ABSTRACT OF THE DISCLOSURE

A window bar assembly comprising a plurality of elongated plastic muntin bars joined together to form a decorative arrangement for placement over a single-pane window sash, said members having longitudinal bores adapted to receive joint strengthening pins and further adapted for attachment to the sash by end engagement over extensions of sash connectedcollar pins.

This invention relates in general to the field of decorative building materials and more particularly is directed to pre-formed decorative framing members for use with large glass windows.

In view of the constantly rising costs of building materials, manufacturers, architects and builders are constantly seeking methods and materials to reduce construction costs in residential, commercial and industrial construction. Particular attention has been paid to the windows of buildings and it has been found that considerable economies result from using a large single pane of glass in the sash of the usual double hung window in lieu of the former practice of employing four, six or eight lights of glass, each individually secured in wood framing members. By utilizing a single glass pane, all of the millwork formerly required to manufacture such windows can be eliminated and this results in considerable manufacturing cost savings. If the homeowner desires to have the effect of the old type of window construction, he is forced to replace the original window with another one of his own choice at his own expense.

The present invention eliminates this problem by providing a snap-in type of bar assembly which can be easily removed for the washing of the window.

Further, in installations wherein it is desired to employ insulated glass in multi-pane assemblies, it is the present practice to utilize a plurality of smaller, fractional inch lights of insulated glass between fixed window bar members which are secured to the window sash. Such types of installations combine the advantages of the insulating qualities of insulated glass with the pleasing esthetic appearance of a multi-pane sash. However, the disproportionate expense of these constructions usually outweigh the advantages sought and so much designs are not economically feasible in most instances. By employing the instant removable window bar assembly, a single large pane of insulated glass can be utilized and then the window bar assembly can be applied. In this manner, the former expense of manufacturing and installing small lights of insulated glass can be entirely eliminated without any sacrifice in insulating qualities while achieving substantially the same pleasing appearance.

It should further be noted that not only are initial installation economies made possible by employing the removable window bar assembly, but also continuing savings will be realized through years of use in that interior and exterior painting procedures are simplified at the windows. Wherein in accordance with the present practice each individual window bar must be painstakingly painted utilizing utmost care to keep the glass free from paint, by utilizing the invention herein described, window bar painting can be entirely eliminated.

The instant invention offers advantages to the ultimate new home buyer in enabling him to select the style of window desired, even after the house is completed. It is contemplated that the contractor can purchase and install single light windows throughout and thus keep the initial window construction costs to a minimum. After the customer has purchased the house, he could then select horizontal lights, divided colonial lights or old English diamond lights for installation in accordance with his individual desires and tastes.

It is therefore an object of the present invention to provide a window bar assembly which can be installed on a pre-existing single pane window.

Another object is the provision of a window bar assembly which can be removed from the window after installation for the purpose of washing the window.

It is another object of this invention to provide a window bar assembly that lends itself to easy installation and removal, even by those unskilled in the trade.

Still another object is to provide a window bar assembly which is shaped so that it can be readily reversed in case of the discoloration of one side or because of warping.

A further object is the provision of a pre-formed window bar assembly which is flexible for easy installation.

It is another object of this invention to provide a method of economically utilizing insulated glass in simulated multi-pane window installations.

It is another object of this invention to provide a removable window bar assembly to facilitate economies when applying paint to window sash installations.

It is another object of this invention to provide a removable window bar assembly of various configurations which may readily be interconnected to alter the appearance of a window opening.

It is another object of this invention to provide a window bar assembly that is inexpensive in manufacture, rugged in construction and trouble-free when in use.

Other objects and a fuller understanding of the invention will be had by referring to the following description and claims of a preferred embodiment thereof, taken in conjunction with the accompanying drawings where like reference characters refer to similar parts throughout the several views and in which:

FIG. 1 is a side elevational view showing the invention installed on a window.

FIG. 2 is a cross section taken along line 2—2 of FIG. 1.

FIG. 3 shows an enlarged view of part of the device illustrating the connection to the window frame.

FIG. 4 shows a view, partly in section, illustrating the connection of a vertical and horizontal members of the invention.

FIG. 5 shows a partial perspective, exploded view of the invention.

Although specific terms are used in the following description for the sake of clarity, these terms are intended to refer only to the particular structure of my invention selected for illustration in the drawings and are not intended to define or limit the scope of the invention.

Referring now to the drawings, wherein like reference characters designate like or corresponding parts throughout the several views, there is shown in FIG. 1 a window frame 10 having a window 12 therein. Secured in said window 12, in a known manner, is a single pane of glass 14. Removably secured to the side edges of the window, which are constructed of wood, is the bar assembly 16 which is composed of a series of vertical members or rods 18 interconnected by a single horizontal member or rod 20. The vertical rods 18 are secured to each other and to the horizontal rod 20 by a connecting pin 22. The rods 18 and 20 are hollow to provide space for the pin 22 and the collar pin 24. The
collar pins 24 as best seen in FIGS. 3 and 5, are pointed at the forward end, as at 26, and blunt at the rearward end, as at 28. Intermediate the forward and rearward ends is a stop 30, the purpose of which is to limit the insertion of the pointed end of the collar pin 24 into the wooden side edges of the window.

The rods 18 and 20 have a cross-sectional shape similar to an astroid or a hypocycloid of four cusps. This symmetrical feature provide for the complete reversability of the assembly. The other ends of members 18 and 20 are symmetrically shaped as at 35, to provide a snug fit with the side edges of the window in either the original or the reversed position. The inner ends of vertical rods 18 are also shaped, as at 34, to provide a snug fit with the circumferential shape of the horizontal member 20.

In operation the collar pins 24 are inserted, by hammering or the like, into the wooden side edges of the window 12 at positions corresponding with the outer ends of members 18 and 20. The connecting pins 22 are inserted into the hollow portions of the upper rods 18 allowing a 20 portion to extend outwardly thereof. These upper rods 18 are then placed in a position wherein the pins 22 are adjacent to a plurality of holes 36 which are pre-formed in the horizontal rod 20. The pins 22 are then inserted into said holes 36 and pass therethrough and into the hollow portion of the lower rods 18 which are also placed adjacent to holes 36, only on the opposite side thereof. The assembled unit is then flexed, one rod at a time. The hollow portions at the end of all rods are inserted in turn over the blunt end 28 of the corresponding collar pins 24. The rods are manufactured of a plastic, such as styrene, to provide the flexible quality without undue distortion.

The window 12 now takes on the appearance of an expensive type of multi-pane window without having the initial installation expense and without having the bother of washing each pane separately. The assembly can be removed simply by reflexing the rods and removing them from the collar pins.

Although I have described my invention with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

1. A removable window bar assembly in combination with a window constructed of a single pane of glass retained within a peripheral wooden frame, said window bar assembly comprising

(A) a plurality of resilient, vertical members, each having one connected end and one free end, 
(1) said members comprising a plurality of upper members and a plurality of lower members, 
(2) each said member having a longitudinal, concentric bore, and 
(3) said upper and lower members being arranged in a plurality of vertically juxtaposed pairs;
(B) a resilient horizontal rod interconnected between the said vertical members, and having two free ends, 
(1) the said ends being provided with a concentric, axially extending bore, 
(2) said upper and lower members being positioned respectively above and below the said rod, 
(3) the said connected end of each vertical member being in contact with the said horizontal rod; and 
(4) said horizontal rod being provided with transverse, axially located holes at each place of contact;
(C) pin means connecting the said upper and lower members
(1) a portion of said pin means penetrating the said horizontal rod through the said holes, 
(2) and portions of the said pin means being insertable into the said bores of the said vertical members at the connected ends thereof;
(D) and a plurality of affixed stationary collar pins spaced about the said wooden frame
(1) each said pin having a pointed insertion end and a blunt connection end, extending respectively from the ends of a cylindrical body, 
(a) said pointed end being driven into the said frame, and 
(b) said connection end extending above the frame, 
(2) certain of said pins being positioned to receive the free ends of the said vertical members, 
(3) other said pins being positioned to receive opposite ends of the said horizontal members, 
(4) the connection end of said pins receiving and engaging the said horizontal and vertical members, in the said respective bores thereof, whereby the window bar assembly may be removed from the said window frame without moving the collar pins.

2. The invention of claim 1 wherein each said collar pin includes stop means at least positioned between the said ends, said stop means limiting the penetration of the said insertion end into the wooden frame.

3. The invention of claim 1 wherein each said collar pin includes stop means at least positioned between the said ends, said stop means limiting the penetration of the said insertion end into the wooden frame, said stop means comprising an integral, radially raised collar peripherally extending from the said cylindrical body.

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