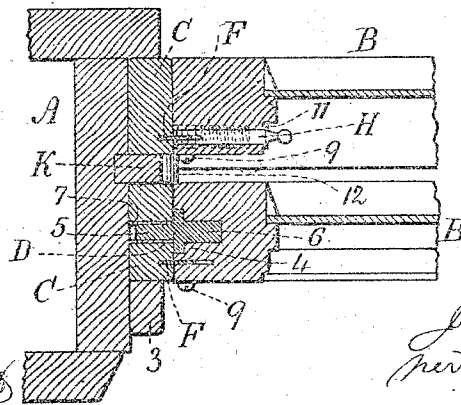
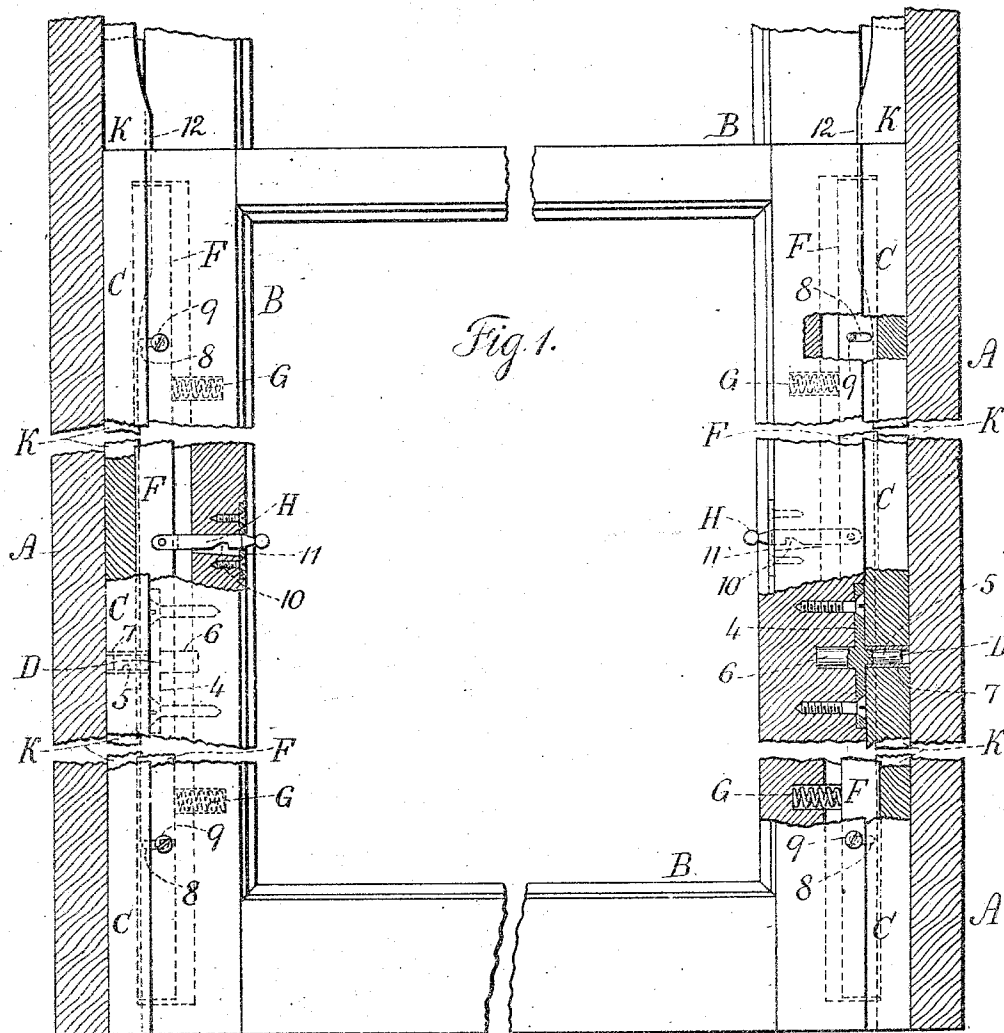


(No Model.)

J. B. BROOME.
WINDOW SASH.

No. 583,976.

Patented June 8, 1897.



Witnesses:

J. Stait

Chas. A. Smith

Fig. 2.

Inventor:
Joseph B. Broome
per Lemuel W. Terrell
Att.

UNITED STATES PATENT OFFICE.

JOSEPH B. BROOME, OF UTICA, NEW YORK, ASSIGNOR TO HIMSELF, AND
LEWIS H. BROOME, OF JERSEY CITY, NEW JERSEY.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 583,976, dated June 8, 1897.

Application filed December 17, 1895. Serial No: 572,387. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. BROOME, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented an Improvement in Window-Sashes, of which the following is a specification.

Window-sashes have been pivoted at their opposite edges to sash-strips that slide in the window frame or casing, and the adjacent surfaces have been grooved for the reception of metal strips having diagonal slots by which such metal strips have been forced outwardly to connect the sash and sash-strips or drawn inwardly into the sash to allow such sash to be swung upon its pivots.

The present invention is for facilitating the construction of the parts and to allow each metal strip to be drawn inwardly and retained with facility or be forced directly outwardly into the groove of the sash-strip and held automatically so as to prevent the parts becoming misplaced or inoperative when the sashes are raised or lowered; and the present invention consists in the peculiar construction and combination of devices hereinafter set forth and claimed.

In the drawings, Figure 1 is an elevation representing portions of a sash, partially in section to show the pivots and the sash-strips and the connecting devices. Fig. 2 is a plan view in section, representing the upper and lower sashes at one side of the window-frame.

The window-frame A is made in any usual manner, and the parting-strip is represented at K and the stop-bead at 3. The sash B is adapted to receive the glass as usual, and it is sufficiently narrow to be swung upon its pivots between the stop-beads of the window-frame, and the sash-strips C are introduced into the runways of the window-frame at the edges of the sashes, and the pivots D are midway, or nearly so, between the top and bottom edges of the window-sash, so that the sash may be swung upon such pivots to open the same and give access to the outer surface of the glass for cleaning, or the sash may be swung in this manner in opening the window to any desired extent.

I find it advantageous to make each pivot

with a plate 4, from which a pivot-pin 5 projects, and this plate is let into the edge of the sash, and behind the plate is a stud 6, passing into a hole in the sash, and by making the pin 5 smaller in diameter than the stud 6 a hole can be bored through the sash-strip C and into the edge of the sash, the size of the hole corresponding to the size of the stud 6, so that the stud can be driven firmly into the hole in the sash, and thereby the pivot will be strengthened and not liable to work loose, and a short tube 7, of brass or other suitable material, can be forced tightly into the hole in the sash-strip, so that the pivot-pin 5 will turn freely in such tube and prevent the pivot embedding itself into the wood or enlarging the hole in the sash-strip.

In each edge of the sash a saw-cut is made of a depth sufficient to receive entirely into it the metal strip F, and a similar saw-cut is made in the outer face of each sash-strip and corresponding in position to the saw-cut in the sash, but not as deep, so that the metal strip F can be contained in the saw-cut in the sash when the sash is being swung on its pivots, and it can be moved outwardly, so as to enter the saw-cut in the sash-strip when the window is swung up into position. In this metal strip, preferably toward the ends, horizontal or transverse slots 8 are made that receive through them pins or screws 9, and the length of the slots 8 and the positions of the pins or screws 9 are such that the metal strip can freely be moved back into the saw-cut in the sash or pressed outwardly into the saw-cut in the sash-strip, and the pins or screws passing through the slots hold the metal strips in position, and I make use of helical springs G, introduced into holes bored into the sash and behind the metal strips and preferably toward the ends of such strips for forcing the metal strips outwardly into the sash-strips when the parts are not otherwise acted upon.

Near the middle of each metal strip F is a retracting-handle H, forked at one end and connected to the metal strip by a cross or pivot pin, and this retracting-handle is advantageously cylindrical, so as to pass freely through a hole bored in the sash and approximately near the pivot-pins, and this retract-

ing-handle has a notch 10, engaging a plate 11 or similar stop when the handle 11 has been drawn back and with it the metal strip, the springs G being compressed in the operation.

From the foregoing it will be understood that when the sash is to be swung upon its pivots the handle 11 is drawn inwardly and the metal strip F drawn out of the sash-strip entirely into the saw-cut in the sash, and the retracting-handle is then caught with its notch 10 upon the plate 11, and the same operation is performed at each edge of the sash, and the sash is then free to be swung upon its pivots for opening the sash and giving access to the outer side of the glass for cleaning or otherwise, and when the sash has been swung up again into its position the retracting-handles 11 are moved sufficiently to liberate them from the plate 11 and allow the springs G to project the metal strips into the saw-cuts in the sash-strips, and by so doing the sash will be prevented from swinging on its pivots, and the joints between the sash-strips and the sash will be closed by the metal strips passing across into the saw-cuts in the sash-strips.

I find it advantageous to make the metal strips F of a shorter length than the height of the sash, so that the ends of the saw-cuts may be closed by wooden blocks, putty, or other suitable material, as illustrated in Fig. 1.

The top rail of the lower sash and the bottom rail of the upper sash are usually beveled upon their adjacent surfaces and form the meeting-rails of the sash, and the end portions of these meeting-rails are adjacent to the parting-strips K of the window-frame, and it is often difficult to make the sashes tight where the meeting-rails of the sashes come against the surfaces of the parting-strips, because the portions of the meeting-rails of the sashes are apt to rub upon the surfaces of the parting-strips K as the sashes are raised or lowered, and when the necessary play is provided there is almost always an opening at the ends of the meeting-rails of the sashes adjacent to the surfaces of the parting-strips. To avoid this difficulty, I make the parting-strips K wider, as shown at 12, and closely adjacent to the meeting-rails of the sashes, so that when the sashes are closed upwardly and downwardly the ends of the meeting-rails come close to the surfaces of the parting-strips at 12, where they are wider, but the other portions of the parting-strips being narrower do not in any way come in contact with the ends of the meeting-rails of the sashes when such sashes are either being raised or lowered. Hence these central projections at 12 on the parting-strips make

the window-sashes tighter without interfering with the freedom of movement of such sashes.

The spring that projects the metal strip may be placed around the pull 11, as shown by dotted lines in Fig. 2.

I claim as my invention—

1. The combination with the sash and sash-strips having longitudinal saw-cuts in their adjacent surfaces, of metal strips introduced into such saw-cuts and having cross-mortises in such strips, pins passing through the mortises and springs to press such strips outward from the sash into the saw-cuts in the sash-strips, a retracting-handle pivoted to each strip and passing through the sash for drawing back the metal strips into the sash, substantially as set forth.

2. The combination with the sash and sash-strips having longitudinal saw-cuts in their adjacent surfaces, of metal strips introduced into such saw-cuts and having cross-mortises in such strips, pins passing through the mortises and springs to press such strips outward from the sash into the saw-cuts in the sash-strips, a retracting-handle pivoted to each strip and passing through the sash for drawing back the metal strips into the sash, pivots for connecting the sash to the sash-strips and upon which pivots the sash can be swung when the metal strips are withdrawn, substantially as set forth.

3. The combination with the sash and sash-strips having longitudinal saw-cuts in their adjacent surfaces, of metal strips introduced into such saw-cuts and having cross-mortises in such strips, pins passing through the mortises and springs to press such strips outward from the sash into the saw-cuts in the sash-strips, a retracting-handle pivoted to each strip and passing through the sash for drawing back the metal strips into the sash, there being a latch upon the retracting-handle and a plate upon the sash for engaging the latch, substantially as set forth.

4. The combination with the upper and lower sashes, of intermediate parting-strips on the window-frame, the edges of which parting-strips project from the window-frame a greater distance adjacent to the meeting-rails of the sash when the sashes are closed than at the other portions so as to set closely against the meeting-rails when the sashes are closed and allow freedom of movement when the sashes are being opened, substantially as set forth.

Signed by me this 13th day of December, 1895.

JOSEPH B. BROOME.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.