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DECORATIVE WINDOW STRUCTURE

Filed Aug. 1, 1968

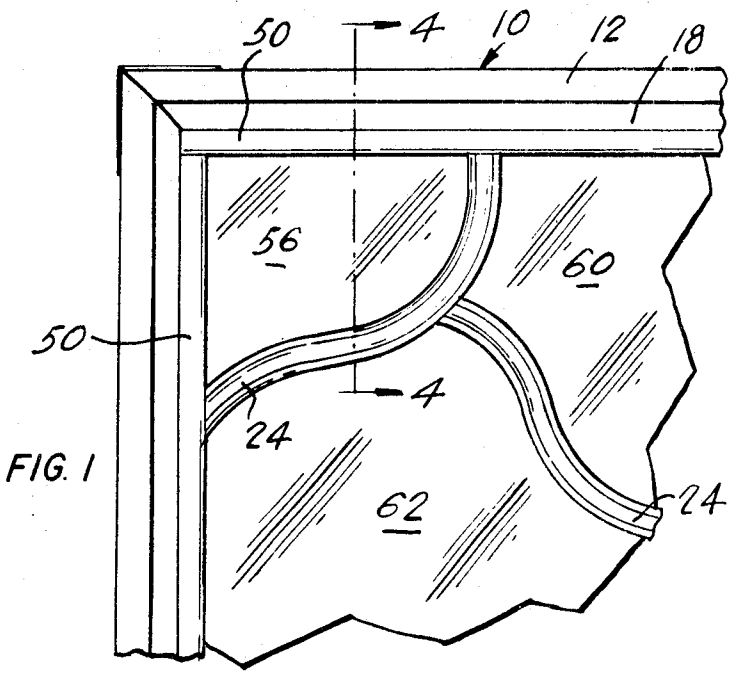


FIG. 1

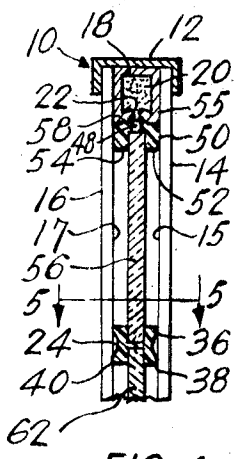


FIG. 4

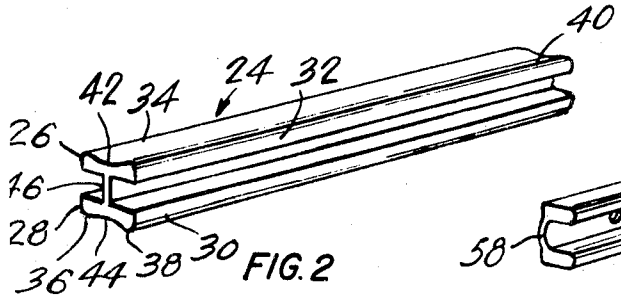


FIG. 2

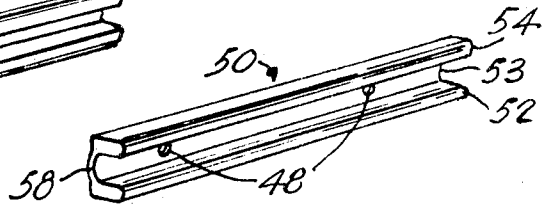


FIG. 3

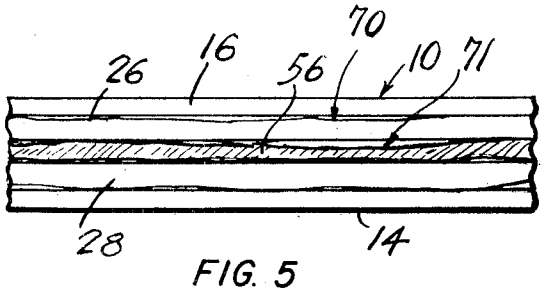


FIG. 5

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DECORATIVE WINDOW STRUCTURE

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ABSTRACT OF THE DISCLOSURE

The present invention relates to an H-shaped came formed of flexible and resilient plastic to permit edges of decorative pieces of glass to be received between the flangles with the outer surfaces of the flanges engaging the inner surfaces of a pair of spaced panes of glass.

The present invention relates to stained glass windows and to a substitute for conventional cames used to hold adjacent stained glass pieces together.

Conventional cames are made of lead and are generally H-shaped in cross section with the stained glass pieces fitting snugly within and being secured between the flanges of the H-shape. Adhesives are used to secure the stained glass pieces to the cames. Conventional cames are illustrated for example in U.S. Pat. 3,226,903, which patent also illustrates a form of window structure similar to that of the present invention. A substitute for conventional cames is illustrated in Canadian Pat. 603,760 which shows a plastic bead formed in situ about the pieces of stained glass and adapted to function as a conventional came. These cames are difficult to apply, will not hold in place, and will not allow air movement, will not located glass in centre of two panes.

The present invention provides improvement over conventional cames by providing a came that is relatively inexpensive, is preformed and may be easily applied, will permit place assembly of the stained glass and will distribute the load of the stained glass.

It is thus an object of the present invention to provide a new came formed of resilient and flexible plastic that will accommodate variation in glass thickness and will centre the glass while permitting air movement.

It is a further object of the present invention to provide a new window structure.

Broadly the present invention relates to a came having a web with laterally projecting flanges to form a substantially H-shaped cross section, said came being extended from a flexible resilient plastic material. The present invention also relates to a stained glass window structure wherein the stained glass pieces are confined between a pair of panes and wherein said cames engage the inner surfaces of said panes to aid in supporting said stained glass pieces.

Further features, objects and advantages will be evident from the following detailed description taken in conjunction with the accompanying drawings in which

FIG. 1 is a partial plan view of a stained glass window constructed in accordance with the present invention.

FIG. 2 is a perspective view of the came of the present invention.

FIG. 3 is a perspective view of a border came of the present invention.

FIG. 4 is a section along the line 4—4 of FIG. 1.

FIG. 5 is a section on line 5—5 of FIG. 4.

The window **10** is formed with a peripheral substantially U-shaped channel frame **12** which embraces a pair of clear panes **14** and **16** and a hollow spacer **18**. The

panes **14** and **16** have a pair of opposed inner surfaces **15** and **17** respectively. The hollow spacer **18** and the panes **14** and **16** are secured together in position within the frame **12** by any suitable adhesive means. The spacer **18** is generally fitted with a suitable dehydrating substance **20** and a suitable slit or passage **22** is provided in the inner wall of the spacer **18** and this passage **22** is adapted to communicate with the inside of the window **10** between the panes **14** and **16** as will be described hereinbelow.

One of the main integers of the present invention is the came **24** illustrated in FIG. 2. This came **24** is flexible resilient plastic which permits the came to be easily bent into shape to follow the peripheral contour of the stained glass pieces but tends to return to its original shape. One suitable plastic material is vinyl and the came of the present invention is preferably formed from extruded vinyl. The came **24** has a longitudinal web **46** with laterally projecting flanges **26**, **28**, **30** and **32** which form a substantially H-shaped cross section. Each of the flanges **26**, **28**, **30** and **32** has a lateral projecting rib indicated at **34**, **36**, **38** and **40** respectively adjacent their free ends.

A substantially U-shaped border came **50** having a pair of flanges **52** and **54** projecting from a base **53** is illustrated in FIG. 3. A longitudinal central bead **58** is provided on the base **53** and this bead and the base **53** have holes **48** therethrough.

The window structure of the present invention as above described is formed by the peripheral frame **12** which has secured therein the pair of panes **14** and **16** with the peripheral spacer **18** therebetween. The spacer is filled with a dehydrating agent **20**. Border cames **50** overlie the spacer **18** with the bead **58** over the slit **22** and the apertures in the came **50** communicating with the dehydrating material through the slit **22**. Received between the flanges **52** and **54** are the edges of the stained glass, for example as indicated at **56**, **60** and **62** located adjacent the periphery of the window. The other edges of these and other stained glass pieces are retained between the flanges **26** and **28** or **30** and **32** of the cames **24**. Ribs **34**, **36**, **38** and **40** engage the surfaces **15** and **17** of the panes **14** and **16** and may be slightly compressed to urge the flanges **26** and **28** or **30** and **32** against the stained glass pieces received therebetween to aid in supporting these pieces. Similarly the flanges **52** and **54** may bear against the surfaces **15** and **17**.

The dehydrating material **20** in the spacer **18** communicates with the spaces between the panes **14** and **16** and the adjacent pieces of stained glass in the following manner. The holes **48** in the bead **58** connect the slot **22** with the space between the flanges **52** and **54** and the edges of the stained glass piece held therein and these spaces in turn are connected to the spaces between the panes due to openings found between the inner surface of the flanges of the cames and the stained glass pieces. Such openings are illustrated at **70** in FIG. 5 and are formed due to the variations in thickness inherent in conventional stained glass pieces. Air passage across a came is also permitted due to deviation in the cames forming openings such as those indicated at **71** in FIG. 5 between the came and the inner surfaces **15** or **17**. The deviation of the cames from the surfaces **15** or **17** are also formed due to the uneven thickness of the stained glass pieces.

The applicants have disclosed one form of the present invention. Other forms will be evident to those skilled in the art.

We claim:

1. A decorative panel structure comprising a frame,

spaced panes of glass having opposed surfaces, a peripheral spacer between said panes, a plurality of pieces of stained glass arranged in a plane between said panes, cames having a web and laterally projecting flanges forming an H-shaped cross section embracing edges of said pieces of stained glass between adjacent said flanges, said cames engaging said opposed surfaces.

2. A decorative panel structure as defined in claim 1 wherein said cames have laterally projecting ribs adjacent the free ends of said flanges and wherein said ribs engage said opposed surfaces and urge said flanges into contact with said pieces.

3. A decorative panel structure as defined in claim 1 wherein said spacer is hollow and contains a dehydrating agent and is provided with openings between said panes.

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U.S. Cl. X.R.

52—311, 399, 456; 161—45