

989,863.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

LEOPOLD MODEL

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SWINGING SASH-FRAME FOR WINDOWS.

989,863.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed March 5, 1910. Serial No. 547,470.

To all whom it may concern:

Be it known that I, LEOPOLD MOREL, a subject of the King of Great Britain, residing in the city and district of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Swinging Sash-Frames for Windows; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to swinging sash frames for windows and particularly to the horizontally swinging type of such sashes.

Broadly speaking, it comprises a window frame provided with removable bead sections, a sash frame mounted to slide vertically in the window frame, supports carried by the window frame adjacent to the vertical ways for the sash frame, means for pivotally and removably suspending the sash frame from the supports and detachable sash cord couplings for the sash frames.

In order to more clearly disclose the construction, application and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings, like reference characters designate the same parts.

In the drawings: Figure 1 is a perspective of a window frame showing the application of the invention; Fig. 2 is a front view of a window complete, showing the detachable sash cord connections; Fig. 3 is a perspective of one of the removable bead sections; Fig. 4 is a perspective of one of the sash supporting members; Fig. 5 is a perspective of one form of hinge adapted to suspend the sash frame from the support; Fig. 6 is a similar view of a modified form; and, Fig. 7 is a side elevation of a second form of removable bead section and socket.

The invention is particularly designed for the purpose of enabling the sash frame to be swung inward from the window frame while at the same time it is supported by the window frame and freed from the sash cords, its position being such that it may be turned on its support so that it will be seated exactly in its vertical ways in the window frame without disconnecting it from its supports. To this end each sash

frame 1 is provided with hinges 2, one leaf of which is secured to the face of the sash frame while the other leaf is free. The free leaf of each hinge is provided with a flange 3. The hinges are placed near the top and bottom respectively of the sash frame and their free leaves are normally folded over on the fixed leaves so that the hinge is closed and compact on the face of the sash frame. When open or in operative position the free leaf will travel in sliding contact with the adjacent face of the window frame. On this adjacent face of the window frame are rigidly secured supporting hooks or brackets 4 behind which the free leaves of the hinges may be slid as the sash frame is lowered. When these free leaves have been slid behind the hooks, the flanges 3 will engage the same to prevent disengagement of the hooks and leaves. In order to allow inward swinging of the sash frames after the free leaves of the hinges have engaged the hooks the bead of the window frame opposite the supporting hooks is provided with a removable section 5 having off set tongues or fingers 6 adapted to hold the bead section in position by engagement with slotted plates 7, the slotted plates being secured in the window frame in such position that the slots therein lie directly over recesses cut in the frame and adapted to receive the ends of the tongues.

It is desirable, of course, to disconnect the sash cords from the sash frame when the sash frame is to be swung to the dotted line position of Fig. 1. To this end eye bolts 8 or similar means are provided. These bolts are adapted to be seated in upwardly inclined bores or sockets 9 leading upwardly from a point near the bottom of the sash cord groove. The lower ends of these eye bolts are connected to the sash cords. The weight of the sash frame on the sash cords and eye bolts will act at all times to keep the eye bolts properly seated in their sockets 9.

The description above given applies particularly to the lower or inner sash though, of course, it may apply equally well to either sash, the only difference being that the removable section of the parting bead may be simply seated in a groove and the tongue and slot devices avoided.

Referring to the lower or inner sash the operation of the invention is as follows:— The lower sash will be raised in its ways in the frame until the hinges 2 are above the

tops of the hooks, the free leaves of the hinges will then be turned to open position substantially flat against the adjacent edge of the window casing and the sash frame 5 will be lowered until the lower edges of the free leaves strike the shoulders or bottoms of the supporting hooks 4. In this position the flanges 3 of the free leaves of the hinges will engage the outer vertical edges of the 10 supporting hooks and prevent lateral movement of the adjacent edge of the sash frame, except as about a pivot. When the sash has been lowered to this position it is ready to be swung pivotally on the hinges as a pivot. 15 To allow such swinging the bead section 5 is removed by lifting the same so that the tongues 6 will be withdrawn from the slots in the plates 7. The lower sash frame is now swung horizontally inward on its hinges 20 which are supported from the hooks 4. As it moves inward the sash cords may be disconnected from the frame by simply withdrawing the eye bolts 8 from their sockets 9 leaving the sash frame to swing freely on 25 the hinges 2. If it is desired to clean the upper sash next it is only necessary to swing the lower sash horizontally toward the window casing and connect the sash cords thereto by inserting the eye bolts in their sockets, 30 then continue the swinging movement of the sash until it is seated in its ways in the window frame and raise it to the top of its ways. The ways of the lower sash, of course, are extended sufficiently far upward to permit 35 the lower edge of the lower sash frame to pass upwardly beyond the upper edge of the upper sash frame when the upper sash frame is in lowered position and the lower sash frame in raised position. As it moves up- 40 ward, of course, the free leaves of the hinges will pass from behind the hooks and may be folded to inoperative position. When the lower frame has been raised the upper frame may be lowered, the free leaves of its hinges 45 being turned to position to engage behind

its supporting hooks just as in the case of the lower sash frame. When the hooks and hinge leaves are in coöperative position the removable section of the parting bead may be taken out and the sash frame swung in- 50 wardly just as the prior sash frame was swung, its sash cords also being detached in the same manner as the sash cords of the lower sash frame were detached.

In the modified form shown in Fig. 7, resilient spring plates or caps 6' are substituted for the hooks 6 and sockets 7' are substituted for the sockets 7. 55

It is clear that changes may be made in the construction, arrangement and disposition of the several parts of the invention 60 without in any way departing from the field and scope of the same, and it is meant to include all such within this application where- in only preferred forms have been disclosed. 65

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

A device of the character described comprising supporting brackets adapted to be 70 rigidly secured to the window frame adjacent to the guide ways of the sashes, and plain hinges each consisting of a fixed leaf adapted to be firmly secured to a sash frame and a movable leaf adapted to be swung to 75 position to fit snugly between one of the aforesaid brackets and the window frame, and provided with a longitudinal retaining flange adapted to engage the vertical edge of one of the supporting brackets and prevent 80 relative lateral movement between said supporting bracket and the sash frame to which the hinge is secured.

In witness whereof I have hereunto set my hand in the presence of two witnesses. 85

LEOPOLD MOREL.

Witnesses:

T. MYNARD,
 E. J. GARWIN.