Jan. 27, 1953 L. J. MILONE 2,626,658

TRIPLE SLIDING WINDOW

Filed Feb. 3, 1949 4 Sheets-Sheet 1

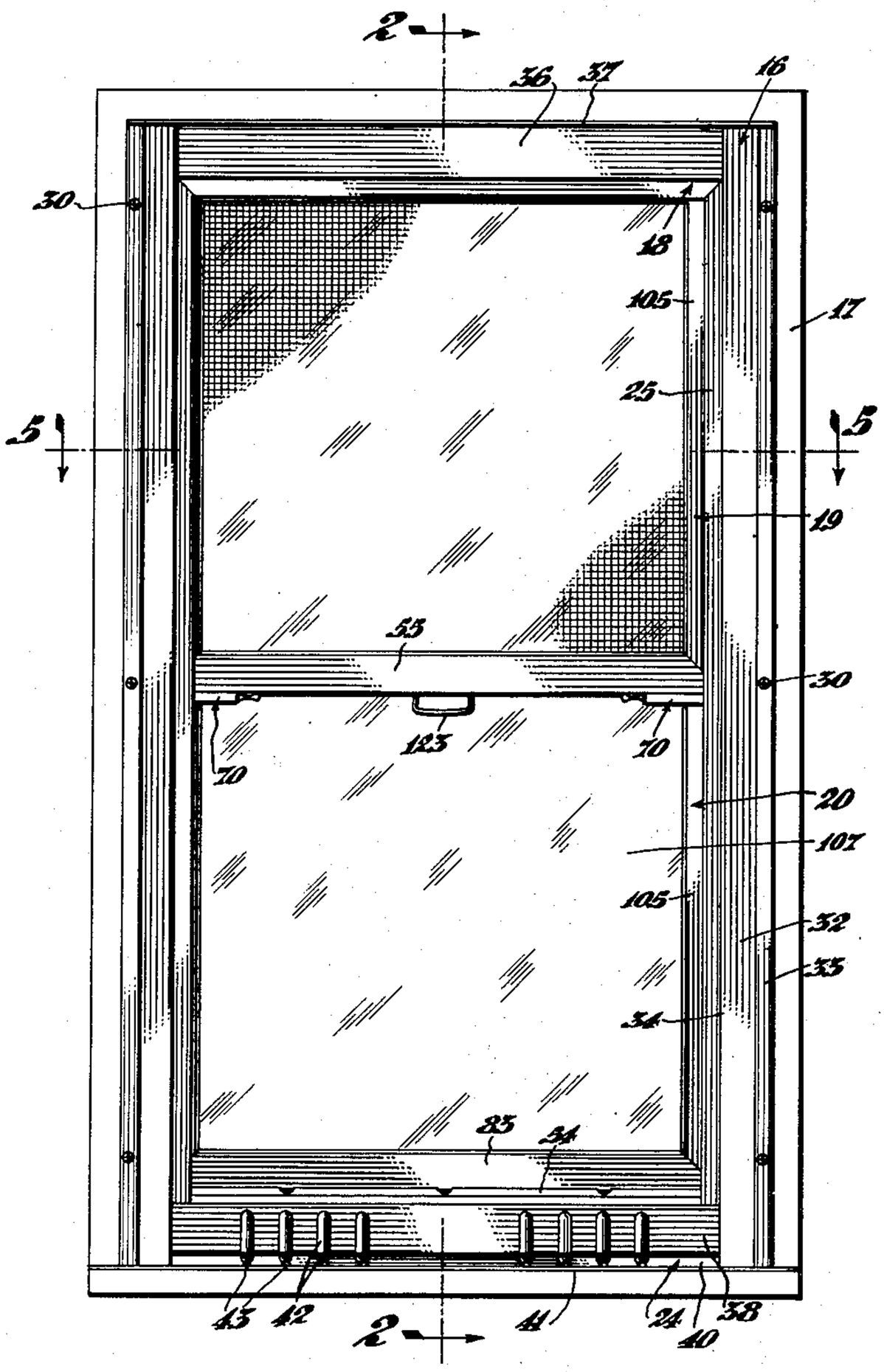

Fig. 1

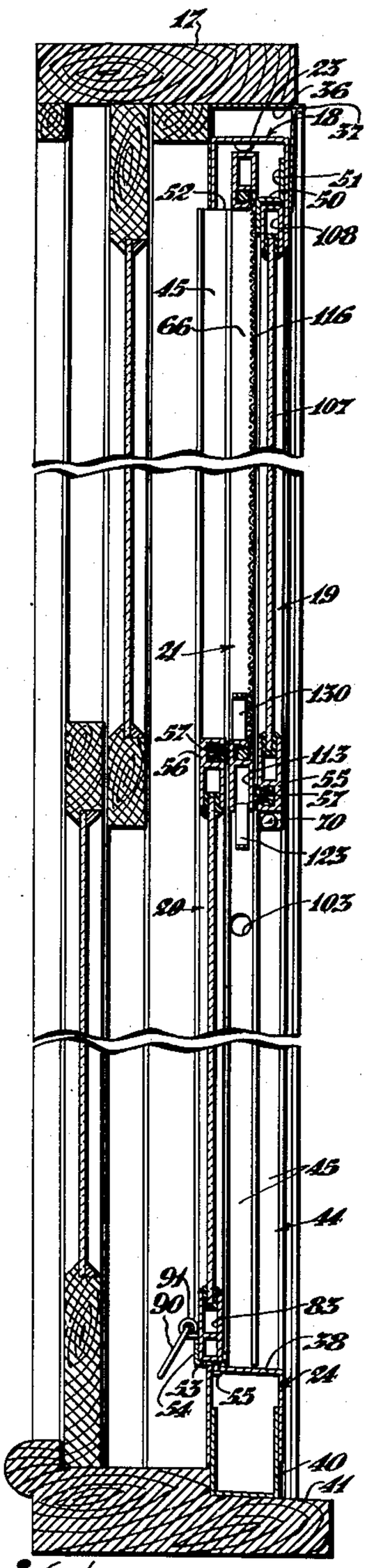

Fig. 2

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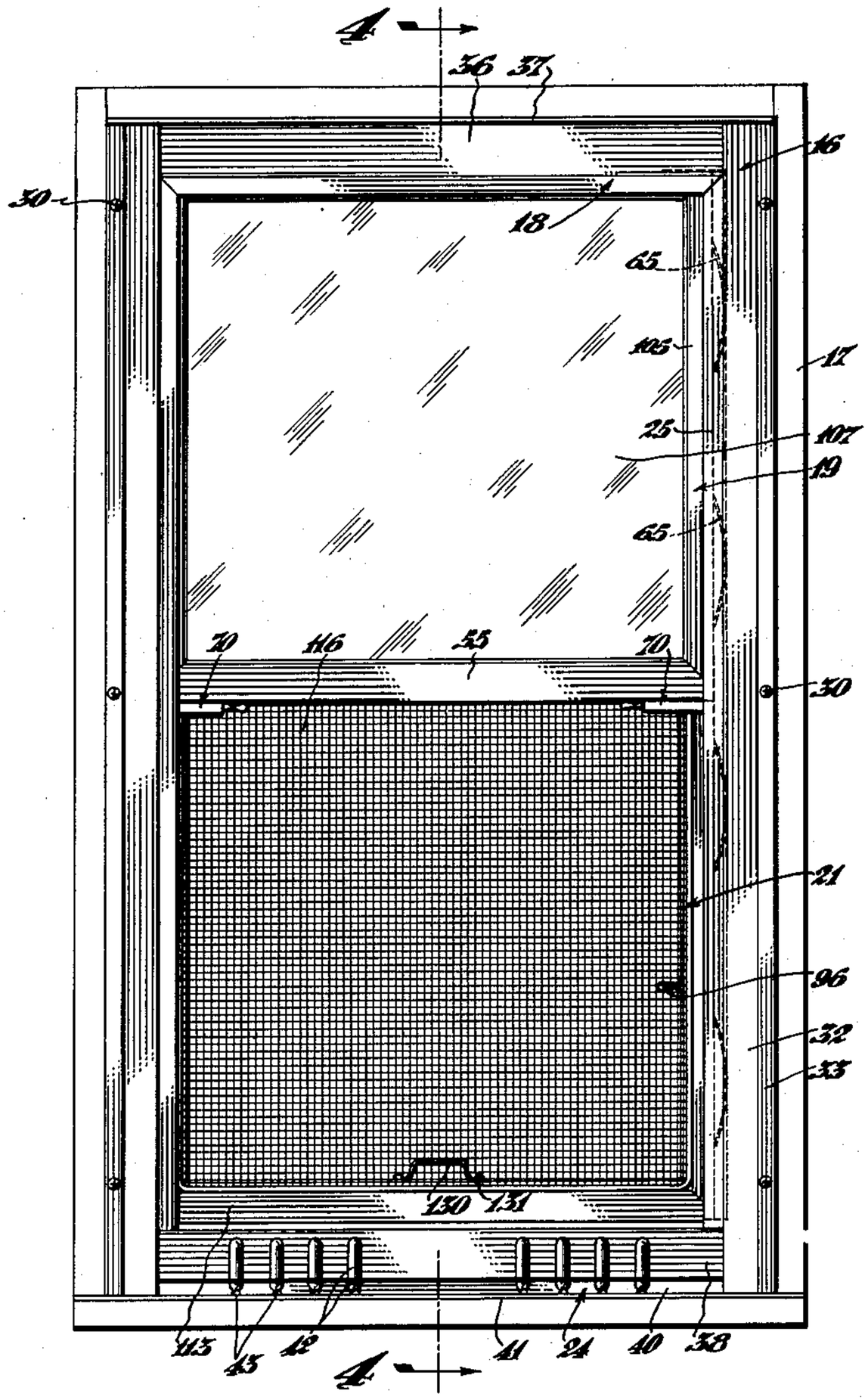

Fig. 3

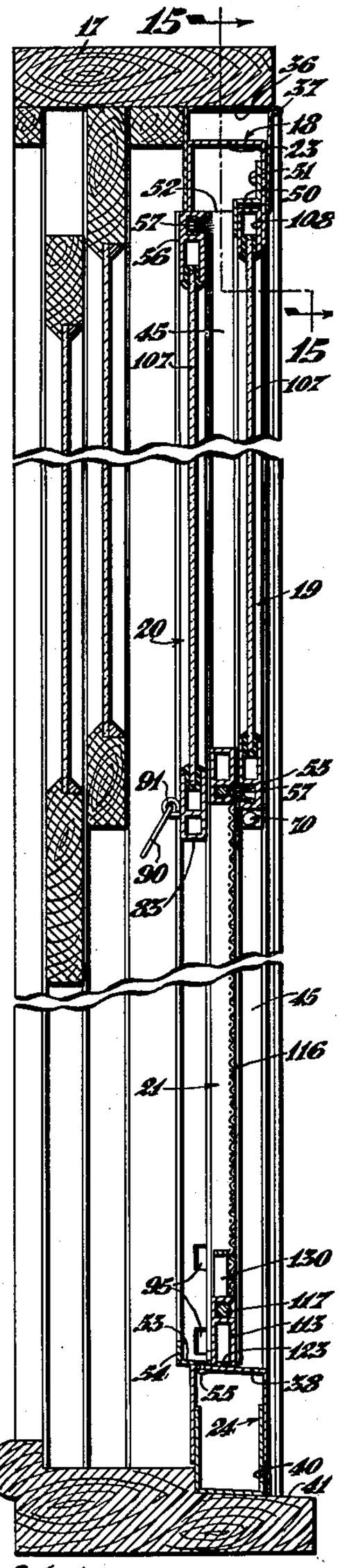

Fig. 4

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TRIPLE SLIDING WINDOW

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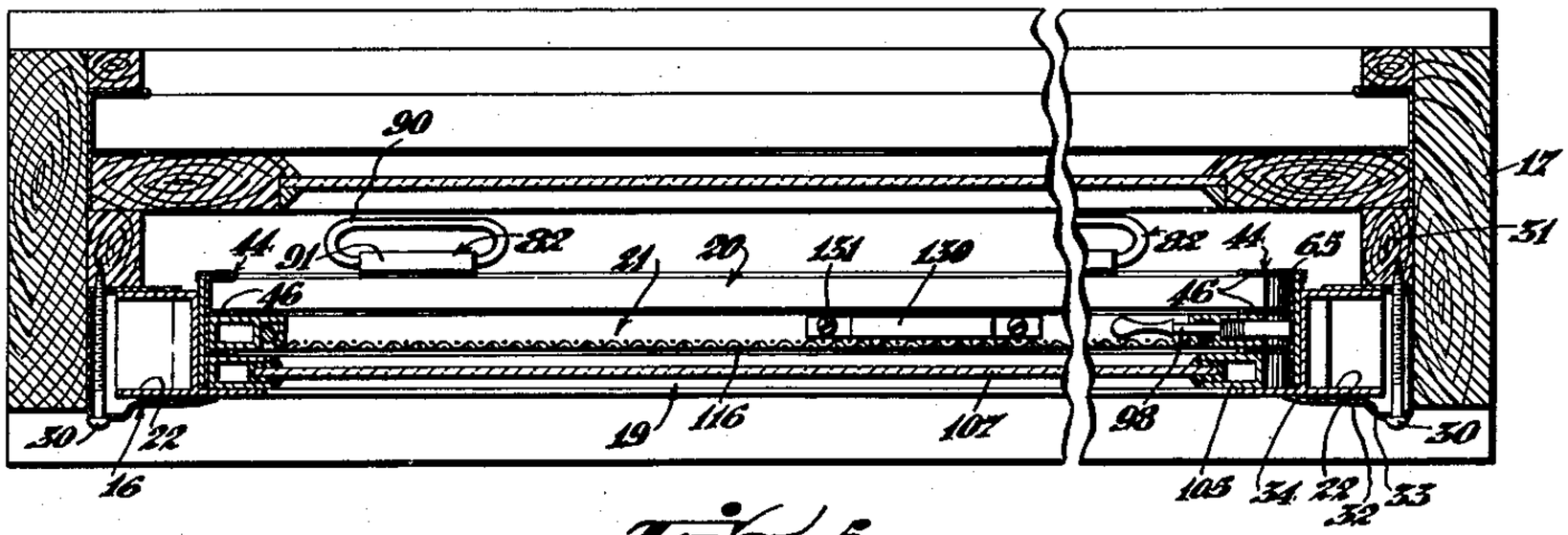

Fig. 5

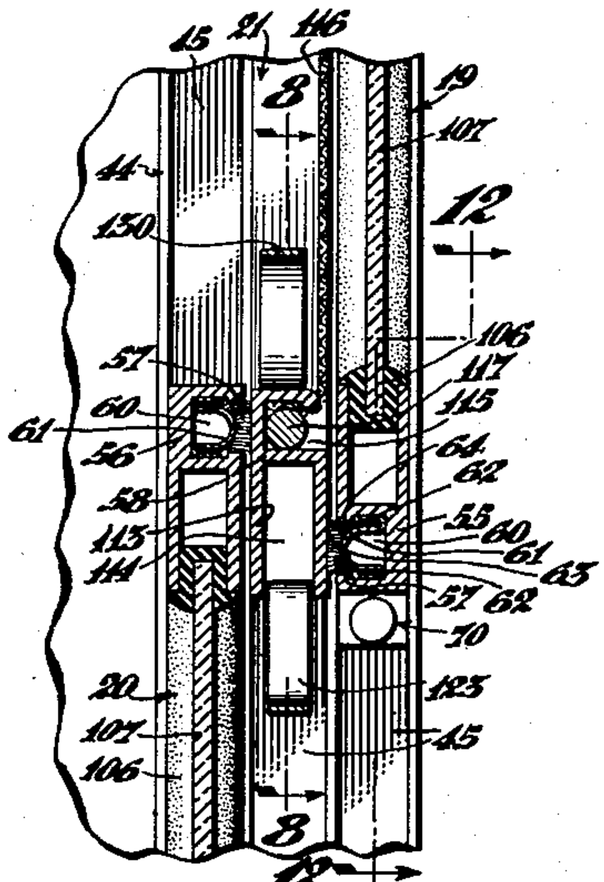

Fig. 6

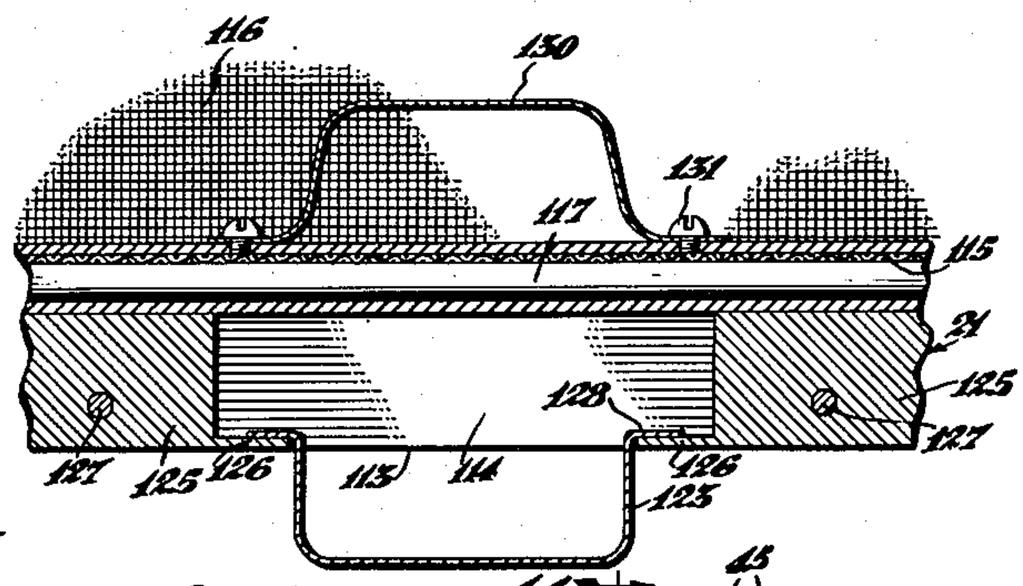

Fig. 8

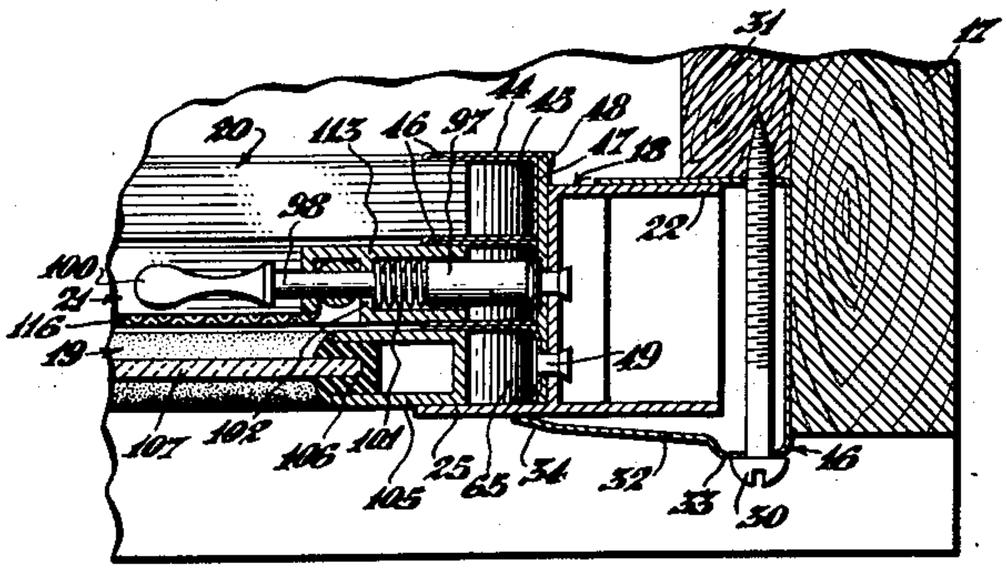

Fig. 7

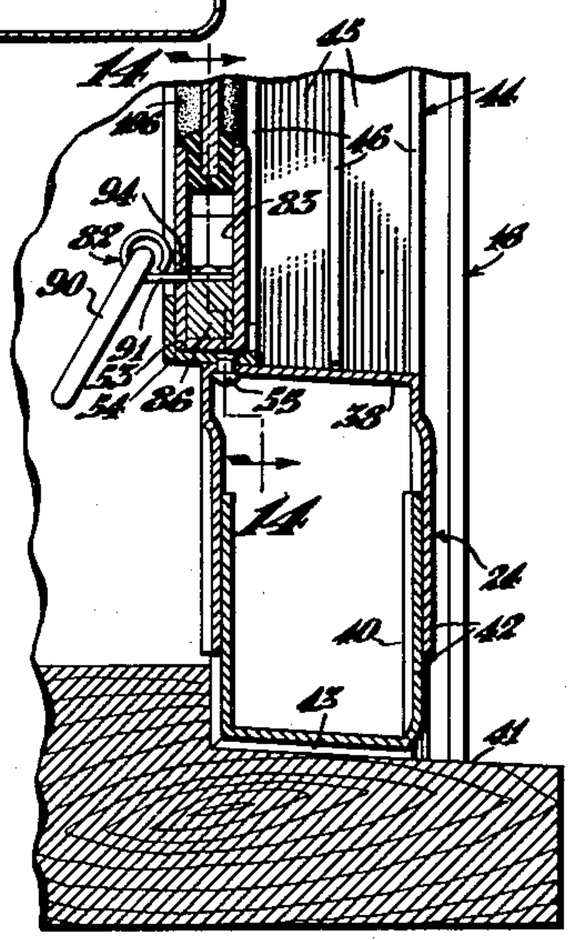

Fig. 9

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Jan. 27, 1953 L. J. MILONE 2,626,658

TRIPLE SLIDING WINDOW

Filed Feb. 3, 1949 4 Sheets-Sheet 4

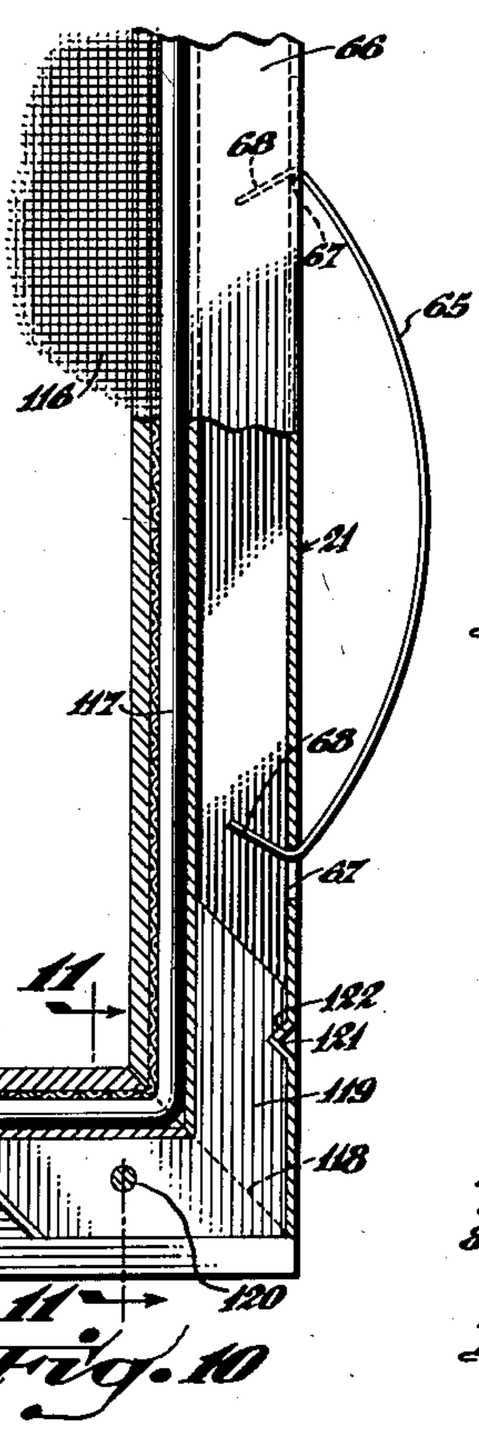

Fig. 10

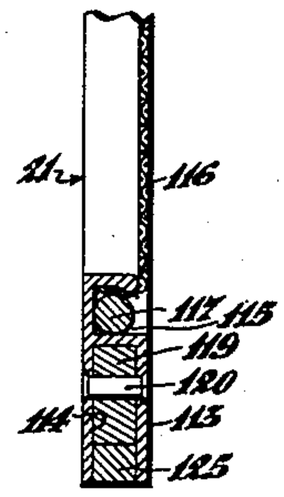

Fig. 11

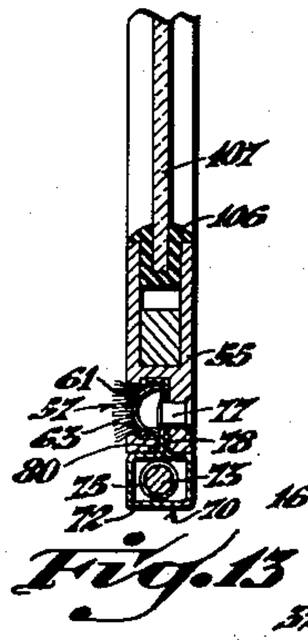

Fig. 13

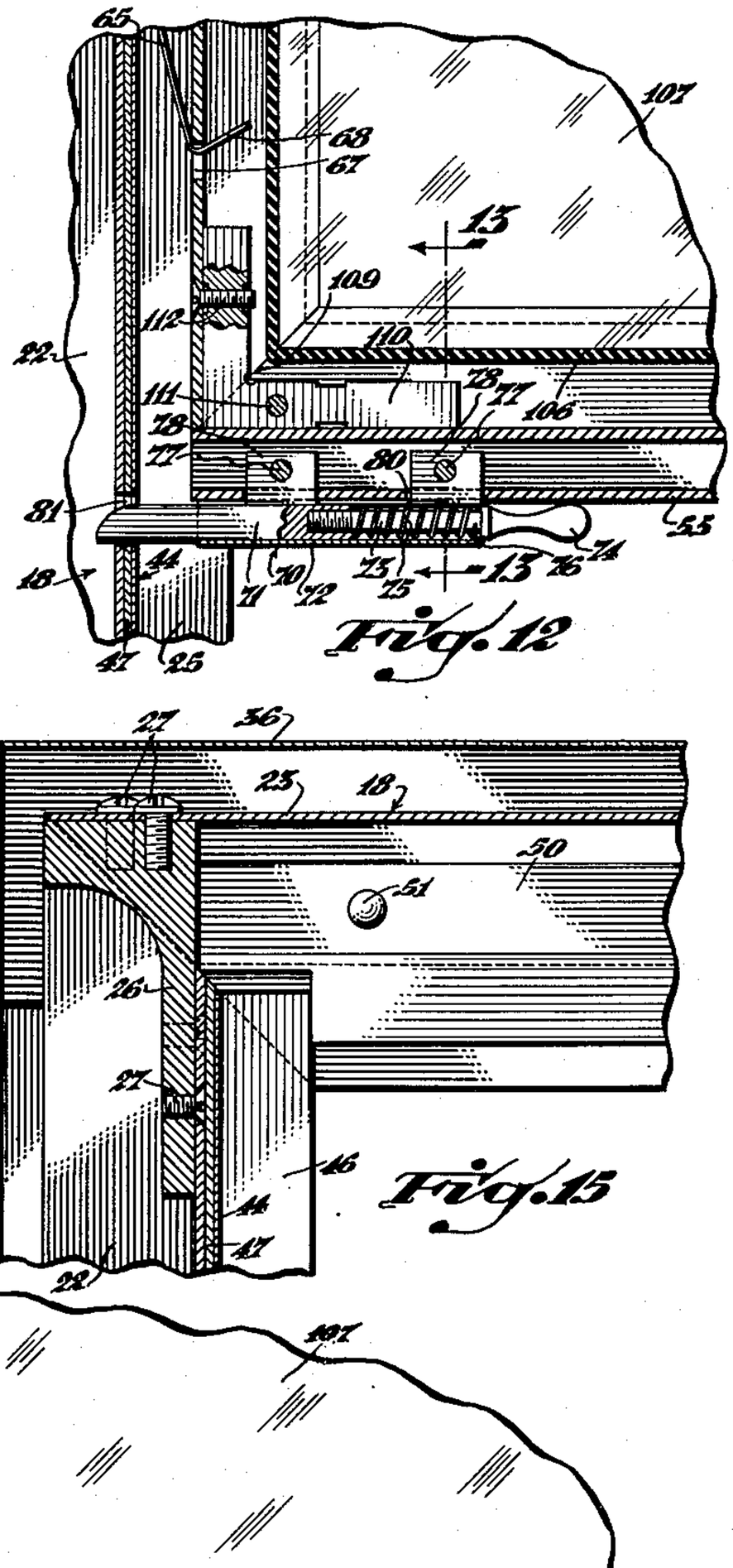

Fig. 12

Fig. 15

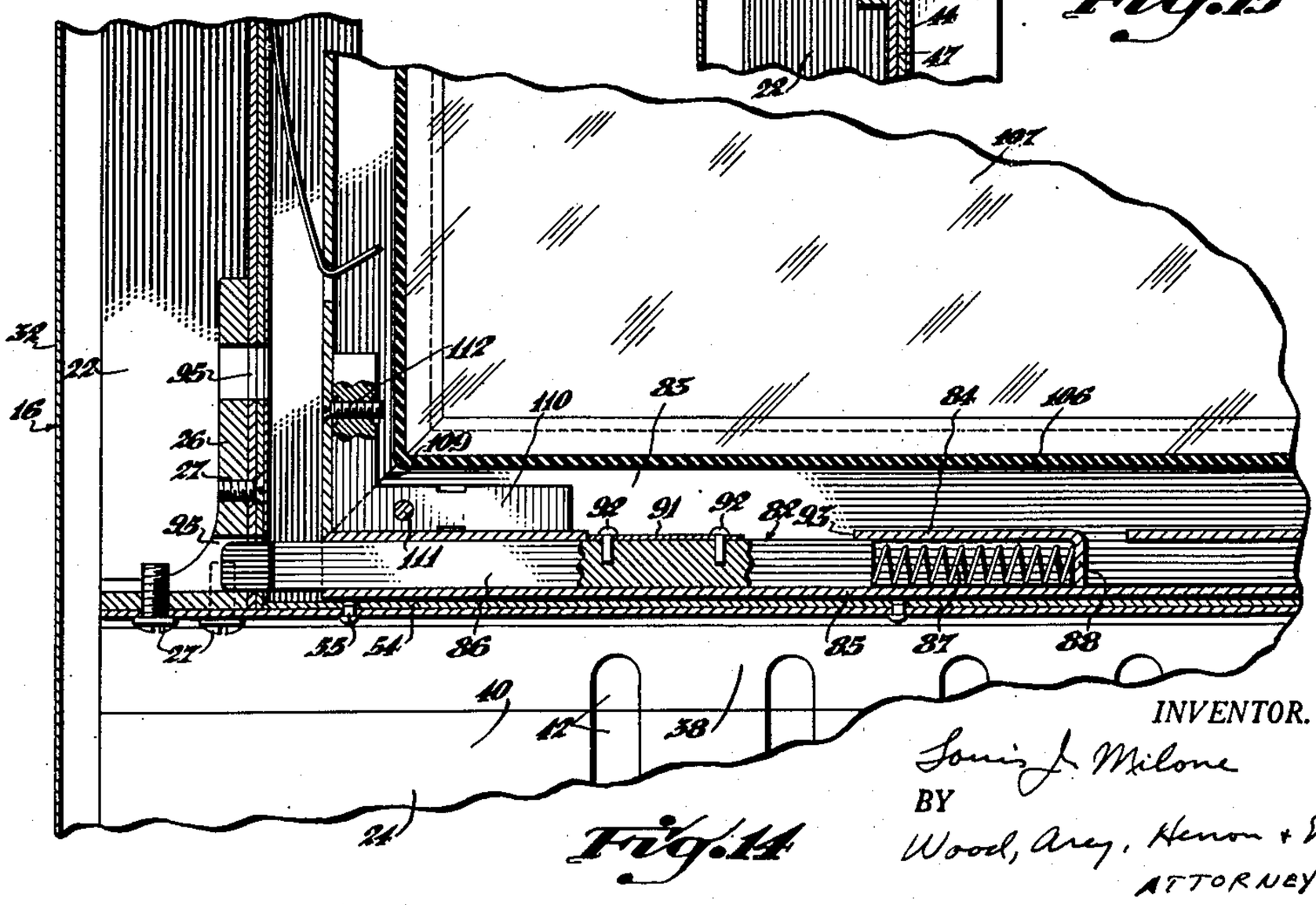

Fig. 14

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UNITED STATES PATENT OFFICE

2,626,658

TRIPLE SLIDING WINDOW

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Application February 3, 1949, Serial No. 74,358

2 Claims. (Cl. 160—101)

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This invention is directed to storm window units which are adapted for permanent installation in residential buildings and the like, at the outside of the conventional windows of the building to provide protection against heat loss during winter seasons. The principal objective of the invention has been to provide an assembly having slidable sashes which are arranged in double-hung relationship to one another, in conjunction with a screen sash, these three members being adjustable to relative positions to provide full weather type protection, without ventilation in the coldest weather, partial ventilation as desired when the temperature is less severe, and full ventilation through an insect screen during summer months. More specifically, the objective has been to provide these features of adjustability in a compact structure which requires less manipulation of the assembly than the various storm sash units which are now available.

In the construction of the present installation, the handling of screen sashes to equip the unit for summer service and the handling of glass panels, with removal of the screen sash, to equip the unit for winter service is eliminated by the provision of an assembly having double-hung, slidable, storm sashes and a screen sash all permanently mounted in a frame.

The lower storm sash and screen sash are arranged interchangeably to occupy the same position at the lower portion of the frame so that the householder may convert the unit, at the change of seasons, simply by lowering one sash and elevating the other to a storage position in the frame. Each sash is mounted in a separate runner or slideway, and the screen member is interposed between the two storm sash members. The meeting rails of the storm sashes are provided with sealing strips facing each other, so arranged that the lower rail of the screen sash is interposed between the strips to complete the seal when the screen is in its elevated position in winter. Thus, when the screen is lowered, one of the sealing strips establishes a seal with the upper rail of the screen to prevent small insects from entering the house. Ease of movement of the sashes has been accomplished by improvements in the construction of the slideways to provide a smooth sliding fit and establish a weather-tight seal between the sashes and frame.

Sections of aluminum extruded to be of the desired shape in cross section are used conveniently in the fabrication of the respective elements of the present assembly. However, al-

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though extruded aluminum is smooth when new, it is not well suited at mating slidable surfaces inasmuch as the aluminum tends to become galled or roughened during service after which the friction between the sliding part becomes excessive as does the wear. To eliminate this difficulty, the present invention contemplates a structure in which the slide panels for the respective members of the assembly present faces of stainless steel which embrace the sides of the sashes, to provide a weather-tight seal, and at the same time permit the sashes to slide smoothly even after prolonged service. In this respect, the stainless steel of the present improvement is very thin, too much so to be self-sustaining but it is clinched in place to derive support from its cooperating aluminum backing member. Therefore, the invention utilizes the ease of fabrication conferred by sections of extruded aluminum, in conjunction with the free sliding action conferred by stainless steel and since the actual weight of stainless steel employed is very low, the overall cost of this additional feature is inconsequential.

Each of the sashes is provided with a latch operable to lock the sash either closed or partially opened for ventilation during the winter season. The screen sash is provided with a disappearing handle which depends from its lower rail for convenience in lowering the sash from its storage position and which disappears into the lower rail when the screen sash is lowered to the sill. By virtue of these features, the unit is installed permanently in the window opening, provides efficient protection during the winter season and may be converted to summer use easily and conveniently by the housewife.

Other details and advantages of the invention are more fully disclosed in the specification with reference to the drawings in which a preferred embodiment of the invention is illustrated.

In the drawings:

Figure 1 is a general view of the storm window unit as viewed from the outside of a building, showing the storm sashes in closed position for winter use, the screen sash being in its elevated storage position.

Figure 2 is an enlarged fragmentary sectional view taken on line 2—2, Figure 1, illustrating generally the relationship of the sashes when the unit is conditioned for winter usage.

Figure 3 is a general view similar to Figure 1, showing the screen sash in its lowered position for summer usage.

Figure 4 is an enlarged fragmentary sectional view taken on line 4—4, Figure 3.

Figure 5 is an enlarged fragmentary sectional view taken on line 5—5, Figure 1.

Figure 6 is an enlarged fragmentary sectional view of the meeting rails of the storm sash and screen sash frames taken from Figure 2, detailing the manner in which a weather-tight seal is established between the storm sashes.

Figure 7 is an enlarged fragmentary sectional view taken from Figure 5, detailing the construction and installation of the storm sash frame and guide rail together with one of the latch plungers for locking the screen sash in a selected position.

Figure 8 is an enlarged fragmentary sectional view of the lower rail of the screen sash frame detailing the disappearing handle arrangement for the lower cross rail.

Figure 9 is an enlarged fragmentary sectional view taken from Figure 2, further detailing the construction of the lower rail of the storm window frame with reference to the sill of a window and showing a portion of the lower storm window sash in closed position.

Figure 10 is an enlarged fragmentary sectional view illustrating the structural details of the screen sash.

Figure 11 is a sectional view taken on line 11—11, Figure 10, further detailing the screen sash construction.

Figure 12 is a fragmentary sectional view taken on line 12—12, Figure 6, detailing the corner construction of the upper storm sash frame and the latch for locking the sash in its raised position.

Figure 13 is a sectional view taken on line 13—13, Figure 12, further detailing the sash frame structure.

Figure 14 is an enlarged fragmentary sectional view taken on line 14—14, Figure 9, detailing the construction of the lower storm sash frame and latch for locking the lower sash in selected positions.

Figure 15 is an enlarged fragmentary sectional view taken on line 15—15, Figure 4, detailing the upper corner construction of the storm window frame with the sashes removed.

Referring particularly to Figures 1 and 3 of the drawing, the storm window unit in general constitutes an adaptor frame 16 formed from U-shaped strips installed within a standard window frame 17 and telescopically embracing the top and sides of the storm window frame generally indicated at 18 (Figures 1 and 2). It will be seen that the storm window frame 18 is telescopically embraced by the adaptor frame 16 in such manner that the adaptor frame compensates for variations in the standard window frame 17 and establishes a weather-tight seal between the window opening and the storm window frame 18. Slidably mounted within the storm window frame is an upper storm sash 19, a lower sash 20 and a screen sash 21. These respective sashes may be removed conveniently from the storm sash by springing the sashes laterally to the right as viewed in Figure 5, as hereinafter described.

The storm window frame 18 is fabricated and assembled in various sized units by the manufacturer and constitutes a pair of side frame members or stiles 22—22, a cross rail 23 at the top and a cross rail 24 at the bottom. The side members 22—22 are in the form of aluminum extrusions generally of U-shaped cross section facing outwardly and including a marginal flange 25

extending inwardly to provide a retaining flange for the upper sash (Figure 7). The side members 22 also include slideways for the sashes which are described in detail in another point in the specification. The storm window frame members are joined together at the corners by insert brackets 26 inserted within the members and secured by screws 27 as shown in Figures 14 and 15.

The storm window frame is installed as a unit by means of the U-shaped adaptor strips 16. These are slipped upon the side members 22—22 of the frame and the entire unit is placed in the window opening. The adaptor strips 16 then are extended laterally into abutment with the surface of the window frame and a series of wood screws 30 are passed through the strip into the sash stop rail 31 of the window frame as shown in Figure 5. The adaptor strips 16 are formed from relatively thin sheets of yieldable aluminum alloy, the outer limb 32 being configurated to provide a bead 33 and an angular marginal edge 34 adapted to engage the outer surface of the marginal flange 25 of the side member 22. The adaptor strips are shaped to engage the members 22 under spring tension such that the adaptor member must be sprung open to receive the side rail 22. This arrangement permits the adaptor strips to be placed in position and to be adjusted conveniently in adapting the frame unit to the window opening to facilitate installation. The screws 30 press the edge 34 firmly against the frame members 22 to hold the frame 18 securely by frictional engagement and to provide a weather-tight seal.

The top rail 23 of the storm sash frame is telescopically received by the top adaptor frame strip 36 as shown in Figures 2 and 15. The adaptor strip 36 is installed upon the top rail 23 prior to the application of the side members 16 with the upper ends of the side members overlying the top members as shown. The outer edge of adaptor strip 36 is doubled upon itself to provide flange 37 for engagement by the upper end of the side members 16. It will be observed therefore, that the sides and top of the storm window frame is engaged by the adaptor frame 16 so that the unit is conveniently adjusted to fit standard window openings which may vary considerably from standard size and shape by adjusting the individual adaptor strips as required. The arrangement is such that the only fitting required is to cut the adaptor strips to length should they be oversize. After the screws 30 have been tightened, the storm window frame 18 is of course frictionally locked in position with respect to the adaptor strips.

As shown in Figures 1, 2 and 9, the lower rail 24 of the storm window frame is of two piece construction consisting of a pair of U-shaped rails 38 and 40, the rail 38 forming a part of the frame unit and telescopically engaged over the rail 40. The lower rail 40 is frictionally engaged by rail 38 and may be adjusted with respect to the sill 41 of the standard window frame. Therefore, the rail 40 will compensate if the window sill 41 is not level. Rails 38 and 40 are provided with mating corrugations 42 (see Figures 1 and 9) arranged to maintain the two sections longitudinally in alignment and also providing passageways 43 to permit draining of condensation from the space between the storm sashes and standard window sashes. From the foregoing, it will be observed that the unit may be adjusted laterally and longitudinally relative to the adaptor frame so that the storm window frame may conven-

iently be fitted to window openings within its size range even though considerable variation as to size and shape is present.

The respective sashes 19, 20 and 21 are slidably mounted within the frame 18 by means of the runners indicated generally at 44 (Figures 5 and 7). After a period of exposure to the atmosphere, aluminum tends to oxidize or corrode, tending to make sliding difficult. Also, by reason of its softness, aluminum has a tendency to wear rapidly and to become scratched and marred, which further interferes with the sliding action. In order to overcome this problem, the slideways or runners 44 are constructed from stainless steel sheet metal which is doubled upon itself to form the three channels 45, for the respective sliding sashes. These channels are delineated by the respective partitions 46 formed by folding the sheet upon itself, the sheet being riveted to a strip 47 formed preferably from aluminum. The innermost partition is clinched as at 48 upon the edge of strip 47. If desired, the strip 47 may be made part of the stile extrusion 22, with the slideways secured directly to the stiles. By reason of the inherent flexibility of the sheet metal, the partitions 46 exert a slight pressure engagement with the opposite sides of the sashes to provide a weather seal. The runner assembly is secured to the side rail by means of rivets 49, the inner ends of which are countersunk to avoid interference with the sliding of the sashes. The sashes 19, 20 and 21 are individually slidable with respect to each other and each sash is provided with latching apparatus hereinafter described, to lock the sash in selected positions.

As shown in Figures 2 and 15, the head rail 23 of the storm window frame is somewhat different from the side members or stiles 22—22. As shown, the head rail preferably constitutes an aluminum extrusion having an angle strip 50 secured by rivets 51, forming an inset portion to seat the top rail of the upper sash 19. The head rail extrusion includes an opening 52 to permit the top rail of the screen sash to extend within the head rail when the screen sash is elevated as shown. The lower rail 24 of the storm sash frame also is provided with a recess 53 to receive the lower rail of the lower sash 20 as shown. Recess 53 is formed by an angle strip 54 riveted as at 55 to the upper one of the pair of U-shaped rails 38—40. By virtue of the spring urged runners 44 and the recesses 52 and 53 the top and bottom of the upper and lower sashes are engaged about their entire peripheries substantially in weatherproof contact with the storm sash frame. The meeting rails of the upper and lower sashes are sealed with respect to each other by means of the mohair strips illustrated in Figure 6 to complete the seal.

Except for the top cross rail of the upper storm sash 19, the framing members of the storm and screen sashes are made from aluminum extrusions which are substantially the same but which are altered according to the requirements of the several members. As detailed in Figure 6, the lower rail 55 of the upper sash and the upper rail 56 of the lower sash each is provided with a sealing strip indicated generally at 57. These seals contact the opposite sides of the lower rail 58 of the screen sash which is interposed between the meeting rails 55 and 56 when the storm sashes are closed and the screen raised as shown. The rails 55 and 56 are provided with a groove 60 open to the screen sash rail 58. The seal 57 in its preferred form constitutes a U-shaped

sheet metal strip 61 having its opposite side edges 62—62 doubled over and clinched upon the opposite edges of a strip of mohair fabric 63 to form a brush-like sealing engagement with the screen cross rail. This assembly is inserted in the slot 60 and the slot 60 includes overhanging lips 64—64 to engage the edges 62—62 of the strip 61 to lock the strip in place. The seals 57 are constructed as units and are installed by pressing them into the grooves 60 whereupon they establish a snap fit with respect to the grooves. The seal is established automatically when the unit is conditioned for winter use with the screen sash raised in its storage position and the storm sashes closed. When the unit is conditioned for summer use by elevating the lower storm sash and lowering the screen sash as shown in Figure 4, the mohair seal of the upper sash establishes a seal with the upper rail of the screen sash to prevent the entrance of small insects. The use of mohair for the seals is of advantage because this material provides a maximum sealing effect with a minimum frictional engagement with the cross rail.

The respective sashes 19, 20 and 21 are removably mounted within their respective runner channels by means of curved leaf springs 65 mounted within the right hand frame members of the respective sashes as shown in Figures 3 and 10. The side framing members 66 of each sash is provided with sets of openings 67 adapted to receive the angular ends 68—68 of the leaf springs as shown in Figure 10 to lock the springs in place. Each sash is provided with a pair of leaf springs as shown in Figure 3. As viewed in Figures 3 and 5, the leaf springs are located along the right hand side of the sashes so as to urge the sashes to the left. It will be noted in Figure 5 that the partition 46 of the right hand runners are considerably lower than the right hand partitions. By pressing the sashes toward the right, the leaf springs 65 may be compressed sufficiently to disengage the left hand edge of the sashes from their grooves so that the sashes may be removed for replacement or cleaning. This arrangement also facilitates installation since the storm window frame 18 may be installed with the sashes removed for convenience in seating the frame in the window opening. After installation, the sashes may be slipped in place from inside the building.

In order that the sashes may be locked in selected adjustments, each sash is provided with spring pressed latches. As shown in Figure 1, the latches 70—70 for the upper sash 19 are secured to the lower cross rail 55. Described in detail with reference to Figures 12 and 13, each latch 70 constitutes a plunger 71 slidably sustained in a housing 72 formed from sheet metal. A pull rod 73, including a handle 74 is screw-threaded into the end of plunger 71 and a spring 75 is maintained in compression between the end of plunger 71 and the end 76 of the housing. The housing is secured to the rail 55 by means of rivets 77 passing through upwardly extended ears 78—78 forming a part of housing 72, the rail 55 being slotted as at 80 to admit the ears into the rail. The stiles 22 of the frame are provided with a set of apertures 81—81 for engagement of plunger 71 when the sash is in its elevated position as shown in Figures 1 and 3. If desired, the stiles may be provided with additional apertures 81 for latching the sash at other selected positions.

The lower storm sash 21 is provided with a

pair of latches 82—82, located within the lower cross rail 83 so as to permit the framing member to fit snugly within its sill recess 53, in closed position. Described with reference to Figures 9 and 14, the lower rail 83 comprises an extrusion generally similar to cross rail 55 of the upper sash, being U-shaped in cross section and including an intermediate wall 84 and a lower wall 85 forming a tubular section which is used as a slideway for the latch plunger 86. A spring 87 is maintained under compression against the inner end of plunger 86, the opposite end of the spring being seated against a stop 88, formed by severing a section from the intermediate wall 84 and bending the section downwardly at right angles to the wall. The plunger 86 is actuated by the handle or loop 90 which is secured to the plunger by means of bracket 91 which in turn is secured to the plunger by means of rivets or drive screws 92—92. A portion 93 of wall 84 is removed to provide the necessary clearance for the bracket 91, as shown in Figure 14, and the handle end of bracket 91 extends inwardly through a clearance slot 94 in the vertical wall of the lower rail as shown in Figure 9. As shown in Figure 14, the stile members 22 of the frame are provided with apertures 95 arranged to engage the end of plunger 86 to latch the lower sash either in closed position or at selected elevations. In operation, the loops 90 are drawn inwardly toward each other to disengage the plungers and the sash is free to be shifted to the desired position. If a slight amount of ventilation is desired, the second aperture shown in Figure 14 is utilized and when the sash is elevated fully for summer use, the plunger is engaged in an aperture (not shown) located to latch the sash in the position shown in Figure 4.

Since the screen sash 21 is considerably lighter than the storm sashes, a single latch 96 (Figure 3) will suffice although if desired, a pair of latches may be employed. The screen latch plunger is detailed in Figure 7 and constitutes a plunger 97 slidably mounted within the side frame member of the screen sash and arranged to lock the sash in closed position. A pull rod 98 having a handle 100 is screwthreaded into the inner end of plunger 97 and a spring 101 is maintained in compression between the end of the plunger and a wall 102 of the side member. The storm window side rail 22 is provided with an aperture to latch the screen in its closed position, the aperture being indicated at 103 in Figure 2. The screen sash preferably is held by friction in its elevated position shown in Figure 2, with the upper rail of the screen sash frame extending within the hollow head rail 23 of the storm sash frame. When the screen sash is in this position, its lower cross rail is in position between the mohair seals 57 as shown in Figures 2 and 6. It will be apparent that if desired an aperture may be provided to lock the sash in this position, but this is not necessary because the sash is light in weight and sufficient pressure is exerted by the springs 65 to hold it securely.

The storm sash frames are of duplicate construction, the side framing members 105 being in the form of channel shaped extrusions (Figure 7) with the open side of the frames facing inwardly to receive a U-shaped gasket 106 formed from rubber or other resilient material, marginally embracing the edge of the window pane 107. The upper cross rail 108 for the top sash is a

duplicate of the side framing members and receives the gasket 106 in the same manner as the side framing members. The lower cross rail for the upper sash 55, previously described with reference to the mohair seal and latches, likewise includes a U-shaped portion to receive the gasket as shown in Figures 6 and 12.

The lower sash is substantially the same as the upper except for the upper cross rail which is a duplicate of the lower cross rail of sash 19 as detailed in Figure 6. The glass panel 107 is mounted by means of the gasket 106 as previously described. The gasket 106 preferably is in the form of a continuous strip bent around the corners as shown in Figure 14 to avoid unnecessary joints and provides a water-tight seal between the glass and the framing members.

As detailed in Figures 12 and 14, the corner joints of the sashes are formed by a miter joint, indicated at 109, the framing members being connected together by angular insert brackets 110 which are inserted within the channel portion of the adjacent members prior to the installation of the glass panels. As shown, the inserts 110 preferably are secured to the respective cross members by means of the rivet 111 and the side members are then secured to the insert 110 by means of a machine screw 112 passing from the outside of the framing member into screw-threaded engagement with the insert bracket. By virtue of this arrangement, the assembly of the sashes is facilitated, and the sash frames may be taken apart for replacement of the glass panels by removing the screws 112.

The screen sash frame 21 is fabricated from hollow aluminum extrusions 113, as detailed in Figures 6, 7 and 8. Extrusion 113 provides an outwardly facing channel 114 and a laterally facing channel 115 for mounting the screen cloth panel 116. The screen panel is secured in the channel 115 by a thin rod 117, the marginal edge of the panel being looped under the rod 117 with the rod forced into the channel 115 to establish a press fit and at the same time to stretch the screen panel tautly within the frame. The rod 117 preferably is formed from a soft material such as lead so that it may deform under pressure to facilitate assembly and preferably is a continuous length of material bent around the corners of the screen frame as shown in Figure 10. The corners of the screen framing members are mitered as at 118 and are joined together by angle insert brackets 119 which are inserted in the adjacent hollow framing members as shown. The inserts 119 are secured to the cross members by a rivet 120 and the vertical members are secured by clinching the outer wall of the framing member as at 121 into a notch 122 formed in the insert.

The lower cross member of the screen sash frame is provided with a disappearing handle 123 (Figure 8). This handle provides a hand hold for drawing the screen downwardly from the position shown in Figure 2. Normally, the handle would prevent the screen sash from seating upon the sill of the storm window frame and for this reason it is adapted to be retracted into the lower framing member when the screen sash is lowered. As shown, the lower cross member 113 of the screen frame is channel shaped, the channel being open downwardly. A pair of bars 125, each having a ledge 126, is slipped into the frame channel and secured by rivets 127. The handle 123 is U-shaped, the ends of the vertical limbs being bent angularly as at 128 to support the handle upon the ledges 126. Thus, the handle normally depends by gravity from the lower cross

rail but disappears into the cross rail when the sash is lowered. The screen also is provided with a U-shaped handle 130 mounted on the top of the lower cross rail directly above the handle 123. Handle 130 is secured by machine screws 131 and is utilized in raising the screen from its closed position.

The storm window units preferably are furnished to the user completely assembled and ready for installation, which is a comparatively simple operation and may be done by the average craftsman or householder. The adapter strips are furnished in lengths for the particular size of window opening but if oversize, it is a simple matter to trim them to length. Being fabricated from aluminum extrusions, the frame and sashes are accurately interfitted to provide a weather-tight unit of neat and trim appearance. The storm sashes are adjusted readily to various intermediate positions by reason of the smooth sliding fit provided by the steel runways so that it is a simple matter to ventilate the house during less severe weather. Should it be necessary to remove the sashes for cleaning or replacement, they are conveniently detached from the frame by springing them to one side to disengage them with respect to the runners.

Having described my invention, I claim:

1. A convertible storm window and fly screen unit comprising a storm window frame unit adapted to be secured in a window opening in spaced horizontal relation to the standard window sashes, upper and lower storm sashes spaced horizontally from each other and slidably mounted for vertical movement within the storm window frame and adapted to be raised and lowered with respect to each other, a screen sash interposed in parallelism between the storm sashes and adapted to be raised and lowered with respect to the storm sashes, the upper and lower storm sashes having cooperating meeting rails which are disposed in parallelism in a horizontal plane when said upper and lower sashes are respectively in closed position, said meeting rails having a substantial width in the vertical plane, the meeting rails each comprising a metal extrusion of duplicate configuration in cross section, each duplicate extrusion including a lateral groove having a sealing strip extending outwardly beyond the vertical plane of the meeting rail, said sealing strips being disposed respectively along the lower edge of the upper storm sash meeting rail and along the upper edge of the lower storm sash meeting rail in planes one above the other, the screen sash having a lower cross rail of substantially the same width as the storm sash meeting rails, the screen sash cross rail being disposed in a common horizontal plane with respect to the storm sash meeting rails when the screen sash is in elevated position whereby said sealing strips engage the respective upper and lower edges of the screen sash cross rail on opposite sides to establish a weather tight seal when the storm sashes are closed with the screen sash elevated.

2. A convertible storm window and fly screen unit comprising a storm window frame unit adapted to be secured in a window opening in spaced horizontal relation to the standard window sashes, upper and lower storm sashes spaced horizontally from each other and slidably mounted for vertical movement within the storm window frame and adapted to be raised and lowered with respect to each other, a screen sash interposed in parallelism between the storm sashes and adapted to be raised and lowered with respect to the storm sashes, the upper and lower storm sashes having cooperating meeting rails which are disposed in parallelism in a horizontal plane when said upper and lower sashes are respectively in closed position, said meeting rails having a substantial width in the vertical plane, the meeting rails each comprising a metal extrusion of duplicate configuration in cross section, each duplicate extrusion having a body which is generally U-shaped in cross section and adapted to receive an edge of a storm window pane, each U-shaped body including a closed end having a groove including a sealing strip extending outwardly beyond the vertical plane of the meeting rail, said duplicate meeting rails being inverted relative to each other with the sealing strips facing toward one another and disposed respectively along the lower edge of the upper storm sash meeting rail and along the upper edge of the lower storm sash meeting rail in horizontal planes one above the other, the screen sash having a lower cross rail of substantially the same width as the storm sash meeting rails, the screen sash cross rail being disposed in a common horizontal plane with respect to the storm sash meeting rails when the screen sash is in elevated position whereby said sealing strips engage the respective upper and lower edges of the screen sash cross rail on opposite sides to establish a weather tight seal when the storm sashes are closed with the screen sash elevated.

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