

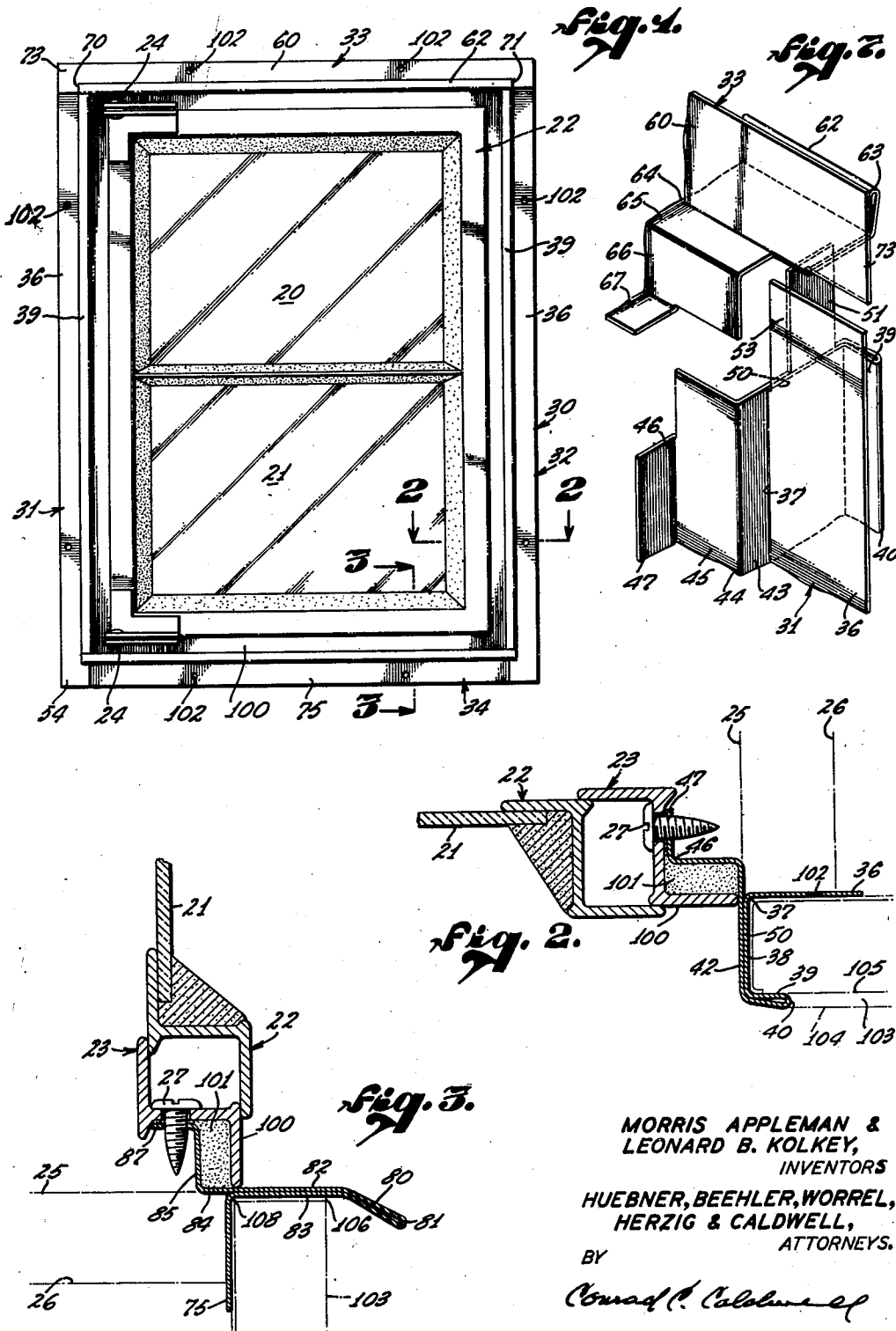
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L. B. KOLKEY ET AL
METAL SASH SURROUND

2,635,720

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2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

Fig. 4.

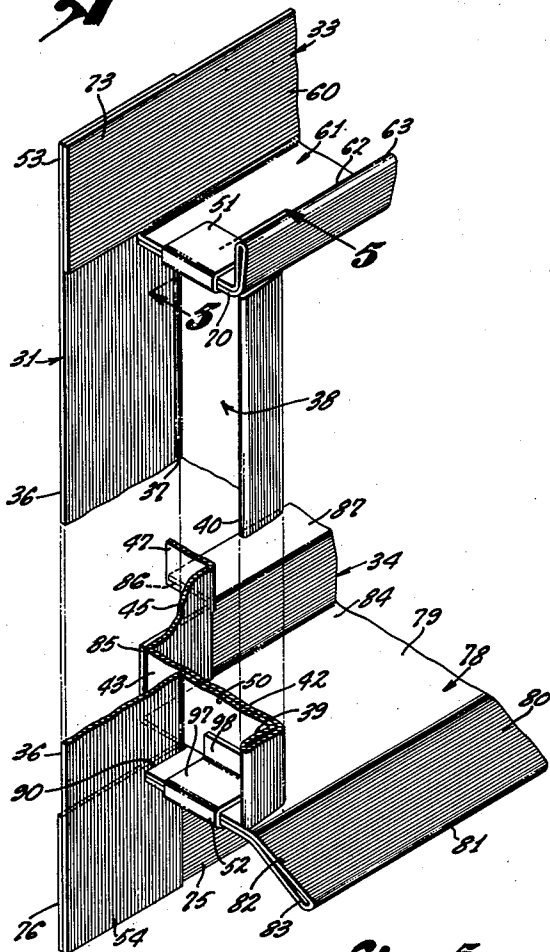


Fig. 5.

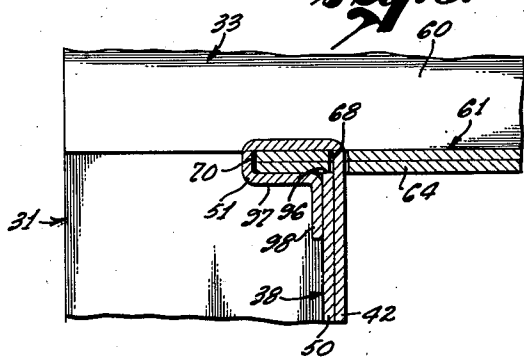
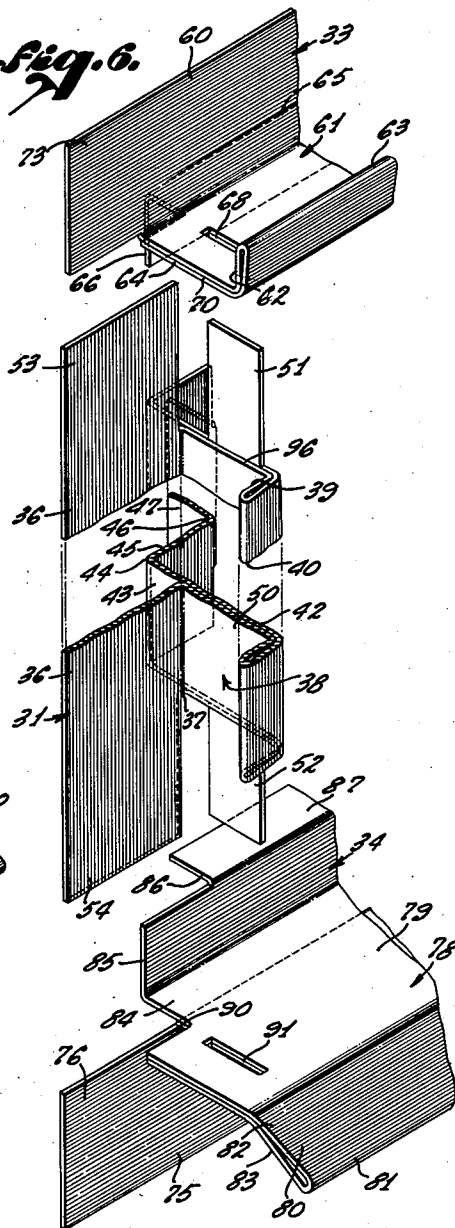


Fig. 6.



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METAL SASH SURROUND

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2 Claims. (Cl. 189-75)

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This invention relates to a metal sash surround adapted to receive a window sash and frame and further adapted to provide a metal trim about a window opening. More particularly the invention relates to a sheet metal form of surround including integral flanges providing a border for a finishing material, such as stucco, around the window and including novel means of securing separable portions of the surround to one another to form an integral structure.

The instant invention contemplates the provision of a sheet metal window framing structure which is capable of being fabricated in unitary strips comprising top, bottom and sides respectively which are thereby knocked down for shipment and which may be assembled prior to forwarding to a job.

It is among the objects of this invention to provide a new and improved sash surround having a neat and finished appearance and which is capable of ready mass production on an economical basis.

It is also among the objects of this invention to provide in a metal sash surround of the desired character described, new and improved knock down and assembled features.

Another further object of the invention is the provision of new and improved interrelated construction and securement for portions of the surround relative to one another.

Another object of the invention is to provide a new and improved adjustable interlocking feature resulting in a rigid and economical construction capable of assembly for use by means of a few simple tools, as a pair of pliers.

It is likewise among the objects of this invention to provide new and improved corrosion resisting construction with improved features of imperviousness to weather, seepage, moisture and the like; and to provide improved features of inter-relation and correlation of the surround with a window and its finish and a building and its finishing material.

Also within the contemplation of this invention is the provision of improvement over prior art structure and methods heretofore contemplated for generally similar purposes.

With these and other objects in view, the invention consists of the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter set forth, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the drawings—

Figure 1 is a front view of a window including a surround embodying this invention;

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Figure 2 is a plan sectional view taken as on a line 2-2 of Figure 1;

Figure 3 is a vertical sectional view taken as on a line 3-3 of Figure 1;

Figure 4 is a fragmentary perspective view of a surround exemplifying this invention;

Figure 5 is a detailed sectional view taken as on a line 5-5 of Figure 4;

Figure 6 is a fragmentary exploded sectional view of said surround;

Figure 7 is a fragmentary perspective view from the back side of a surround exemplifying the invention.

Referring more particularly to the drawings, there is illustrated by way of example but not of limitation windows as 20 and 21 set within a sash 22 mounted as upon a frame 23 by means of hinges 24 or the like.

The frame 23 is ordinarily and preferably formed of metal as is the sash 22, the former being secured as to the finish trim 25 or framing 26 of the main building structure as by means of screws 27. The finish trim 25 is ordinarily lumber and the wood framing 26 ordinarily comprises 2 x 4's framing the window opening.

The surround designated generally at 30 comprises preferably interchangeable sides 31 and 32, a top 33, and a bottom 34.

The sides 31 and 32, as may be most clearly seen from the drawing of side 31 in Figures 4 and 6, and 7, each comprise elongate members including an attaching flange 36 formed as along a bend line 37 to constitute one wall of a channel 38, the other wall 39 of which is formed with a double-folded edge 40 preferably parallel to the plane of the attaching flange 36.

The doubled trimming flange 39 is folded as at 41, the outer wall 42 thereof extending rearwardly as at 43 beyond the securing flange 36. As by means of a fold line 44, an offset 45 is formed and a further fold as at 46 provides a terminal securing flange 47.

The innermost wall 50 of the channel 38 is undercut at its rearward extension and the offset portion 45 is correspondingly shortened at the upper and lower ends of each side 30 and 31 to form longitudinally projecting tongues 51 and 52 preferably lying in the plane of the channel 38. Said undercut also forms terminal extensions 53 and 54 at the top and bottom respectively of each attaching flange 36.

Top member 33 is formed with an upwardly directed attaching flange 60 forming one wall of a channel 61 whose other wall is formed by a doubled trimming flange 62 having a forward edge 63 at the top thereof.

The other wall 64 of the channel 38 in addi-

tion to forming a bottom thereof extends rearwardly as at 65 of the attaching flange 60 for a distance corresponding to the rearward extension 43 of the inner wall 42 of the side members 31 and 32. The bottom wall 64 is turned down as at 66 to provide a securing flange 67 lying rearwardly but in a plane parallel to the attaching flange 60.

A preferably rectangular opening 68 is formed through the bottom of the channel 61 at a position spaced rearwardly of the trimming flange 62, forwardly of the attaching flange 60, and inwardly from the ends 70 and 71 of the top member 33. The openings 68 are adapted to accommodate the tongues 51 guided by outwardly extending ends 73 on the attaching flange 60.

A bottom member 34 is provided with an attaching flange 75 having outwardly projecting ends 76. A sill forming flange 78 has a portion 79 extending outwardly at approximately right angles to the attaching flange 75 and includes a downwardly directed lip 80 having a folded edge 81 by virtue of which the lip and the portion 79 are double, being formed with an upper wall 82 and lower wall 83. The upper wall 82 has an inward extension 84 relative to the attaching flange 75 and then forms an offset 85, and a terminal securing flange 86, the latter being formed as with a cut-out 87 to accommodate the off-set 45 and terminal securing flange 47 of the side members 31 and 32 at either end thereof.

A cut-out 90 provides an insertion space for the downwardly extending terminal extensions 54 forwardly of the lateral extension 76 at either end of the bottom member.

Similarly, openings 91 are formed in the sill portion 79 at either end thereof to accommodate the downwardly extending tongues 52 of the side members 31 and 32, respectively.

Each of the side members 31 and 32, the top member 33 and the bottom member 34 is separately formed. They may be secured together to form a surround by insertion of the upwardly extending tongues 51 and the openings 86, the upwardly extending terminal 53 of each side member being then adapted to provide or underlie the lateral extension 73 of the top member and the downwardly extending flange 67 of the top member being accommodated in front of and thus overlying the offset 45 of the side members.

In a similar manner, the downwardly extending tongues 52 are inserted through the opening 91. The downwardly extending portion 54 of either side member are adapted to overlie the lateral extensions 76 by virtue of the cut-out 90.

It may be observed that the tongues 51 and 52 are of substantial length. Accordingly, when they are inserted through the openings 68 and 91 respectively they may be doubled over the ends of the top and bottom members as shown most clearly in Figures 4 and 5.

The inner wall 50 of the side channel 38 is adapted to abut at its upper end 96 against the lowermost wall 64 of the top channel 61. When the tongue is folded around the outer edges 70, for example, of the top member and then pinched therearound as indicated at 97 and 98, as they may readily be by means of a pair of pliers, a firm securement of the members to one another is made.

In view of the length of the tongues 51 and 52 and due to their flexibility, where necessary to make an accurate fit, the upper and lower members may be relatively separated by utilization of only the upper and lower portions of the tongues

in which case the inner wall 50 will not abut against the bottom of the tongue 61, for example, at the top. Similar utilization of the extreme top and bottom ends of the tongues permit their outward lateral bending whereby the side members may be spaced relatively further from one another than the distances between the openings 68 or 91 on the top and bottom members respectively.

The amount of vertical as well as lateral adjustment of the members relative to one another is thus determined by the length of the tongues 51 and 52, and although the members are constructed to meet specific measurement they may be expanded if need be beyond such measurement.

The flange 87 of the bottom member and the corresponding flanges 47 of the side members may be formed with nail or screw holes as desired or they may be secured to the frame of the window as shown most clearly in Figure 1 and also at the sides and bottom respectively in Figures 2 and 3.

The terminal flange 67 of the top member may be similarly secured in any desired manner to the top of the frame 23. Because of the offset 45 of the side members or 85 of the bottom member, the outer surface 100 of the frame may lie substantially in the plane of the respective securing flanges 36 and 66 while still leaving room the customary caulking compound 101.

The attaching flanges 36, 60 and 75 may be provided as with nail holes 102 as desired whereby they may be secured to the wood frame 26 or the like forming the rough frame for the window opening.

Stucco or any other desired wall finish 103 applied to the outer surface of the building structure is accommodated and held in place adjacent the window opening by the channel 38 in the side members and at 61 in the top member.

Building finishes, whether cementitious or not, may be laid flush with the trimming flanges 39 and 62 as shown at 104, Figure 2. Other building finishes such as lumber may likewise be accommodated entirely within such channel as indicated by the phantom outline 105 in Figure 2.

A downwardly extending lip or rain drip 80 overlies the upper margin 106 of the finish 103 as indicated in Figure 3, thus protecting the same from the weather and other erosional influences.

The above construction has the advantage, among other things, of simple assembly, adjustability for variant opening dimensions, rigidity and economy of construction, elimination of spot welding and other conventional means of surround manufacture and assembly. In view of the seamless construction thus provided moisture is excluded from penetrating the surround particularly in the area of the fold 37 of the side, 66 of the top and 108 of the bottom member. Moreover, the doubled edges of 40 of the side members and 63 and 81 of the bottom members avoid raw edges, further resisting corrosion occasioned by raw edges, thereby adding to the life of the product and avoiding staining, discoloration and the like incident to prior art surrounds.

The above construction has been found particularly adapted for fabrication in sheet metal. The construction, however, lends itself to other methods of production including molding and extrusion, particularly metal extrusion. In either case the channel construction and flanges may be rounded or made relatively right lined within the skill of the artisan.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred method and embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent structures and methods.

The invention having been herein described, what we claim as new and desire to secure by Letters Patent is:

1. In a sheet metal surround, comprising a pair of side members, a top member and a bottom member, said members comprising a generally U-shaped channel in cross section, the improvement comprising: an outwardly directed attaching flange formed integral with each of said members defining one wall of said channel, the metal being doubled back against itself at the outer edge of the opposite side wall of said channel to form an unbroken fold-line and a double-wall thickness for said opposite side and the bottom of said channel, said double-wall bottom extending entirely around the surround, said opposite side wall of said bottom member being substantially wider than the corresponding doubled side walls of the side members and slanting outwardly and downwardly beyond the double-walled channels of the side rails as and for a rain sill, the normally uppermost layer of the double-walled bottom layer being flat and horizontal and the uppermost wall of a sill-forming flange extending continuously inwardly of the sill proper, forming an obtuse angle with said sill and defining an inward extension relative to said attaching flanges, then forming an upwardly directed offset and a terminal securing flange portion, the lowermost layer of the double-walled bottom member passing from the doubled back edge of the sill-forming fold in contiguity with said uppermost layer throughout said sill, thence horizontally under said horizontally extending uppermost wall of the sill-forming flange as the lowermost wall portion of said latter flange, thence downwardly to form said outwardly directed attaching flange for said bottom member, the innermost layer of the double-walled side members likewise extending inwardly beyond said double-walled channel portion co-extensively with said double-walled sill-forming flange, the latter being notched at each end to accommodate corresponding ends of said first mentioned securing flanges on said side members, each side member then defining a similar inwardly directed offset and an inwardly directed terminal securing flange.

2. In a sheet metal surround, comprising a pair of side members, a top member and a bottom member, said members comprising a generally U-shaped channel in cross section, the improvement comprising: an outwardly directed attaching flange formed integral with each of said members defining one wall of said channel, the metal being doubled back against itself at the

outer edge of the opposite side wall of said channel to form an unbroken fold-line and a double-wall thickness for said opposite side and the bottom of said channel, said double-wall bottom extending entirely around the surround, said opposite side wall of said bottom member being substantially wider than the corresponding doubled side walls of the side members and slanting outwardly and downwardly beyond the double-walled channels of the side rails as and for a rain sill, the normally uppermost layer of the double-walled bottom layer being flat and horizontal and the uppermost wall of a sill-forming flange extending continuously inwardly of the sill proper, forming an obtuse angle with said sill and defining an inward extension relative to said attaching flanges, then forming an upwardly directed offset and a terminal securing flange portion, the lowermost layer of the double-walled bottom member passing from the doubled back edge of the sill-forming fold in contiguity with said uppermost layer throughout said sill, thence horizontally under said horizontally extending uppermost wall of the sill-forming flange as the lowermost wall portion of said latter flange, thence downwardly to form said outwardly directed attaching flange for said bottom member, the innermost layer of the double-walled side members likewise extending inwardly beyond said double-walled channel portion co-extensively with said double-walled sill-forming flange, the latter being notched at each end to accommodate corresponding ends of said first mentioned securing flanges on said side members, each side member then defining a similar inwardly directed offset and an inwardly directed terminal securing flange, the doubled sill-forming flange extending longitudinally outwardly beyond the bottoms of said channels in said side members and being formed with a transverse slot at each end spaced inwardly from said ends respectively, each of said side members having a tongue extending longitudinally beyond said side members and adapted to be inserted through a corresponding slot, each said tongue being of a length sufficient to be doubled back around the corresponding end of the bottom member, the ends of the first mentioned attaching flanges at the corners of the surround being normally in flat face-to-face slidable relationship, permitting selective elongation of the surround.

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