Sept. 12, 1967 J. O. KOHL 3,340,665

CONTINUOUS CHANNEL COVERING FOR WINDOW FRAMES AND THE LIKE

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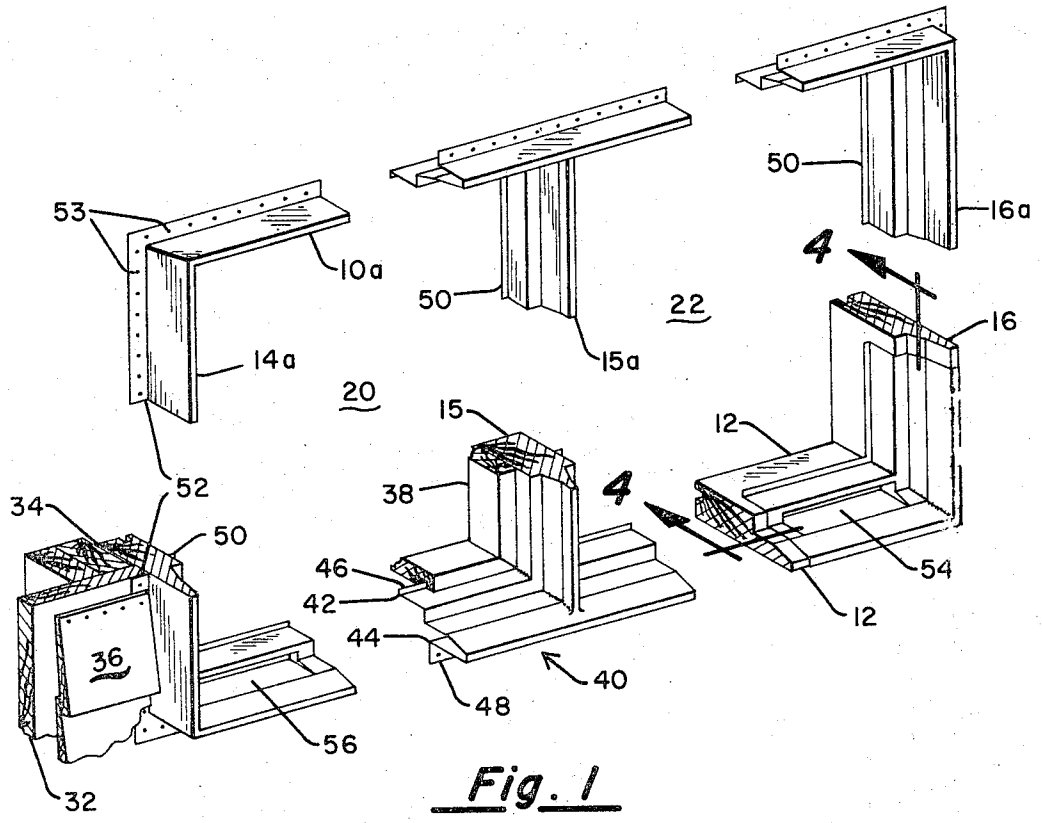


Fig. 1

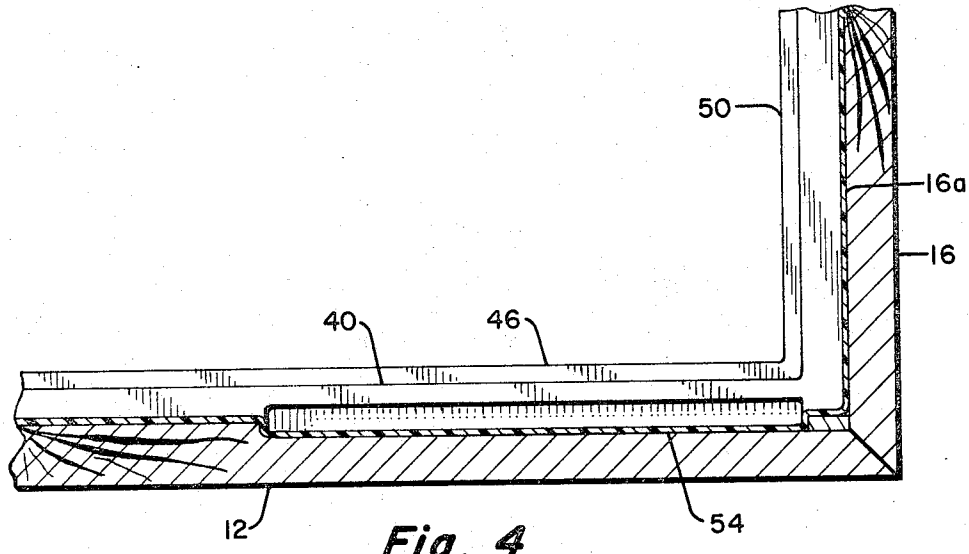


Fig. 4

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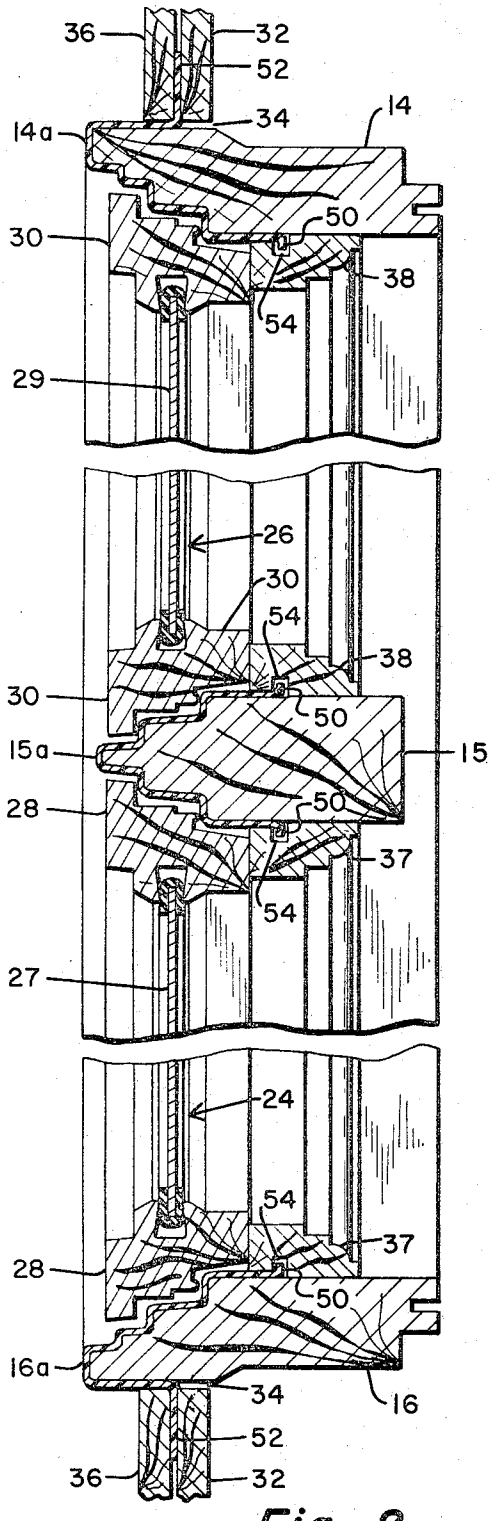


Fig. 2

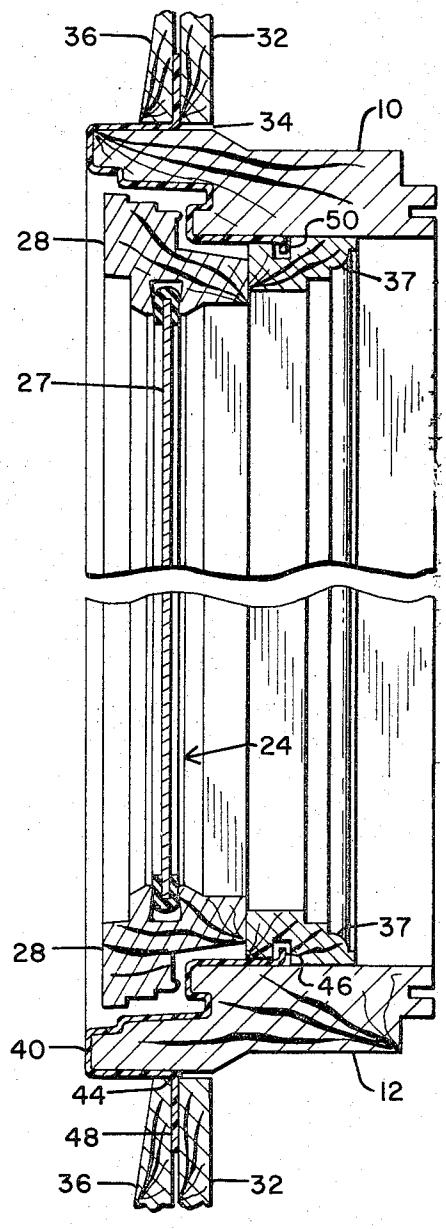


Fig. 3

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CONTINUOUS CHANNEL COVERING FOR WINDOW FRAMES AND THE LIKE

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1 Claim. (Cl. 52—656)

This invention relates to protective and ornamental coverings for window frames, door frames, and the like.

In the past, protective and ornamental coverings for such frames have been attached to the frame by sections, one for each of the corresponding members of the frame. Separately fabricating each of the individual sections is generally time-consuming and costly, and this is also true when assembling and fitting the covering to the frame structure. Furthermore, even though the individual sections are precisely fitted together, gaps occur at the joints, and these gaps are unsightly and provide a passageway for moisture, dust, and the like to seep into the frame structure thereby partially destroying the advantage of the protective feature of the covering.

It is an object of this invention to obviate the foregoing disadvantages of the prior art by providing a unitary plastic covering for the entire frame structure with no seams or gaps where the different portions of the covering, corresponding to the respective members of the frame, are joined. The covering shell of this invention may be formed by relatively inexpensive well-known molding or casting techniques to the desired shape and contour either directly on the finished wood frame unit on which it is to be used, or as a unitary structure and then slipped over the frame so that the latter seats firmly in the shell covering.

The invention will be best understood by reference to the accompanying drawings in which:

FIG. 1 is a partially sectioned perspective view showing an embodiment of this invention;

FIG. 2 is a horizontal sectional view showing greater detail of the embodiment of this invention;

FIG. 3 is a vertical sectional view illustrating further details of the embodiment of this invention, and

FIG. 4 is a fragmentary sectional view taken on the line 4—4 of FIG. 1.

A wood casement window of common type is shown in the drawings. It comprises an upper horizontally disposed head jamb member **10** (FIG. 3), a lower horizontally disposed sill member **12**, and vertically disposed jamb members **14**, **15** and **16**, the jamb member **15** being a mullion centrally located between the extremities of the horizontal members. The window frame members thus define rectangular openings **24** and **26** (FIGS. 2 and 3) for receiving window sash of any suitable type. Window glazing **27** and **29** is suitably mounted in the sashes **28** and **30** and the latter may be hingedly or otherwise mounted in the frame structure described. The window frame is preferably preformed and then mounted in a suitable opening in a rough wall **32**, usually with a slight gap as indicated at **34**, according to suitable or conventional procedure. Outer finish wall members of one common type are indicated at **36**. Stop members, indicated at **37** and **38**, also of conventional type, are provided for the sashes **28** and **30** respectively.

According to the present invention, a suitable plastic material is molded, preferably by vacuum forming techniques, into a rectangular structure corresponding to that of the window frame with each portion of the plastic structure having a channel-shaped cross section contoured to fit the profile of the respectively corresponding members of the frame. For exterior use the plastic channel members extend inwardly at least to a depth sufficient to cover the portions of the jamb and sill members which are

normally exposed to the weather. Examples of suitable plastic materials from which the covering shell may be vacuum formed are sheets of vinyl resin, polystyrene or acrylate resin from .002–.06 inch thick. The covering shell of plastic material is illustrated by the cut-out portion indicated at **40** in FIG. 1. This partial section of the shell conforms to the contour of the sill member **12** and covers all otherwise exteriorly exposed surfaces of said sill member. One side wall of the channel or shell extends along the upwardly facing surface of the sill member to a continuous upwardly projecting flange **46**. An edge of the channel is designated by the bend line **42** at the base of the flange **46**. Along the opposite edge **44** of the sill covering channel member, a planar flange **48** extends in a substantially vertical plane in overlying relationship to the outer surface of the rough wall member **32** in an area adjacent the outer peripheral surface of the wooden frame.

A more detailed sectional view of the covering channel for the sill member **12** is shown in FIG. 3. The channel shaped plastic covering extends as a unit, integral with the sill covering, over the portions of the head and side jamb frame members which would otherwise be exposed to the weather. The covering for the head jamb members **10** is indicated at **10***a*, and that for the side jamb members at **14***a*, **15***a* and **16***a*. Each jamb covering channel has an inner stop flange **50** which is integral with and in continuation of the flange **46**, and a weather seal and attaching flange **52** like the flange **48** is formed on the outer peripheries of the channel coverings **10***a*, **14***a* and **16***a* for the jamb members.

As best shown in FIG. 1, the plastic channel members covering the outer surfaces of the window frame members, being molded as a unit without corner joints, effectively cover and seal the joints between the wood frame members. As further shown in FIGS. 2 and 3, the continuous stop flanges **50** are contained in kerfs or grooves **54** formed in the overlying stop members **37**. Similarly the flange **46** of the sill covering member is confined in a groove of the sill stop **37**. Thus the flanges **46** and **50** perform the functions of locating the window stops and constituting weather seals like the seal and attaching flanges **48** and **52** at the outer periphery of the continuous, integral channel members.

An important feature of the channel cross section shape is the inward flare, without reentrant portions, so that the covering may be slipped over the outer portion of preformed window frames. It will be evident that the covering channel throughout its length is narrowest along the outwardly facing edges of the several frame members. In other words, there are no reentrant portions along the channel depth. This unitary plastic structure must be sufficiently rigid to be capable of handling and mounting as a unit on a preformed wood frame of conforming sectional contour. A suitable degree of flexibility is also required to permit conforming the plastic shell to minor irregularities in the window frame surfaces and adjoining rough wall surfaces.

Nail holes **63** (FIG. 1) may be provided in the flanges **48** and **52** so that these flanges may be nailed to the rough wall members **32**. The window frame structure shown in the drawings has sash which are hingedly mounted to the jamb members **14** and **16** and a length of the sill member **12** adjacent to each side jamb member is formed with a recess to receive hinge hardware as indicated at **54** and **56**. Such recess areas are sealed off by pockets molded into the plastic channel, as indicated in FIGS. 1 and 4. The hardware is merely fastened in the usual manner in these pockets. Preferably, a coating of water repellant adhesive is applied to the outer surfaces of the wood frame members or to the inner surfaces of the covering channel prior to slipping the latter over the

frame. A suitable adhesive may be used in this manner to form a continuous water impervious bond between the wooden frame members and plastic channel.

The bends in the covering plastic channel formed in conforming it to the cross sectional contour of the various wood frame members are such that there are no sharp corners in which dirt, moisture, etc. can gather. It is also a feature that the inner surfaces of the plastic channel members conform to the underlying surfaces of all of the respective wood frame members so that the channel covering fits in snug seating engagement with the underlying wood members and the thin plastic channel members are adequately supported by the wood members.

Although the illustrated embodiment of this invention has been described for covering the outwardly extending portions of a double casement type window frame to a predetermined depth, it will be evident that the invention is also applicable to provide a unitary covering structure for the inwardly extending portions of the frame. In the latter case, since the plastic channel will be located inside of the building closure, the covering may be primarily for ethetics, rather than for protection of the wood frame surfaces.

Both the interior and exterior surfaces of the wood frame may be covered in a like manner with plastic channel members. The latter may be joined together along their respective stop flanges **46** and **50** by heat fusion or by other means, such as plastic or metal tabs or clips spaced along the adjoining inner peripheries of the exterior and interior covering channel shells.

Obviously, further variations may be made within the teachings of this invention. It is equally applicable to frame structures of doors and of any single or multiple window type and to frames of various other configurations as well as those of generally rectangular shape.

I claim:

A protective covering for a window frame comprising: substantially rigid plastic channel forming a unitary seamless rectangular structure corresponding to the window frame with the respective side members of said rectangular structure having a cross-section wherein the inner surface of said channel conforms to at least a portion of the profile of a respectively corresponding member of said window frame, said cross-sections further being such that from the bottom of the channel to the top opening thereof the channel width does not decrease whereby the window frame may be inserted into snug seating engagement with the channels.

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