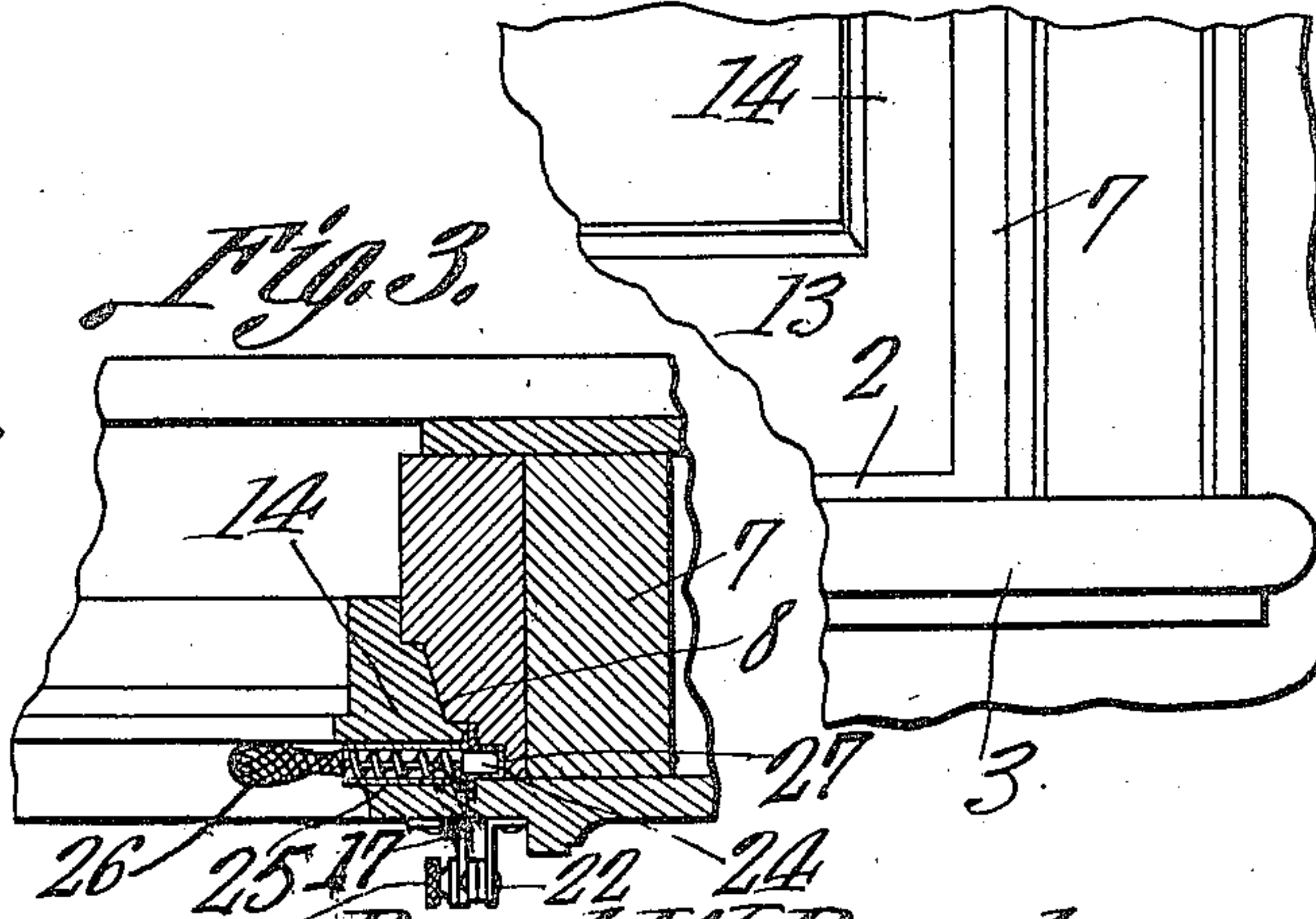
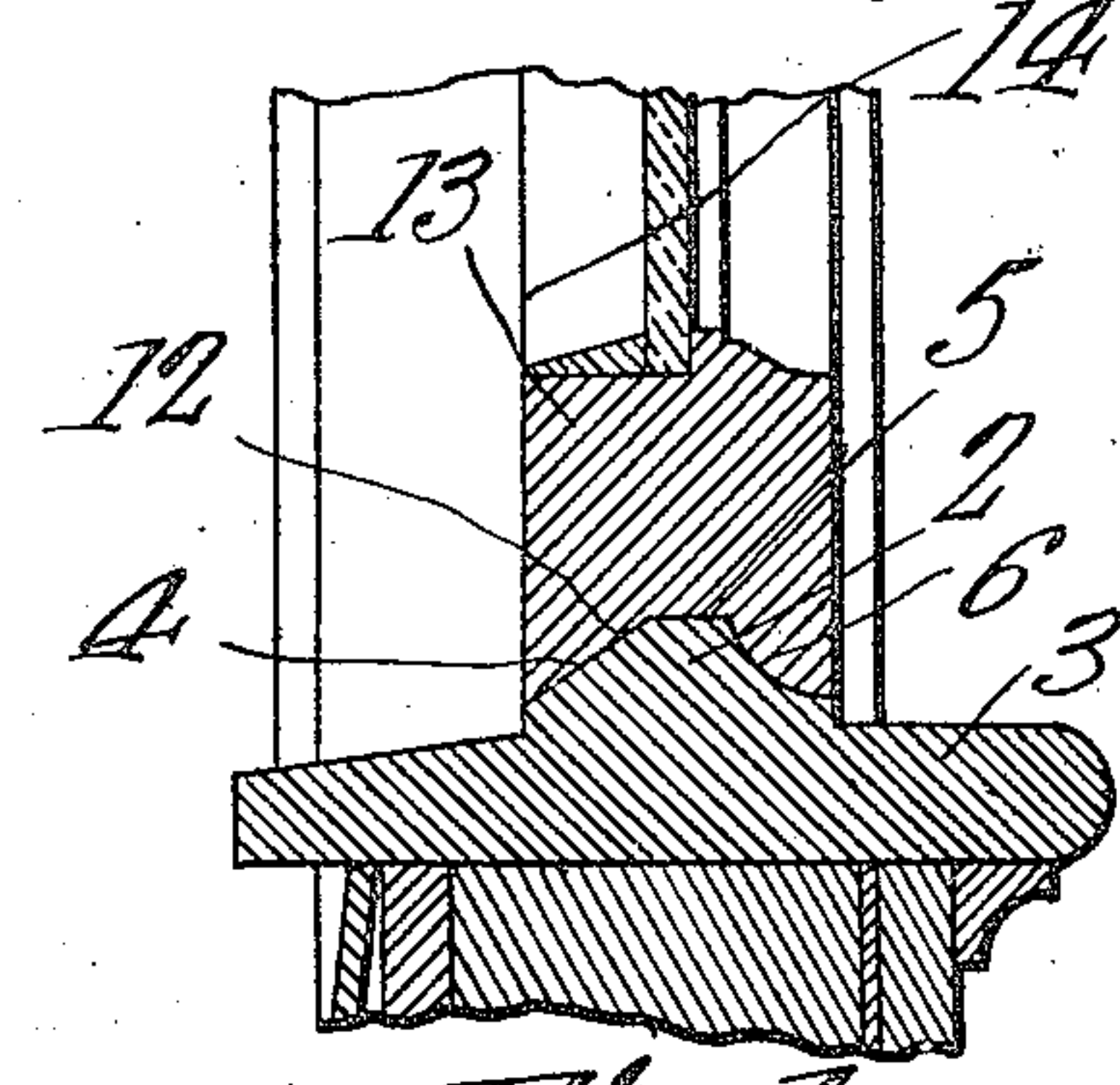
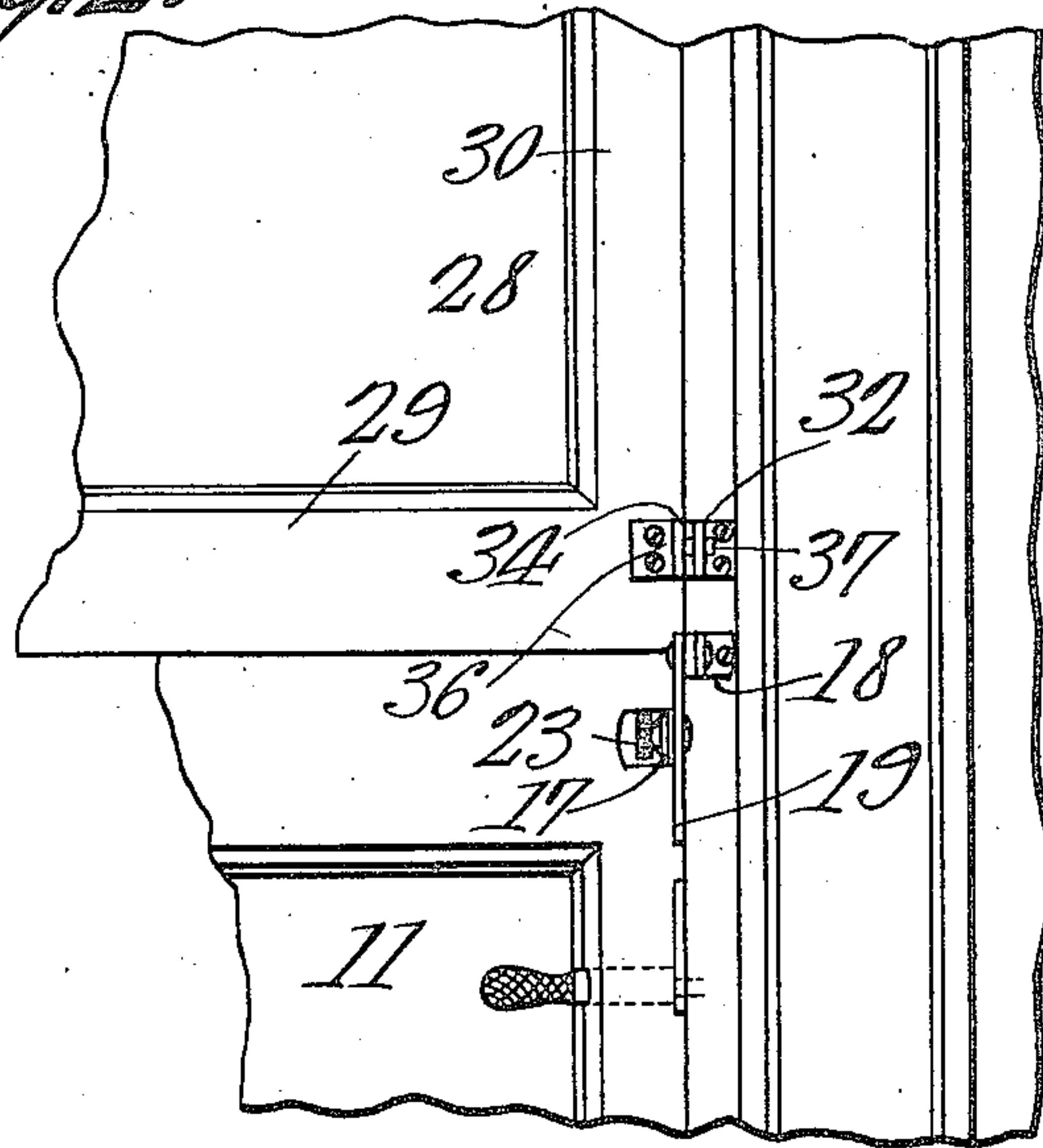
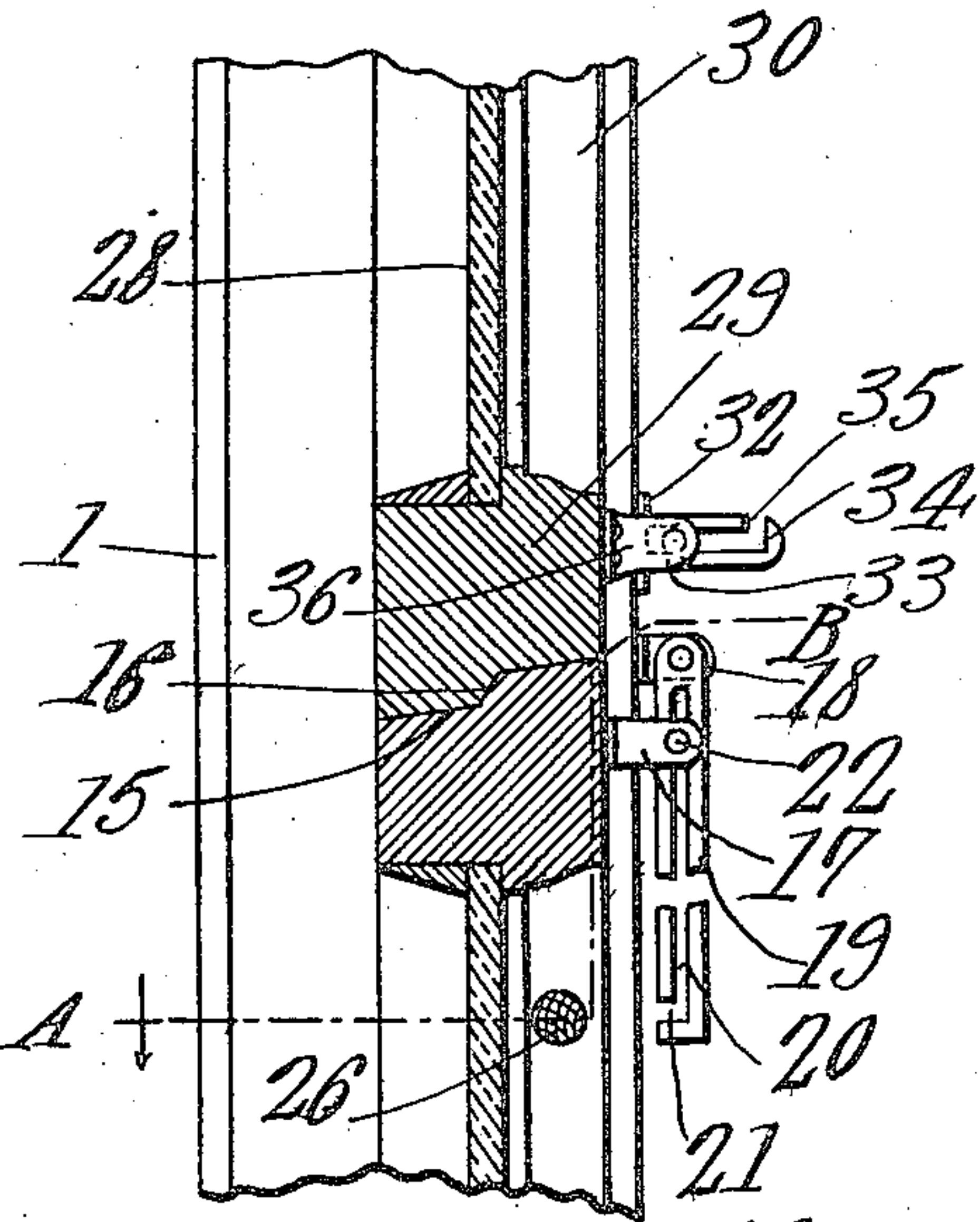
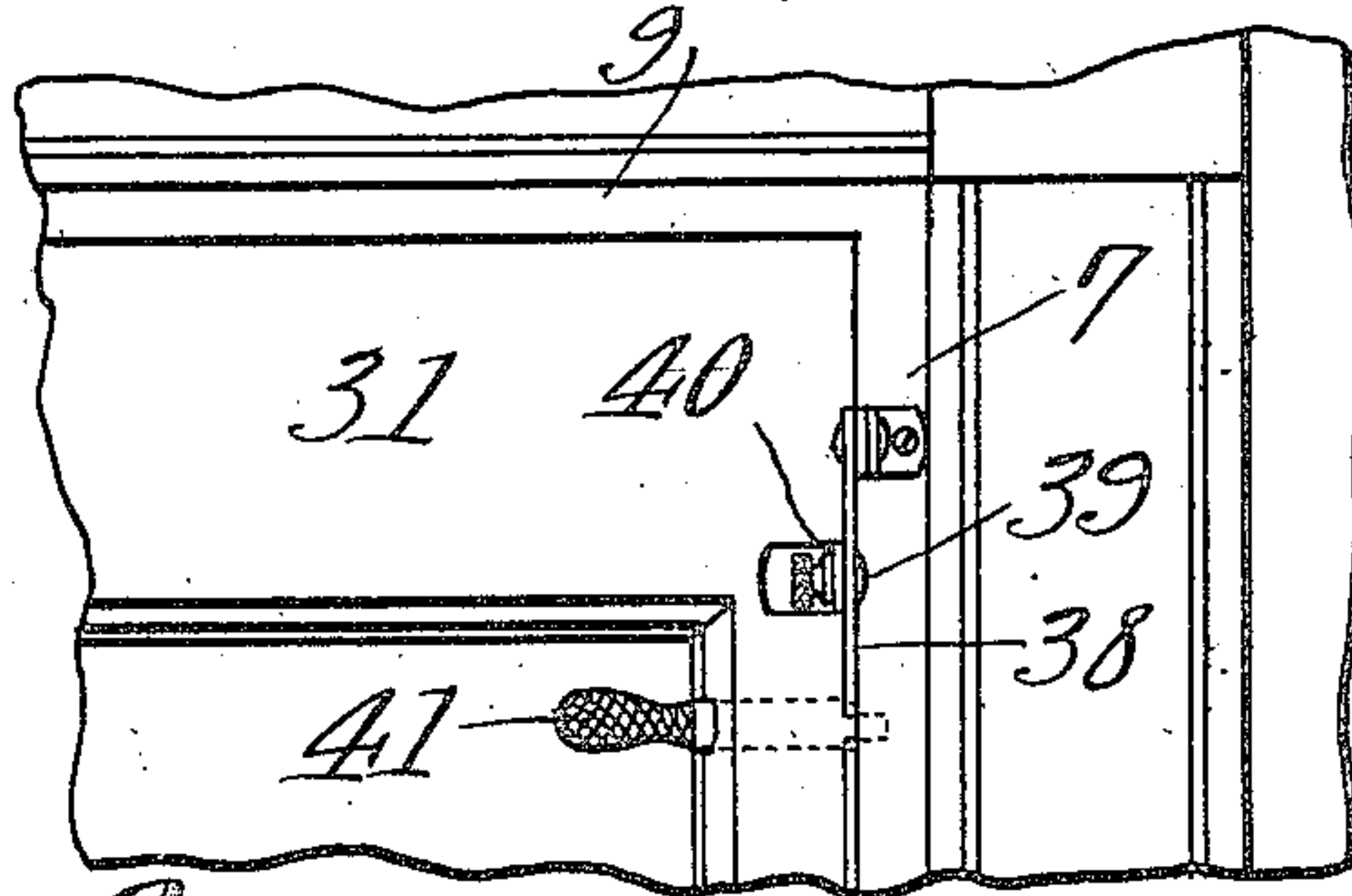
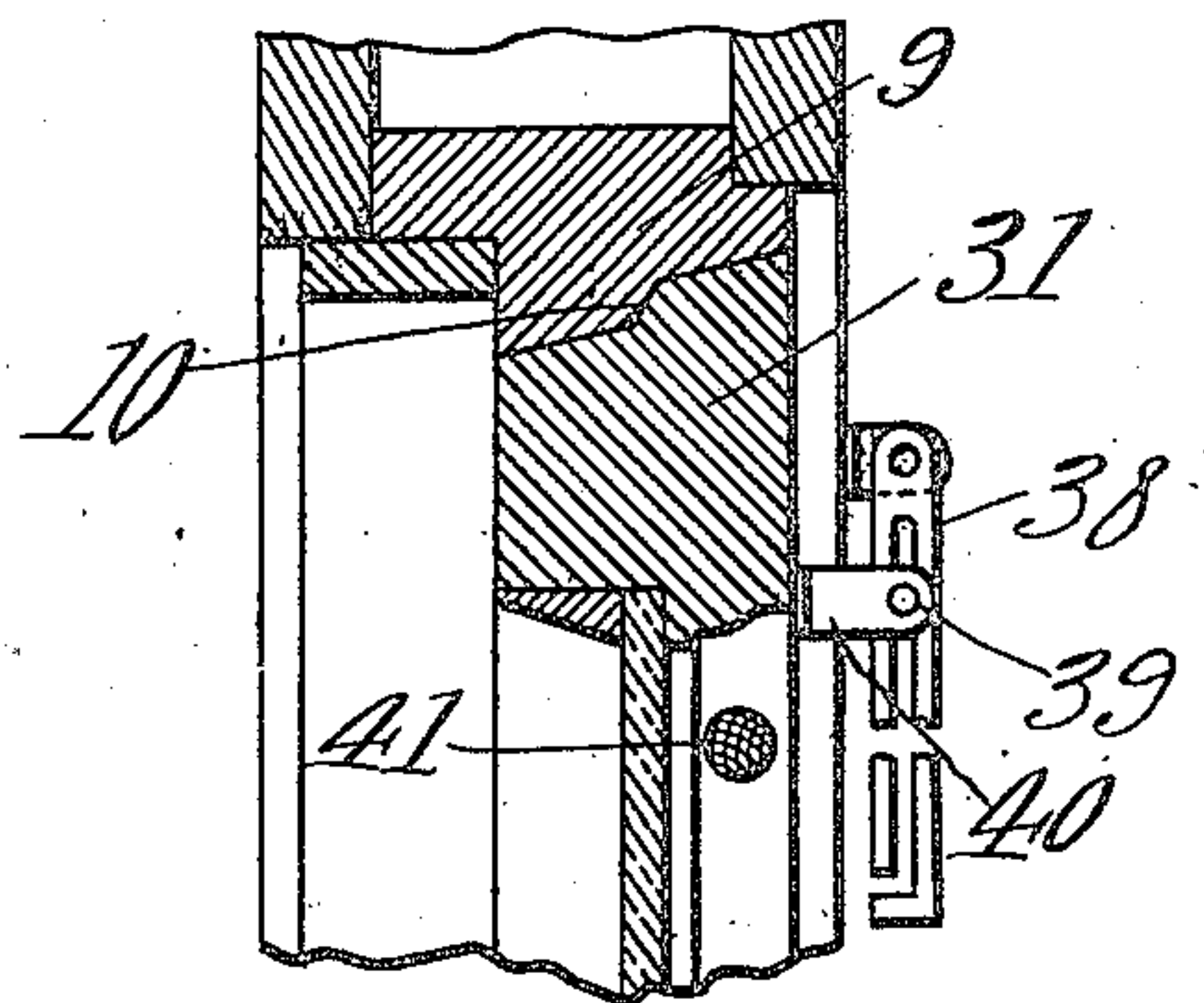


P. W. BOWDE.
WINDOW.
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993,951.

Patented May 30, 1911.



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UNITED STATES PATENT OFFICE.

PAUL W. BOWDE, OF WAUKESHA, WISCONSIN.

WINDOW.

993,951.

Specification of Letters Patent.

Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, PAUL W. BOWDE, a citizen of the United States, residing at Waukesha, in the county of Waukesha and State of Wisconsin, have invented a new and useful Window, of which the following is a specification.

This invention relates to windows, its principal object being to provide a window frame in which are arranged an upper sash and a lower sash, said upper sash resting upon the lower sash when the two are closed and either sash being readily swung to open position independently of the other sash.

A further object is to provide sashes of this character, either of which can be readily removed from the frame independently of the other.

With the foregoing and other objects in view the invention consists of the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a vertical section through a window frame and sashes embodying the present improvements, the middle portion of each sash and portions of the frame being broken away. Fig. 2 is a front elevation of the parts shown in Fig. 1. Fig. 3 is a section on line A—B Fig. 1.

Referring to the figures by characters of reference 1 designates a window frame having a retaining rib 2 upon the sill 3 thereof, said rib being preferably formed with an outer flat inclined face 4, an intermediate horizontal face 5, and an inner longitudinally concaved face 6. The jambs 7 of the frame have their inner faces stepped, as shown at 8, and the head 9 of the frame is also stepped, as shown at 10.

The frame 1 is adapted to be closed by two sashes, one being mounted directly on the other. The lower sash, which has been indicated at 11, has a groove 12 in the lower face of its bottom rail 13, this groove being shaped so as to fit snugly upon the rib 2 heretofore described. The stiles 14 of this

sash are shaped to fit snugly against the stepped portions 8 of the jambs 7 and the top rail of the sash is inclined downwardly and outwardly, as indicated at 15, there being an intermediate inclined shoulder 16.

A bracket 17 is secured to each side portion of the sash 11 and another bracket 18 is secured to each jamb 1 and close to the sash. A hanger 19 is pivotally mounted upon each of the brackets 18 and has a longitudinal slot 20 therein, said slot being open at one side adjacent to one end thereof as indicated at 21. A clamping screw 22 is slidably mounted within the slot 20 and extends loosely through the bracket 17, the head of the screw bearing upon one face of the hanger 19 while the bracket 17 bears upon the other face thereof. A clamping nut 23 engages the screw and by means thereof said screw can be tightened so as to bind the hanger tightly upon the bracket 17. A spring controlled catch 24 is arranged in either or both of the stiles 14, said catch being mounted within a tubular casing 25 inserted into the stile and there being a handle 26 or the like projecting beyond the inner face of the stile whereby the catch 24 can be retracted into its casing and thus released from engagement with a socket member 27, secured to the jamb 7 of the window frame.

The upper sash 28 has its bottom rail 29 so shaped as to fit snugly upon the top rail of the lower sash, the stiles 30 and the top rail 31 of this upper sash being arranged to fit snugly against the jambs 7 and the head 9.

Supporting brackets 32 are secured to the jambs adjacent to the ends of the bottom rail 29, each of these brackets having a forwardly extending portion 33 which is slotted longitudinally, as shown at 34, said slot being open at the top and close to the end of the bracket, as shown at 35. Brackets 36 are secured to the end portions of the rail 29 and each has a trunnion 37 extending laterally therefrom and movably mounted within the slot 34 in the adjacent bracket 32.

Hangers 38, similar to the hangers 19 heretofore described, are connected to the jambs adjacent to the upper portion of the sash 28 and are slidably engaged by clamping screws 39 supported by brackets 40 which are attached to the sash 28. This sash is

also provided with one or more spring catches 41 similar to the catches 24 heretofore described and which are adapted to engage keepers or socket members attached to the jambs of the window frame.

Should it be desired to open the lower sash, the screws 22 are loosened and the catches 24 disengaged from their keepers. Said sash can then be swung inwardly upon the rib 2 and when it has assumed a desired position, it can be held against further swinging movement by tightening the screws 22 within the hangers 19. When the sash is thus moved inwardly from under the upper sash 28, the weight of said upper sash is supported by the brackets 32 and the trunnions 37 extending from brackets 36. To entirely remove the lower sash from the window frame, the screws 22 are loosened and moved to the open ends of the hangers after which said hangers are swung upwardly off of the screws and the sash lifted from the rib 2.

The upper sash 28 can be swung inwardly either prior or subsequent to the adjustment or removal of the lower sash. When the sashes 41 are released from the jambs and the screws 39 loosened, the upper sash 28 can be swung inwardly, the trunnions 37 constituting the pivots. As the lower or bottom rail of the sash will work against the jambs during this swinging movement, it is necessary for the trunnions to have a sliding movement within the plates 33 and for this reason, the slots 34 are provided. Hangers 38 and screws 39 can be employed for securing the sash in any position to which it may be swung. To remove the upper sash, it is merely necessary to release the hangers from the screws, as heretofore described in connection with the hangers 19 and to move the sash far enough to bring the trunnions under the open top portions of the slots 34 whereupon said trunnions can be lifted out of the slots.

Should the lower sash be removed and the upper sash be closed, the catches 41 will hold said sash tightly against the stepped faces

of the jambs and frame head and thus prevent the sash from rattling.

Importance is attached to the fact that, by reason of the peculiar construction shown, either sash can be adjusted or removed independently of the other sash, and, as the upper sash rests directly on the lower sash when both of the sashes are in closed positions, the construction is rendered very compact and will not constitute an objectionable barrier to the admission of light.

What is claimed is:—

The combination with a window frame, said frame having a retaining rib upon the sill thereof, of a lower sash tiltably and removably straddling the rib, said sash having a stepped top rail, an upper sash having a stepped bottom rail engaging the stepped top rail of the lower sash, said upper sash having its upper rail stepped and normally engaging the head of the window frame, slotted brackets secured to the window frame and each slot extending to the top of the bracket adjacent the free end thereof, brackets secured to the lower rail of the upper sash and having projecting portions slidably and revolvably mounted within the slotted brackets and cooperating therewith to support the upper sash, brackets secured to the top rails of the two sashes, hangers pivotally connected to the window frame and having slots extending longitudinally therein and opening through the lower edges of the hangers adjacent the free ends thereof, and means engaging said last mentioned brackets and slidable within the slots for securing the hangers against movement relative to said brackets to hold the sashes when tilted, and cooperating means upon the sashes and window frame for securing said sashes in closed position.

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

PAUL W. BOWDE.

Witnesses:

HERBERT D. LAWSON,
F. B. OCHSENREITER.