Jan. 5, 1971 J. W. HEMMINGER 3,552,077

SPACER IN A MULLION WALL CONSTUCTION

Filed April 14, 1969

FIG. 3

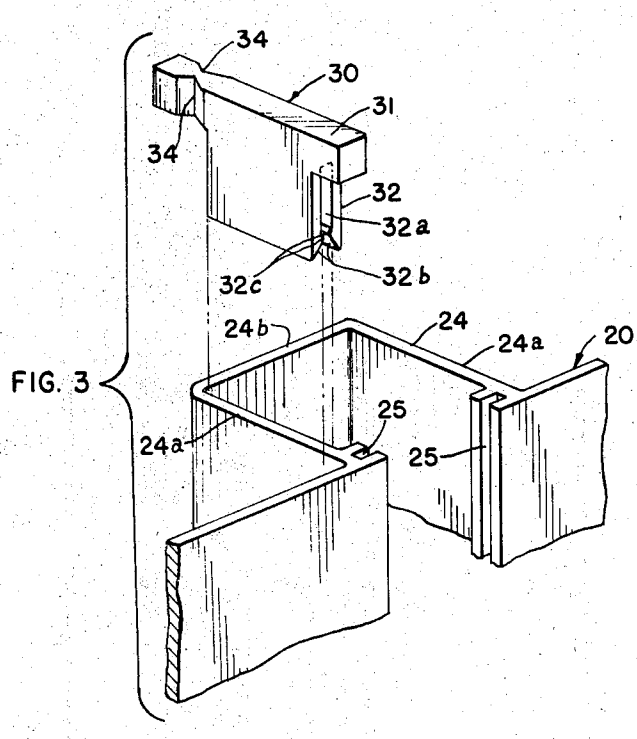


FIG. 4

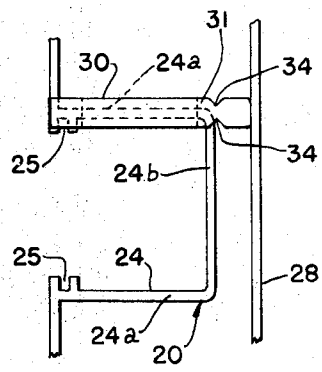


FIG. 2

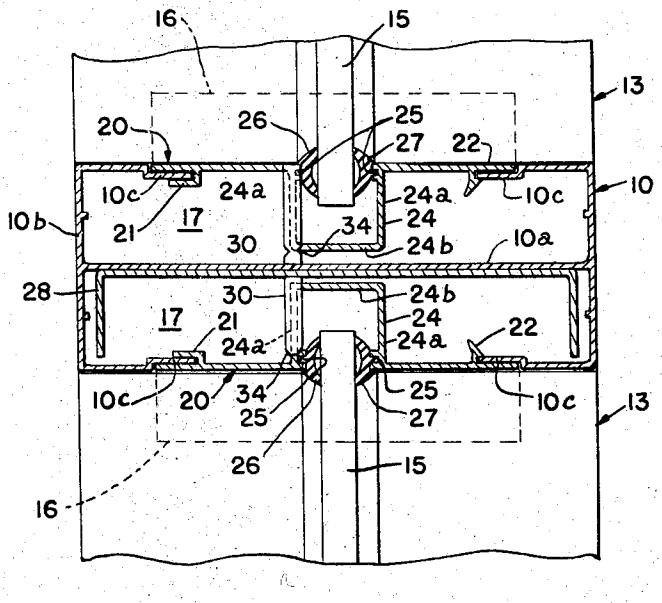
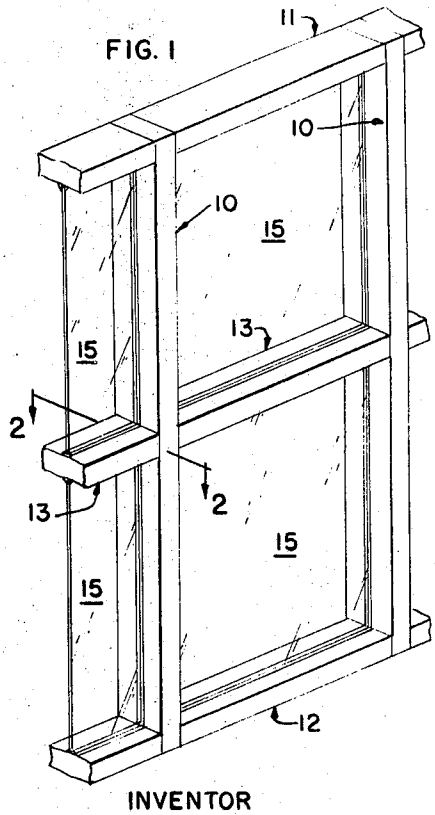


FIG. 1



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SPACER IN A MULLION WALL CONSTRUCTION

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U.S. Cl. 52—393 2 Claims

ABSTRACT OF THE DISCLOSURE

There is provided a spacer for use with a wall construction of the general type having a hollow vertical mullion and interconnecting horizontal mullions or structural elements. The vertical mullion includes a filler having a glazing channel of generally U-shaped section formed therein. The spacer includes a longitudinally extending top cross bar and a longitudinally bifurcated downwardly depending bar of resilient material and adapted to snap over a leg over the glazing channel so as to prevent deflection of the filler section inwardly relative to the vertical mullion.

The present invention relates to an improved wall construction, and specifically, to an improved wall construction and a new and novel spacer for use therewith which prevents inward deflection of the glazing filler in a vertical mullion.

In a commercially known type of wall construction, there is provided a generally I-shaped vertical mullion having an intermediate transversely extending mullion wall. Interconnecting horizontal structural members or mullions are secured to the vertical mullions. More specifically, the suitable shear blocks are secured to the outer wall of the vertical mullion, and the intermediate horizontal members in turn are fastened to the shear block. Such construction is more fully illustrated in my co-pending application, Ser. No. 815,633, filed even date herewith. A glazing member or filler, having a glazing channel, is snapped into the open end of the hollow mullion section, terminating at the horizontal mullions. Since the horizontal mullions abut against the outer surface of the vertical mullions, inward deflection of the filler member creates a gap in the window frame which is unsightly and undesirable from a weathering point of view.

Accordingly, an object of the present invention is to provide a new and improved wall construction which overcomes the above-mentioned difficulty.

Another object of the present invention is the provision of a new and improved spacer for use with a wall construction of the type described and which prevents inward deflection of the filler member.

Further objects and advantages of the present invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed and forming a part of this specification.

In accordance with these and other objects, there is provided an improved wall construction including a vertical mullion section having a transversely extending mullion wall defining a frame pocket, closed by a filler member defining a second wall and having a glazing channel of generally U-shaped section formed therein extending inwardly toward the mullion wall. The filler member extends along the vertical mullion intermediate any horizontal structural members. In accordance with the present invention, there is provided an improved spacer having a longitudinally extending top cross bar and a longitudinally bifurcated downwardly extending bar of resilient material snapped over the end of a leg of the glazing channel. The top cross bar spaces the leg of the glazing channel relative to the mullion transverse wall and prevents inward deflection of the filler member.

In accordance with another feature of the present invention, it is common to provide reinforcing bars or members within the hollow interior of a vertical mullion. To this end the top cross bar of the spacer is scored or weakened to permit breaking off a section thereof, so that by the reversal of the spacer a half turn over the leg of the glazing channel, the top bar of the spacer will be of the proper length to provide for engagement with a reinforcing bar.

For a better understanding of the present invention, reference may be had to the accompanying drawing wherein:

FIG. 1 is a perspective view of a typical wall construction according to the present invention;

FIG. 2 is a cross-sectional view of the wall construction of FIG. 1, taken along line 2—2, and illustrating the spacer members;

FIG. 3 is an exploded perspective view illustrating the assembly of a spacer member onto the leg of a glazing channel; and

FIG. 4 is an enlarged view illustrating the positioning of a filler member by a spacer relative to the transverse wall of a vertical mullion.

Referring now to the drawings, there is illustrated in FIG. 1 a wall construction according to the present invention. More specifically, there is illustrated a plurality of spaced vertical mullions **10**, interconnected at their top by a header member **11**, and at their bottom by a base member **12**. Intermediate the length of the vertical mullions there are intermediate horizontal mullions or structural members **13**. The vertical mullions together with the members form openings containing glass or other panels **15**. As more fully described in my above-mentioned co-pending application, the horizontal members **13** abut against the outer or jamb surface of the vertical mullions **10**, and may be secured thereto by suitable shear blocks **16**.

Referring now to FIG. 2, a typical vertical mullion **10** is of general I-shape, having a transversely extending mullion wall **10***a*, face walls **10***b* and inwardly extending flanges **10***c*, which together define hollow mullion sections forming frame pockets **17**. The pockets **17** may be closed by suitable filler members **20**, and in the illustrated embodiment, the filler members **20** have interfitting longitudinal parts **21** and **22** for lockingly engaging the ends of the flanges **10***c*. The filler members **20** form a side wall of the mullion assembly, and include a glazing channel **24** of generally U-shape extending inwardly toward the transverse million wall **10***a*. The glazing channel **24** includes side legs **24***a* interconnected by the bight portion **24***b*. Moreover, confronting gasket channels **25** are formed along the outer edges of the glazing channel **24** to position and secure suitable weathering gaskets **26** and **27**, fixing the glass **15** within the glazing channels **24**.

If desired, a suitable reinforcing bar **28** can be positioned within the hollow mullion section, as needed. In the illustrated embodiment, one of the hollow mullion sections includes a reinforcing bar **28** of generally U-shape, having its bight portion forming a part of the transverse mullion wall.

Inward deflection of a filler member **20** would cause separation with the butt jointed horizontal members **13**, and would adversely effect the weathering of the wall. Accordingly, there is provided in accordance with the present invention a spacer **30** to prevent such inward deflection of the filler member **20**. More specifically, the spacer **40** is formed of resilient material such as nylon, and includes a longitudinally extending top cross bar **31**,

and a longitudinally bifurcated downwardly depending bar **32**. The bifurcated bar **32** is readily snapped over one of the legs **24***a* of the glazing channel **24**, and preferably on the outer one of the legs **24***a*. The bifurcated bar **32** of the spacer **30** defines a longitudinal slot **32***a* having chamfered confronting edges **32***b* projecting inwardly to define inwardly projecting beads **32***c* adjacent the upper end of the slot **32***a*. The beads **32***c* will grip leg **24***a* of the glazing channel. The bifurcated bar is of a length equal to the depth of the leg **24***a* so as to be firmly held thereon. One end of the top cross bar **31** extends beyond the bottom of the glazing channel **24** and engages with the transverse mullion wall.

In accordance with another feature of the present invention, there is provided a suitable weakened or scored portion **34** of the top cross bar **31** to permit breaking off of the top cross bar **31** at the score mark. Thus, the spacer **30** may be turned a half turn, and snapped with the other end of the top cross bar toward the transverse mullion wall **10***a* when a reinforcing bar **28** is used, as illustrated with the spacer **30'** in FIG. 2.

It will be understood that a wall construction of the type illustrated and employing spacers **30** on the outer one of the side legs **24***a* of the glazing channels **24** will prevent inward deflection of the filler members **20**, thus eliminating openings between the filler members and the intermediate horizontal members **13**.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A wall construction including a vertical mullion section having a transversely extending mullion wall defining a frame pocket and a second wall defined by a filler member having a glazing channel of generally U-shaped section formed therein extending inwardly toward said mullion wall, said channel having spaced side legs interconnected by a bight portion; a horizontal structural member having one end butt fitted to said vertical member; and a spacer including a longitudinally extending top cross bar and a longitudinally bifurcated downwardly depending bar of resilient material and snapped over the end of a leg of said glazing channel, said top cross bar spacing said leg relative to said mullion wall.

2. A wall construction as set forth in claim **1** and including a reinforcing member in said frame pocket defining in part said transversely extending mullion wall, said spacer having one end of the top cross bar shorter than the other end and fitted with the shorter end against said reinforcing member.

References Cited

UNITED STATES PATENTS

3,055,468	9/1962	Horejs	52—393
3,403,490	10/1968	Luedtke	52—393

JOHN E. MURTAGH, Primary Examiner

U.S. Cl. X.R.

52—397, 456, 666. 731