(No Model.) 2 Sheets—Sheet 1.

T. W. GABEL.

WINDOW.

No. 573,402. Patented Dec. 15, 1896.

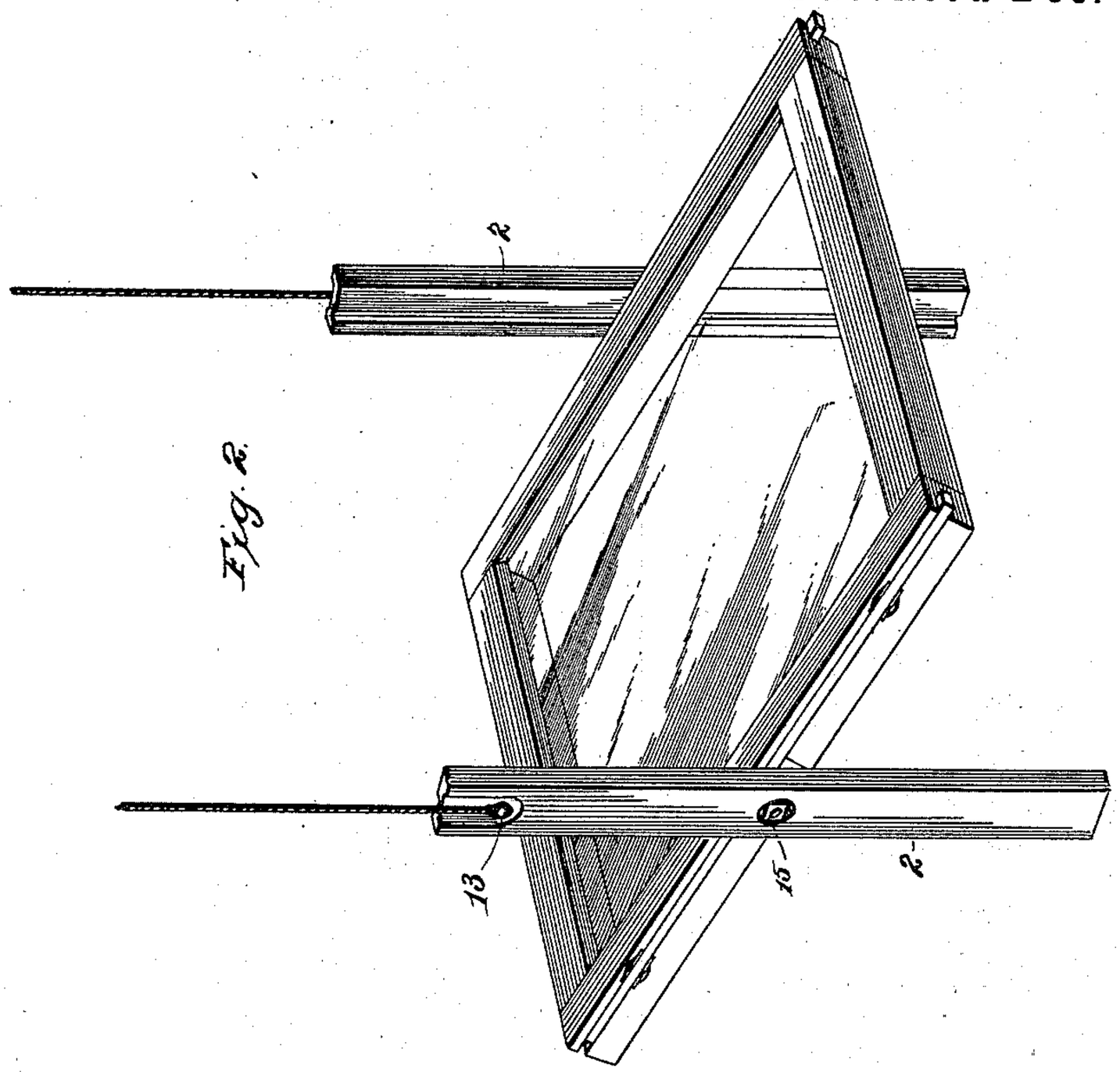

Fig. 2.

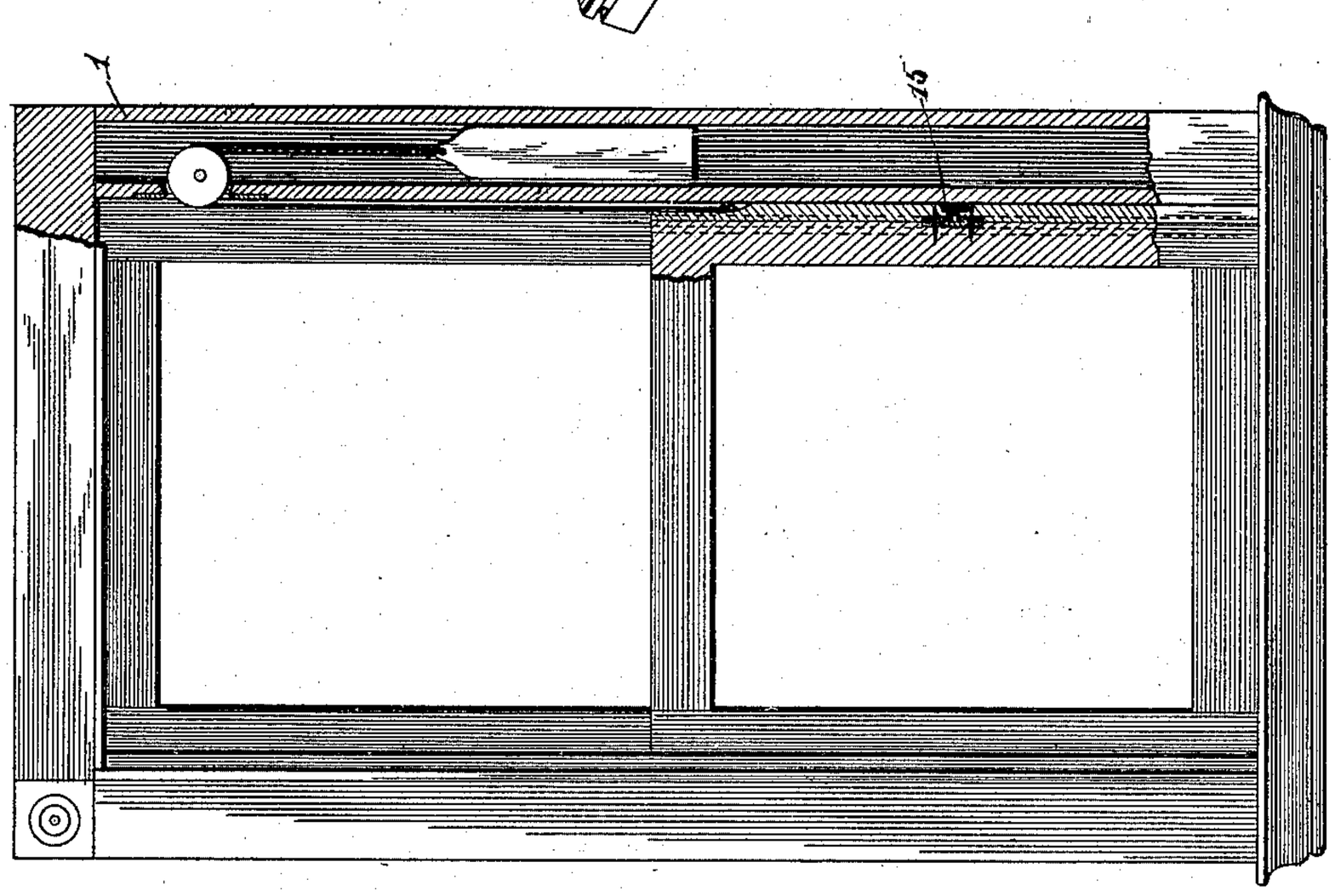

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

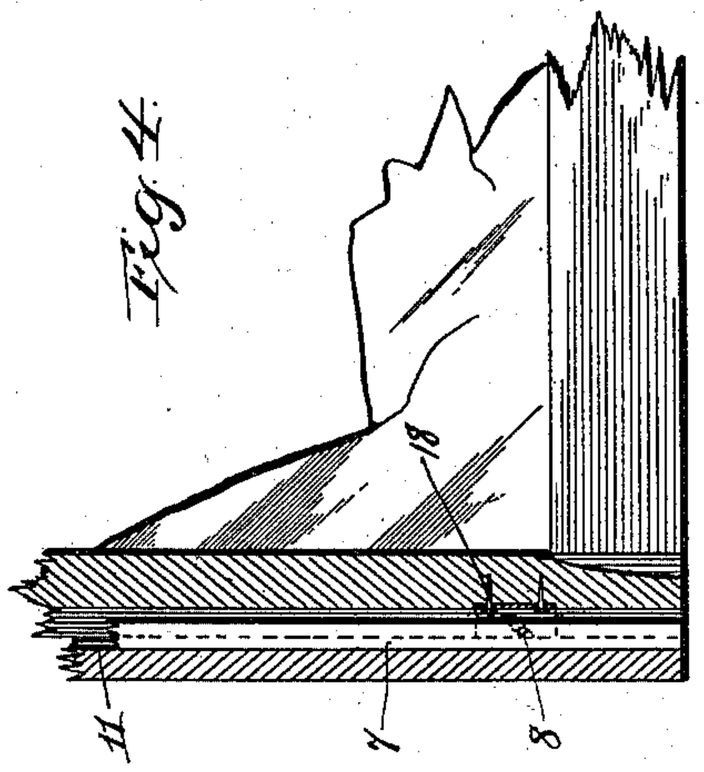


Fig. 5.

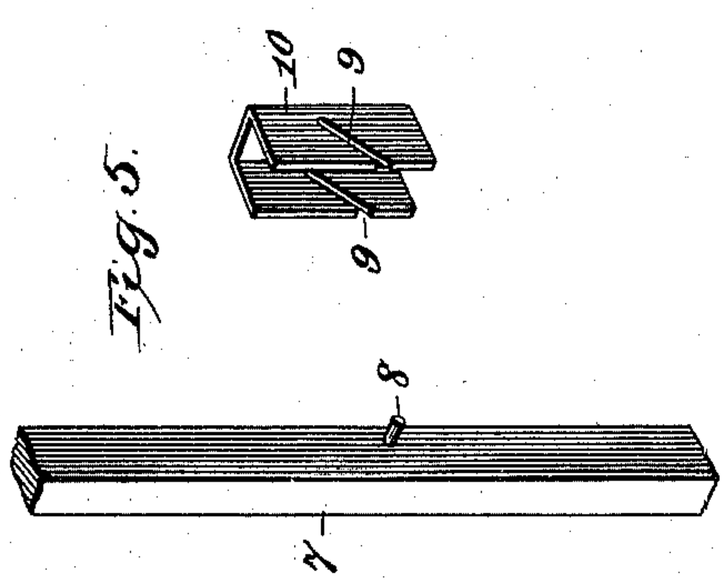
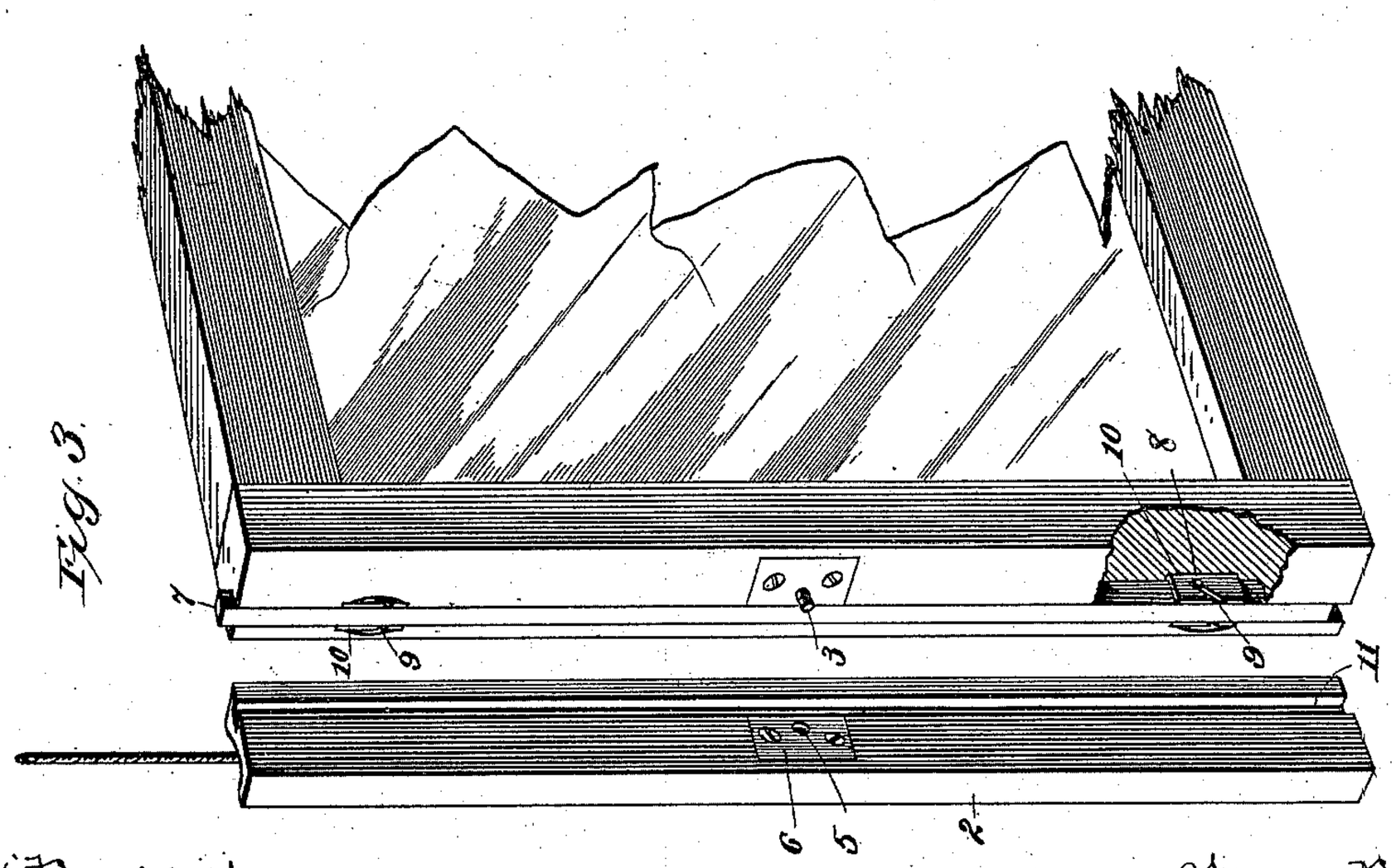


Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE W. GABEL, OF LANCASTER, PENNSYLVANIA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 573,402, dated December 15, 1896.

Application filed June 6, 1896. Serial No. 594,493. (No model.)

To all whom it may concern:

Be it known that I, THEODORE W. GABEL, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Windows, of which the following is a specification.

My invention relates to a new and useful improvement in windows, and has for its object to so construct a window as to permit the sashes thereof to be swung upon horizontal pivots without interfering with the usual method of raising and lowering said sash and to so bring about this result as to leave the window as weather and dust proof as usual or more so; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by numbers to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation of a window-frame, a portion thereof being broken away and sectioned, also a portion of one of the side rails of the sash, illustrating the method of applying my improvement to said sash and frame; Fig. 2, a detailed perspective of the slide-bars with one of the sashes secured thereto, the latter being swung upon its pivot-points out of alinement with said bars; Fig. 3, a similar view of a portion of the sash, showing the locking-strips therein, said sash being broken away so as to show the cam-guides for bringing the locking-strips into position, and also one of the slide-bars with the groove therein for the reception of the locking-strip; Fig. 4, a detailed section showing the locking-strips cammed into engagement with groove in the slide-bar; Fig. 5, a detailed perspective of one of the cam-guides and a portion of the locking-strip having a pin projecting therefrom adapted to engage with the slots of the cam-guide.

Referring to the drawings in detail, 1 represents the window-casing, which may be of any design, the side walls thereof having suitable grooves either formed therein or produced by the usual partition-strips. The slide-bars 2, which are two in number, are each adapted to slide within the grooves thus formed in the window-casing after the manner of the sliding of an ordinary sash. These bars have pivoted thereto, by means of the trunnions 3, a sash 4, said trunnions projecting within holes 5, formed in the escutcheon-plates 6, it being noted that there are two of the trunnions and escutcheon-plates on each sash. Thus it will be seen that should the sash be held in vertical alinement with the slide-bars it may be raised and lowered in the same manner as an ordinary sash, the sliding of the bars in the grooves of the window-casing giving proper guidance to said sash. The trunnions are threaded for the reception of suitable nuts 15, whereby the sash is held in proper relative position. In order that the sash may be thus held in alinement with its slide-bars, I provide a locking-strip 7 upon each side of the sash. Said strips are fitted within grooves formed in the side rails of said sash, so that they may be forced inward and become flush with said side rails. A pin 8 is secured within each of the locking-strips near the bottom or lower end thereof, also a like pin near the upper end thereof, and these pins project beyond the sides of the locking-strips and are adapted to engage the cam-slots 9 of the cam-guides 10. Said guides are preferably formed of sheet metal, as clearly shown in Fig. 5, so as to embrace the locking-strip when the pins 8 project within the slots. By this arrangement it will be seen that should the locking-strips 7 be forced longitudinally either up or down the engagement of the pins with the slots will cause said strip to move in or out, as the case may be. Thus to lock the sash in alinement with its slide-bars it is only necessary to force the locking-strips downward, whereby they will also be forced outward into engagement with the groove 11 of the slide-bars, which will securely hold the sash in alinement with said bars and also exclude the elements and dust from the room after the manner of weather-strips, and when thus locked the sash will, to all appearances, be the same as an ordinary sash.

When it is desired to swing the sash upon

its trunnions, the locking-bars 7 may be forced upward, as shown in Fig. 3, through which movement the action of the pins 8 within the cam-slots 9 will cause said bars to move inward until flush with the side rails of the sash, after which, as readily understood, the sash may be swung to any angle upon its trunnions, or may be turned inside out for the purpose of cleaning.

The cam-guides may be secured within the rails of the sash by screws or nails 18, or in any other suitable manner, so as to prevent their accidental withdrawal when in use.

It is of course obvious that where two sashes are used in combination with a window-frame both are provided with my improvements in the same manner as that just described in connection with one sash. Also when ropes and weights are used to counterbalance the sash these ropes may be adapted to the slide-bars at 13 in any convenient manner.

In practice the sash of a window constructed in accordance with my improvement when locked longitudinally by the strips may be raised and lowered in the same manner as the sashes of an ordinary window, and the joints between said sash and window-frame are as weather-tight as has heretofore been the case, and yet when it is desired to clean the glass of a sash this is greatly facilitated by moving the locking-strips inward, as before described, and swinging the sash upon its trunnions, in which case access is had to both sides of the glass from the inside of the room; and another great advantage had by my construction is that ventilation of a room is made more complete in that both sashes of the window may be so swung as to leave a clear space practically the full size of the opening in the window-frame.

Having thus fully described my invention, what I claim as new and useful is—

The combination of a window-frame, bars adapted to slide therein, escutcheon-plates carried by said bars, a sash between said bars, trunnions projecting from said sash into engagement with the escutcheon-plates, cam-guides secured below the surface of the sash, said guides consisting of a metallic body having a back with sides at right angles thereto, said slides provided with cam-slots, locking-strips fitted within suitable grooves formed in the side rails of the sash and pins projecting from the locking-strips into engagement with the cam-slots, whereby the locking-strips when moved vertically will be caused to move inward or outward as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

THEODORE W. GABEL.

Witnesses:
JACOB HALBACH,
I. N. GABEL.