

(No Model.)

R. SUTHERLAND.  
WINDOW SASH.

No. 562,503.

Patented June 23, 1896.

Fig. 1.

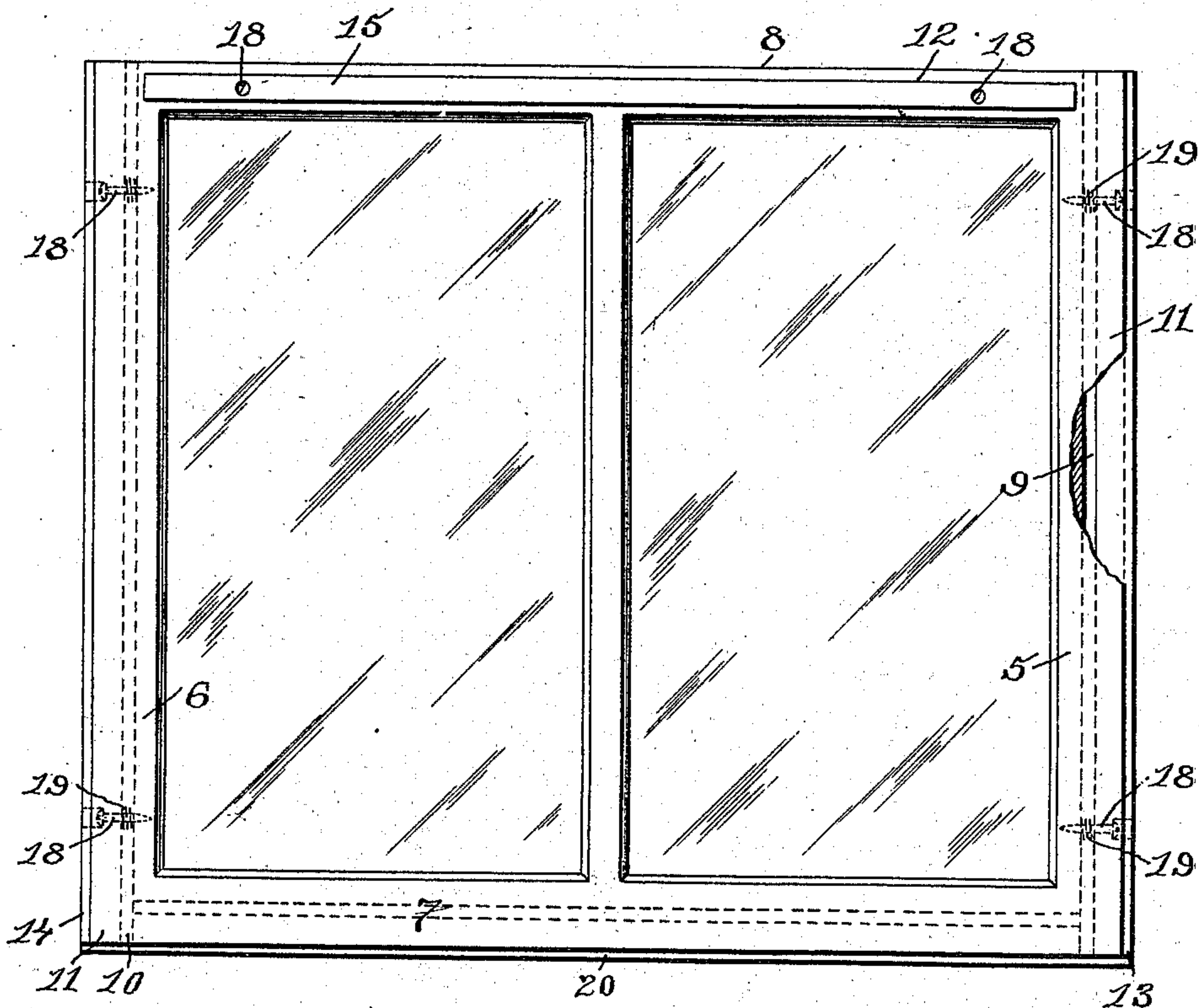


Fig. 2.

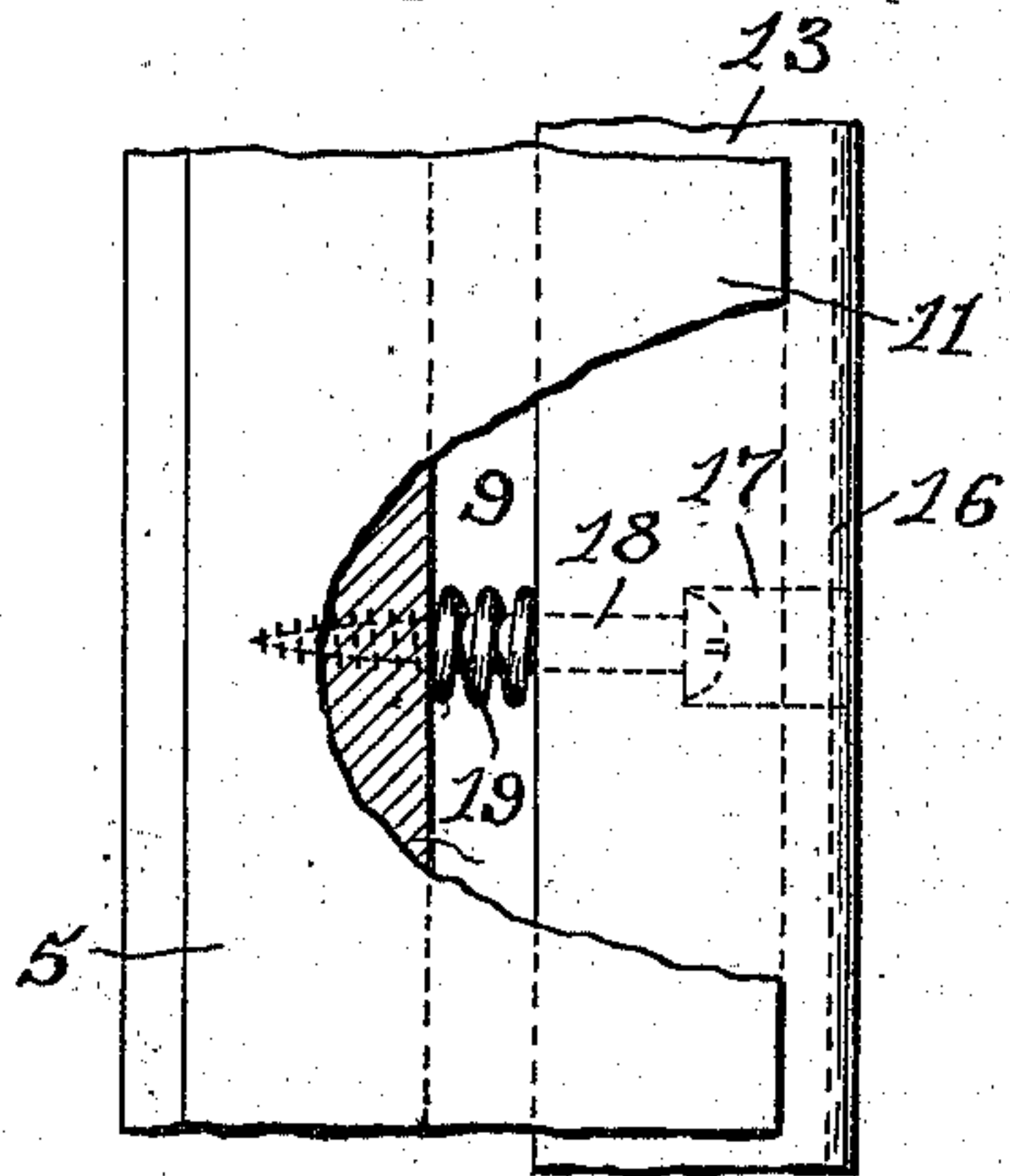
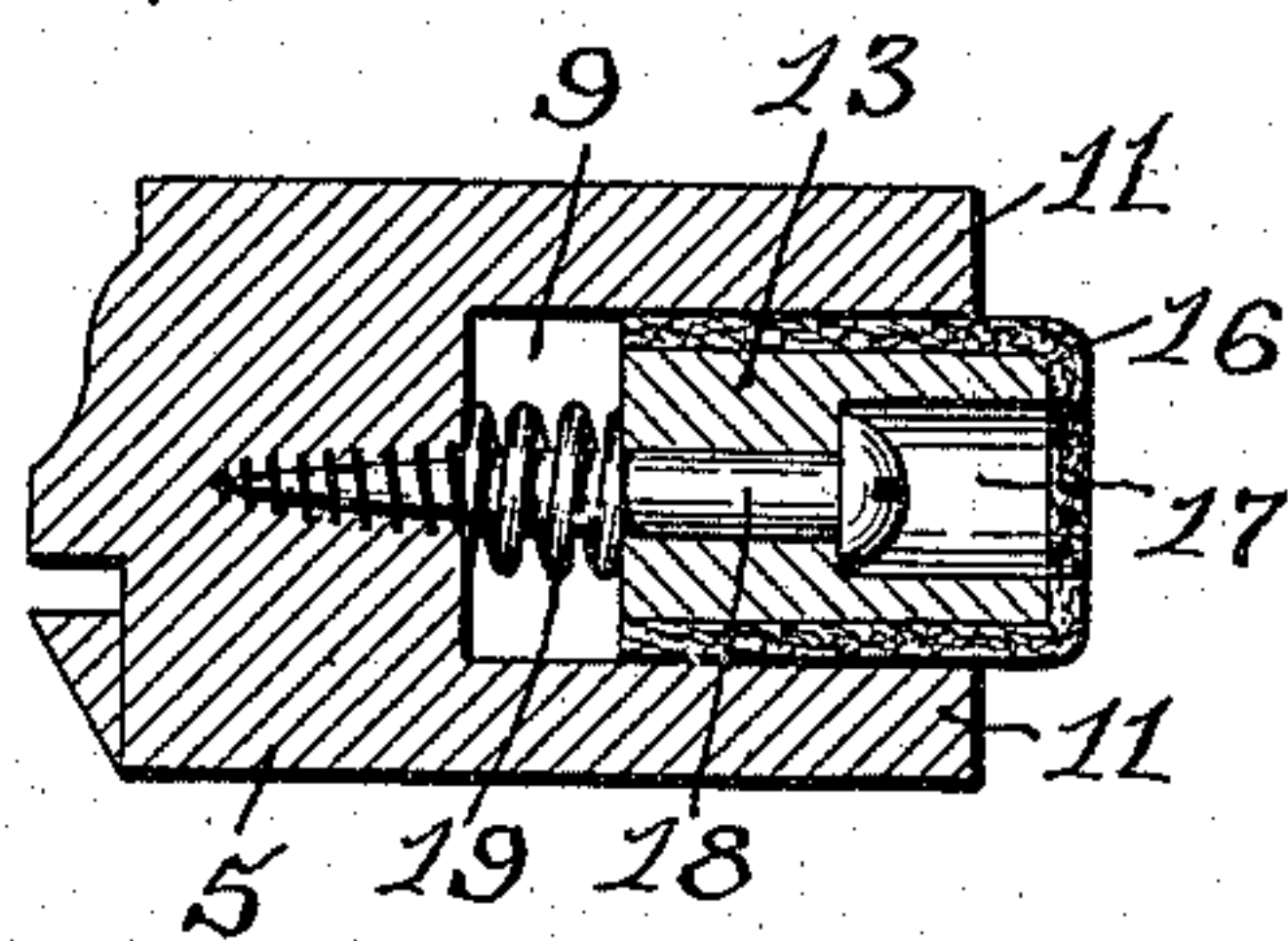


Fig. 3.



WITNESSES:

Chas. H. Luther Jr.  
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INVENTOR:

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by Henry J. Miller  
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# UNITED STATES PATENT OFFICE.

ROBERT SUTHERLAND, OF BOSTON, MASSACHUSETTS.

## WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 562,503, dated June 23, 1896.

Application filed April 9, 1896. Serial No. 586,764. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT SUTHERLAND, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Window-Sashes; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in window-sash.

The object of the invention is to so construct a window-sash that the space between the side bars and the casing, and between the meeting-rails of two sash, will be effectually closed against the passage of wind or dust, and this without causing the undue binding of the sash and consequent difficulty of sliding the same.

The invention consists in the peculiar features of construction and combination of parts, whereby the object of the invention is accomplished, as will hereinafter be more fully described, and pointed out in the claim.

Figure 1 represents an elevation of the improved sash, part of one side bar being broken away. Fig. 2 represents an enlarged detail view of portions of the same. Fig. 3 represents an enlarged cross-sectional view of one of the side bars.

Similar numerals of reference designate corresponding parts throughout.

Between the side bars of a window-sash and the side frames of the window-frame a looseness of fit is generally allowed to effect the easy sliding of the sash in the frame. This looseness of fit varies in degree, but is always sufficient to admit gusts of wind carrying dust to enter the building. The usual course taken to close the space is to secure weather-strips against the casing and in such intimate contact with the sash as to effectually prevent its movement, for if the strips are not so secured they are ineffectual for preventing the entrance of air. These strips are very quickly worn away, become loosened, and by catching on the sash are broken and disfigured.

In carrying my invention into practice I take a sash having the side bars 5 and 6, the lower rail 7, and the meeting-rail 8. In the edges of the side bars 5 and 6 I form vertical grooves 9 and 10, the walls 11 11 of which are parallel throughout. In the front or rear of the meeting-rail 8, I form a horizontal

groove 12, extending between the upper ends of the grooves 9, and also having parallel walls. In the grooves 9 and 10 of the side bars 5 and 6, and in the groove 12, I mount the closing-strips 13, 14, and 15, which are of considerably less width than the grooves, and are furnished with the fibrous covering 16, serving as a packing between the sides of the strips and the walls 11 11 of the groove, to effect a complete contact therewith, while allowing for free movement of the strip, that portion of the fibrous packing extending over the edge of the strips serving as a packing between the strips and the side frames or between the strip in the meeting-rail 8 and a corresponding portion of another sash.

The manner of operatively mounting the closure-strips is as follows: In each of said strips 13, 14, and 15 are formed a plurality of recesses 17, connected with the back of the strip by perforations. Through these perforations extend screws 18, the heads of which loosely fit in the recesses 17. These screws are secured in that portion of the sash-frame in which the groove is formed and spiral springs 19 are mounted on the shanks of the screws between the strip and the bottom of the groove, the resilience of these springs tending to continuously press the strip outward on the screws and to close the space adjacent to the sash without binding thereon. The lower rail 7 may also be furnished with a similar strip 20, operatively mounted in a longitudinal groove in said rail, the construction and operation being similar to the strips 13 and 14, hereinbefore described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination with a window-sash, having the grooved bars 5 and 6, and the grooved rail 8, of the strips 13, 14 and 15 each having a fibrous covering 16, and the recesses 17 with their perforations, the screws 18 extending through said perforations, and secured in the sash, and the springs as 19, mounted on the screws, and acting to press the strips outward as described.

In witness whereof I have hereunto set my hand.

ROBERT SUTHERLAND.

Witnesses:

W. STANLEY CAMPBELL,  
H. J. MILLER.