

No. 763,287.

PATENTED JUNE 21, 1904.

H. L. HOYER.  
WINDOW FRAME.

APPLICATION FILED MAR. 8, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

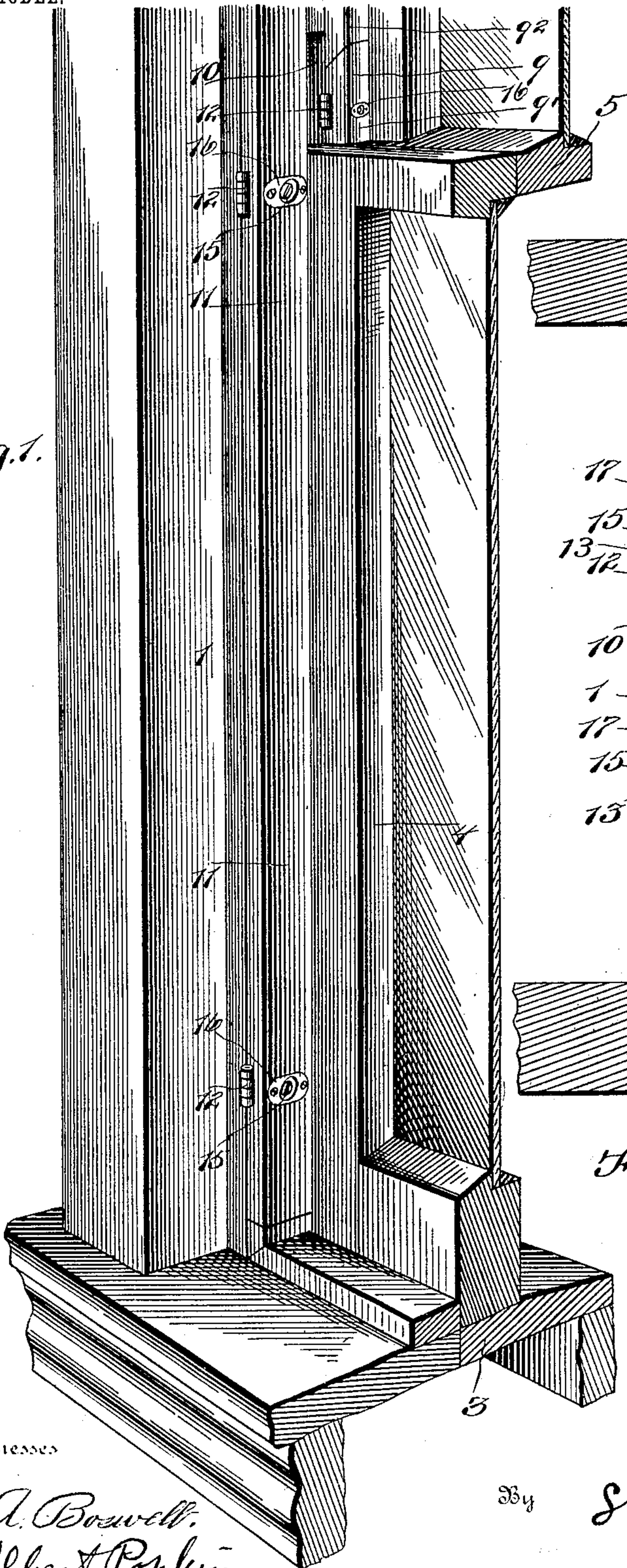


Fig. 2.

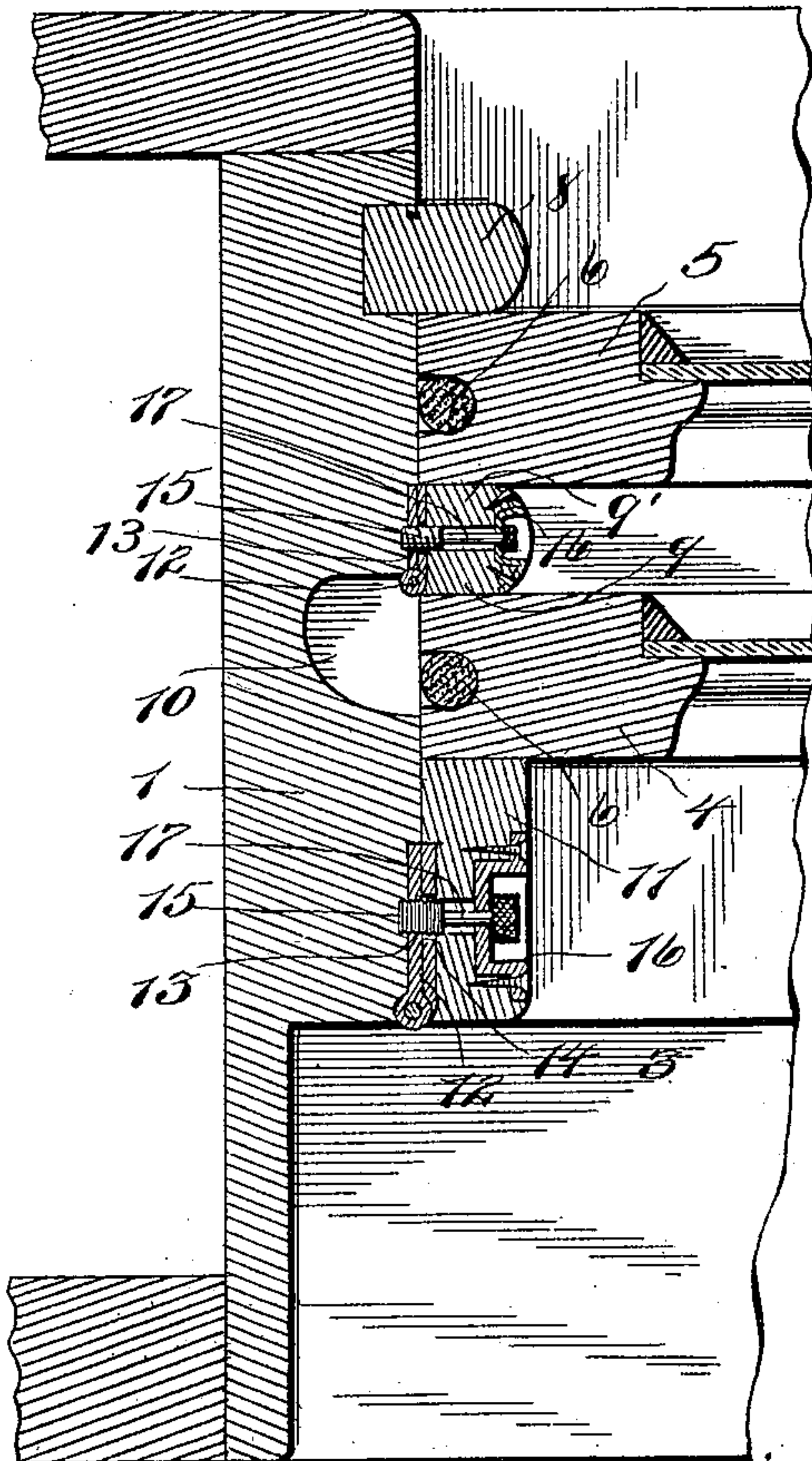
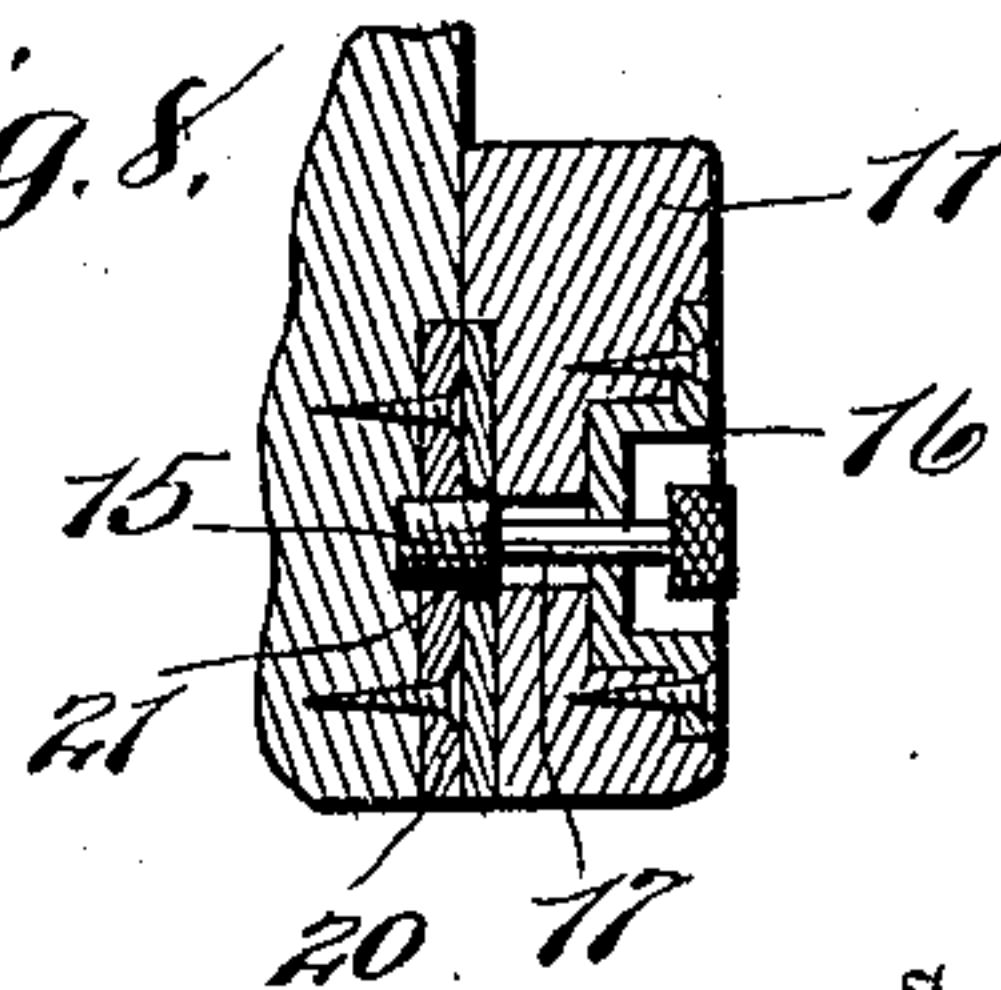


Fig. 8.



Inventor

Henry L. Hoyer.

Witnesses

R. A. Bowell.  
Albert Popkin

By

Sturtevant & Lecky  
Attorneys



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2 SHEETS—SHEET 2.

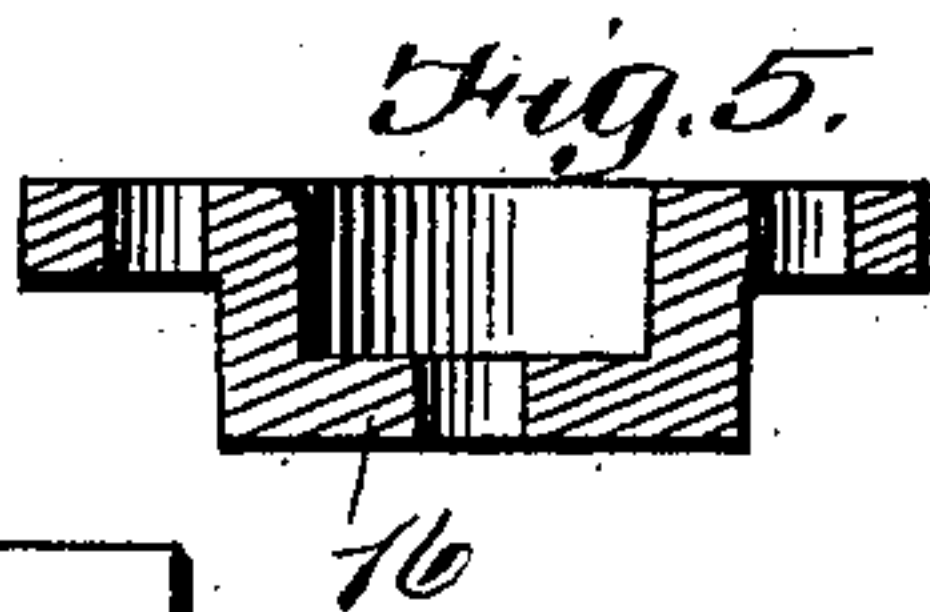
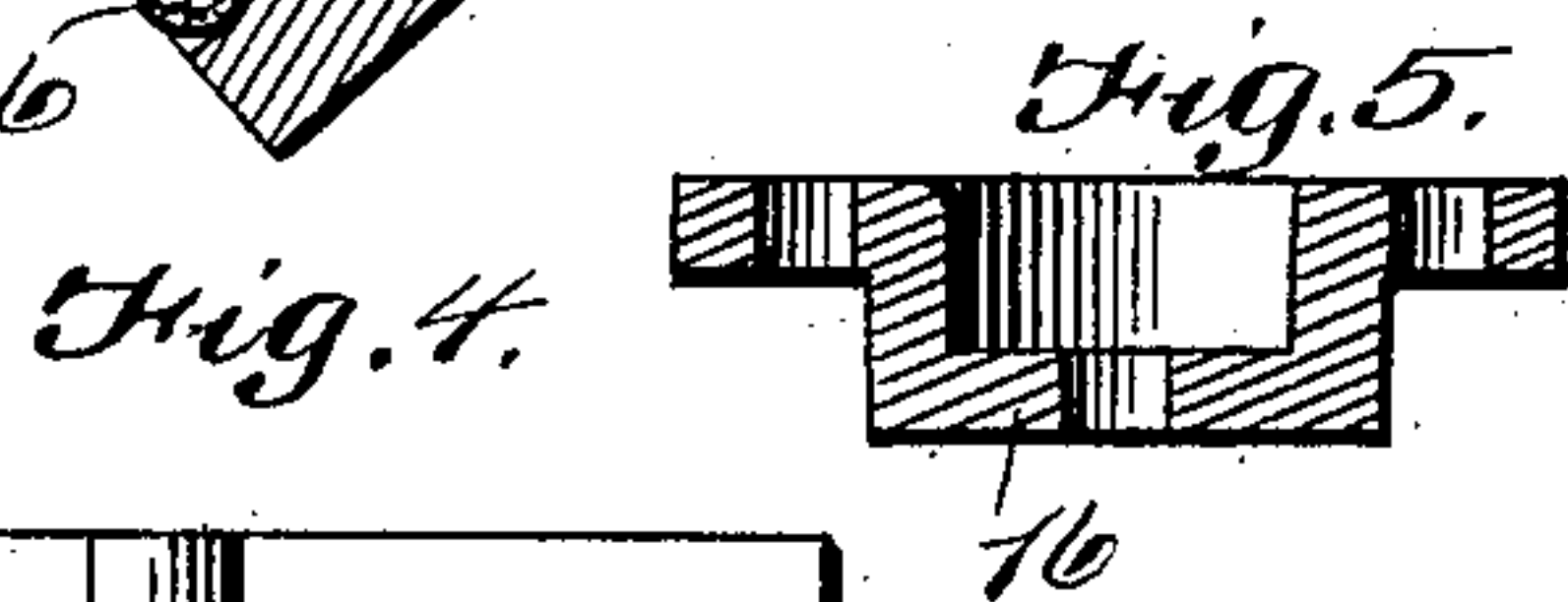
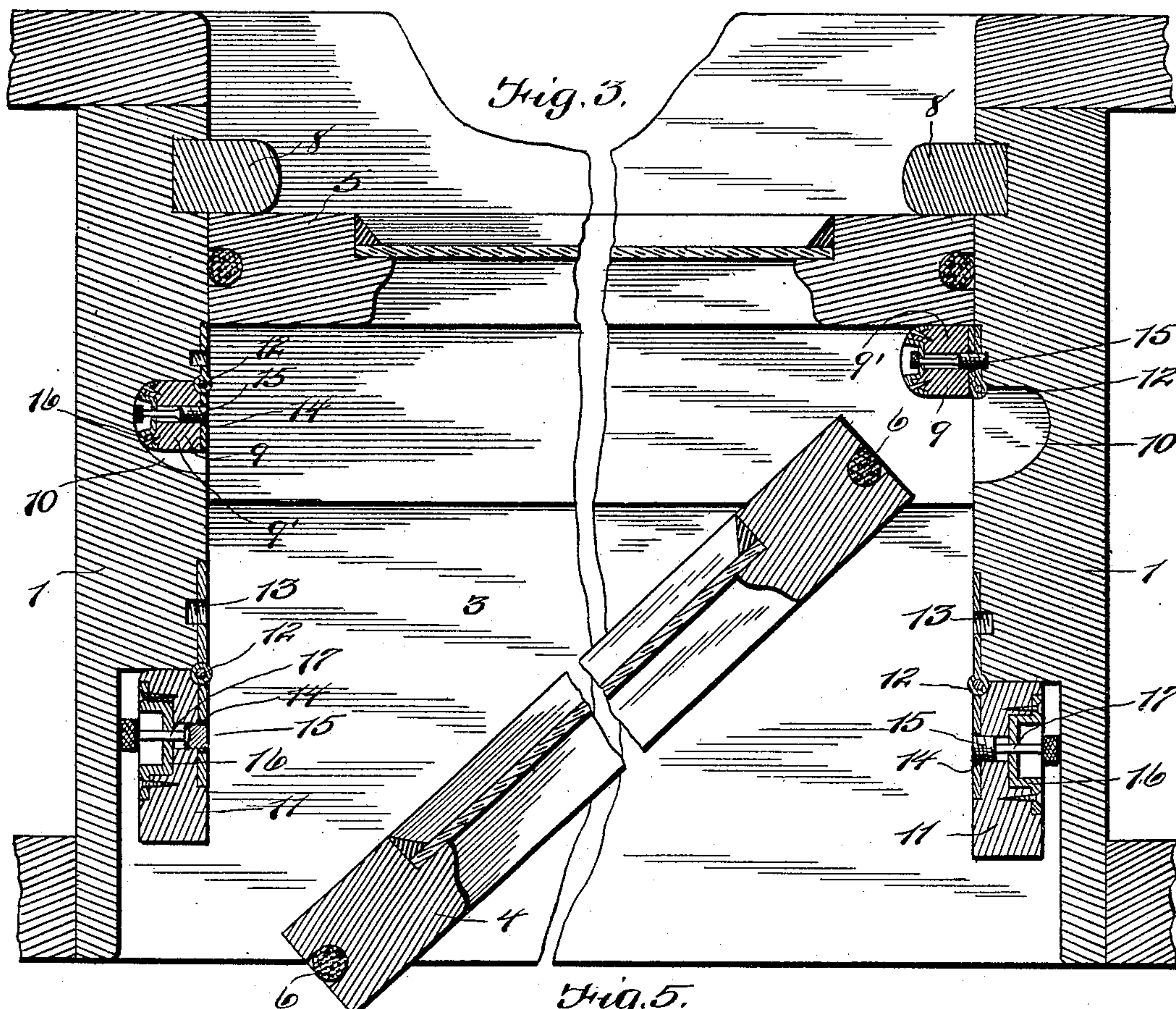


Fig. 6.

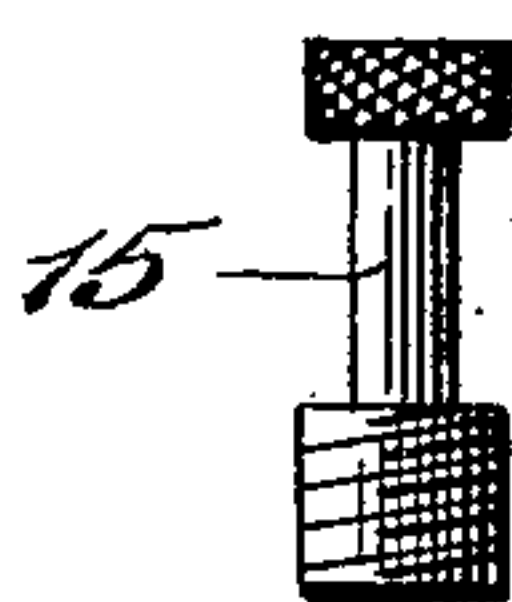
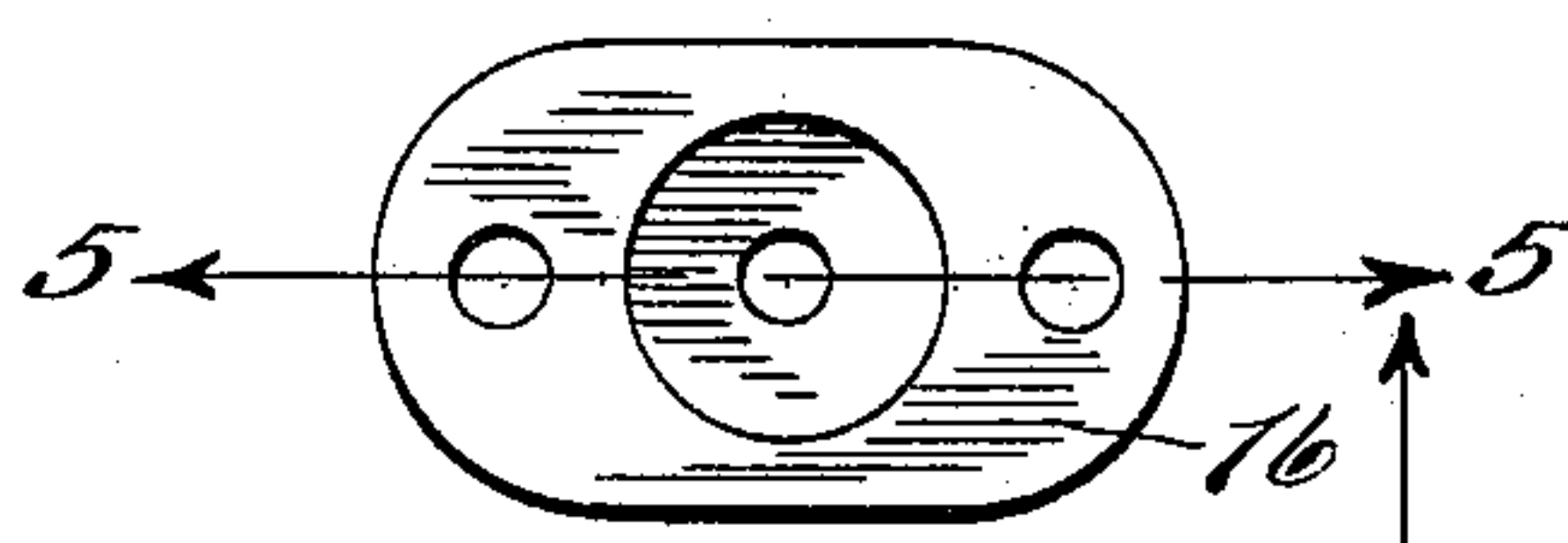
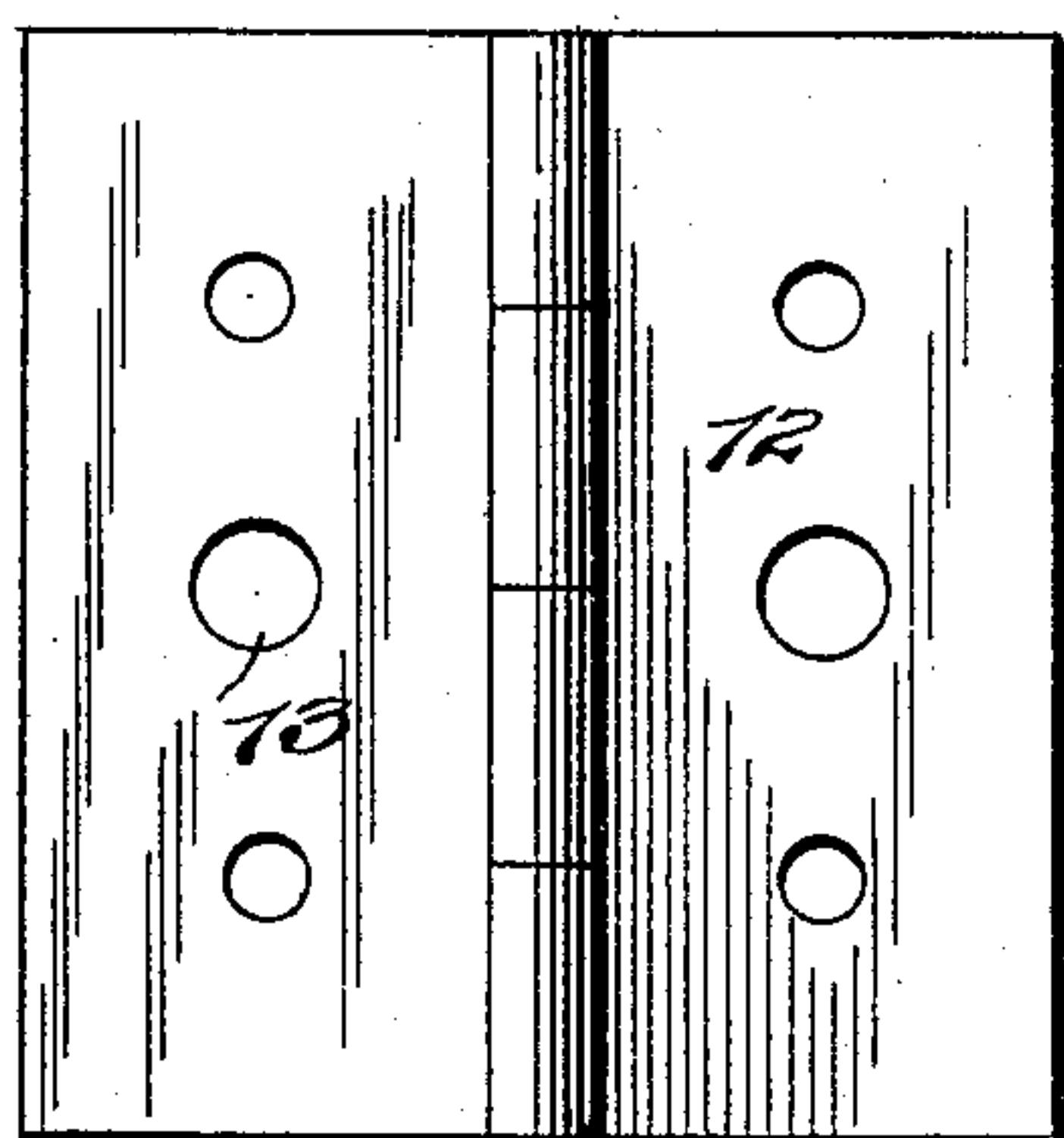


Fig. 7.



Witnesses

R. A. Boswell.  
Albert Popkin

Inventor

Henry L. Hoyer.

By

Sturtevant & Grealy

Attorneys



# UNITED STATES PATENT OFFICE.

HENRY LEONARD HOYER, OF BUTTE, MONTANA.

## WINDOW-FRAME.

SPECIFICATION forming part of Letters Patent No. 763,287, dated June 21, 1904.

Application filed March 8, 1904. Serial No. 197,078. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY LEONARD HOYER, a citizen of the United States, residing at Butte, in the county of Silverbow, State of Montana, have invented certain new and useful Improvements in Window-Frames, of which the following is a description, reference being had to the accompanying drawings and to the figures of reference marked thereon.

My invention has reference to the construction of window-frames, and relates more particularly to the means by which the sashes are held and guided in place.

My invention has for its object to provide means by which the sashes may be readily taken out of the frames or may be readily swung into the room to permit both sides of the glass to be cleaned from the interior of the room, thus avoiding any necessity for the person cleaning the windows leaning out of the window or standing outside the window to clean the outside of the glass.

A further object of the invention is to provide the stops or beads by which the sashes are held and guided with locking means which will permit of unlocking these parts without the necessity of removing the locking means, and so without liability of losing the locking means.

With these objects in view and with the further object of providing means for the purposes indicated which shall be simple in construction, inexpensive, and capable of being readily attached to window-frames now in use my invention consists in the construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view of a portion of a window-frame provided with my improvements. Fig. 2 is an enlarged horizontal section through Fig. 1. Fig. 3 is an enlarged horizontal section through a window-frame, showing the upper sash swung inwardly for cleaning and one parting-head swung into its recess. Fig. 4 is a face view of a hinge employed and forming also an element or member of a head-fastener. Figs. 5 and 6 are enlarged sectional and plan views of the screw-carrying plate. Fig. 7 is a side elevation of

the fastener. Fig. 8 is a sectional view of a modified fastener.

Referring to the drawings, 1 1 are the usual side pieces of a window-frame of ordinary construction, and 3 is the bottom piece of the window-frame.

4 is the lower sash and 5 the upper sash arranged in the usual way to slide on the side pieces 1 1 and provided with the usual suspension-cords.

8 represents the outer strips or stops secured to the side pieces 1 in any convenient manner and forming the guides for the outer face of the upper sash.

9 represents the parting strips or beads located between the adjacent faces of the two sashes and forming the guides for the inner faces of the upper sash and for the outer face of the lower sash. The beads 9 are preferably made in two pieces 9' and 9<sup>2</sup>, the lower pieces 9' extending upward, as shown a considerable distance above the meeting line of the sashes. The bead may, however, be made in one piece.

10 represents recesses formed in the inner faces of the side pieces in such position that, as hereinafter described, they may receive the hinged bead 9. These recesses will be made either of the length of the lower piece 9' of the bead or of the full length of the bead, according as the bead is made in two pieces or in one. In either event the beads 9 will be called "hinged" beads.

11 represents the stops or inner guide-strips which hold the lower sash in place and form the guides for its inner face. The stops 11 are secured to the side pieces 1 by means of hinges 12, located at the inner edge of the stops, the inner plates or leaves of the hinges being set into the adjacent faces of the side piece 1 and the stops, so that when the stops are in closed position, as shown in Fig. 2, the stops will fit snugly against the side piece. The pintles of the hinges 12, as clearly indicated in the drawings, are so arranged that when the stops and beads are in the position in which they are shown in Fig. 3 their inner surfaces are flush, or nearly so, and present no obstruction to the movement of the sash. As shown in the figures of the drawings referred



to, the axes of the pintles are in line with a plane midway between the front and rear faces of the leaf, which is secured to the side piece 1 instead of being in line with the plane of the adjacent faces of the leaves when in closed position, as shown in Fig. 2. The leaves or plates of the hinges which are secured to the side pieces 1 are each provided with a screw-threaded aperture 13, and the leaves which are secured to the stops are each provided with an aperture 14, through which extends a thumb-screw 15. The thumb-screws 15 extend through the stops 11, and their heads, preferably circular milled heads, are received in recesses formed in plates 16, which are secured in the exposed faces of the stops, being so set in this face of the stops that no part of them will project beyond the face of the stops and so that when the stops are in locked position the outer faces of the thumb-screws will be substantially flush with the face of the stops. Each thumb-screw is provided between its head and screw-threaded portion with a neck 17 of less diameter than the screw-threaded portion, this neck being received in an aperture in the plate 16, in which it turns freely and is at the same time held from being withdrawn from the plate.

The parts 9' of the beads 9 or, as above indicated, the whole bead, if preferred, are hinged to the side pieces 1 by hinges 12, similar in construction to the hinges of the stops 11, and thumb-screws 15 and plates 16 are provided to lock them in place. The head of the thumb-screw of the bead is preferably provided with a cross-groove to receive a screw-driver, which may be used in case the screw cannot easily be turned directly by hand. By the use of the recessed plates 16 on the bead with the head of the securing-screw seated in it when in locking position the outer face of the bead is free from any projection which might interfere with the sliding of the sash.

When it is desired to clean the exterior face of the lower sash, the thumb-screws of the stops are turned to withdraw the screws from the leaves of the hinge secured to the side piece, and the stops are then swung on the hinges to the position shown in Fig. 3. The lower sash may then be swung inwardly, being still supported by the sash-cords, and one side may be swung on the other as a pivot to permit access to the exterior of the glass.

When it is desired to clean the upper sash, the lower sash is swung outward sufficiently to permit the locking devices of the beads to be released, when the beads will be turned on their hinges until they rest in the grooves or recesses 10. The lower sash may then be slid upward and the upper sash slid downward and then swung inward to permit of access to the exterior face of the glass.

Two of the hinge-fasteners such as above described will ordinarily be found sufficient

for each stop and each bead, but more may be used and, if desired, ordinary hinges may be used in connection with one or more of the hinge-fasteners.

If desired, the fastening devices may be made independent of the hinges, as indicated in Fig. 8, in which 20 is a plate having screw-threaded aperture 21, intended to be set into the side piece 1 to receive the screw 15.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a window-frame, the side piece provided with a longitudinal recess, and a bead hinged to the side piece, the recess being adapted to receive the bead, and means, comprising a securing-screw carried by the bead having its head flush with the outer face of the bead when in locking position, for detachably locking the bead in position against the side piece.

2. In a window-frame, the side piece provided with a longitudinal recess, a bead hinged to the side piece, the recess being adapted to receive the bead, means comprising a securing-screw carried by the bead having its head flush with the outer face of the bead when in locking position, for detachably locking the bead in position against the side piece, a stop hinged to the side piece in such position that when turned away from the sash it will permit the sash to swing inward, and means for detachably locking the stop against the side piece.

3. A window-frame provided with a hinged bead or stop adapted to be turned on the hinge to permit the sash to be removed from its ways, a headed securing-screw carried by the bead or stop, a recessed plate in the outer face of the bead or stop adapted to receive the head of the screw, and a plate secured to the frame behind the bead or stop and having a threaded aperture for the inner end of the screw, the plate forming a part of the hinge of the bead or stop.

4. A window-frame provided with a hinged bead or stop, having a securing-screw mounted therein and a plate on the frame behind the bead or stop having a threaded aperture for the inner threaded end of the screw, the plate forming a part of the hinge.

5. A window-frame provided with a hinged bead or stop having an apertured plate secured thereto, a screw having a reduced shank turning in said aperture and a plate secured to the frame behind the bead or stop and forming a part of the hinge and having a threaded aperture to receive the inner threaded end of the screw.

6. A window-frame provided with a bead or stop, a hinge connecting the bead or stop to the frame and provided in its plates or leaves with registering apertures, the inner one of which is threaded, and a screw extending through the bead into engagement, at its



inner threaded end, with said threaded aperture.

5 7. A window-frame provided with a bead or stop, a hinge connecting the bead or stop to the frame having its plates or leaves provided with registering apertures, the inner one of which is threaded, an apertured plate on the bead or stop, and a screw having a reduced shank mounted in the latter plate and  
10 extending through the bead or stop with its inner end engaging said threaded aperture.

8. A window-frame provided with a bead or stop, a hinge connecting the bead or stop to the frame having its plates or leaves pro-

vided with registering apertures, the inner 15 one of which is threaded, a recessed plate on the bead or stop, having an aperture formed therein, and a headed screw mounted in the recessed plate and extending through the bead or stop with its inner threaded end en- 20 gaging said threaded aperture.

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

HENRY LEONARD HOYER.

Witnesses:

F. A. McARTHUR,  
JOHN C. SCHAPPS.