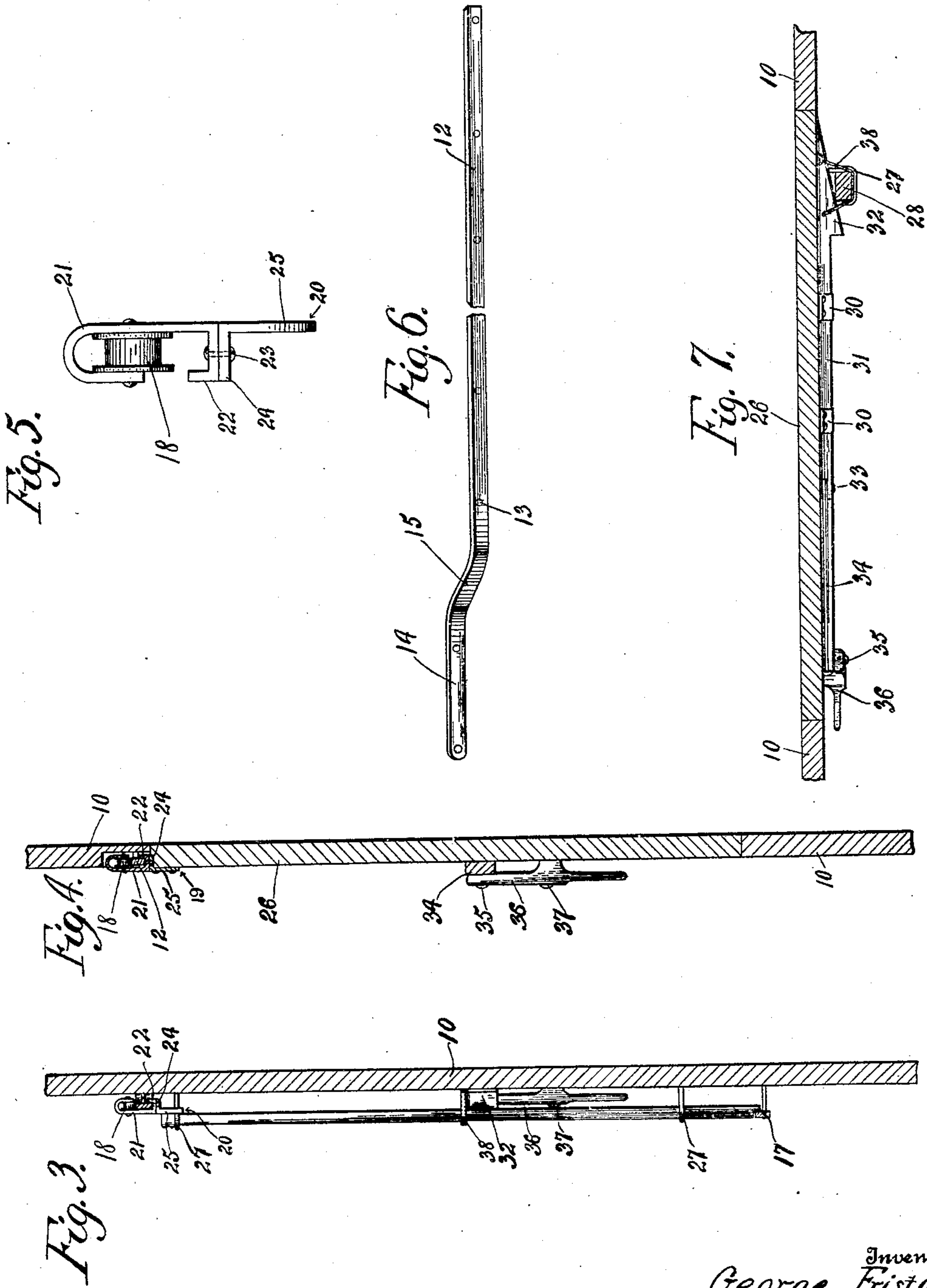
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

GEORGE FRISTAD, OF GARRINGTON, ALBERTA, CANADA.

FLUSH-DOOR HANGER.

No. 931,052.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed March 26, 1909. Serial No. 485,908.

To all whom it may concern:

Be it known that I, GEORGE FRISTAD, a subject of the King of England, residing at Garrington, in the Province of Alberta, Dominion of Canada, have invented certain new and useful Improvements in Flush-Door Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to flush door hangers and more particularly to that class of hangers for supporting and guiding sliding doors to enable the latter to be tightly closed in the door frame flush therewith.

The primary object of the invention is the provision of flush door hangers which are adapted to support a sliding door to permit the same to be brought to an opened or closed position and when in the latter position will fit tightly within the door frame and flush therewith.

A further object of the invention is the provision of this character of devices which will enable doors to be tightly closed, readily and quickly opened and that will securely lock the door flush within the door frame.

A further object of the invention is the provision of flush door hangers which are simple in construction, thoroughly efficient in function or operation, durable and inexpensive in the manufacture.

In the drawings accompanying and forming part of this specification is illustrated the preferred form of embodiment of the invention, which to enable those skilled in the art to practice the invention, will be set forth at length in the following description, while the novelty of the invention will be included in the claims succeeding said description. It is of course to be understood that changes, modifications and variations may be made such as come properly within the scope of the appended claims, without departing from the spirit of the invention.

In the drawings: Figure 1 is a side elevation of a portion of a car with the invention applied thereto and the door being in a closed position. Fig. 2 is a similar view with the car door in an open position. Fig. 3 is a sectional view on the line 3—3 of Fig. 1 looking in the direction of the arrow.

Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 5 is a side elevation of one of the swiveled door hangers. Fig. 6 is a detail perspective view of the track removed from the side of the car. Fig. 7 is a sectional view on the line 7—7 of Fig. 1.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

In the drawings the numeral 10 designates the vertical side wall of a car which is of the usual type and is provided with a doorway or opening 11 forming an entrance and exit to the car. Mounted upon one face of the side wall 10 above the door opening 11 is a horizontally disposed track 12 the latter spaced from the said wall 10 a suitable distance and secured thereto by fasteners 13 or in any other suitable manner. The forward extremity of the track 12 for a distance is offset as at 14 with respect to the remaining portion thereof by a curvature 15 so as to permit the offset portion 14 to lie in close relation with the vertical wall 10. For a greater portion of the length of the offset 14 of the track 12 there is formed in the wall 10 above the doorway or opening 11 a recess 16 one end of which extends beyond and a distance from the point of curvature 15 of the track.

Parallel with and secured to the side wall 10 is a guide strip 17 the latter disposed below and arranged at one side of the doorway or opening 11 and coextensive for a greater portion of the length of the track 12 for the purpose as will be hereinafter described. Upon said track 12 are adapted to travel sheaves or guide rollers 18 the latter journaled in pairs in hangers designated generally by the numerals 19 and 20, each comprising a swiveled hanger head 21 in which the pair of sheaves 18 are mounted. The lower edge of the hanger head 21 is formed with a right angularly disposed flange 22 containing a suitable central opening to receive a swivel pin or stem 23 connected to said flange and formed integral with a right angularly disposed flange 24 of a door plate 25 secured to the outer face of a sliding door 26. It is of course to be understood that the hanger 19 has its door plate 25 secured to the sliding door near the left hand free edge thereof but the door

plate 25 of the hanger 20 is not connected to said sliding door 26 in the manner as is the one of the hanger 19 and which hanger 20 is disposed near the right-hand free edge of the sliding door.

Mounted in the sliding door 26 near the right hand free edge thereof are outwardly projecting alining substantially U-shaped guide loops or yokes 27 which receive a vertical bar 28 the upper end of which is secured to the door plate 25 and its opposite lower reduced end 29 freely engages the guide strips 17 during the opening and closing of the said sliding door. The uppermost guide loop or yoke 27 engages suitable openings formed in the door plate 25 of the hanger 20 so as to permit lateral shifting of the sliding door when being moved to a closed position in the door way or opening 11 in the side wall of the car.

Upon the sliding door 26 are mounted a pair of brackets 30 supporting and guiding a horizontally slidable wedge bar or member 31 one end of which is formed with a wedge-shaped extremity or head 32 and the opposite end is connected by a pivot 33 to a link 34 the latter also pivoted as at 35 to the upper end of a manually operable lever 36 the latter centrally pivoted as at 37 to the sliding door. Connected to the wedge-shaped head 32 is a flexible strap 38 which passes around the bar 28 and is also connected to the sliding door 26 so that upon movement of the wedge member or bar 31 in one direction on the sliding door the said flexible strap 38 will operate to move the door 26 out of the opening 11 at one end thereof and in close relation to the bar 28 which will enable the said sliding door to be shifted to an open position.

To move the sliding door into closed position it is necessary to shift the said door upon the track 12 into alinement with the doorway or opening 11 which will cause the hanger 19 to travel onto the offset portion 14 of the track and enter the recess 16 which will bring the left hand free edge of the sliding door into the doorway or opening 11. Now, the operator manipulates or moves the lever 36 so as to shift the wedge member or bar 31 to bring its wedge-shaped head 32 between the bar 28 and the right-hand portion of the sliding door 26 which will cause the said sliding door 26 to be shifted laterally into the doorway or opening 11 flush with the side walls 10 of the car and also lock the said door in its closed position.

The particular manner of bringing the door to an open position will be clearly obvious therefore a detailed description of

the same is deemed unnecessary and is herein omitted.

What is claimed is—

1. The combination with a doorway, of a track having an offset above said doorway, a guide strip arranged below and at one side of the doorway, a sliding door, hangers having rollers adapted to travel upon said track, one of said hangers swiveled to the door, a bar having swiveled connection with the other hanger and engaging said guide strip, means receiving said bar and connected to the door to permit lateral movement thereof, and means movable between said bar and door to bring the latter into a closed position within the doorway and flush therewith.

2. The combination with a doorway, of a track having an offset above said doorway, a guide strip arranged below and at one side of the doorway, a sliding door, hangers having rollers adapted to travel upon said track, one of said hangers swiveled to the door, a bar having swiveled connection with the other hanger and engaging said guide strip, means receiving said bar and connected to the door to permit lateral movement thereof, a slidable wedge member mounted upon the door and movable between the latter and the said bar to laterally shift the door, and manually operable means connected with said wedge member for operating the same.

3. The combination with a doorway, of a track having an offset above said doorway, a guide strip arranged below and at one side of the doorway, a sliding door, hangers having rollers adapted to travel upon said track, one of said hangers swiveled to the door, a bar having swiveled connection with the other hanger and engaging said guide strip, means receiving said bar and connected to the door to permit lateral movement thereof, a slidable wedge member mounted upon the door and movable between the latter and the said bar to laterally shift the door, manually operable means connected with said wedge member for operating the same, and a flexible element connected to the wedge member and the door and engaging the bar upon movement of the wedge member in one direction to bring the said door into position to allow opening thereof.

In testimony whereof, I affix my signature, in presence of two witnesses.

GEORGE FRISTAD.

Witnesses:

HALDOR A. HAGEN,
A. O. KOLDEN.