

E. JOHNSON.
BLIND CLOSER.

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917,448.

Patented Apr. 6, 1909.

Fig. 1.

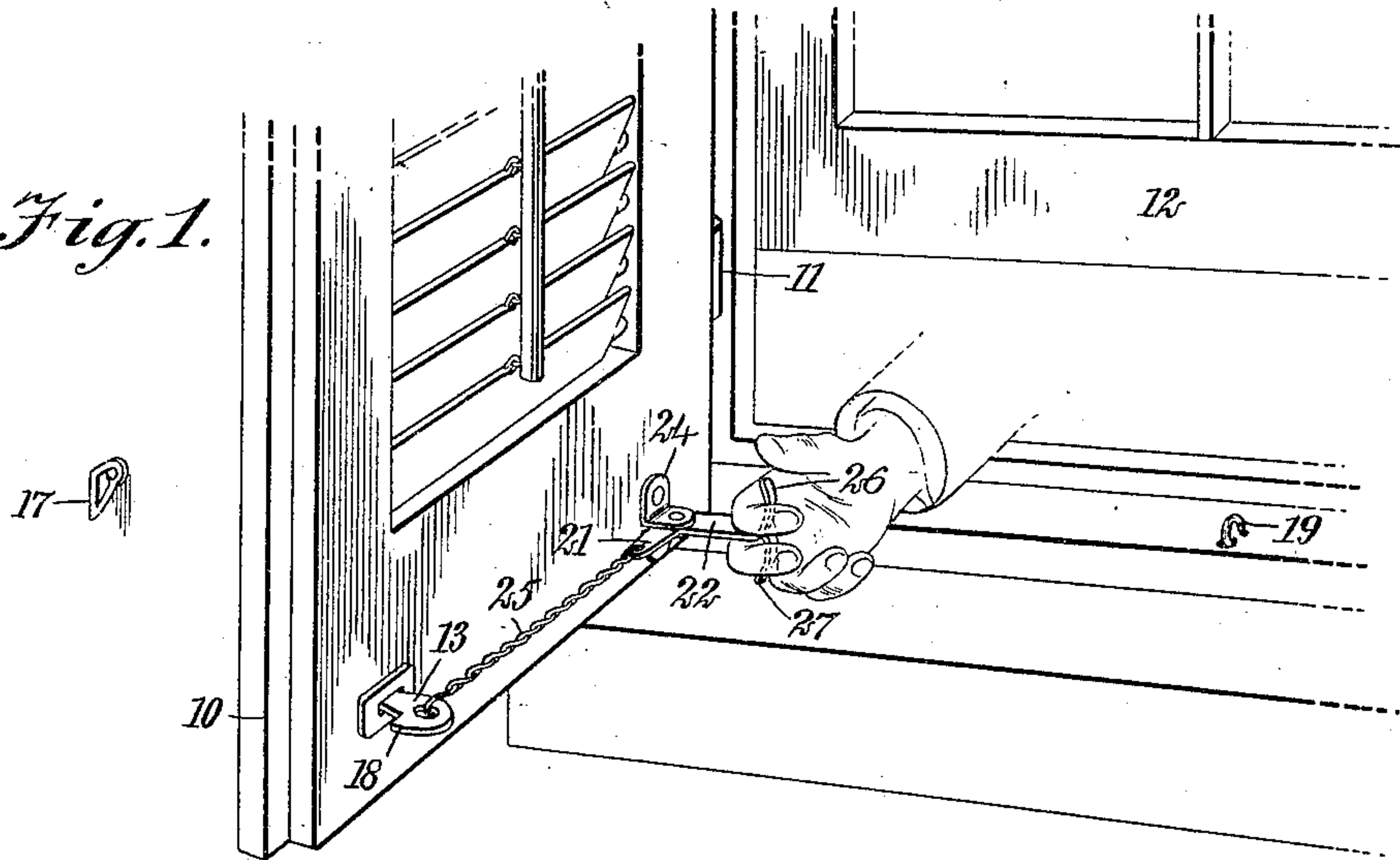


Fig. 2.

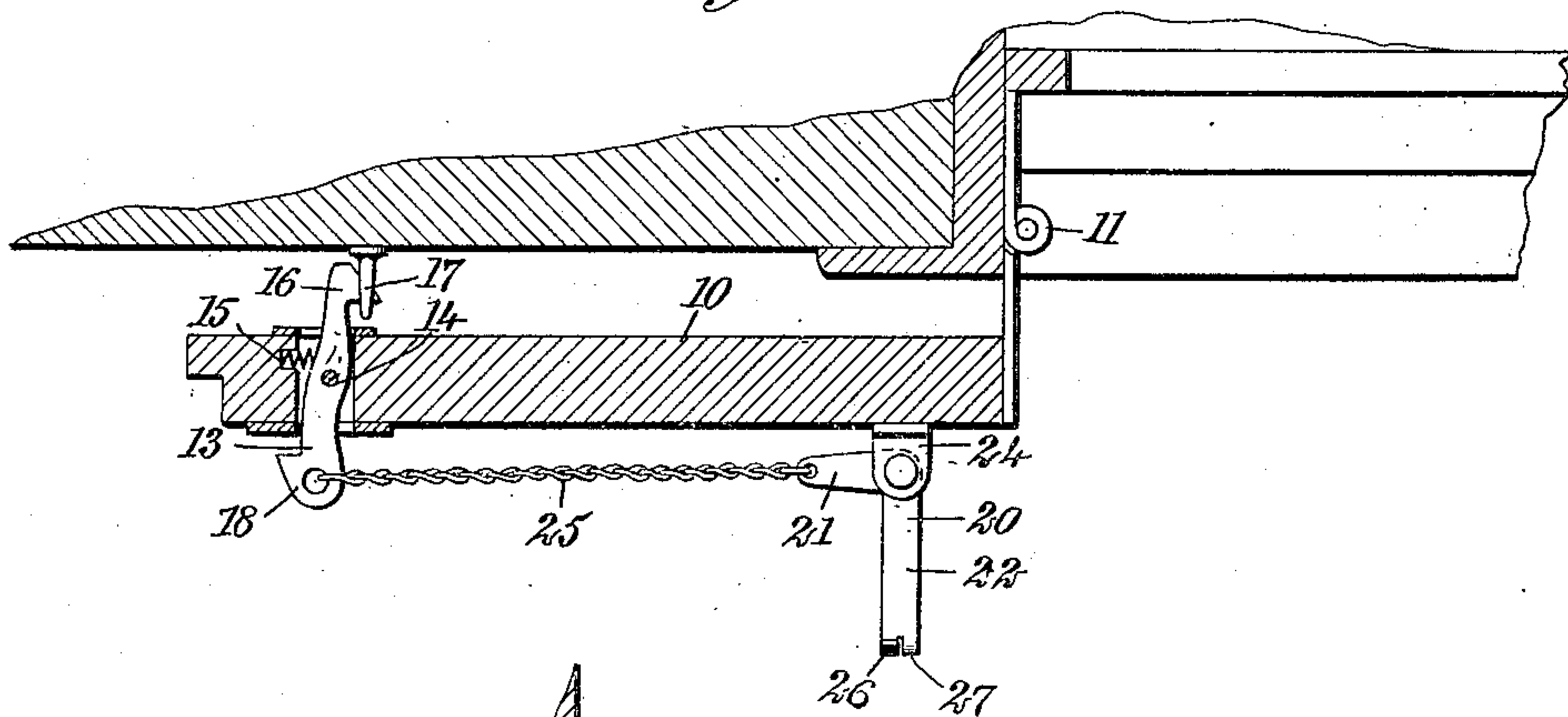
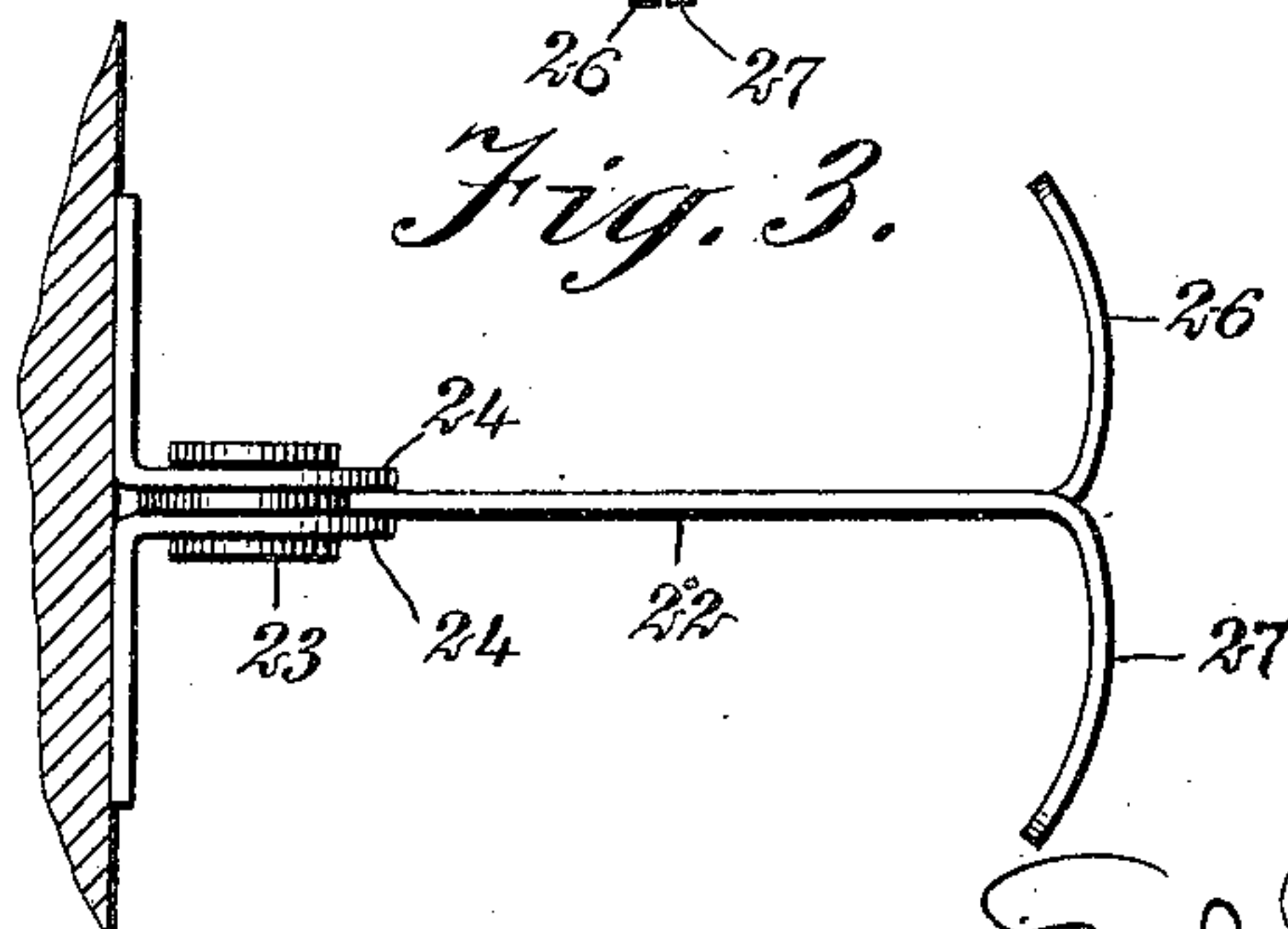


Fig. 3.



WITNESSES

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EADS JOHNSON, OF MONTCLAIR, NEW JERSEY.

BLIND-CLOSER.

No. 917,448.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed October 13, 1908. Serial No. 457,471.

To all whom it may concern:

Be it known that I, EADS JOHNSON, a citizen of the United States, and a resident of Montclair, in the county of Essex and State of New Jersey, have invented a new and Improved Blind-Closer, of which the following is a full, clear, and exact description.

In my improved construction an operating lever is mounted to swing in a horizontal plane and the outer end of the lever is connected to the fastener and is spaced a considerable distance from the hinged edge, so that said lever operates not only to disengage the fastener, but it also operates as a lever with a comparatively long arm, to close the blind. The lever is of the bell crank type, and the outer end is so designed as to constitute a finger grip extremely simple in form yet efficient in operation.

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

Figure 1 is a perspective view of a portion of a window and blind provided with a closer constructed with my invention; Fig. 2 is a transverse section in substantially the plane of the fastener; and Fig. 3 is a view of one end of my improved lever, showing the same on an enlarged scale.

My improved blind closer is adapted for use in connection with any common form of blind and fastener therefor, the details of which constitute no portion of my invention.

To facilitate a clear understanding of the construction and use of my improved device, I have illustrated a blind 10, secured by a suitable hinge 11 to the window casing and adjacent the outer surface of the window 12. The blind carries adjacent its free edge, a fastener in the form of a latch lever 13, extending through the blind from one side to the other, and having each end thereof terminating beyond the surface of the blind. The latch lever is secured upon a suitable pivot 14, so as to swing in a horizontal plane, and adjacent the pivot is a spring 15 for holding the latch lever in one of its two limiting positions. The latch lever terminates in a hook 16 at one end, which automatically engages with a retainer 17 on the wall of the house when the blind is swung open to its limiting extent, and terminates in a hook 18 at its inner end, which may automatically engage with a retainer 19 on the window sill,

when the blind is in its closed position. The hooks are upon opposite edges of the lever and the portions beyond each hook are beveled, so that as the blind is swung to its limiting position in either direction, the lever is automatically moved against the tension of the spring and snaps into place.

In connection with this fastener, details of which are unimportant, I employ an operating mechanism serving not only to disengage the fastener when the blind is in its open position, but also serving to swing the blind to its closed position. The preferred form of this operating mechanism includes a bell crank lever 20, cut from a piece of sheet metal and having two arms 21 and 22. The lever at the intersection of these arms is mounted on a pivot pin 23, constituting a fulcrum, and this pivot pin is held adjacent its ends between two outwardly-extending lugs 24, each of which is preferably cut and stamped from sheet metal. Each lug is substantially L-shaped and has one portion in engagement with the surface of the blind and secured thereto by a suitable nail or screw and has the other portion extending outwardly from the blind at substantially right angles thereto and parallel to the corresponding portion of the other lug. The bell crank lever 20 lies in a horizontal plane and the arm 21 normally lies substantially parallel to the surface of the blind, while the arm 22 normally extends outwardly therefrom at substantially right angles. The arm 21 is connected to the end of the latch lever 13 of the fastener by means of a chain, wire, cord, or other connecting member 25, and the arm 22 terminates at its outer end in a finger grip formed integral with the arm.

As previously stated, the bell crank lever is formed of sheet metal and the arms 21 and 22 thereof lie in the same plane. To form the finger grip, the outer or free end of the arm 22 is provided with a cut or slit extending longitudinally thereof intermediate the side edges of the arm, so as to form two separate branches 26 and 27. These branches are bent laterally in opposite directions, and each lies at substantially right angles to the plane of the lever. Each branch may be slightly curved throughout its length and its free end thereof may be rounded. The two branches together, constitute a finger grip, and each is of a length approximately equal to the average width of a person's finger.

In closing a blind provided with my im-

proved device, it is only necessary to raise the window a very few inches and the hand need be projected out of the window only to the finger grip. Two fingers grasp the two
 5 branches or members 26 and 27 upon opposite sides of the arm 22 of the bell crank lever, and by giving a slight pull, the latch lever is disengaged from the retainer and the blind is free to swing to its closed position. After
 10 the disengagement of the fastener, the person continues to pull on the finger grip and the blind is quickly and easily closed, due to the position of the bell crank lever in respect to the blind. The arm 22 of the lever ex-
 15 tends outwardly from the blind adjacent the hinged edge thereof, so that after the fastener is disengaged the lever becomes substantially rigid with the blind, and the arm 22, the lugs 24, the edge of the blind, and one leaf of the
 20 hinge combine to form one arm of a large bell crank lever, the opposite arm of which is formed by the blind itself. This leverage is such that very little force need be applied to swing the blind, and this force is applied at
 25 such a point as to give the highest efficiency.

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

1. The combination with a blind fastener,
 30 including a latch lever adapted to be pivotally mounted on a blind at the outer or free edge thereof and extend from opposite sides thereof, to engage retainers upon the sill and the side of the house to hold the blind in
 35 closed or open position, and a spring for automatically engaging said latch lever with either of said retainers, of an operating mechanism for said blind fastener, comprising two substantially parallel lugs adapted to be se-
 40 cured to the blind adjacent to the hinged edge thereof, a bell crank lever pivoted between said lugs and movable in a plane at right angles to the plane of the blind and a flexible connection between one end of said
 45 bell crank lever and said latch lever, said bell

crank lever being formed of sheet metal and having the opposite end thereof bifurcated and bent in opposite direction to form a finger grip extending at substantially right angles to the plane of said lever. 50

2. The combination with a blind fastener, including a latch lever adapted to be pivotally mounted on a blind adjacent the free edge thereof and extend from opposite sides thereof, and a retainer upon the house wall
 55 for engagement with one end of said latch lever, to hold the blind in open position, of an operating means for said fastener and said blind, including a bell crank lever adapted to be secured to the blind adjacent the hinged
 60 edge thereof and to swing in a plane at right angles to the plane of the blind, one end of said lever normally extending outwardly from said blind and terminating in a finger grip, and the other end of said lever normally
 65 extending toward said latch lever and substantially parallel to said blind, and a connecting member extending from said last-mentioned end to said latch lever, whereby
 70 upon pulling on said finger grip, said latch lever is first disengaged from said retainer and said blind is then swung to its closed position.

3. The combination with a blind and a fastener for retaining it in open position, of
 75 means for disengaging said fastener and swinging said blind to its closed position, comprising a bell crank lever pivoted to said blind adjacent the hinged edge thereof and swinging in a plane at right angles to the
 80 plane of the blind, and connecting means secured thereto and having operative engagement with said fastener.

In testimony whereof I have signed my name to this specification in the presence of
 85 two subscribing witnesses.

EADS JOHNSON.

Witnesses:

HAROLD C. CHAPMAN,
 CLAIR W. FAIRBANK.