June 29, 1948. A. HAMELIN 2,444,226

DOUBLE SASH SLIDING AND SWINGING WINDOW

Filed Jan. 17, 1946 2 Sheets-Sheet 1

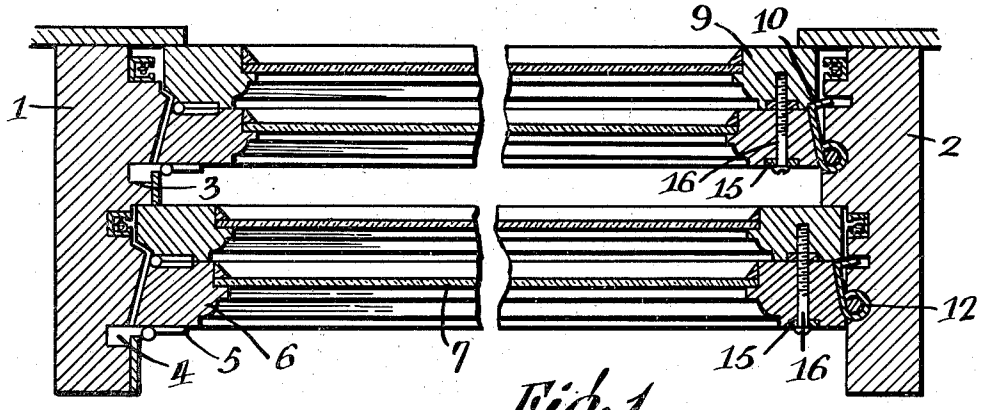


Fig. 1

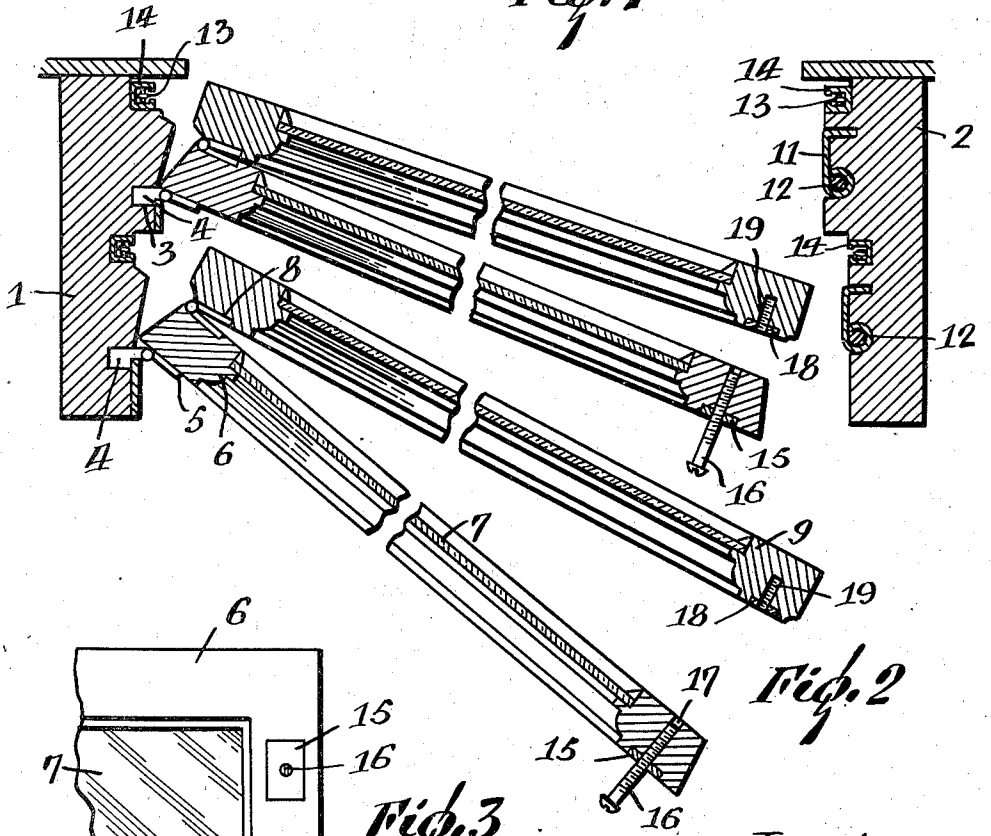


Fig. 2

Fig. 3

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DOUBLE SASH SLIDING AND SWINGING WINDOW

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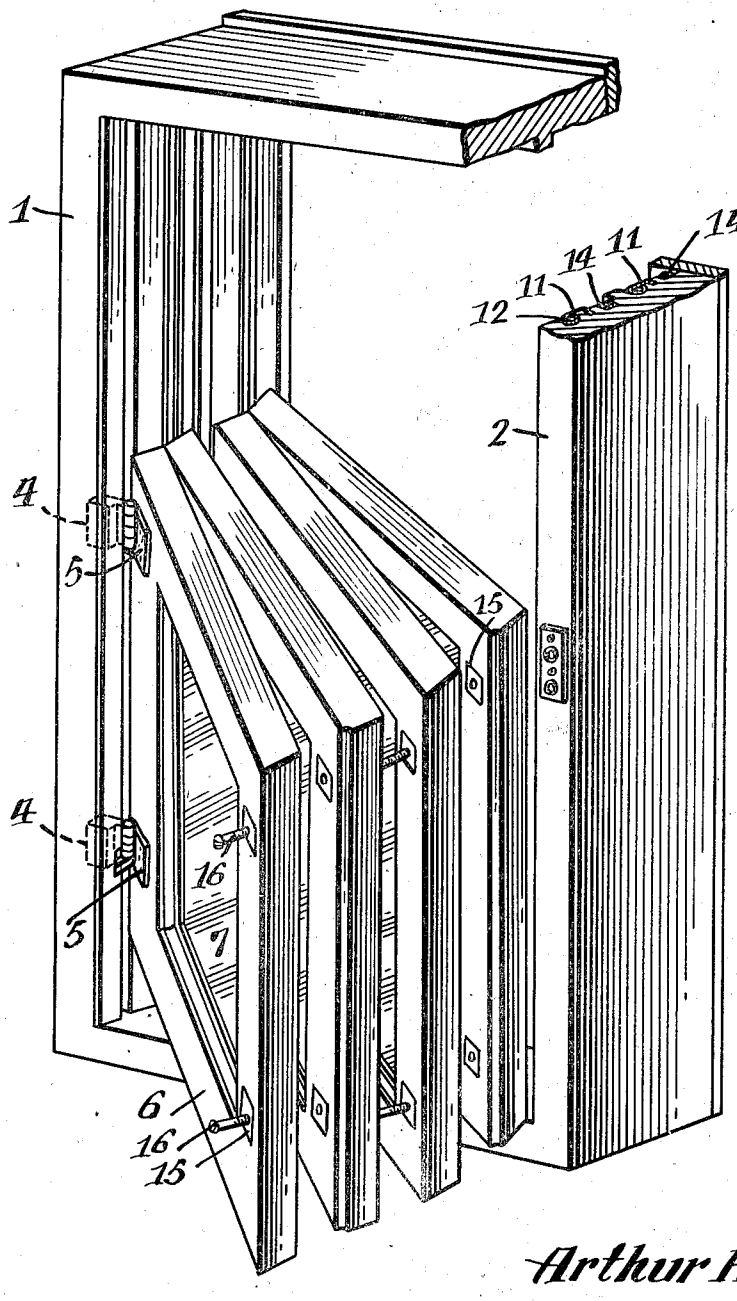


Fig. 4

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UNITED STATES PATENT OFFICE

2,444,226

DOUBLE SASH SLIDING AND SWINGING WINDOW

Arthur Hamelin, Pointe-aux-Trembles, Quebec, Canada

Application January 17, 1946, Serial No. 641,738

2 Claims. (Cl. 20—50)

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The present invention pertains to a novel window construction of the sliding sash type and wherein the sashes are also adapted to swing out of the window frame. This application relates to the same subject matter as my co-pending application of even date, Serial No. 641,737.

The principal object of the invention is to construct each of the sashes as a double unit providing an insulating air space and at the same time to permit separation of the elements of each double unit for cleaning both sides of each element from the interior of the building.

With this object in view, one of the frame members carries a pair of slidable hinge blocks to each of which is hingedly attached a sash element. To each of the latter is hingedly attached a similar and co-extensive sash element, thereby forming a double sash unit consisting of two individual sashes with an insulating air space between. The hinges between the respective sash elements are preferably disposed adjacent to the frame side member which carries the sliding hinges.

At the opposite side of the frame, one of the sash elements of each pair overlaps the other element to form a notch when the elements are brought against each other in mutually closed position. The adjacent frame member carries a pair of hingedly mounted weather-strips adapted to be received in the notches and thereby lock the outermost sashes in closed position. When the latter are to be swung, a suitable means is operated for withdrawing the window strips from their obstructing position.

Another object of the invention is to provide means for locking the elements of each unit together, so that either unit may be swung without necessarily separating the elements thereof. However, the locking means is readily detachable to permit access to both surfaces of all the sash elements for cleaning.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a horizontal section of the window in closed position;

Figure 2 is a similar section showing the several hinges partially open,

Figure 3 is a detail elevation of a window constructed according to the invention, and

Figure 4 is a perspective view.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 1 is shown a window assembly incorporating vertical side frame members 1 and 2. The frame member 1 has a pair of vertical slots or ways 3 corresponding to the two sliding and swinging sashes that will presently be described. Each channel 3 contains a slidable hinge block 4 having hinged thereto a complementary hinge plate 5 disposed within the frame opening. A sash frame 6 is attached to each plate 5 and may be of suitable or conventional design and provided with a glass pane 7.

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On the surface of the sash frame 6 opposite that attached to the member 5, and at the edge nearer the frame 1, is attached a leaf hinge 8 which in turn carries a sash frame 9 generally similar to the frame 6. Each sliding sash is therefore a double member consisting of two similar members secured together, while one of the members is also hinged to a sliding block 4. The double sashes associated with the respective blocks 4 are alike, and a detailed description of only one of them is necessary.

At the free swinging edges of the sashes, the outer frame 9 overlaps the adjacent inner frame 6, forming a notch 10 when these frames are in engagement with each other, as shown in Figure 1. The adjacent frame member 2 carries, for each double sash, an angular weatherstrip 11 hingedly mounted on a shaft 12 and adapted to enter the notch 10, thereby locking the corresponding sash frame 9 from being swung on its hinge. The strips are, however, readily withdrawn by a suitable means for turning the shafts 12 as disclosed, for example, in my aforementioned co-pending application.

At the frame members 1 and 2, the sashes are counterbalanced against each other by cables or chains 13 accommodated in channels 14 as also disclosed in my copending application.

In each of the outer sash frames 6, in the side adjacent to the frame member 2, is mounted a plate 15 in which is threaded a screw 16 adapted to extend through a hole 17 in the sash frame. The adjacent side of the corresponding sash frame 9 receives also a plate 18 and a hole 19 alined with the hole 17 and adapted to receive the corresponding screw 16. Adjacent frames 6 and 9 may be locked together by a screw 16, as shown in Figure 1, and are detached for relative swinging movement on the respective intermediate hinges 8, as shown in Figure 2.

Each double sash, when closed as in Figure 1, forms an insulating air pocket. Nevertheless, both sides of each pane of glass are accessible for cleaning by separating the individual sash frames in the manner illustrated in Figure 2.

As in my co-pending application, the sashes are slidable in the conventional manner and can be swung out of the window frame on the respective hinges 4, 5.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim as my invention is:

1. In a window, a pair of spaced frame side members, hinges vertically slidable in one of said members, sashes attached to said hinges, and sashes hinged to the first named sashes and doubling the first named sashes, whereby to hinge said sashes together in pairs, one sash of each pair projecting beyond the other sash of the same pair at the remaining frame member to form notches when said sashes are closed against each other, and weather-strips hingedly mounted in the last named frame member and receivable respectively in said notches.

2. In a window, a pair of spaced frame side members, hinges vertically slidable in one of said members, sashes attached to said hinges, and sashes hinged to the first named sashes adjacent to the last named frame member, the second named sashes doubling the first named sashes, to hinge said sashes together in pairs, one sash of each pair projecting beyond the other sash of the same pair at the remaining frame member to form notches when said sashes are closed against each other, and weather-strips hingedly mounted in the last named frame member and receivable respectively in said notches.

ARTHUR HAMELIN.

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The following references are of record in the file of this patent:

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