Aug. 14, 1951 R. O. COUGHENOUR 2,564,299

COMBINED STORM AND WINDOW FRAME

Filed Dec. 13, 1946 2 Sheets-Sheet 1

Fig. 1

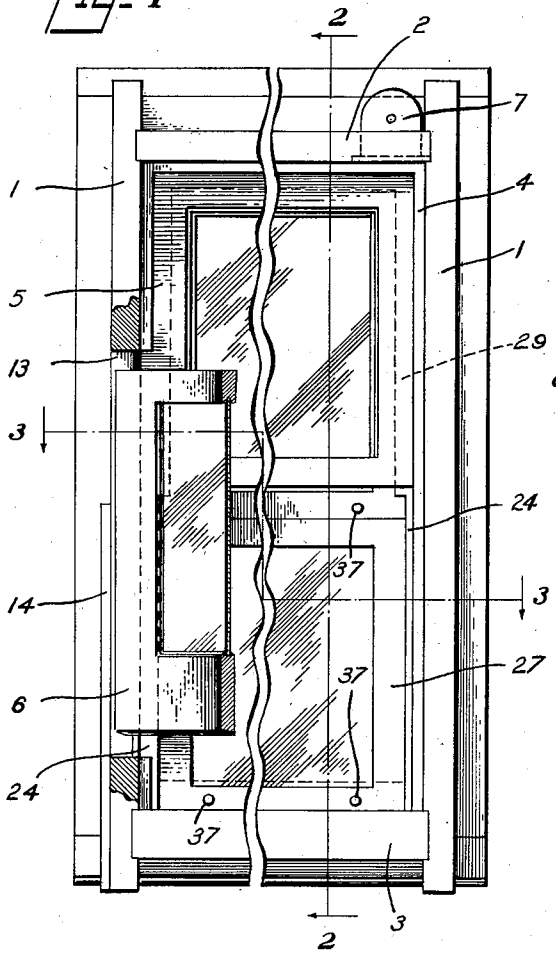
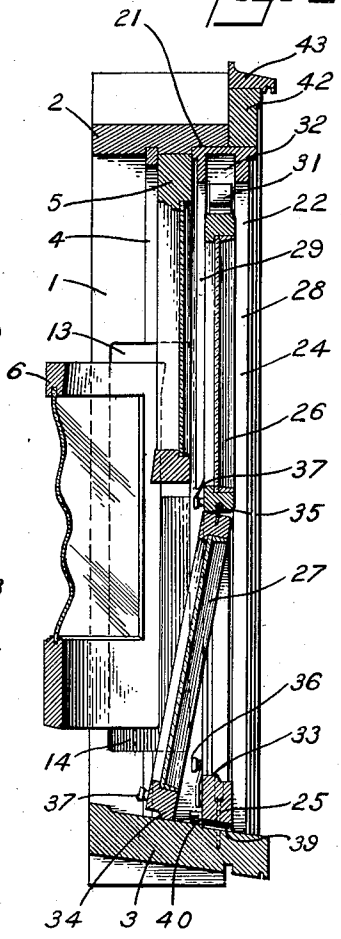


Fig. 2



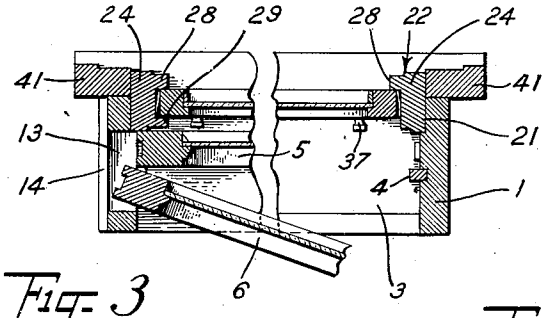


Fig. 3

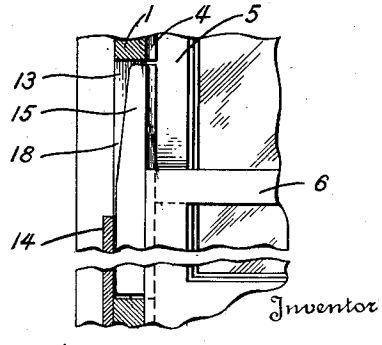


Fig. 4

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COMBINED STORM AND WINDOW FRAME

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Fig. 5

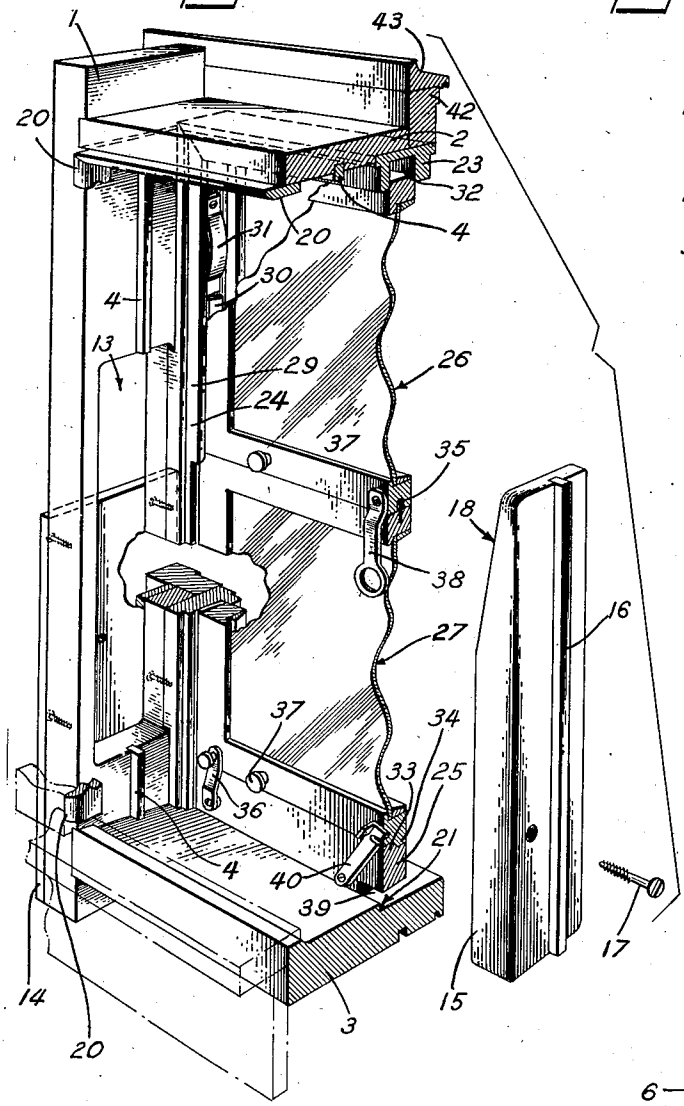
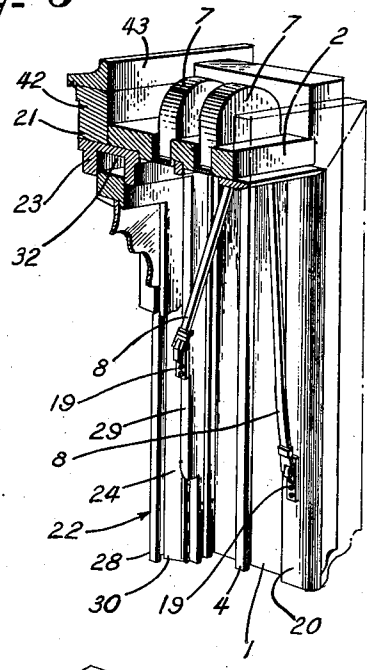


Fig. 6



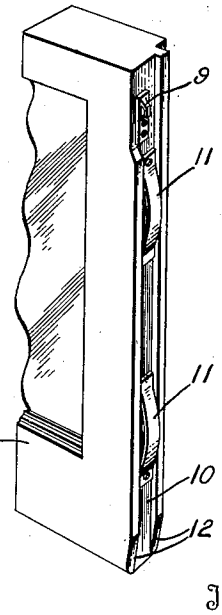


Fig. 7

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2,564,299

COMBINED STORM AND WINDOW FRAME

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Application December 13, 1946, Serial No. 715,975

8 Claims. (Cl. 20—55)

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This invention relates to a combined storm and window frame construction made of wood.

The invention provides a combined storm and window frame constructed so that both the window and storm sash may be individually and selectively removed through the inner side of the frame. In the present invention, the window sash may be removed and the glass cleaned on both the inner and outer faces after which they may be replaced in the frame and then the storm sash may be removed from the inner side of the frame for the cleaning of both sides and subsequent replacement in the frame.

The invention provides a combined storm and window frame construction arranged so that the storm sash frame is built into the window frame for cooperation therewith to provide the outer guide strip for the window sash and at the same time be formed with guide channels for slidably receiving and holding storm sash. The invention comprehends the provision of a combined window and storm sash frame construction wherein the auxiliary top frame bar for the storm sash frame is formed with a channel adapted to have the top storm sash bar engaged therein in two positions, one in which a pair of storm sash in the storm sash frame cooperates to close the opening through the storm sash frame and the window frame with a pocket provided above the top bar of the storm sash into which the upper storm sash may be moved to separate the upper storm sash from a lower storm sash to provide a ventilating opening in the central portion of the window. The storm sash frame includes an auxiliary sill strip which cooperates with the lower storm sash to normally retain it in closed position in the storm sash frame in cooperation with an upper storm sash in closing the opening through the frame. The lower storm sash may also be operated to place the lower end inwardly inside of the auxiliary sill strip to seat on the sill of the frame, while the upper storm sash is moved to its upper limit of movement with the upper storm sash bar fully engaged in the channel in the auxiliary top bar of said storm sash frame. This will provide for a ventilating opening between the upper and lower storm sash that is of increased size from that above referred to.

The invention comprehends the provision of a window frame consrtuction wherein one of the jambs has a removable guide plate forming part of one of the guideways for the window sash throughout a length of the jamb greater than the vertical dimension of a window sash and a supplemental jamb plate mounted on the outer face of said jamb over said opening for cooperation with said jamb for receiving and holding said

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window guide plate in sash guiding position. When this window guide plate is removed from its pocket in the jamb, both window sash may be removed from the inner end of the frame by moving the sash to engage one side in the pocket in the frame. This disengages the other side of the sash from the guideway in the opposite jamb, so that it may be swung inwardly through the open inner side of the frame when the sash may then be removed from the frame for cleaning, painting and the like. The auxiliary jamb and guide strips of the storm sash frame cooperate at the outer side of the jamb to not only provide an outer guide flange for the window sash but also to provide a guide projecting inwardly from the jamb to aid in replacing the window guide plate in the pocket in the jamb.

The invention provides a window frame construction that is adapted to be built into a frame, brick, stone or veneer type of building construction, without modification, in which a storm sash frame is built into the frame construction to provide a combined unitary frame structure for slidably mounting both window and storm sash with means provided so that both the window and the storm sash may be selectively and independently removed through the inner side of the frame.

In the drawings:

Fig. 1 is an elevation of the window frame constructed according to the present invention looking from the inside with the central section and other portions broken away and shown in cross-section to illustrate a fragmentary portion of the left-hand side of a window sash engaged in the pocket formed in the left-hand jamb and the sash extending inwardly in angular relation and partially removed position relative to the frame.

Fig. 2 is a vertical transverse cross-section taken substantially on line 2—2 of Fig. 1 with the storm sash shown in partly removed position to provide a ventilating opening above the top storm sash and about the lower portion of the lower storm sash with a fragmentary portion of one of the window sash shown in partly removed position having a side engaged in the pocket formed in the jamb.

Fig. 3 is a horizontal cross-section taken substantially on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary vertical cross-section taken transversely through the pocket portion of the left-hand jamb with the central portion broken away to illustrate how the window guide plate fits in the pocket.

Fig. 5 shows a fragmentary portion of a combined window and storm sash frame construction

in perspective, looking at the left-hand portion from the inside, with portions broken away and shown in section and other portions removed to illustrate details of construction of the frame and sash and their manner of assembly, the window guide plate being shown in disengaged relation to the frame and in aligned relation with the pocket formed in the jamb, the window sash being eliminated and the retaining screw for the window guide plate being shown in disengaged aligned relation with the opening in the window guide plate.

Fig. 6 is a fragmentary perspective showing the upper right-hand corner of the window frame in perspective looking from the inside at an angle of about 45° and illustrates how the sash balances are mounted in the frame and the tapes secured when the window sash are removed.

Fig. 7 is an enlarged fragmentary view in perspective showing the right-hand side portion of the lower window sash, looking from the inside at an angle of about 45° for illustrating the details of construction of the right-hand window sash stile.

The window frame of this invention is designed to be made of wood or similar material and has a pair of spaced parallel jambs 1 connected at the top by a top frame bar 2 and at the bottom by a sill 3. These frame members are joined together to form a rectangular frame. Top frame bar 2 and jambs 1 have the inner faces formed with central grooves for receiving intermediate guide strips 4 so that the inner edges will project inwardly from the inner faces to form the center divider between a pair of sash guide channels. Upper and lower window sash 5 and 6 respectively, extend between jambs 1 and are slidably mounted against opposite sides of intermediate guide strip 4 in the usual manner well-known in the art.

Sash balances 7 of conventional form are mounted in openings in top frame bar 2, as shown in Fig. 6, adjacent the right-hand end of top frame bar 2. These sash balances are of the spring wind type having flexible metal tapes 8 carrying loops on the end for detachable engagement with hooks on hook plates 9 mounted on the sash stile of the window sash near the upper end, as shown on lower window sash 6 in Fig. 7. The edge of the sash stile for each window sash is formed with a longitudinal groove 10 in which hook plate 9 is mounted at the upper end.

In the present disclosure, only one set of sash balances 7 is illustrated for the window sash, both being mounted in top frame bar 2 each in spaced aligned relation with one window sash guide channel, and each to be used for one of the window sashes 5 and 6, respectively. In this way, the use of a single sash balance for each window sash provides a lift for the sash on one side only. However, two sash balances may be provided, if desired, so as to be connected with opposite sides of the sash in a manner well-known in the art. With the construction using a single sash balance, it is preferred to use resilient bowed spring strips 11, each mounted in longitudinal grooves 10 on the edge of the side stile of each window sash, as illustrated on the side stile in Fig. 7. The two bowed resilient spring strips 11 shown in Fig. 7, are mounted on the upper and lower end portions respectively, of the side stile of sash 6 and cooperate to secure free sliding movement of the window sash in the frame between jambs 1. At the lower end, both upper and lower window sashes 5 and 6 respectively, have the side stile provided with a beveled portion 12. Aside from these described structural features of window sash 5 and 6 respectively, they are of the usual conventional construction.

According to the present invention, one of the jambs, the left-hand jamb 1, as shown in Figs. 1, 3 and 5, is formed with an elongated pocket 13 formed by removing an intermediate portion of the left-hand jamb 1 throughout the portion that provides guide channels for upper and lower sashes 5 and 6. This also includes removal of the intermediate guide strip 4 throughout the length of pocket 13. A supplemental jamb plate 14 is mounted on the outer face of left-hand jamb 1 to cover the lower portion of the opening in jamb 1 forming pocket 13, but leaving the upper portion of said pocket open, as clearly shown in Figs. 1 and 5.

A sash guide plate 15 is formed to detachably fit into said pocket. The inner face of guide plate 15 has a longitudinally extending intermediate guide strip section 16 for alignment with intermediate guide strip 4 of left-hand jamb 1 when guide plate 15 is seated in pocket 13. Guide plate 15 has a thickness equal to that of jamb 1 and when engaged in pocket 13, the outer face engages supplemental jamb plate 14 along the inner face.

Sash guide plate 15 fills pocket 13 so that it is held in position with the inner face in coplanar relation with the inner face of jamb 1 for effectively guiding upper and lower window sash 5 and 6 in the frame in their normal up and down sliding movement. Sash guide plate 15 is formed with a transverse aperture to receive a wood screw 17 of a length to extend through the guide plate and threadedly engage in supplemental jamb plate 14 for rigidly retaining guide plate 15 in pocket 13 in the normal assembled relation in the jamb for normal operation of the window sash. It will be noted that pocket 13 has the lower end terminating a short distance above sill 3 and that the vertical length of pocket 13 is slightly greater than the vertical dimension of either upper or lower window sash 5 or 6, respectively. The upper end of sash guide plate 15 is formed to provide a beveled upper outer face 18.

When upper and lower window sash 5 and 6 respectively, are in the upper position in the window frame between jambs 1, the upper end portion of sash guide plate 15 will extend above the lower ends of these sash. By removing screw 17, the lower end of sash guide plate 15 may be moved inwardly in removing it from pocket 13. Plate 15 will pivot about the lower ends of the window sash in the uppermost position. Since pocket 13 is open at the upper end at the outside of jamb 1, the rearward movement of the upper end of guide plate 15 with bevel face 18 can move outwardly to and beyond jamb 1 and guide plate 15 is easily manipulated in removal from the jamb.

When sash guide plate 15 is removed, lower window sash 6 may then be moved downwardly to a position where the left-hand end is opposite pocket 13. Then, lower sash 6 may be moved to the left, as shown in Fig. 1, into pocket 13 to disengage the right-hand side from the guideway on right-hand jamb 1. Then the right-hand side of sash 6 may be moved inwardly through the window opening to the inside of the window frame where the loop on the end of flexible metal tape 8 may be disengaged from the hook on hook plate 9 carried by sash 6 and attached to the hook on hook plate 19 secured on jamb 1, as shown in Fig.

6. The sash may then be entirely disengaged by inward movement through the window opening to the inside of a building in which the window frame is mounted.

Upper window sash 5 may be moved downwardly and disengaged by manipulation in pocket 13 in the same manner as sash 6 and removed through the inner side of the opening in the window frame. Another hook plate 19, as shown in Fig. 6, is mounted on the window frame to hold the loop on the end of flexible tape 8 when detached from upper sash 5.

After the windows have been cleaned, painted, or other operation thereon completed, it will be clear that by reversing the above-described removal operation, the upper sash 5 may first be inserted into the frame between jambs 1 followed by reinsertion of lower window sash 6. The sash are moved to the upper limit of movement between jambs 1 and sash guide plate 15 replaced in pocket 13.

Inner sash guide strips are indicated at 20 which are applied in a conventional manner to the inner margin of jambs 1 and top frame bar 2 in spaced parallel relation to intermediate guide strips 4 to provide the guide channels in cooperation with the jambs and top frame bar for lower window sash 6. In Fig. 5 the inner trim construction is shown in dot-and-dash lines to illustrate how the window construction may be completed in accordance with usual building practice.

The outer marginal portions of top frame bar 2, jambs 1 and sill 3 are rabbeted, as indicated at 21 to form a seat to receive and mount storm sash frame 22. Storm sash frame 22 is formed of an auxiliary top guide or channel bar 23 mounted in the rabbeted portion 21 of top frame bar 2, auxiliary jamb and guide strips 24 at each side of the frame engaged in the rabbets 21 in jambs 1, and auxiliary sill strip 25. Auxiliary sill strip 25 extends across the bottom of storm sash frame 22 and is engaged in rabbet 21 formed in the upper outer face of sill 3, in the manner clearly shown in Figs. 2 and 5. Auxiliary top bar 23 and auxiliary jamb and guide strips 24 extend inwardly beyond the inner face of top frame bar 2 and jambs 1, as clearly shown in Figs. 2 and 3 to form outer guide strips on the window frame, including jambs 1, for cooperation with intermediate guide strips 4 to provide a complete guide channel for upper window sash 5. As shown in Figs. 2, 3 and 5, the left-hand auxiliary jamb and guide strip 24 forms a continuous guide flange along the outer edge of pocket 13 for cooperation with jamb 1 and sash guide plate 15 to project inwardly beyond jamb 1 and guide sash guide plate 15 into pocket 13.

Auxiliary jamb and guide strips 24 are formed to provide a channel for slidably guiding upper and lower storm sash 26 and 27 respectively. For this purpose, the outer edge portion of each auxiliary jamb and guide strip 24 is provided with an inwardly extending flange throughout the entire length thereof at 28. Inner guide flanges 29 extend from the central portion to the upper end along the inner edge of each auxiliary jamb and guide strip 24 in spaced parallel relation to flange 28 for cooperation to form a guide channel along the inner edge of each strip 24 for guiding the side edges of the storm sash.

Weather stripping may be applied in the grooves formed by flanges 28 and 29 along the inner edges of strip 24 between the flanges. This weather stripping is indicated at 30 and may be in the form of the usual spring strip. The side

edges of storm sash 26 and 27 are arranged to provide a limited amount of space in the guide channels for the reception of the weather stripping 30 and in order that the storm sash are freely slidable in auxiliary jamb and guide strips 24. An arched spring strip 31 is mounted at the upper end in the guideway formed by flanges 28 and 29 on the inner edge of left-hand guide strip 24, as shown in Fig. 5, for engaging upper storm sash 26 for normally and frictionally holding the upper storm sash against accidental movement in guide strips 24. It will be noted that the outer dimensions of the storm sash are less than the inner dimensions of the opening through the window frame. This allows removal of the storm sash through the window frame to the inside. Both the window and storm sash use the same size glass in the sash.

Auxiliary top guide and channel bar 23 is formed with a deep channel portion providing a top storm sash pocket 32, as shown in Figs. 2, 5 and 6 in which the upper sash bar of upper storm sash 26 engages in cooperative relation in the manner shown in Fig. 5, illustrating the storm sash in the normal closed position. Storm sash pocket 32 provides for the upward movement of upper storm sash 26 from the position shown in Fig. 5 until the upper edge of the frame thereof is fully engaged in the pocket. In this position, a space of an inch or two may be provided between the adjacent bars on the upper and lower storm sash to provide for ventilation between the storm sash in the central portion of the window frame.

Auxiliary sill strip 25 is formed along the inner upper edge with an upwardly projecting retaining flange 33, while the lower outer edge of lower storm sash 27 is formed with a depending flange 34. The lower edge of storm sash 27 is formed in complementary relation with the upper edge of auxiliary sill strip 25 for retaining the lower storm sash in closed position in the window frame, as shown in Fig. 5. This complementary construction using retaining flange 33 and depending flange 34 is provided because the inner lower portions of auxiliary jamb and guide strip 24 do not have an inner guide flange on the lower portions thereof.

The inner guide flange 29 on each guide strip 24 extends downwardly over the upper edge of lower sash a sufficient distance to retain the storm sash 27 when located in closed position in the window frame, as shown in Fig. 5. An upwardly extending tongue 35 is mounted in the upper sash bar of lower storm sash 27, projects upwardly from the central portion and extends throughout the length thereof. Tongue 37 is received in a groove formed in the bottom sash bar of upper storm sash 26 in the manner shown in Figs. 2 and 5. This provides an interlocking joint connection between upper and lower storm sash 26 and 27 respectively, when they are engaged in adjacent window closing position in storm sash frame 22.

Latches 36 may be pivotedly mounted on auxiliary sill strips 25 at opposite ends thereof, as shown in Fig. 5, for movement into position so that the free end engages over bottom storm sash 27 for locking it in position against detachment from the storm sash frame 22. Handles 37 are provided on the lower sash bars of storm sash 26 and 27 to facilitate manipulation of the storm sash in detaching and replacing them in storm sash frame 22 and in adjusting them in the frame. Another handle 38 is mounted in the

central portion of the cross bar on the lower part of upper storm sash **26** to project downwardly along the inner side of the upper portion of lower storm sash **27**, as shown in Fig. 5. This handle **38** may be manually engaged in the manipulation of upper storm sash **26** for moving it up into storm sash pocket **32** and removing it therefrom from a convenient position below window sash **5** and **6**.

The central bottom portion of auxiliary sill strip **25** is formed with a recess **39** to provide a drain passage over the upper face of sill **3** so that water or condensation may be drained outwardly through said recess. A gate **40** is pivoted adjacent recess **39** on auxiliary sill strip **25** for movement into and out of a position where it closes recess **39** at the inner end thereof. This is clearly shown in Fig. 5.

The outer edges of jambs **1** have moulding strips **41** rigidly secured thereto to provide flanges extending laterally to the outer sides of the jambs, as clearly shown in Fig. 3. A top moulding strip **42** is rigidly secured to the front edge of top frame bar **2**, as shown in Figs. 2 and 5 and extends upwardly above top frame bar **2**. A water table **43** is mounted on top of top moulding strip **42**. The moulding strips **41** and **42**, and water table **43** complete the outer window frame structure in cooperation with jambs **1**, top frame bars **2** and sills **3**. They also cooperate with storm sash frame **22** since they are mounted in coincident relation with the outer edge portions thereof as will be apparent from the illustrations in Figs. 2 and 3.

This completes the outer structure of the window frame so that it is adapted for use in the window opening of a frame building, the window opening of a brick or stone veneer building, or the window opening in a brick or stone building. In other words, this window frame construction provides what may be called a universal frame structure that does not require modification or additions to adapt it to any one of the different types of building structures above-mentioned, which is not true of the conventional window frame structures now being used.

With the combination window and storm sash frame constructed as above described, it will be clear that when this window structure is mounted in a building in the usual manner, a person may remove both the window sash and the storm sash from the frame operating from the inside. With this new window frame construction, the upper and lower window sash **5** and **6** may be removed in the manner above described by first removing sash guide plate **15**. It is customary in cleaning windows, particularly in cold weather, to remove the inner sash and clean them while the storm sash are left in position, as shown in Fig. 5.

The window sash are then replaced and sash guide plate **15** is replaced in pocket **13** during which time the left-hand auxiliary jamb and guide strip **24** may be used as a guide in the replacement of plate **15** in pocket **13**. After the window sash have been replaced, they are both moved to the uppermost position in the window frame leaving the lower half of the frame open for access to the storm sash. Latches **36** are moved inwardly and downwardly about their pivots out of engagement with lower storm sash **27** whereupon handles **37** on the lower storm sash may be grasped and both storm sash slidably moved upwardly in the guideways formed in storm sash frame **22**. Storm sash pocket **32** provides for this movement so that depending flange **34** may be moved above retaining flange **33** whereupon the lower edge of lower storm sash **27** may be manually drawn inwardly to a position inside auxiliary sill strip **25**. Then, lower sash **27** is dropped down substantially to sill **3** and moved toward the inside of the window frame. This movement of the lower storm sash is provided by the lack of guide flanges on the inner lower ends of strips **24**. The movement of lower sash **27** downwardly inside of auxiliary sill strip **25** disengages the upper edge of the lower storm sash from the lower ends of inner flanges **29** as the lower end of storm sash **27** is moved inwardly into disengaged relation from storm sash frame **22**.

After removal of lower storm sash **27** through the lower portion of the window frame to the inside thereof, one may then proceed to move upper storm sash **26** downwardly in storm sash frame **22** for removal at the bottom in the same manner as the lower storm sash frame was removed. After the sash are cleaned or other work completed and they are ready for replacement, the upper storm sash is first inserted in storm sash frame **22** and moved upwardly into its position in the guideways between flanges **28** and **29**. Then, lower storm sash **27** is placed in position in a manner that will be clear from the above description.

When it is desired to secure ventilation through the combined window and storm sash, upper storm sash **26** may be moved upwardly until the upper edge is fully engaged in pocket **32** in auxiliary top guide and channel bar **23**. This provides a ventilating space between the upper and lower storm sash, while window sash **5** and **6** may be left open at the top and bottom or arranged in any other desired manner to secure ventilation around them through the frame.

Another arrangement is to move lower storm sash **27** inwardly and downwardly so that the lower edge engages sill **3** inside of auxiliary sill strip **25** in the manner shown in Fig. 2. Then, upper storm sash **26** may be moved downwardly to engage the upper edge of lower storm sash **27** and provide a substantially wide ventilating opening across the top portion of the window above the upper edge of upper storm sash **26**, as shown in Fig. 2. The window sash **5** and **6** may be arranged in any desired manner to provide openings for ventilation through the window in combination with the storm sash in the position shown in Fig. 2.

It will also be understood that the storm sash may be replaced by screens. Frames similar to those used for storm sash **26** and **27** are provided with suitable screening in order to provide screens for summer use in place of the storm sash. The screen sections are inserted and removed in exactly the same manner as the storm sash.

By rabbeting the outer margin of jambs **1** and top bar **2** of the window frame to receive bar **23** and strips **24**, it will be understood that the invention provides a structure wherein auxiliary guide strips **24** perform the dual function of providing an outer window sash guide as well as part of a storm sash guide frame structure. In this way, the invention provides a structure that is substantially economical to manufacture in the form of a completed integral combination window and storm sash structure that is adapted for ready installation in any building in a manner well-known in the art.

Auxiliary guide strips **24** replace the conventional blind stops or outer sash guide strips.

Strips 24 guide the window sash in the frame, prevent the window sash from falling outwardly and cooperate in guiding both the window sash and sash guide plate into and out of the pocket in the jamb.

The invention claimed is:

1. A combined storm and window frame construction comprising a frame formed of a pair of spaced parallel jambs joined by a top frame bar and a bottom sill, an intermediate guide strip extending inwardly from the inner sides of said jambs, said jambs and top frame bar having the outer margins formed with rabbets along the inner faces thereof to form a seat, window sash slidably mounted on opposite sides of said intermediate guide strip for cooperation to close the opening through said frame, a pair of auxiliary jamb and guide strips each mounted in one of the rabbets in said jambs with the inner edges projecting inwardly from said jambs to form guide strips for said window sash, said auxiliary jamb and guide strips having spaced inwardly projecting guide flanges on inner opposite sides thereof cooperating with said intermediate guide strips to form sash guide channels on said jambs for the outer window sash and for storm sash along the inner edge thereof, and an auxiliary top channel bar seated in the rabbet in said top frame bar and depending below the inner face of said top frame bar to form a top window sash retaining strip, and storm sash slidably mounted in said storm sash guide channels of said auxiliary jamb and guide strips having a top sash bar adapted to engage in said auxiliary top channel bar.

2. In a combined storm and window frame construction having a frame formed of spaced parallel jambs joined by a top frame bar and a bottom sill, an intermediate guide strip extending inwardly from the inner central faces of said jambs for slidably guiding window sash on opposite sides thereof between said jambs, the combination of a storm sash frame having auxiliary jamb and guide strips, an auxiliary top guide bar joining said auxiliary jamb and guide strips, said jambs and top frame bar being formed with rabbets on the inner face of the outer margins for receiving said auxiliary jamb and guide strips and said auxiliary top guide bar therein with the inner edges of said auxiliary jamb and guide strips and said auxiliary top bar projecting inwardly of the inner faces of said jambs and top frame bar for cooperation therewith to form outer guide flanges for slidably retaining said window sash in said frame, and said storm sash frame having the inner edges of said auxiliary jamb and guide strips and said auxiliary top bar formed with guide channels to slidably receive storm sash in said auxiliary jamb and guide strips with the top sash bar of said storm sash engaging said auxiliary top bar.

3. In a combined storm and window frame construction having a frame formed of spaced parallel jambs joined by a top frame bar and a bottom sill, an intermediate guide strip extending inwardly from the inner central face of each jamb for slidably guiding window sash between said jambs on opposite sides thereof, the combination of a storm sash frame having auxiliary jamb and guide strips, an auxiliary top guide bar joining said auxiliary jamb and guide strips, an auxiliary sill strip joining the lower ends of said auxiliary jamb and guide strips, said jambs, top frame bar and sill being formed with rabbets on

the inner faces of the outer margins to provide a rabbet extending completely around the inner face of the outer margin of said frame for receiving said storm sash frame in said rabbets, said auxiliary jambs and auxiliary top bar projecting inwardly from the inner faces of said jambs and top frame bar for cooperation therewith to form outer guide flanges for slidably retaining said window sash in said frame, and said storm sash frame having the inner edges of said auxiliary jamb and guide strips formed with guide channels to slidably receive storm sash therein, said auxiliary top bar and said auxiliary sill bar being formed for cooperation with top and bottom sash bars on storm sash slidably engaged in said auxiliary jamb and guide strips in providing a storm sash closure for said frame independently of the closure formed by said window sash.

4. In a combined storm and window frame construction having a frame formed of spaced parallel jambs joined by a top frame bar and a bottom sill, an intermediate guide strip extending inwardly from the inner central faces of said jambs for slidably guiding window sash on opposite sides thereof between said jambs, the combination of a storm sash frame having auxiliary jamb and guide strips, an auxiliary top guide bar joining the upper ends of said auxiliary jamb and guide strips, and an auxiliary sill strip joining the lower ends of said auxiliary jamb and guide strips, said frame having said jambs, top bar and sill formed with a rabbet in the outer marginal portion thereof extending entirely around the inner face of said frame to provide a seat receiving said storm sash frame with the inner edges of said auxiliary top bar and said auxiliary jamb and guide strips projecting inwardly beyond the inner faces of said top frame bar and jamb for cooperation to provide outer guide members for cooperation with said intermediate guide strips to slidably retain the outer window sash in said frame, said auxiliary jamb and guide strips having guide flanges mounted on the outer sides of the inner edges thereof and extending from end to end in inwardly projecting relation, inner guide flanges projecting inwardly from the inner upper ends only of the inner sides of the inner edges of said auxiliary jamb and guide strips in spaced parallel relation to said outer guide flanges for cooperation therewith in slidably receiving the outer side edges of storm sash in the channels formed in said storm sash frame, said auxiliary top bar being formed with a channel on the inner edge thereof for receiving the upper edge of a top storm sash bar and said auxiliary sill strip being formed for complementary cooperation with a bottom storm sash bar to retain a bottom storm sash against inward movement from said storm sash frame, whereby a pair of storm sash may be mounted in edge-to-edge relation one above the other in said storm sash frame for cooperation to close the opening in said frame and for removal inwardly through said frame by moving said storm sash upwardly in said storm sash frame for disengaging the complementary portions between the bottom storm sash bar and said auxiliary sill strip with inward movement of a lower storm sash from said storm sash frame through said frame with subsequent removal of an upper storm sash from said storm sash frame by moving it to the lower end thereof and then inwardly.

5. In a combined storm and window frame construction having a frame formed of spaced parallel jambs joined by a top frame bar and a

bottom sill, an intermediate guide strip extending inwardly from the inner central faces of said jambs for slidably guiding window sash on opposite sides thereof between said jambs, the combination of a storm sash frame having auxiliary jamb and guide strips, an auxiliary top guide bar joining said auxiliary jamb and guide strips and having a storm sash pocket formed therein, said jambs and top frame bar being formed with rabbets on the inner face of the outer margins for receiving said auxiliary jamb and guide strips and said auxiliary top guide bar therein with the inner edges of said auxiliary jamb and guide strips and said auxiliary top bar projecting inwardly of the inner faces of said jambs and top frame bar for cooperation therewith to form outer guide flanges for slidably retaining said window sash in said frame, guide flanges on said auxiliary jamb and guide strips for slidably guiding storm sash therein with the top sash bar of a storm sash adapted to extend into said storm sash pocket whereby upper and lower storm sash mounted in said storm sash frame may be separated to provide a ventilating opening therebetween when the upper sash is fully engaged in said storm sash pocket.

6. A combined storm and window frame construction comprising a frame having spaced parallel jambs, a top frame bar joining said jambs at the upper end and a sill joining said jambs at the lower end, an intermediate guide strip extending inwardly from the inner central faces of said jamb in longitudinally extending relation between the upper and lower ends thereof, window sash slidably mounted between said jambs on opposite sides of said central guide strip, said frame having a rabbet formed in the outer margin about the inner edge thereof, a storm sash frame mounted in said rabbet and extending inwardly beyond to the inner faces of said jambs to provide an opening of smaller size in said frame, said storm sash frame having auxiliary jamb and guide strips engaged in the rabbets in said jambs for cooperation with said intermediate guide strip to provide outer window sash guide strips, inner window sash guide strips mounted on the inner edge of said jambs, one of said jambs having an aperture formed therein extending between the inner and outer guide strips and extending vertically of the jamb a distance slightly greater than the height of a window sash, a supplemental jamb plate mounted on the outer face of the last-mentioned jamb and covering a portion of said aperture therein for cooperation to form a pocket, a sash guide plate removably mounted in said pocket and guided into said pocket by the adjacent auxiliary jamb and guide strip for normally retaining said window sash slidably engaged between said jambs in cooperation with each other, the absence of said sash guide plate opening said pocket to provide for window sash removal through the inner end of said frame, said storm sash frame being formed to detachably and slidably receive storm sash therein of a size adapted to pass through said frame to the inside.

7. A combined storm and window frame construction comprising a frame having spaced parallel jambs, a top frame bar joining said jambs at the upper end and a sill joining said jambs at the lower end, an intermediate guide strip extending inwardly from the inner central faces of said jamb in longitudinally extending relation between the upper and lower ends thereof, window sash slidably mounted between said jambs on opposite sides of said central guide strip, inner guide strips mounted on the inner margins of said jambs in spaced parallel relation to said intermediate guide strips, auxiliary jamb and guide strips mounted on the outer edges of said jambs in spaced parallel relation to said intermediate guide strips, said inner and outer guide strips cooperating with said intermediate guide strips to form guide channels on the inner faces of said jambs for slidably guiding window sash therein, one of said jambs having an aperture formed therein extending between said inner guide strip and said auxiliary jamb and guide strip of a length intermediate the ends of said jamb to receive a window sash therein to provide for removal of said window sash through the inner side of said frame, a sash guide plate having an intermediate guide strip thereon detachably mounted in said aperture in said one jamb, said auxiliary jamb and guide strip forming a guide for guiding said plate into said aperture and also cooperating with said plate in guiding window sash in said frame, and said auxiliary jamb and guide strips having guide channels formed on the inner edges thereof inwardly of the channels in said jambs for slidably and removably mounting storm sash therein.

8. A window frame construction, comprising a frame having spaced parallel jambs, a top bar joining said jambs at the upper end and a sill joining said jambs at the lower end, an intermediate guide strip extending inwardly from the inner central faces of said jambs in longitudinally extending relation between the upper and lower ends thereof, inner and outer guide strips mounted on the inner and outer margins respectively of said jambs in spaced parallel relation to said intermediate guide strips for cooperation to form guide channels on the inner faces of said jambs for slidably guiding window sash therein on opposite sides of said intermediate guide strip, one of said jambs having an aperture formed therein extending between at least one of said inner and outer guide strips and the opposite side of said intermediate guide strip of a length intermediate the ends of said jamb to receive a window sash therein to provide for removal of said window sash through the inner side of said frame, a flat supplemental jamb plate mounted on the outer side face of said one jamb over said aperture to close the lower outer end portion of said aperture, and a sash guide plate having an intermediate strip thereon detachably mounted in said aperture in said one jamb for normally guiding sash in movement in said frame opposite said aperture, said supplemental jamb plate cooperating to retain said sash guide plate in aligned position in said aperture.

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