Oct. 15, 1940. J. TAKACH 2,217,997

INSIDE WINDOW SASH FRAME

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Fig. 1

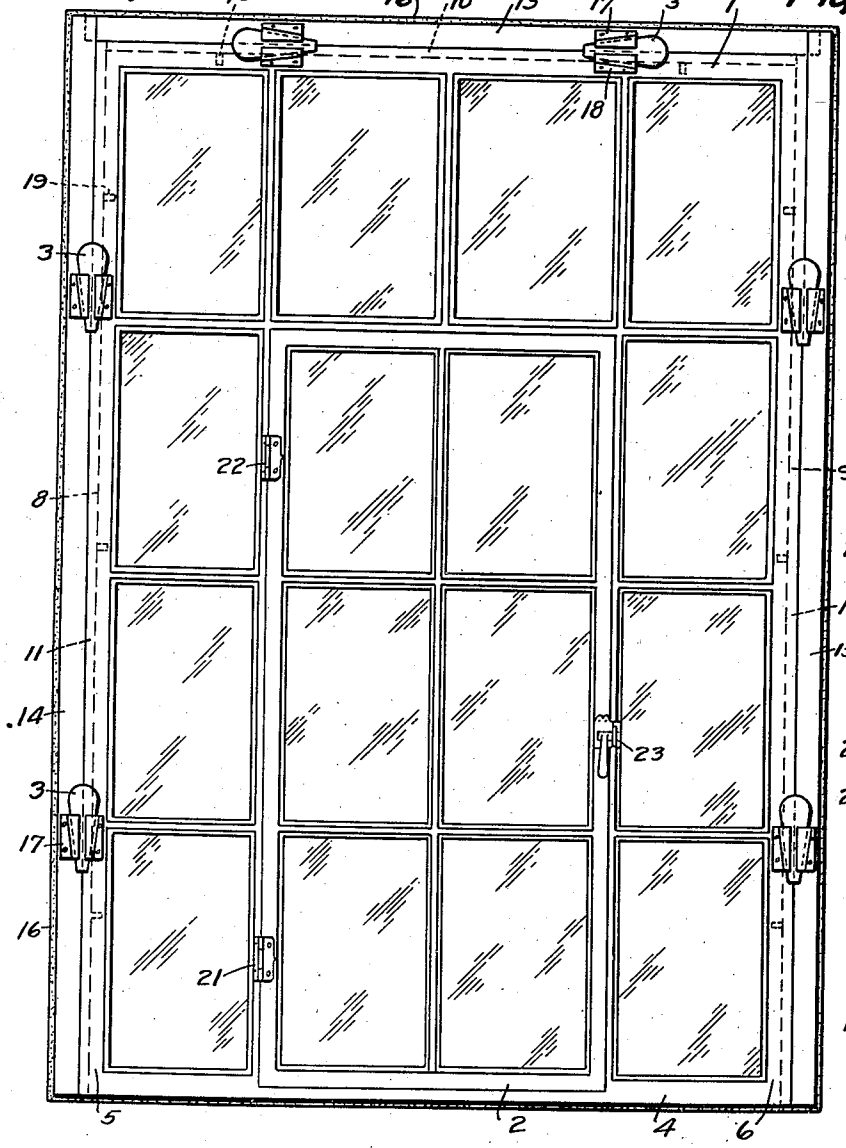


Fig. 2

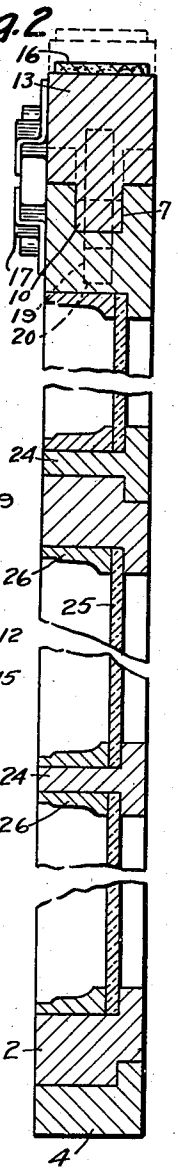


Fig. 3

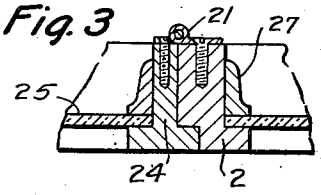
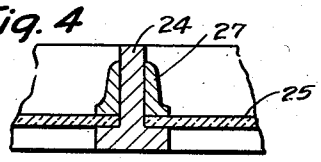


Fig. 4



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Fig. 5

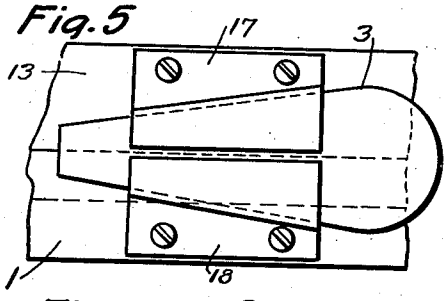


Fig. 7

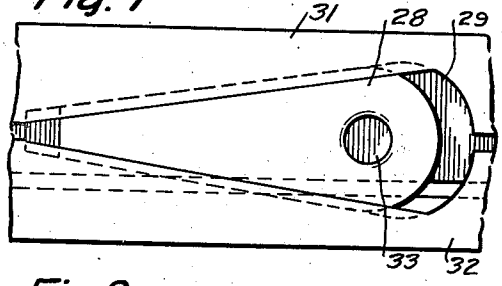


Fig. 6

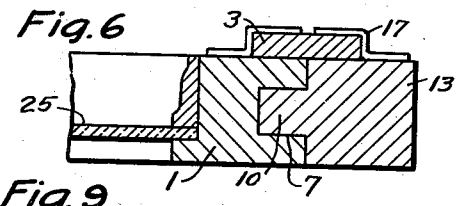


Fig. 8

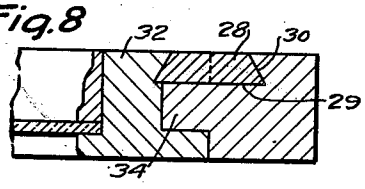


Fig. 9

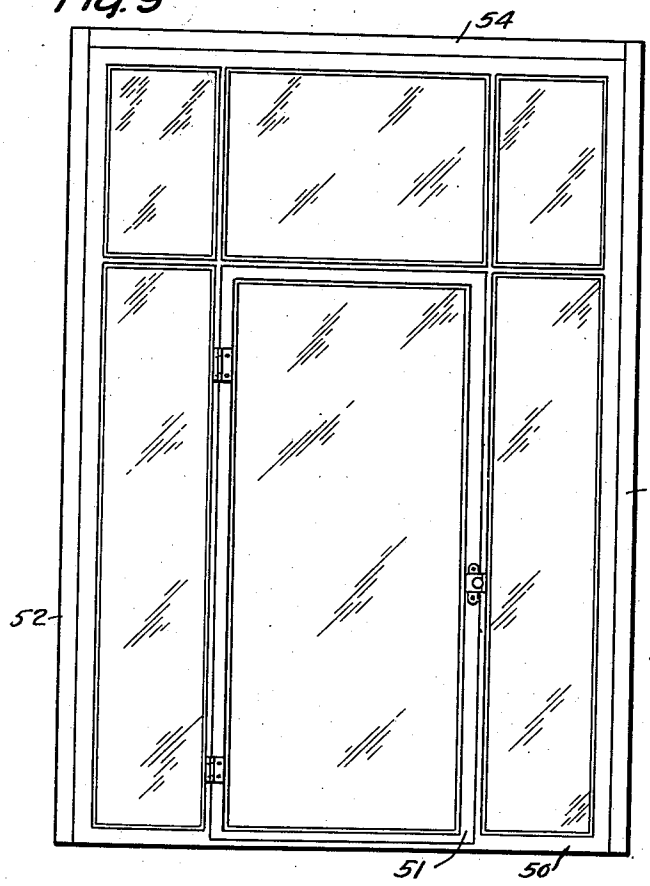


Fig. 10

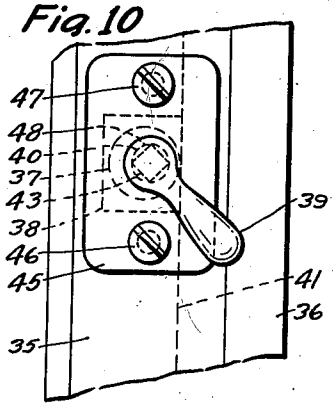
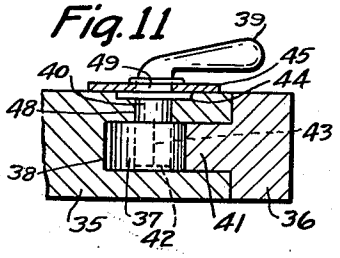


Fig. 11



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UNITED STATES PATENT OFFICE

2,217,997

INSIDE WINDOW SASH FRAME

Julius Takach, Flushing, N. Y.

Application September 29, 1939, Serial No. 297,161

2 Claims. (Cl. 20—55)

The purpose of this invention is to provide means for sealing windows and, particularly, windows of the casement type, by using an inner auxiliary sash completely sealing the window opening.

The invention is a window sash having a hinged door therein, with extension members at the sides and top, and means clamping the sash against the inner surfaces of a window opening inside of the usual sash.

Storm sashes of different types and designs have been provided primarily on the outside of windows, however it usually requires an expert to fit storm sash, and it has been found particularly difficult to use any style of different storm sash with casement windows, or any windows of the pivotal type, and, therefore, it has been found desirable to provide a sash particularly adapted for sealing casement windows which the average layman can install, and which may readily be installed in the window opening by placing it upon the window sill, and then moving parts thereof outward against the inner surfaces of the opening provided for the window and clamping these parts in place, thereby frictionally securing the sash in the window opening.

The object of this invention is, therefore, to provide a simplified sash frame with means whereby it may readily be expanded and clamped in a window opening on the inside of the sash thereof.

Another object is to provide an inside sash adapted to be clamped in the window opening.

Another object is to provide an inside sash having a door therein which may be opened to provide access to opening devices of the outer sash.

A further object is to provide an inside sash frame adapted to be expanded and clamped in the opening for the window inside of the sash of the window, in which the clamping means are substantially hidden.

And a still further object is to provide an inner sash frame for sealing windows which is of a simple and economical construction.

With these ends in view the invention embodies a sash having expanding strips with tongues and grooves in the sides and top, a hinged door in the central part thereof, a continuous fibrous sealing strip around the outer surface, and means wedging the said tongue and groove strips outward against the inner surfaces of a window opening in which the device may be installed.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is a view showing a side elevation of a sash of this type.

Figure 2 is a vertical cross section through the central part of the sash on an enlarged scale, with parts broken away and one of the cross members omitted.

Figure 3 is a detail showing a section through the door hinge with the adjacent frame members.

Figure 4 is a typical section through one of the vertical members of the frame.

Figure 5 is a detail showing an enlarged view of one of the wedge members.

Figure 6 is a cross section through the wedge member shown in Figure 5.

Figure 7 is a view similar to that shown in Figure 5, showing an alternate design in which the wedge member is inserted in a recess in the face of the sash.

Figure 8 is a cross section through the wedge and sash shown in Figure 7.

Figure 9 is a view showing a front elevation of a sash of an alternate design.

Figure 10 is a detail showing another alternate design in which a cam is provided for forcing the extension members outward.

Figure 11 is a detail showing a section through the cam and the mounting therefor.

In the drawings the frame is shown as it may be made, wherein numeral 1 indicates an inner permanent frame forming a sash, numeral 2, a hinged door in said frame, and numeral 3, wedges adapted to spread the frame, providing adjustment for windows of different sizes.

In the design shown in Figure 1, the inner frame 1 is formed with a base member 4, and side members 5 and 6 connected at the upper end by a horizontal member to which the numeral 1 refers, and the members 1, 5 and 6 are provided with grooves 7, 8, and 9 into which tongues 10, 11, and 12 of extension members 13, 14, and 15 extend, and it will be noted that the complete frame may be positioned in a window opening on the inside of a window, and, particularly, a casement window, and then the parts 14 and 15 forced outward against the sides of the window opening, and the part 13 forced upward against the upper surface of the opening, and these parts may be moved outward and upward by the wedges 3 or by any suitable means. The outer surfaces of the side and end members of the complete frame are provided with a felt or fibre strip 16 which may extend continuously around the frame as shown, or may be positioned only on

the sides or top, and it will be noted that, with this strip of felt wedged in between the side and end members, the surfaces of the opening will be absolutely sealed.

In the design shown in Figure 1, these members are wedged outward by wedges 3 mounted between clips 17 and 18 on the frame, and it will be understood that as many of these wedges with the clips may be used as may be desired.

The wedges are normally in the position shown in Figure 1, and, when the frame is in place, the wedges may be tapped to force the members outward against the surfaces of the window opening, and the angle of the bevel of the sides of the wedges is such that they will remain in place.

The sides and ends are also provided with dowel pins 19 fixedly attached to the members 13, 14, and 15, and extending downward into openings 20 in the frame 1, and these provide additional guides preventing lateral bending or twisting of the side end members.

In this design the door 2 is mounted upon the frame 1 by hinges 21 and 22 at one side, and secured by a latch 23 at the other, however it will be understood that the door may be hingedly mounted and held in any manner.

The frame 1 is also provided with cross members 24 which are of a T-shape, having flanges at their outer ends providing seats for glass, which is indicated by the numeral 25, and the glass is held in place by beads 26 in the design shown in Figure 2, the beads being of a slightly different design and indicated by the numeral 27 in Figures 3 and 4.

In the design shown in Figures 7 and 8, wedges 28 are slidably mounted in recesses 29 in the face of the frame, with the edges of the wedges and recesses dovetailed as shown at the point 30, so that the outer surfaces of the wedges may be flush with the face of the frame, and with the wedges positioned between outer members 31 similar to the members 13 and inner members 32 similar to the member 1, it will be noted that these members may be wedged apart by moving the wedges in the recesses. The wedges may be provided with openings 33 in which a screwdriver or the like may be inserted, and it will be noted that the wedge extends downward against the surface of the tongue 34 which is similar to the tongue 10.

In the design shown in Figure 10, the frame is illustrated as being formed of an inner section 35 similar to the section 1, and an outer section 36 similar to the section 13, and a cam 37 is shown in a recess 38 with a removable handle 39 adapted to rotate the cam which is pivoted on a pin 40, and, as the cam is rotated, it will bear against the tongue 41 of the member 36, forcing the member 36 outward. In this design the handle is provided with a square end 42 adapted to be inserted in a correspondingly shaped recess 43 in the cam, and the shank is provided with a collar 44 resting in a recess under an outer face plate 45 which is attached to the frame by screws 46 and 47. It will be noted that the cam may be inserted in a recess, and then the shank of the handle 39 inserted through the opening 48 for the pin 40, and the plate 45 may then be mounted which will secure the handle and pin in position. The shank or pin 40 is, therefore, journaled in the opening 48 and also in an opening 49 in the plate 45.

In the design shown in Figure 9, the outer edge of the frame is constructed similar to that shown in Figure 1, however the frame, which is indicated by the numeral 50, is provided with a door 51, side members 52 and 53, and an upper member 54, and the sides and top may be forced outward by the wedges illustrated in Figure 1, or by the other devices, or by any suitable means. It will be understood, also, that the frame may be of any other type or design, and may be provided for windows of any shape.

It will be understood that other changes may be made without departing from the spirit of the invention. One of which changes may be in the use of other means for expanding and holding the extension parts, another may be in the use of other means for mounting a door in the sash, and another may be in the use of other means for sealing the sash in the window opening.

The construction will be readily understood from the foregoing description. In use the sash may be provided as shown and described, and it will be noted that it may be placed in a window opening with the lower end resting upon the window sill, and the sides and top may be expanded by the wedge members or cam, and, by forcing these members, it will be possible to positively clamp the sides and top against the corresponding surfaces of the window opening, thereby sealing the opening and at the same time positively securing the sash in place.

The sash may be made of various designs to correspond with different types of windows, and the door opening may be provided at any point or points to facilitate opening the sash, particularly of casement windows, and the sealing means may extend continuously around the frame or only at the sides and top as may be desired.

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

1. An inner sash for windows and the like comprising a sash frame substantially of the same size as the inside window opening with sections at the edges of the frame having tongues slidable in grooves in the frame providing expanding means, and clips with sloping inner surfaces with parts thereof on the frame and parts on the sections, and wedges positioned in said clips adapted to force said sections outward.

2. An auxiliary sash frame for windows and the like comprising a frame proper and sections at the edges, said frame being substantially of the same size as the inside window opening, the sections of the frame having tongues slidable in grooves in the frame providing expanding means, and means on said sash frame for moving said sections outward in relation to the frame.

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