

Nov. 8, 1938.

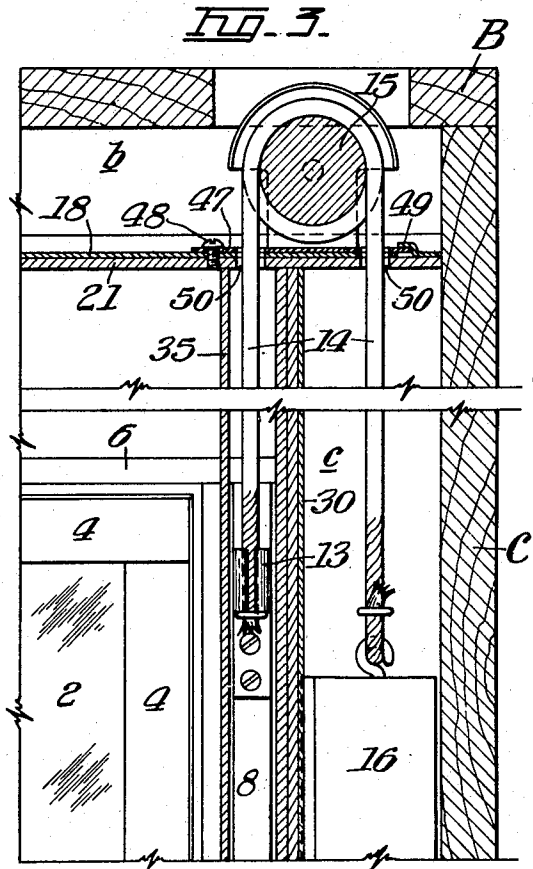
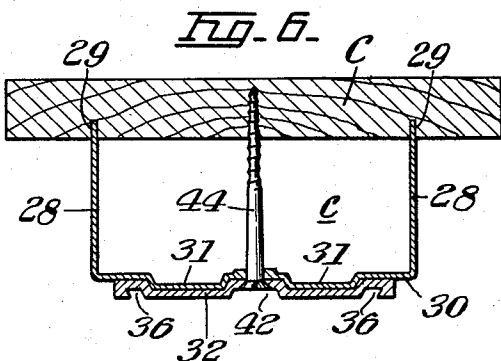
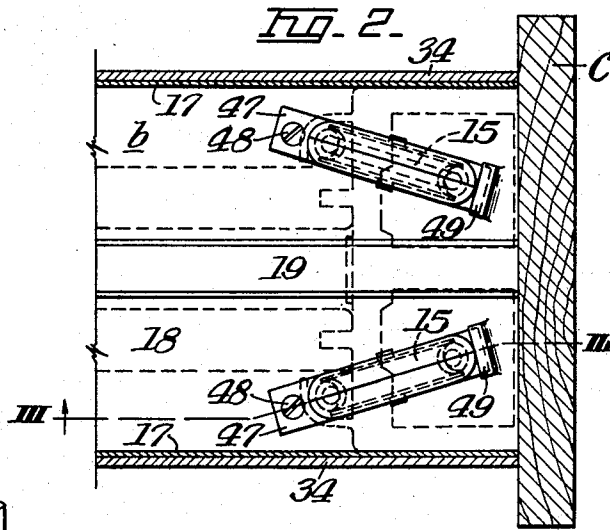
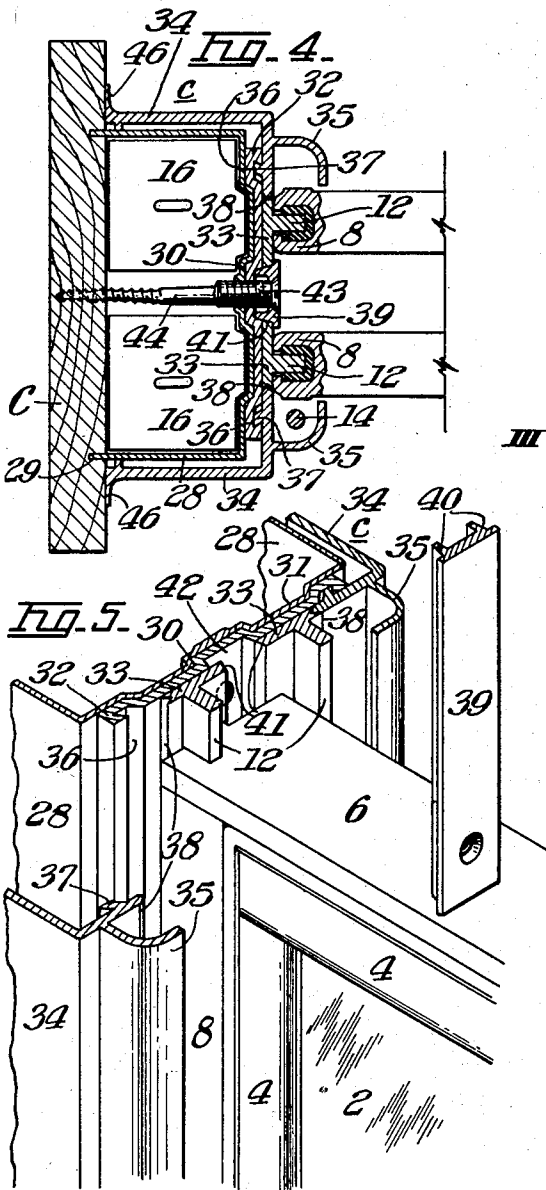
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2,135,680

WINDOW FRAMING

Filed March 29, 1937

2 Sheets-Sheet 2



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2,135,680

WINDOW FRAMING

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Application March 29, 1937, Serial No. 133,487

12 Claims. (Cl. 189—75)

This invention is an improvement in metal window framing construction for mounting and operative installation for use in connection with the sash frame and housings therefor of my companion applications filed herewith Ser. No. 133,485 and Ser. No. 133,486.

It consists in its entirety of stationary window framing portions comprising top and bottom horizontal substantially similar head and sill members, and intervening vertical side framing portions. These members are preferably made of extruded metal sections, for mounting in a window opening and in connection with the sash and housing elements above referred to.

In the accompanying drawings showing one preferred construction:

Fig. 1 is a sectional perspective view showing portions of a complete installation, including both upper and lower sash and housing portions in their operative relation to the surrounding framing;

Fig. 2 is a sectional plan view on the plane of the section line II—II of Fig. 1;

Fig. 3 is a vertical sectional view on the line III—III of Fig. 2;

Fig. 4 is a cross section on the line IV—IV of Fig. 1;

Fig. 5 is a sectional perspective view illustrating separability and adjustability of portions of the framing construction;

Fig. 6 is a sectional view like Fig. 4 showing means for connecting the inner channel and master plate to the surrounding framework.

While the framing construction may be used with other designs or forms of sash and housing, it is shown in combination with improved metallic forms, as in my applications above noted.

The light 2 is held within a surrounding frame between separable front and back members 3 and 4, and mounted in a housing by connecting wedge or dovetail 5. The housing is thus fixedly connected with the sash frame so that they move together, and each housing is composed of a top bar 6, a bottom bar 7, these being reversed as to the upper sash housing, and side bars 8. The top bar 6 of the lower housing and the bottom bar 6a of the upper housing are provided with interengaging meeting rail sealing ribs 9 and 9a.

The bottom bar 7 of the lower housing and the top bar 7a of the upper housing are grooved edgewise for closing engagement with rib 10 of the lower sill and rib 10a of the upper head member, preferably in connection with a flanking rib 11 and 11a respectively.

Side bars 8 of each housing are alike and are

similarly grooved for sliding engagement with ribs or tongues 12 of the window framing. They are also provided with sockets 13 for connection with sash cords 14 which pass over pulleys 15 and connect with sash weights 16 in the usual manner.

The window framing construction with which the raising and lowering housings and their sashes are combined and mounted for operation is, like them, of metal, and preferably composed of extruded sections. Such framing is mounted within the window opening of a building upon the wooden or other opening defining construction comprising a lower sill framing member A, an upper head framing member B, and side framing members C.

The lower metal sill and upper metal head framing members are generally indicated by the letters a and b respectively, and are substantially the same, in reversed positions as shown, Fig. 1.

Each consists of an inner channel shaped one piece section of thin sheet metal having longitudinal side flanges 17 and a connecting web section 18 deflected inwardly at the middle as at 19, for clearance of the joint connection of the outer retaining and finishing housing-engaging portions.

The flanges 17 engage grooves in the wood or other framing A and B as at 20 for fixed location therewith.

The housing-engaging portions consist of a pair of flat sections 21, 22, each having an outer flange 23 terminating in an inclined terminal edge 24 held in position by any suitable securing means, as screws 25. Sections 21 and 22 have interlocking connection with each other within the deflected channel 19 by tongue 26 and groove 27 engagement, each meeting edge being properly shouldered as shown for firm bracing connection.

By such construction web sections 21 and 22 are maintained in alinement against deflecting pressure in either direction, assisted by inner channel web 18.

Section 22 is provided with the integral ribs or tongues 10 and 11, and forms the inner half of the lower sill framing, and in reverse position, forms the outer half for the upper sash housing, as shown.

The pair of intervening oppositely located metal side framing members are generally indicated by the letter c, and are mounted between the under and overlapping ends of the sill and head members a and b.

Each consists of a channel shaped one piece section of thin sheet metal, having longitudinal side flanges 28 also engaging grooves in the wood

or other framing C, as at 29. The connecting web section 30 is deflected and shouldered as at 31 for holding engagement against lateral movement of a master plate 32.

5 Said plate forms the base mounting of the laterally adjustable tongues or ribs 12 and their bases 33, and of the main side walls 34 having the sash cord shrouds 35. These, as shown, extend over and cover the side bars 8 of the sash
10 frame. Master plate 32 is provided along and within its opposite edge portions with undercut grooves 36 for holding engagement by inter-fitting inclined wedging strips 37 of each side wall 34 when they are in their normal outermost position and the parts are assembled for use, as in
15 Fig. 4.

Bases 33 of slide ribs 12 have tongue and groove connection as at 38 with the side walls 34 when both are in normal position, and both bases 33
20 and their ribs are normally in operative relation to the sash housings.

Bases 33 are held in such outwardly spaced position by a pair of wedging bars 39 having converging sides 40 bearing against the inner inclined edge faces 41 of bases 33.

Each bar strip 39, shown as removed in Fig. 5, is insertible in clearance opening 42 of plate 32 and held by several screws 43 tapped into plates 32 and the middle preferably reinforced portion
30 of channel plate 31.

Upon retracting bar 39 sufficiently, at opposite sides, either pair of opposite bases 33 and with them the rib-engaged bars 8 of the sash housings may be shifted inwardly, thus allowing for disengagement of one pair of the opposite side walls 34
35 as in Fig. 5, for access to the sash cord at either side.

An especial advantage in such removability of side sections 34 is that the entire sash housing
40 and sash may be removed together with guide ribs 12 and their bases 33, without disturbing other portions. It will be understood of course that both sections 34 at opposite sides of one sash must be removed together to effect removal of a
45 sash housing.

By making bar 39 in two sections, upper and lower, either may be adjusted by properly shifting one of the sash housings.

Channel 30 and master plate 32 are secured to the side framing C by elongated screws 44, Fig. 6, and the endmost angular casing members 34 by screws 45 through their terminal flange edges 46, or by any other suitable means.

Sash cord pulleys 15 are pivotally mounted in shrouded brackets 47 secured on the inner upper faces at each end of channel webs 18 by a pivoting and tightening screw 48 with the opposite end of the bracket base retained under a limiting flange 49, as in Figs. 2 and 3. By such mounting
60 the pulleys and brackets may be accurately located for proper vertical positioning of the two depending strands of cord 14 in connecting its terminals with the housing bar 8 and sash weight 16 respectively.

The channel webs 18, 21, and 22 and brackets 47 are perforated as at 50 for passage of the cords 14.

It will thus be seen that by the construction of the several combined elements and members of the window framing the three main metal units
70 a, b and c are capable of very accurate mounting and cooperation with each other, and that they provide for operative mounting within a window opening and for easy access to the working elements whenever desired.

Being made of comparatively light, thin, preferably extruded metal shapes, as of aluminum, the entire construction may be reduced to minimum dimensions externally, and in their entirety present an attractive, ornamental and durable
5 equipment.

The several parts may be easily standardized and made to suit various standard types as to size, etc., for different dimensional window openings.

What I claim is:

1. In window framing construction, the combination of upper, lower and side channel members having terminal securing edges and transverse web portions provided with interengaging means for the edge portions of a slidably mounted sash framing, and an inner supporting channel member therefor.

2. In window framing construction, the combination of upper, lower and side channel members of light thin metal having terminal securing edges and transverse sectional and interlocking web portions provided with interengaging means for the edge portions of a slidably mounted sash framing, and an inner supporting channel member therefor.

3. In window framing construction, the combination of upper, lower and side channel members having terminal securing edges and transverse web portions provided with projecting ribs for engaging the edge portions of a slidably mounted sash framing, each rib of each side channel member having a laterally adjustable base and forming a separable part of the channel member.

4. In window framing construction, the combination with side channel members having guide means for a slidably mounted sash framing, an endmost horizontal channel member having terminal securing edges and a transverse double portion web portion connected at the middle and provided on one of said portions with a sealing rib for groove engagement with a window sash frame.

5. In window framing construction, the combination with side channel members having guide means for a slidably mounted sash framing, an endmost horizontal channel member having terminal securing edges and a transverse double portion web portion connected at the middle and provided on one of said portions with a sealing rib for groove engagement with a window sash frame and a flanking rib adjacent thereto.

6. In window framing construction, the combination with side channel members having guide means for a slidably mounted sash framing, an endmost horizontal channel member having terminal securing edges and a transverse double portion web portion connected at the middle and provided on one of said portions with a sealing rib for groove engagement with a window sash frame and an inner reinforcing sheet metal channel member.

7. In window framing construction, the combination with side channel members having guide means for a slidably mounted sash framing, an endmost horizontal channel member having terminal securing edges and a transverse double portion web portion connected at the middle and provided on one of said portions with a sealing rib for groove engagement with a window sash frame, and an inner reinforcing sheet metal channel member having a deflected middle portion for reception of the middle connection of the sectional channel member.

8. A vertical side window framing member

consisting of an inner sheet metal channel member, an outer sectional channel member having a middle dividing wedge and comprising adjacent guide ribs having bases engaging the wedge and endmost angular walls engaging the rib bases having terminal securing edges, and a master plate between the inner channel member and the outer sectional channel member in interlocking engagement with the angular walls.

9. Vertical window framing construction as in claim 8 characterized by the master plate having a middle clearance opening for the wedge.

10. Vertical window framing construction as in claim 8 characterized by the master plate having at each end portion an inclined socket for engagement by an interlocking portion of the angular walls.

11. Vertical window framing construction as in claim 8 characterized by the guide rib bases having interlocking engagement with the endmost angular walls.

12. In window framing construction composed of extruded metal sections, a complete outer vertical side member of channel form secured by its terminal edges against the side of a window opening providing clearance space for sash weights and provided with a separable section having an outwardly spaced web portion including adjustable sash engaging rib sections, releasable wedging means maintaining the rib sections in normal operative position, an inner supporting base channel and an intermediate master plate.

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