

L. BOFIRD.
AIR TIGHT REVOLVING WINDOW SASH.
APPLICATION FILED MAR. 19, 1910.

970,173.

Patented Sept. 13, 1910.

Fig. 1

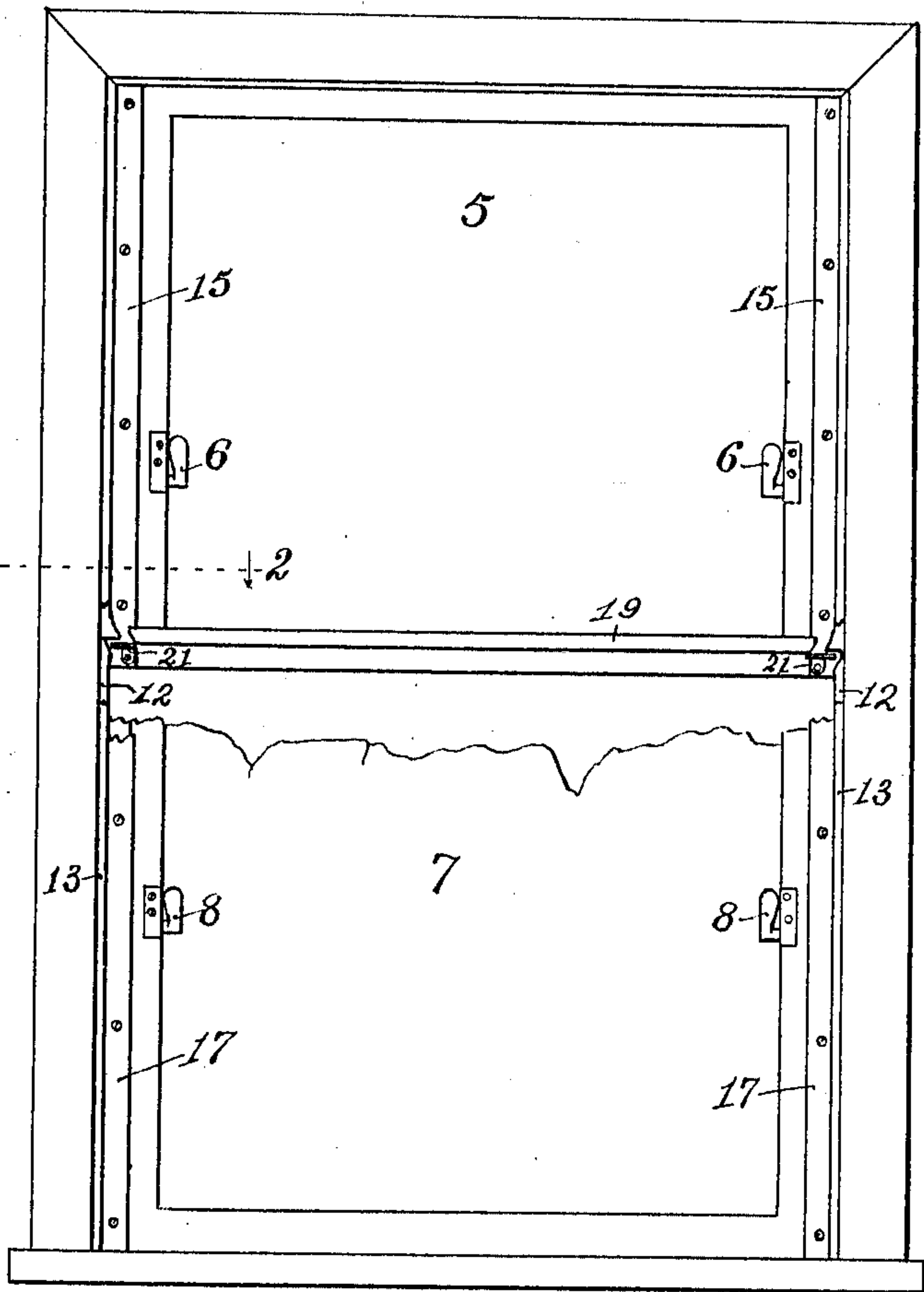


Fig. 2

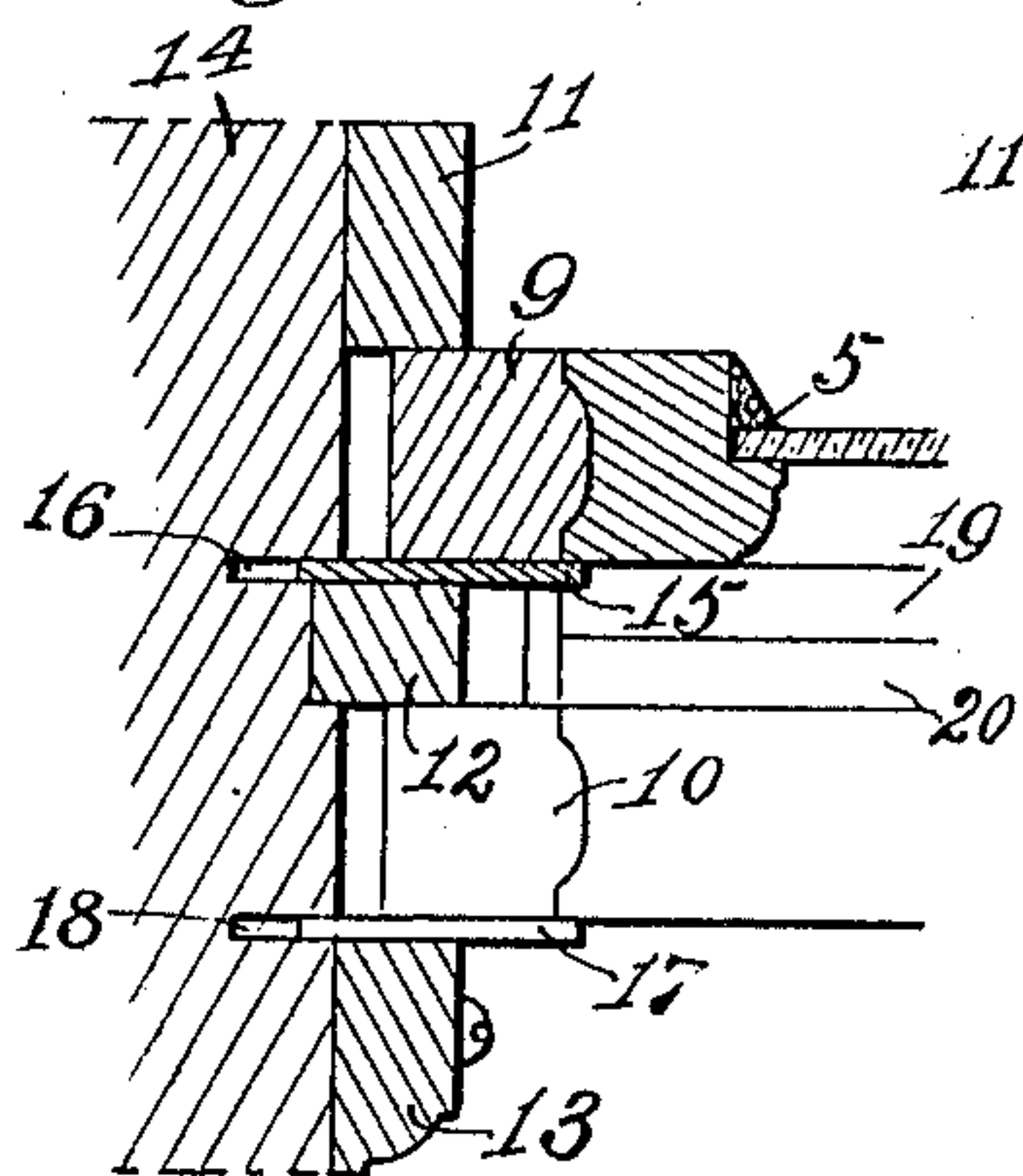


Fig. 3

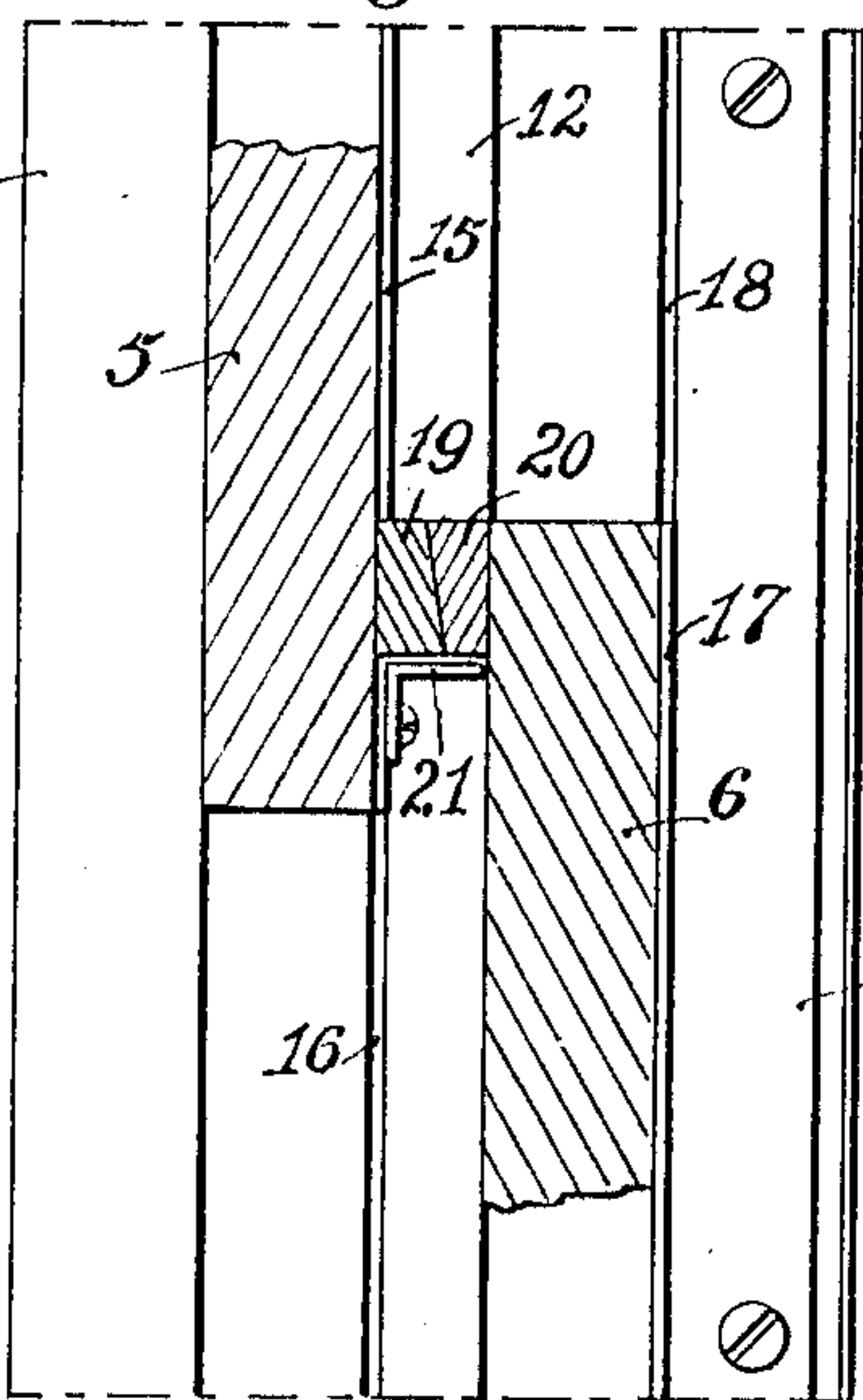
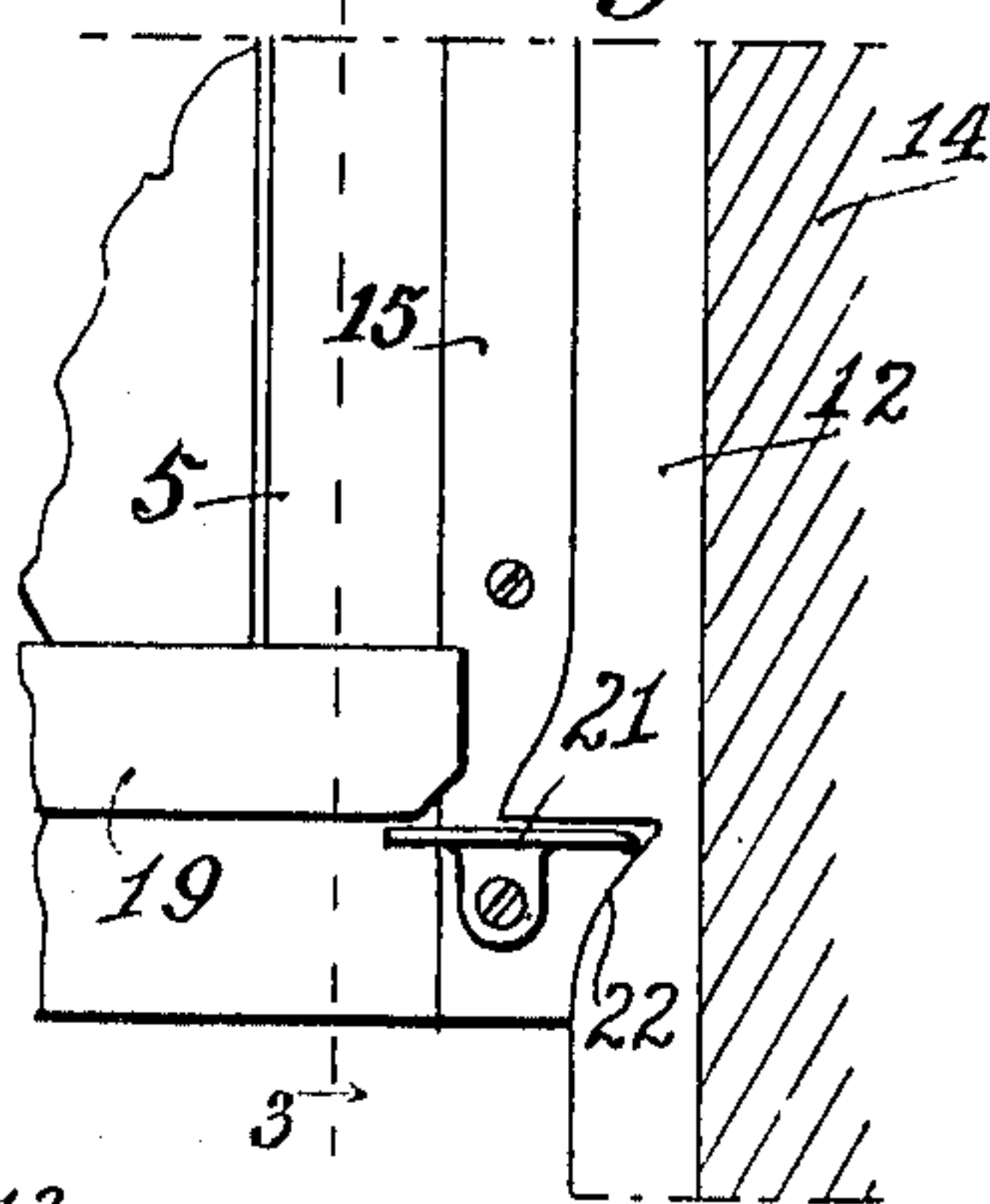


Fig. 4



Witnesses
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LOUIS BOFIRD, OF NEW YORK, N. Y.

AIR-TIGHT REVOLVING WINDOW-SASH.

970,173.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed March 19, 1910. Serial No. 550,526.

To all whom it may concern:

Be it known that I, LOUIS BOFIRD, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Air-Tight Revolving Window-Sash, of which the following is a specification.

This invention relates to improvements in sliding, swinging window sashes and its principal object is to provide sashes of this class with means whereby they may be made to more tightly fit the window frames and thereby make them more nearly air tight and proof against the admission of rain.

The invention therefore consists in the structure of parts and in their combination substantially as hereinafter set forth and claimed.

In the accompanying drawing which forms a part of this specification, Figure 1 represents in elevation a window provided with sashes carrying my improvements, a portion of the lower sash being broken away to disclose the lower end of the upper sash; Fig. 2 is a horizontal section in the plane indicated by line 2—2 in Fig. 1; Fig. 3 is a vertical section taken in the plane indicated by the line 3—3 Fig. 1; and Fig. 4 is an enlarged detailed elevation of the right-hand lower corner of the upper sash seen in Fig. 1 together with the middle stop of the window frame.

Inasmuch as sliding, swinging window sashes are well known no detailed description will be given thereof, it being considered sufficient to refer to my Patent No. 918,270 granted April 13, 1909, for details of the sashes and pivots upon which they are mounted for swinging.

In the drawing of this application 5 indicates the upper sash which is pivoted at 6; 7 indicates the lower sash which is pivoted at 8, while 9 indicates the stiles of the upper sash and 10 indicates the stiles of the lower sash; 11 indicates the weather stops; 12 the middle stops; 13 the inside stops and 14 indicates the jambs.

It is to the structure having the above enumerated features that the parts embraced in the present invention are added.

To the stiles 9 of the upper sash are secured plates 15 which preferably overlap the joint between the stiles and the sash whereby to prevent air from passing through said

joint, and which at their outer edge enter grooves 16 formed in the jambs adjacent to the middle stops 12. To the stiles 10 of the lower sash like plates 17 are secured which also overlap the joint between the stiles and the sash and enter grooves as 18 in the jambs adjacent to the inner stops 13.

It will be noticed with reference to Fig. 2 that even when the stiles are in close contact with the edges of the sashes the plates 15 and 17, which may be termed check plates, have their outer edges seated in the grooves 16 and 18, thereby preventing any passage of rain and any undue flow of air around the said stiles.

To produce a tight joint between the meeting rails of the upper and lower sashes beveled strips as 19 and 20 are attached respectively to said sashes as indicated particularly in Fig. 3. To provide against passage of air or rain up between the sashes at the ends of the strips 19 and 20 swinging plates as illustrated at 21 are attached to the lower outer corners of the upper sash, preferably to the check strips 15 and so located as to coöperate with a shoulder formed on the middle stop substantially as seen in Fig. 4. Below this shoulder there is also a notch as at 22 to receive the outer end of the plate 21. This shoulder and notch coöperate with the plate to swing it into horizontal position across the opening between the ends of the strips 19 and 20 and the middle stops 12 at each side of the window.

When the upper sash is lowered the outer ends of the plates 21 strike the shoulder 22 on stops 12 and so turn the said plates that they will not interfere with the swinging of the sash in its stiles and in the raising of the sash the outer ends of said plates engage the upper shoulder on the middle stops 12, whereby said plates are turned into horizontal position to close the opening above them. It will also be noticed in the release of the stiles from the sash preparatory to swinging the sash the edges of the sash will clear the inner edges of the check plates just as they clear the inner edge of the astragal on the stiles.

The invention claimed is:—

1. The combination with a sliding, revolving window sash provided with lateral stiles having astragals fitting grooves in the sash, of check plates rigidly fixed to said

stiles and extending beyond the edge thereof for the thickness of the astragal for the purpose set forth.

2. The combination with a sliding, revolving window sash provided with lateral stiles, of jambs provided with vertical grooves, check plates rigidly fixed to said stiles and entering at their outer edges into said grooves to a depth such as to retain a seat therein whatever the position of the stile and at their inner edge overlapping the sash when the latter are in vertical position.

3. The combination with sliding, swinging window sashes, of beveled strips joined respectively to their meeting rails, horizontal swinging plates pivoted to the stiles at their lower ends, and middle stops provided

with shoulders for engagement with said horizontal plates for the purpose set forth.

4. The combination with the upper sash of a window fitted with sliding, swinging sashes provided with lateral stiles, of check plates secured to said stiles and provided at their lower ends with plates for closing the opening between the middle stops of the window frame and the ends of the meeting rails of said sash.

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

LOUIS BOFIRD.

Witnesses:

JOHN BAUER,
HERBERT NUMANN.