

No. 775,866.

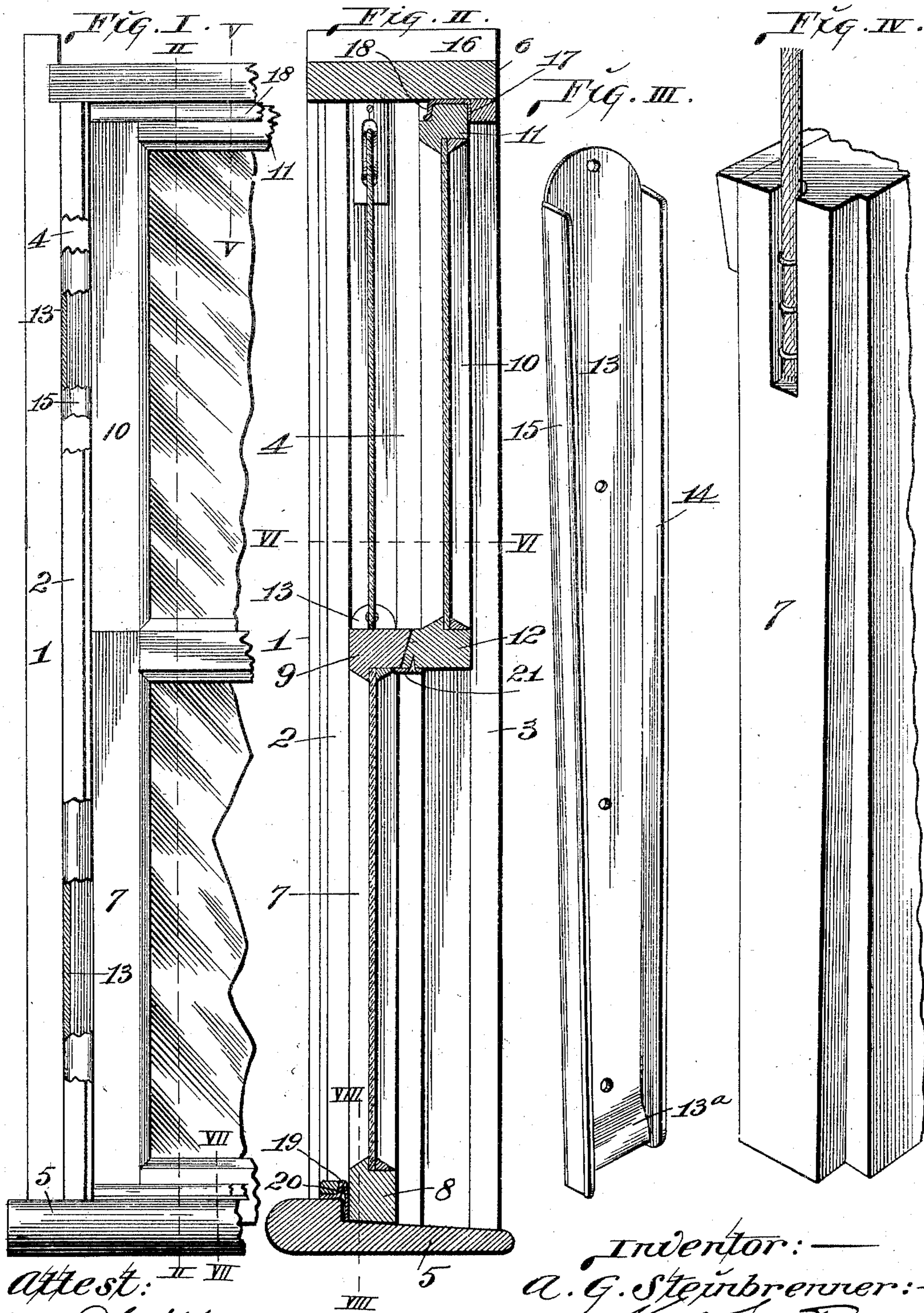
PATENTED NOV. 22, 1904.

A. G. STEINBRENNER.  
WINDOW.

APPLICATION FILED JAN. 16, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



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*Blanche Hogan.*

Inventor:—  
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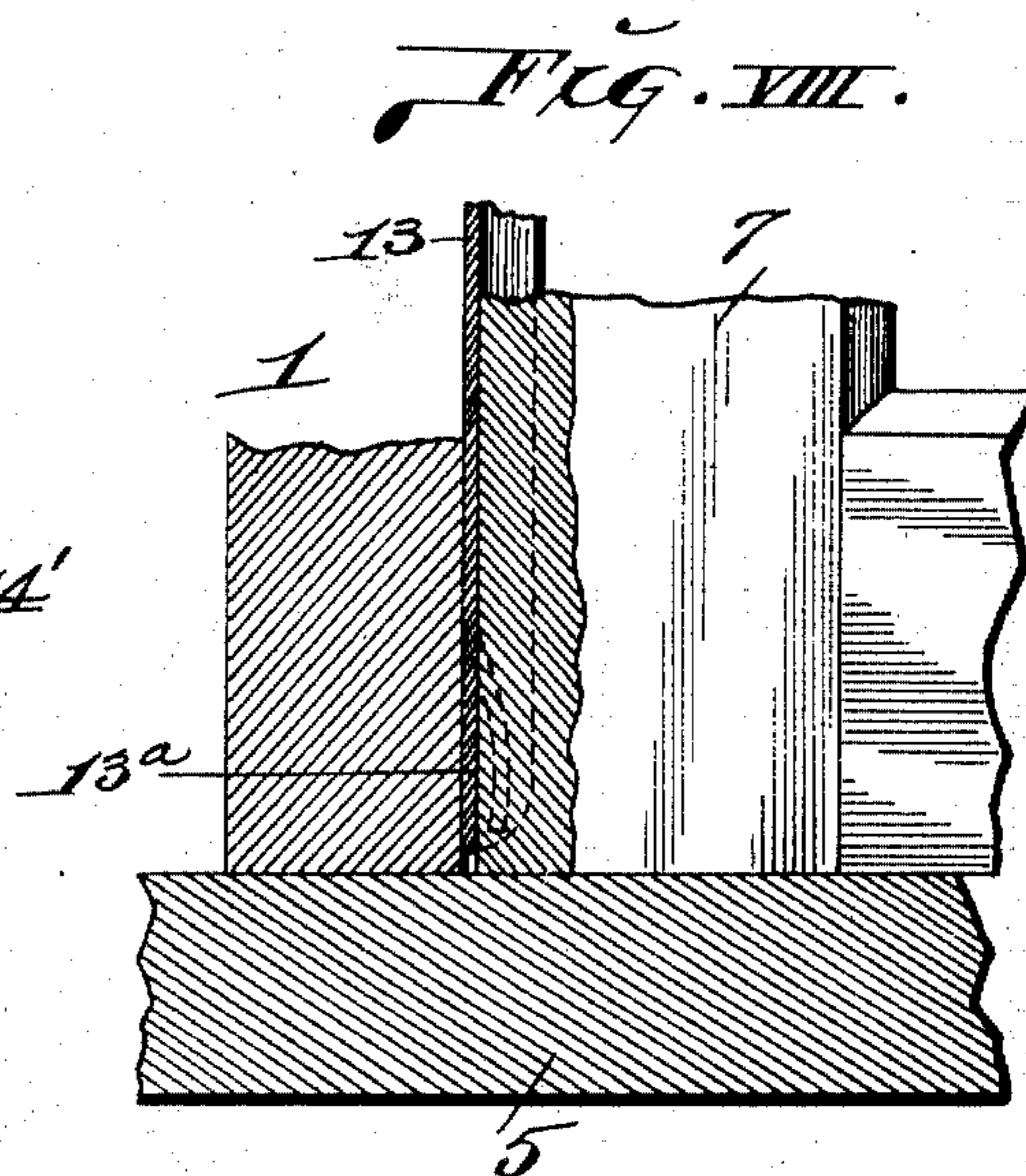
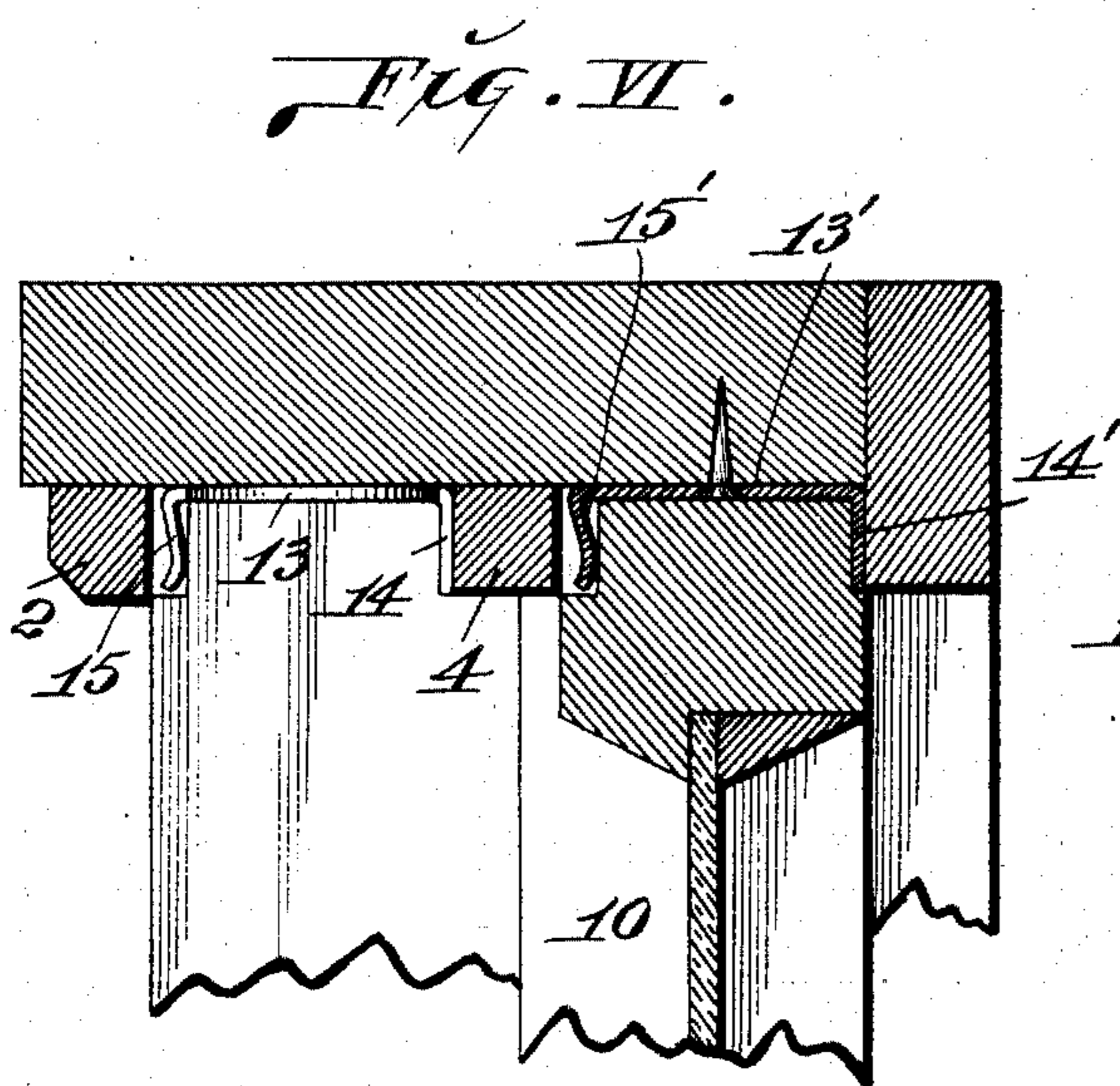
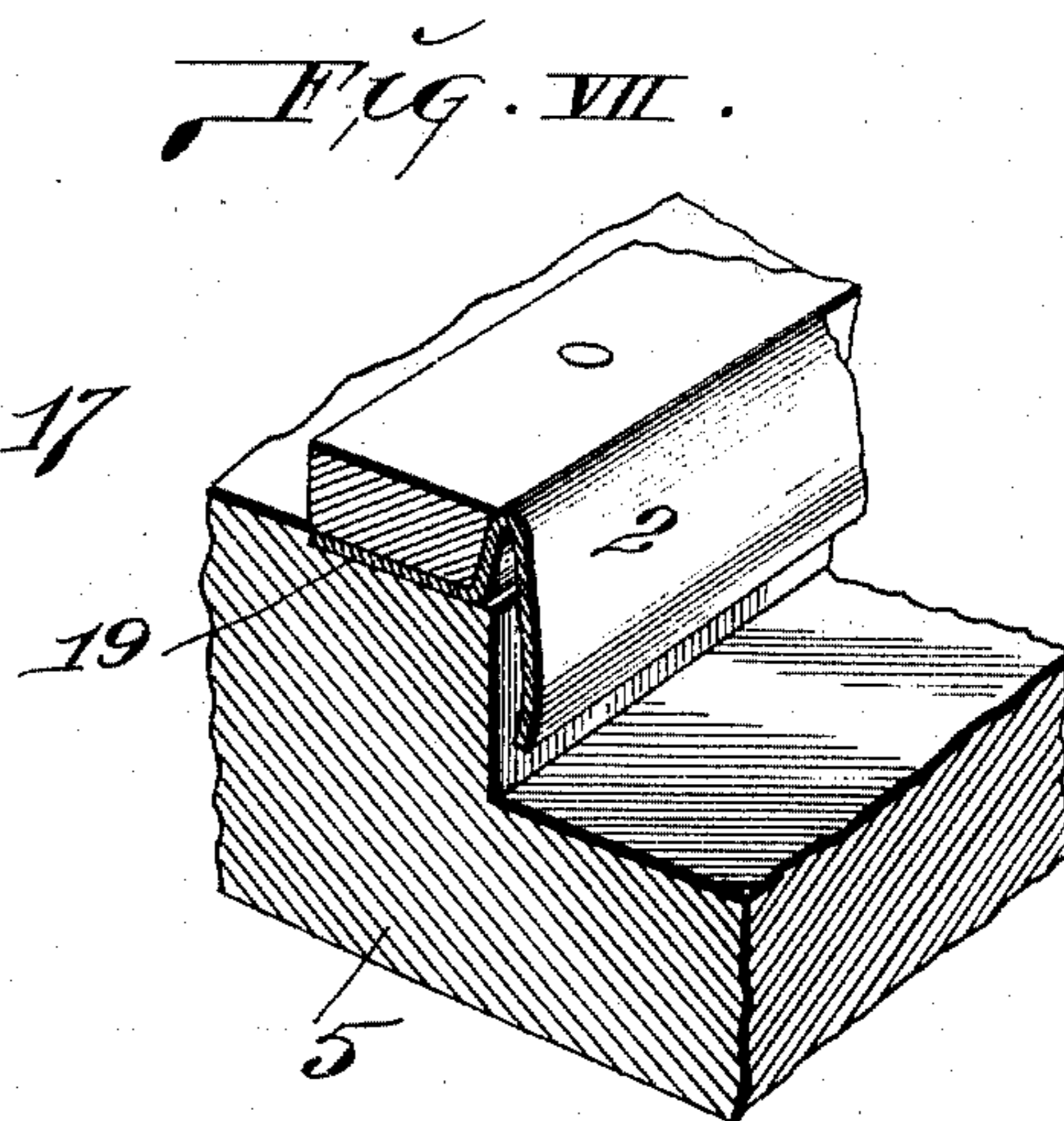
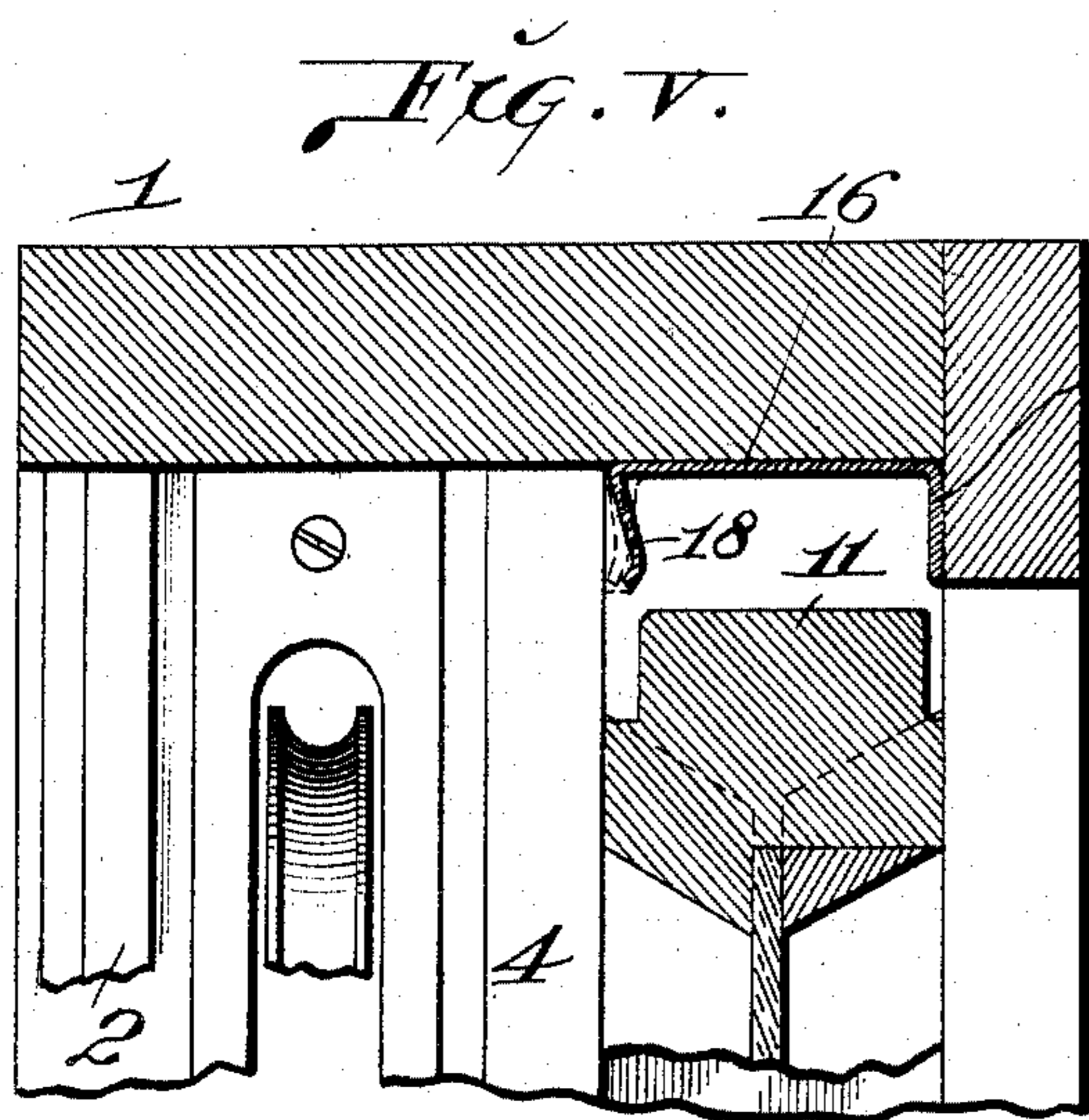
A. G. STEINBRENNER.

WINDOW.

APPLICATION FILED JAN. 16, 1904.

NO MODEL.

2 SHEETS—SHEET 2.



*Attest:*  
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# UNITED STATES PATENT OFFICE.

ANDREW G. STEINBRENNER, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD TO EDWARD S. MARSHALL, OF ST. LOUIS, MISSOURI.

## WINDOW.

SPECIFICATION forming part of Letters Patent No. 775,866, dated November 22, 1904.

Application filed January 16, 1904. Serial No. 189,268. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW G. STEINBRENNER, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Windows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved construction for rendering the windows of buildings air-tight throughout; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an elevation of a portion of a window with my improvement shown applied thereto. Fig. II is a vertical section taken on line II II, Fig. I. Fig. III is a perspective view of one of the sash-receiving strips. Fig. IV is a perspective view of the edge of one of the window-sashes that enters into the strip shown in Fig. III. Fig. V is an enlarged vertical section taken on line V V, Fig. I. Fig. VI is an enlarged horizontal section taken on line VI VI, Fig. II. Fig. VII is an enlarged section taken on line VII VII, Fig. I. Fig. VIII is an enlarged section taken on line VIII VIII, Fig. II.

1 designates the uprights of a window-frame that is furnished with the usual inner and outer stops 2 and 3 and parting-strips 4.

5 is the rabbeted window-frame sill, and 6 the lintel of the frame.

7 designates the side stiles of a lower window-sash, 8 the bottom rail, and 9 the meeting-rail of said sash. 10 represents the side rails of an upper sash, and 11 and 12 are respectively the top and meeting rails of said sash. The edges of the lower-sash stiles 7 taper downwardly in wedge form, as seen in Fig. IV, and the stiles 10 of the upper sash taper upwardly or inversely to the taper of the lower-sash stiles.

13 designates downwardly-tapering sash-receiving strips of channel form that are secured in the sash-runways between the inner window-stop 2 and the parting-strip 4 and which extend from the window-sill 5 upwardly to a point above that occupied by the meeting-

rail of the car-window sash when said sash is in closed position. As stated, these strips are of channel form, the channel shape being due to the existence of a flange 14, projecting from one edge of each strip, and an inwardly-curved spring-tongue 15, projecting from the opposite edge of each strip, as seen most clearly in Figs. III and VI. The channel-strips 13 receive the tapering edges of the lower-sash stiles 7, that are held snugly therein, due to the impingement of the flanges 14 and spring-tongues 15 against the tapering inclosed sides of the sash-rails. At the lower narrow ends of each channel-strip is an inwardly-extending tongue 13<sup>a</sup>, that projects from the main body of the strip and receives the edge face of the adjacent sash-stiles, as seen in Fig. VIII, to thereby prevent edgewise play of the sash in addition to the prevention of lateral play overcome by the flange and spring-tongue of the strip. It will therefore be seen that when the sash is lowered its stiles on moving downwardly in the channel-strips will become laterally wedged between the flanges of said strips at one side and the spring-tongues at the opposite sides, thereby creating a close joint between said members through which air cannot pass.

13' designates upper channel-strips of similar shape to the channel-strips 13 and positioned in the sash-runways of the upper sash between the outer window-stop 3 and parting-strip 4, these strips having flanges 14' and spring-tongues 15'. The only distinction between these upper strips and the lower strips is that their position is inverted with respect to the position of the lower strips, so that the upper sash will be wedged tightly therein when it is moved upwardly into closed position, as distinguished from the downward movement of the lower sash when it is moved into closed position.

16 designates a top channel-strip secured to the lower side of the window-frame lintel 6 at the top of the upper-sash runway, this strip being provided with a flange 17 and a spring-tongue 18, between which the top rail 11 of the upper sash enters when said sash is in closed position. (See Figs. II and V.) This

top strip by receiving the top rail of the upper sash serves to exclude the entrance of air around said top rail when the upper sash is in closed position.

5 19 designates a spring-strip secured to the window-sill 5 and having a wing 20, that extends downwardly into the rabbet of said sill to receive the engagement of the lower-sash bottom rail 8 when the lower sash is moved  
10 into closed position. The wing 20 overhangs the lower portion of the sill, as seen in Figs. II and VII, and is separated from the sill, so that it will yield when the bottom rail of the sash is lowered thereto and will be maintained  
15 in close contact with said bottom rail to exclude the entrance of air past the rail.

21 is a weather-strip secured to one of the sash meeting-rails (see Fig. II) that serves to exclude the passage of air through the inter-  
20 stices between the meeting-rails.

I claim as my invention—

1. In a window, the combination with a sash and frame in which said sash operates, of tapering channel-strips arranged to receive the  
25 stiles of said sash, substantially as set forth.

2. In a window, the combination with a sash and frame in which said sash operates, of tapering channel-strips arranged to receive the stiles of said sash; said channel-strips being  
30 furnished with a spring-tongue extending longitudinally thereof, substantially as set forth.

3. In a window, the combination with a sash and frame in which said sash operates, of tapering channel-strips arranged to receive the  
35 stiles of said sash; said channel-strips being furnished with spring-tongues extending longitudinally thereof, and spring-tongues lo-

cated within the channels of the strips, substantially as set forth. 40

4. In a window, the combination of upper and lower sashes and frame in which said sashes operate, downwardly-tapering channel-strips to receive the stiles of said lower sash and upwardly-tapering channel-strips to  
45 receive the stiles of said upper sash, substantially as set forth.

5. In a window, the combination with upper and lower sashes and a frame in which said sashes operate, of a pair of downwardly-  
50 tapering spring-strips to receive said lower sash, a pair of upwardly-tapering spring-strips to receive said upper sash, each of said strips having a longitudinally-extending side flange and a longitudinally-extending spring-  
55 tongue between which the stiles of the sashes operate, substantially as set forth.

6. In a window, the combination with an upper sash, of a frame having a lintel, and a channel-strip located beneath said lintel to re-  
60 ceive the top rail of said upper sash, said channel-strip having a downwardly-extending flange and a downwardly-extending spring-tongue, substantially as set forth.

7. In a window, the combination with a  
65 frame, of a sash arranged to operate in said frame, spring channel-strips to receive the stiles of said sash, said stiles being of tapering or wedge shape to correspond to the shape of the channels in said strips, substantially as  
70 set forth.

ANDREW G. STEINBRENNER.

In presence of—

E. S. KNIGHT,

NELLIE V. ALEXANDER.