

(No Model.)

2 Sheets—Sheet I.

G. W. BISHOP.
WINDOW.

No. 373,636.

Patented Nov. 22, 1887.

Fig. 1.

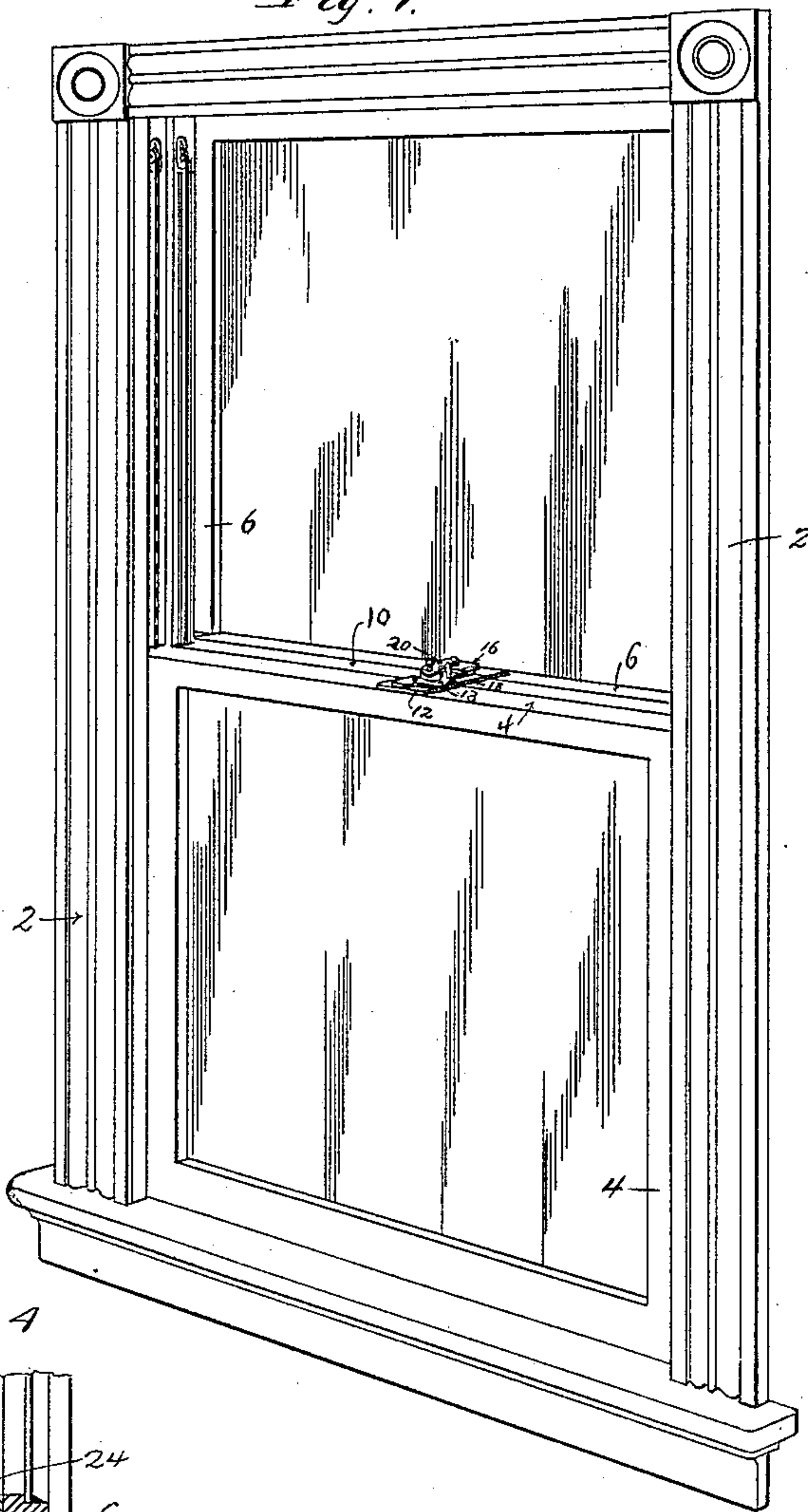


Fig. 4.

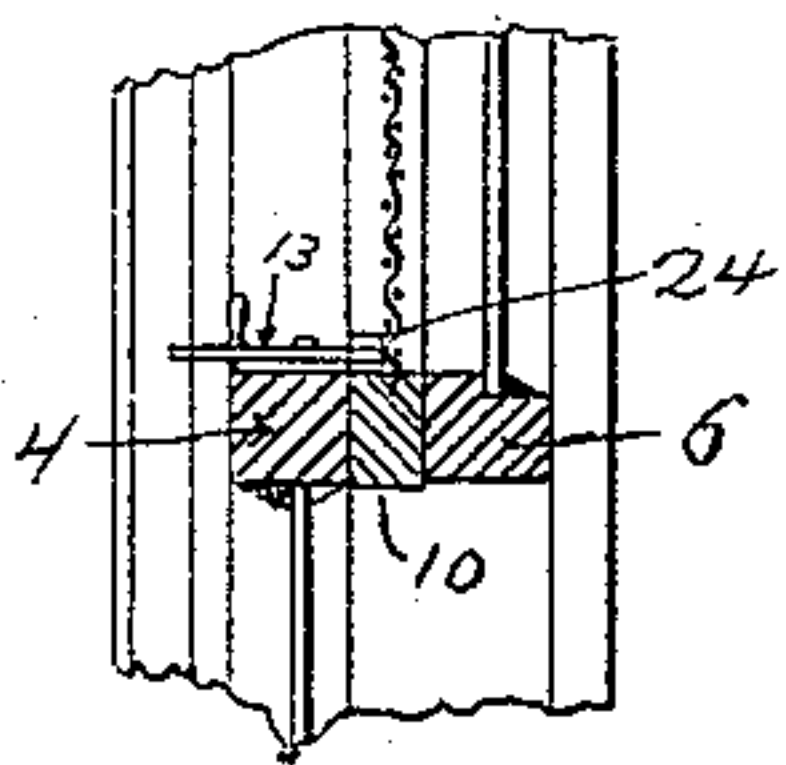


Fig. 3.

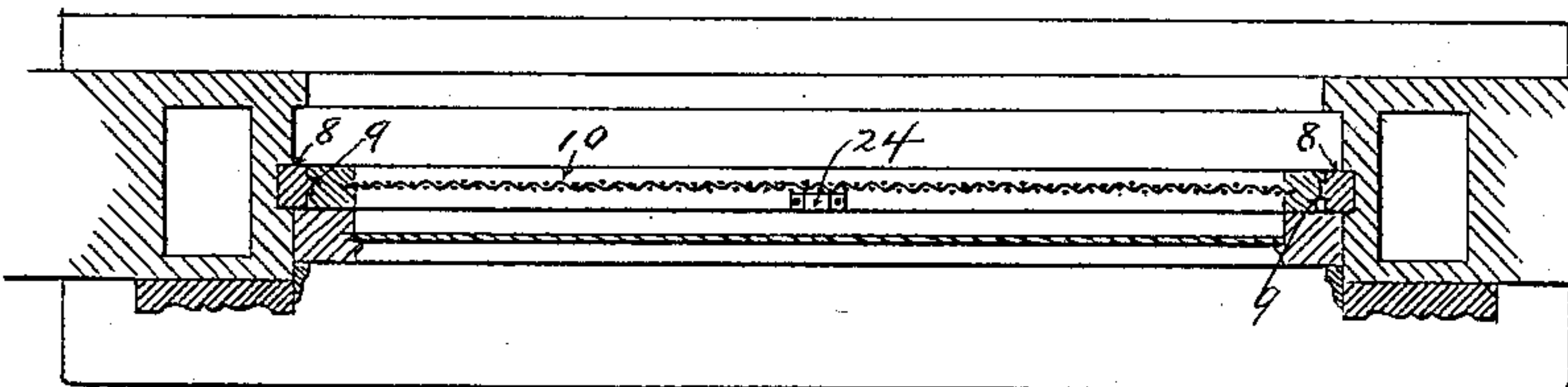
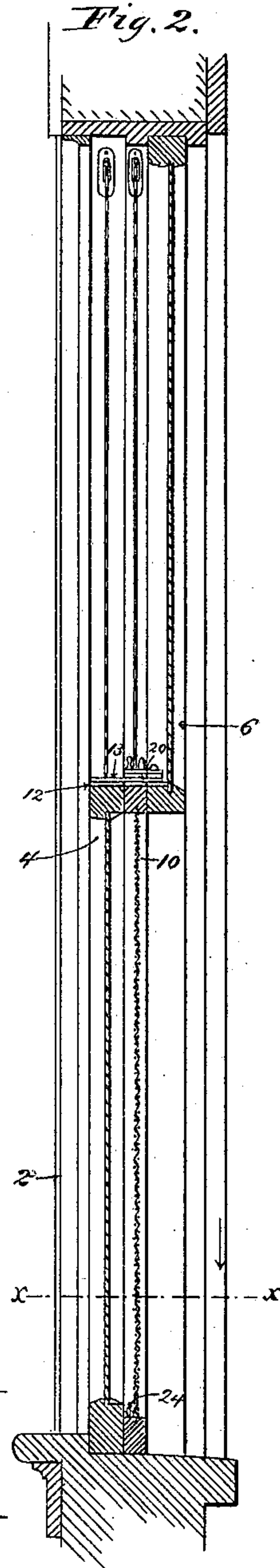


Fig. 2.



Witnesses

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Fig. 5.

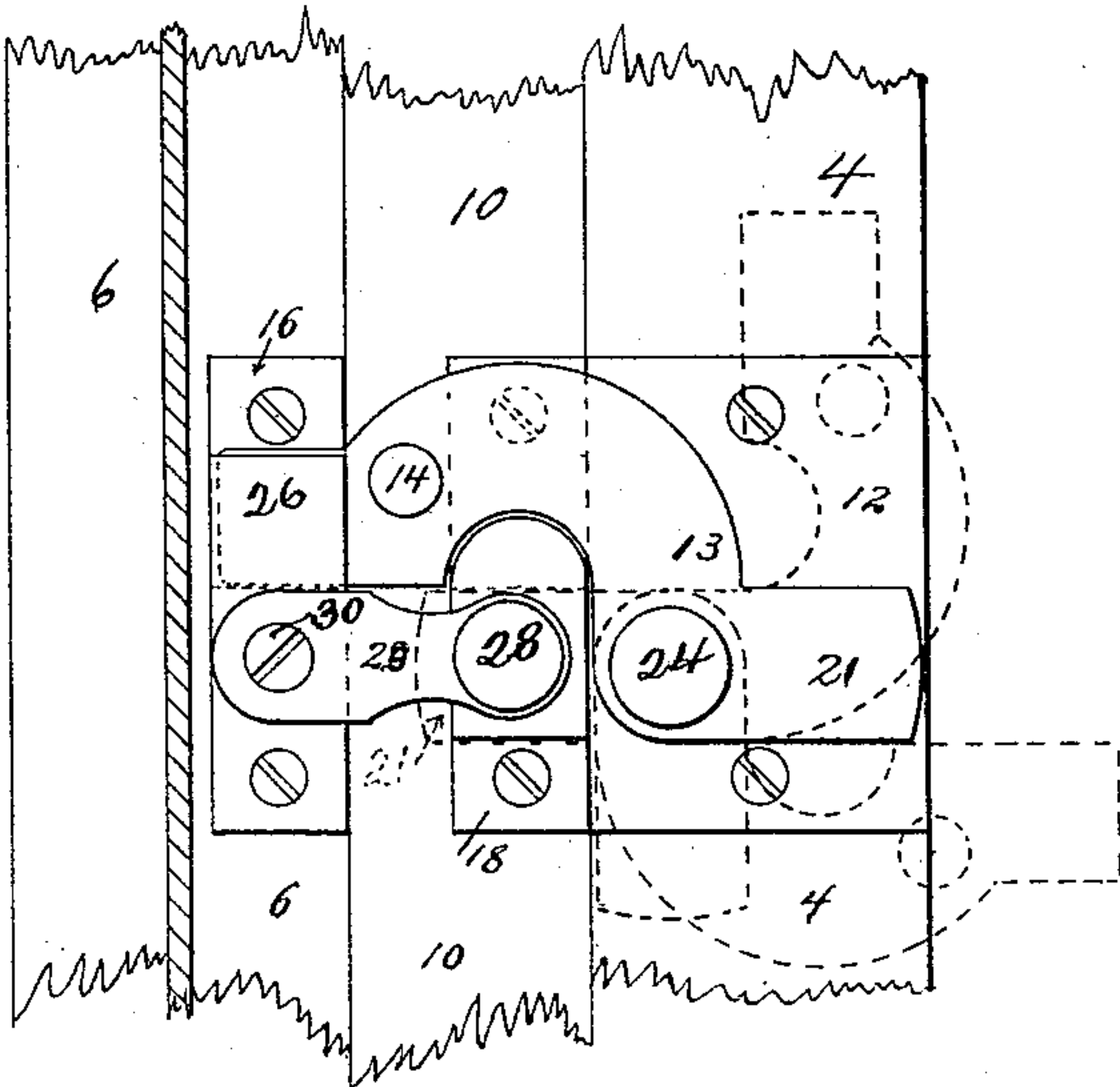


Fig. 6.

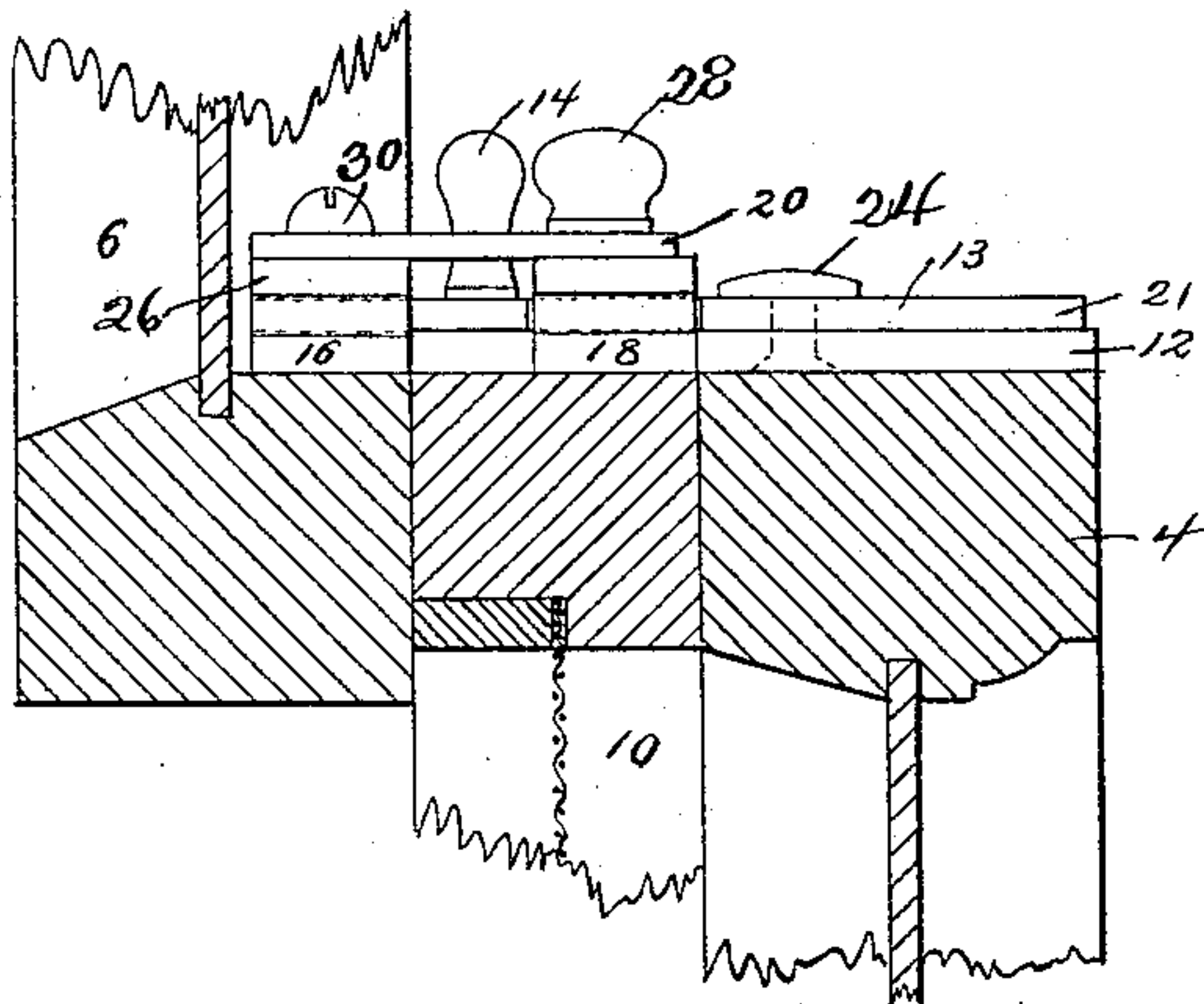
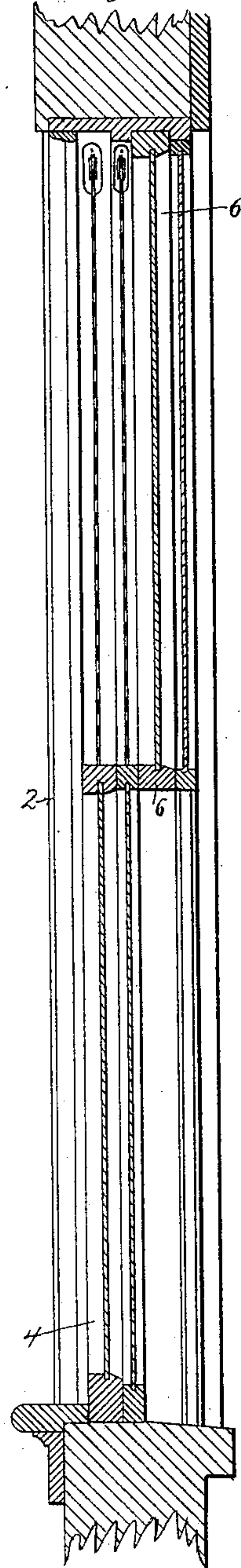


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE W. BISHOP, OF MINNEAPOLIS, MINNESOTA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 373,636, dated November 22, 1887.

Application filed May 31, 1887. Serial No. 239,795. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BISHOP, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Windows, of which the following is a specification.

My invention relates to improvements in the manner of attaching screen and storm windows; and the invention consists, generally, in a window having an intermediate screen or storm sash arranged to slide vertically between the upper and lower sash and to cover the space occupied by either of these sashes, and without interfering with the operation of either of them.

My invention further consists in the combination and construction hereinafter described, and particularly pointed out in the claims.

In the drawings which form part of this specification, Figure 1 is a perspective view of a window embodying my invention. Fig. 2 is a vertical section showing the window-screen closed over the lower sash. Fig. 3 is a transverse section taken on line *xx* of Fig. 2. Fig. 4 is a partial section showing the position of the screen over the upper sash. Fig. 5 is a detail showing the fastening for the sashes and screen-frame. Fig. 6 is a section through the meeting-rail, showing an elevation of the fastening. Fig. 7 is a longitudinal section showing the application of storm-sash in place of the screen.

In the drawings, 2 represents the casing of the window, constructed in the ordinary way. 4 is an inside or lower sash, and 6 is an outside or upper sash, both arranged to slide vertically in the casing in the usual manner.

8 is a parting-strip between the two sashes, on either side of the window, and extending from top to bottom of the frame. This parting-strip is preferably provided with a tongue, 9, which fits a corresponding groove or recess in the sides of the screen-frame 10. The screen-frame 10, thus placed upon the parting-strip, is brought between the two sashes, and is so arranged that the meeting-rails of the lower sash, the screen-frame, and the upper sash shall be on a line when the windows are closed, as shown in Fig. 2, and can all be locked in this position by the fastening shown in Fig. 5. In this view, 12 represents a plate secured to

the top of the lower sash. Pivoted to this plate by a pivot, 24, is preferably a swinging clamp or bolt, 13. This bolt is provided with a handle, 14, and is arranged to swing under a projection, 26, on the plate 16, which is attached to the upper sash. A plate, 18, is also secured to the screen-frame, and the clamp 13 rests upon this plate, and the three sash-frames are secured together.

A button, 20, having a handle or knob, 28, is pivoted by a pivot, 30, to the plate 16 on the top sash, which swings over and bears upon the plate 18 on the screen-sash, thus locking these two sashes together. If it should be desired to raise the bottom sash independently of the screen and upper sash, the swinging bolt 13 is given a quarter-turn, as indicated by dotted lines in Fig. 5, when it will be entirely free from the other sashes and the lower sash can be raised at will. The screen and upper sash are still securely locked by the button 20 and cannot be raised from without. If desired, however, the screen-sash can be raised with the lower sash by making a half-revolution of the bolt 13 and bringing it to the second position, (denoted by dotted lines in Fig. 5.) When this position is reached, the end 21 of the bolt will be forced into a recess in the plate 18, and by throwing back the button 20 the two sashes can be raised together. A plate, 24, similar to the plate 18, may be placed upon the top of the lower cross-rail of the screen-frame. The object of this plate is to secure the screen-frame in position over the upper sash should it be desirable to ventilate from this part of the window. This can be done by simply raising the screen-frame to the upper half of the window and turning the bolt 13 to engage with the plate 24 on the screen-sash, as shown in Fig. 4. By this operation the lower sash and the screen are securely locked and cannot be raised from without, and the upper sash can be left open to any degree required, and no opening will be left at the meeting-rails. It will be seen that by this arrangement of fastening the screen-sash can be connected to and raised with the lower sash, so that outside shutters or blinds can readily be opened and closed without the inconvenience of separately holding or fastening the screen-sash.

Sash-weights may be applied to the screen-sash the same as to the ordinary sashes, if it should be desirable to do so.

In the winter season a storm-sash may be substituted for the screen-sash and operated in a similar manner. In Fig. 7 I have shown a window of this description. In this case, however, the storm-sash would cover only one half of the window, so that it would be necessary to provide one for the other half, which is shown as attached to the outer casing over the upper sash. The upper storm-sash may be attached to the blind-stop in the same manner that the lower storm or screen sash is attached to the parting-strip, and, if desired, can be raised and lowered with the upper sash.

The advantage of having a storm-sash applied in this way is that it is much more convenient for ventilating purposes to have some means of throwing open a large portion of the window, which cannot be conveniently done with the ordinary outside storm-window, and it does not interfere with outside shutters or blinds. It is not necessary, however, to my invention that the storm-window shall be used, as I may remove the screen and place a check upon the meeting-rail of the lower sash to fill the space occupied by the screen, and the window can then be used in the ordinary way, and the full outside storm-window can be used, if desired.

I claim as my invention—

1. The combination, in a window, of the independently-sliding lower sash and screen-

sash, and a fastening device arranged to secure said lower sash and said screen-sash together at will, whereby either of said sashes may be moved independently of the other, or may be fastened together and moved one with the other, substantially as described.

2. The combination, in a window, with the upper sash and the lower sash, of the intermediate independently-sliding sash, 10, and a locking device on the meeting-rails of said sashes adapted to secure said intermediate sash to either of the other sashes or to secure the three sashes together, substantially as described.

3. The combination, in a window, of the upper and lower sash, the intermediate sash, 10, arranged to slide independently of the other sash on vertical ways between said upper and lower sash, and a fastening device upon the meeting-rails of said sashes for securing the three sashes together, substantially as described.

4. The combination, with the upper sash, 6, and lower sash, 4, of the intermediate screen-sash, 10, the swinging bolt 13, pivoted upon said sash 4 and arranged to secure the three sashes together, and the button 20 upon the top sash, arranged to swing over the top of the screen-sash, substantially as described.

In testimony whereof I have hereunto set my hand this 25th day of May, 1887.

GEORGE W. BISHOP.

In presence of—

R. H. SANFORD,
A. C. PAUL.