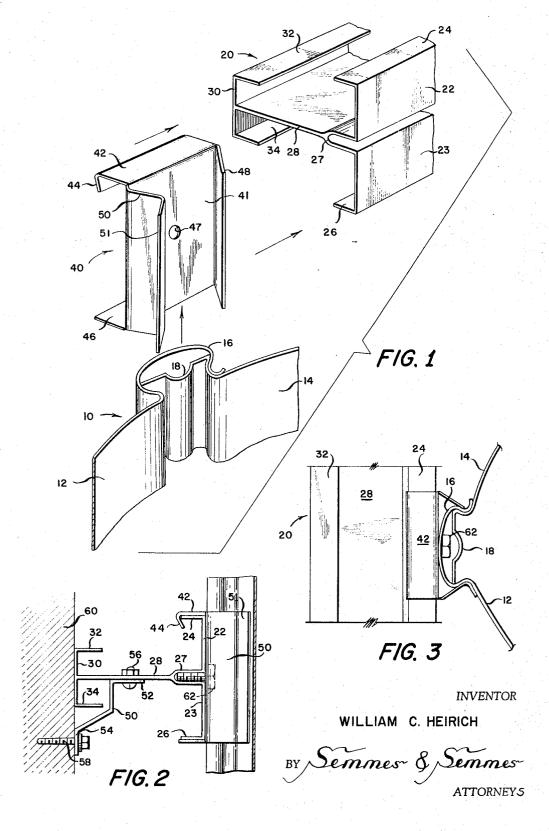
WALL PANELING CLIP

Filed Jan. 6, 1966

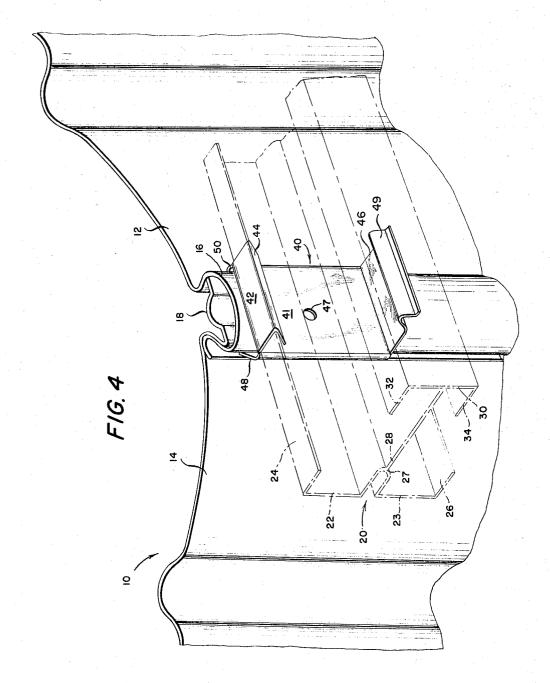
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WALL PANELING CLIP

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INVENTOR

WILLIAM C. HEIRICH

BY Semmes & Semmes ATTORNEYS

Dec. 27, 1966

W. C. HEIRICH

3,293,819

WALL PANELING CLIP

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3 Sheets-Sheet 3

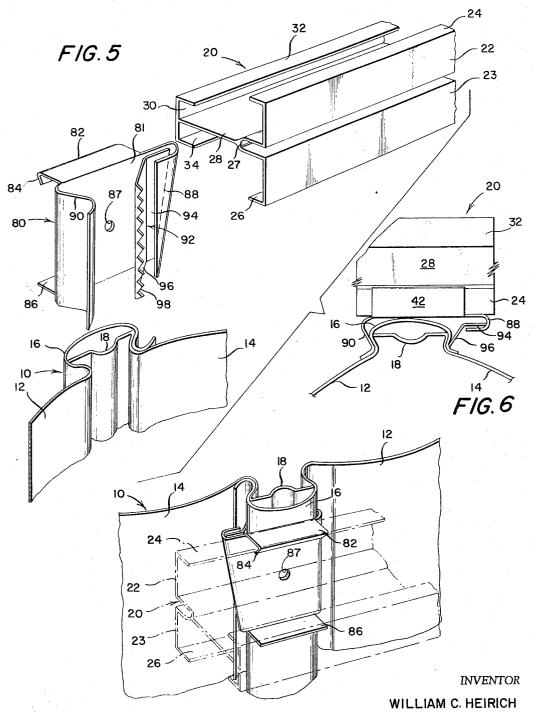


FIG. 7

BY Semmes & Semmes

ATTORNEY5

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3,293,819 WALL PANELING CLIP William C. Heirich, P.O. Box 829, Muskogee, Okla. 74401 Filed Jan. 6, 1966, Ser. No. 519,149 8 Claims. (Cl. 52—478)

The invention disclosed herein relates generally to wall paneling and in particular to an improved clip assembly for attaching the interlocking flanges of adjacent wall 10

panels to building fronts.

Modernizing building structures and in particular store fronts with the use of wall paneling has become increasingly important to the construction industry. In particular, the use of wall paneling consisting of elongated panels 15 having trough-like bottom portions and arched side portions terminating in curvilinear locking flanges is rapidly gaining acceptance. Panel elements similar in construction to those described in my pending application Serial No. 358,024, filed April 7, 1964, and entitled Canopies which 20 issued January 4, 1966 as Patent No. 3,226,891, serve as elements of such wall paneling construction merely by being "flattered out." Unquestionably, the major problem encountered in assembling such wall paneling concerns the method of attaching such paneling to the building 25 front. The present invention envisions the use of a novel wall paneling clip providing for ease in assembling and mounted the panel elements on building fronts in "sliding" relationship along desired lines of construction.

Accordingly, it is an object of the present invention to 30 provide a simple wall paneling clip providing for ease in assembling and mounting interlocking wall panels to a conventional T section attached to a building wall.

Another object of the present invention is to provide a novel wall paneling clip for attachment to a conventional T section attached to a building front permitting the interlocking flanges of adjacent panel elements to be assembled.

A further object of the present invention is to provide means for attaching the interlocking flanges of adjacent 40 wall paneling elements to a building front in a manner permitting such elements to freely slide along the building front thus eliminating the necessity of sizing the terminal panel elements to precisely fit the length of the building front.

Still a further object of the present invention is to provide for ease in assemblying and mounting interlocking wall panels to a conventional T section attached to building wall with use of simple clip assembly characterized by wedging arrangement insuring against slipping of 50 panels.

Yet additional objects of the present invention will become apparent from the ensuing specification and attached drawings which illustrate the novel wall paneling clips wherein:

FIG. 1 is an exploded perspective view illustrating a first embodiment of wall paneling clip, adjacent sections of interlocking wall panels, and a T section to be attached to the building front;

FIG. 2 is a side view illustrating the first embodiment 60 wall paneling clip, adjacent sections of interlocking wall panels, and the supporting T section in assembled position.

FIG. 3 is a top view illustrating adjacent interlocking wall panels held in locking relationship within flanges of 65 the first embodiment wall paneling clip;

FIG. 4 is a perspective view looking outwardly from the face of the building and illustrating the use of the first embodiment wall paneling clip in supporting adjacent interlocking wall panels upon a T section attached to the building front; 2

FIG. 5 is an exploded perspective view illustrating a second preferred embodiment of wall paneling clip designed for wedging interlock with wall panels;

FIG. 6 is a top-view illustrating adjacent wall panels beld in locking relationship within flanges of the second

preferred embodiment wall paneling clip; and

FIG. 7 is a perspective view looking outwardly from the face of the building and illustrating the use of the second preferred wall paneling clip in supporting adjacent interlocking wall panels upon a T section attached to the building front.

Modernization of building fronts may be accomplished with the use of panel elements having trough-like bottom portions and arched side portions terminating in curvilinear locking flanges. As illustrated in FIG. 4, reference numeral 10 generally designates a section of wall paneling including one-half widths of adjacent panels 12 and 14 which terminate in curvilinear locking flanges 16 and 18 respectively.

Assembling the wall paneling 10 to the building surface, as envisioned in the present invention, is accomplished with the use of conventional extruded T sections 20 (illustrated in phantom in FIG. 4) which are attached at one side thereof to the building wall to be "covered" and on the other side thereof to either the first embodiment 40 of wall paneling clip or second, preferred embodiment 80 of wedging wall paneling clip. Now, with specific reference to the first embodiment clip assembly 40 of FIGS. 1-4, each T section 20 includes front vertical walls 22 and 23 held in spaced relationship by U-shaped section 27 and terminating at their extremities in horiozntal flanges 24 and 26 respectively. Attached near the center portion of U-shaped section 27 and extending rearwardly therefrom is horizontal member 28 which terminates in rear vertical wall 30, having horizontal flanges 32 and 34, which in turn is scured to the building front with the use of bracket assembly 50, as illustrated in FIG. 2 and described hereinafter.

Bracket assembly 50 has a top horizontal flange 52 which rests in abutting relationship against the underside of horizontal member 28 and is secured thereto by bolt assembly 56, and a lower vertical flange 54 which rests in abutting relationship against building wall 60 is secured thereto with screw 58.

Wall paneling clip 40, as seen in FIG. 1, consists of a back plate 41 terminating at each side thereof in curvilinear arms or flanges 48 and 50, 51 which are complementarily configured to enclose interlocking flange 16 of panel element 12. At the top of back plate 41 is located upper horizontally disposed arm or flange 42 having a turned down portion 44 at the end thereof designed to encompass horizontal flange 24 of T section 20. At the bottom thereof, back plate 41 terminates in lower horizontally disposed arm or flange 46 which rests in abutting relationship against horizontal flange 26 of T section 20. Near the middle of back plate 41 is located opening 47 through which a self-tapping bolt 62 (FIG. 2) may be inserted for additional support in securing wall panel clip 40 to the U-shaped section 27 of T section 20.

Alternative configuration of clip 40 may be employed, as seen in FIG. 4, in which lower flange 46 terminates in curvilinear section 49 permitting flange 34 of T section 20 to be snapped in place.

Reference to FIGS. 1, 2 and 4 indicates generally the mode of attaching the wall paneling to the building wall being modernized. The initial step involves securing T sections 20 to the building face with the use of bracket assemblies 50, as outlined above. Although wall paneling 10 must be attached perpendicular to T sections 20 with the use of wall paneling clip 40, it is obvious that by running T sections 20 vertically, paneling 10 may be

arranged horizontally. Alternatively, and as envisioned, placing T sections 20 horizontally permits vertical arrangement of wall paneling 10. Still further, wall paneling 10 may be attached to the building wall at any desired angle merely by varying the angle at which T sections 5

20 are attached to the building wall.

As T sections 20 are secured to the building wall, wall paneling clips 40 are inserted in place such that upper horizontally disposed flange 42 rests in covering relationship to horizontal flange 24 of T section 20 and lower 10 horizontally disposed flange 46 rests in abutting relationship to flange 26 of T section 20. Importantly, at this time, wall paneling clips 40 may be slid along the upper horizontal flange 24 of T section 20. In this manner, it is possible to compress or depress the individual panels 15 12, 14 . . . from the face of the building wall. Thus, it is possible to insure that the last individual wall panel of wall paneling 10 precisely coincides with the corner of the building. In this manner, it is no longer necessary to cut the terminal panel to the precise width required 20 claims. thus reducing assembly time greatly. To insure the proper "rigidity" of construction, it is possible to attach wall paneling clips 40 securely to T sections 20 with the use of self threading bolts 62, as previously mentioned.

A primary disadvantage of the first embodiment wall 25 paneling clip 40 of FIGS. 1-4 is the fact that the individual panels 12 and 14 may tend to slide downwardly within flanges 48 and 50 of clip 40. Thus, the second and preferred embodiment of FIGS. 5-7 is designed to permit locking flanges 16 and 18 of panels 12 and 14 30 to become wedged within the wall paneling clip.

The second, preferred embodiment of wall paneling clip is generally designated by the reference numeral 80 and consists of a back plate 81 terminating on one side thereof in curvilinear arm or flange 90 which is 35 generally complementarily configured to rest in abutting relationship against one side of interlocking flange 16 of panel element 12. At the top of back plate 81 is located upper horizontally disposed arm or flange 82 having a turned-down portion 84 at the end thereof 40 designed to encompass horizontal flange 24 of T section At the bottom thereof, back plate 81 terminates in lower horizontally disposed arm or flange 86 which rests in abutting relationship against horizontal flange 26 of T section 20. Near the middle of back plate 81 is located opening 87 through which a self-tapping bolt may be inserted for additional support in securing wall paneling clip 80 to the U-shaped section 27 of T section 20, as illustrated in FIG. 2 with respect to the first embodiment wall paneling clip 40. To this extent, the 50 second embodiment wall paneling clip 80 precisely resembles that of the first embodiment 40 of FIGS. 1-4.

On the other side of back plate 81 is located a second, tapered, overlying flange 88, generally U-shaped in cross-Within overlying flange 88 is located wedge 55 element 92 consisting of a first flat section 94, inserted within overlying flange 88 in sliding relationship therewith, and a second section 96 designed to engage the other half of interlocking flange 16 of panel element 12, as seen in FIG. 9. Of course, the edge of wedge section 96 may contain serrations 98 capable of gripping the surface of interlocking flange 16 more tightly. The serrations 98 of the edge of wedge section 96 may constitute a continuation of section 96 or be formed at any angle thereto, such as 90° for example, depending upon 65 the radius of inner flange 14 at point of contact with section 96.

Thus, as can be seen in FIG. 5, once the interlocking flanges 16 and 18 of panel elements 12 and 14 are inserted within clip assembly 80, any tendency for panels 70 12 and 14 to move downwardly is resisted by the wedgelike formation of overlying flange 88 and wedge element 92. In particular, any tendency of panels 12 and 14 to move downwardly is accompanied by a simultaneous downward movement of wedge element 92 within tapered 75

overlying flange 88, thus causing element 92 to be wedged inwardly in tighter contact with interlocking flange 16 of panel 12. As indicated before, serrations 98 will cause wedge element 92 to bite into grip interlocking

flange 16 even tighter.

The mode of attaching the second embodiment wall paneling clip 80 to building wall 60 is generally similar to that with respect to the first embodiment clip assembly 40 of FIGS. 1-4. Wall paneling clips 80 may be slid along the upper horizontal flange 24 of T section 20 to compress or depress the individual panels 12 and 14. In addition, the second and preferred embodiment 80 of the wall paneling clip precludes the possibility of downward, slipping movement of wall panels 12 and 14 within clip assembly 80.

Manifestly, still further modification of the subject wall paneling clip may be employed, particularly as to configuration of various flange elements, without departing from the scope of invention as defined by the subjoined

1. In a wall paneling assembly of the type having a supporting frame and panel elements with side portions terminating in sets of adjacent locking flanges to form a wall, the combination with said panel elements and supporting frame of a clip assembly enabling certain of said locking flanges to be secured to said supporting frame,

(A) a plate;

comprising:

(B) first locking arm means extending from said plate mounting said clip assembly upon said supporting frame; and

(C) second locking arm means extending from said plate securing one of said sets of adjacent locking flanges to said clip assembly, said second locking arm means including a first flange abutting one side of said one of said sets of adjacent locking flanges and a second flange including a generally overlying section together with a wedge member, slidably mounted within said overlying section, said wedge member abutting the other side of said one of said sets of adjacent locking flanges.

2. A wall paneling assembly as in claim 1, wherein said generally overlying section of said second flange and said wedge member are downwardly tapered.

3. A wall paneling assembly as in claim 2, wherein said wedge member is serrated at its point of contact with said other side of said one of said sets of adjacent locking flanges.

4. A wall paneling assembly as in claim 3, wherein said generally overlying section of said second flange is

U-shaped in cross-section.

5. A wall paneling assembly as in claim 4, wherein said supporting frame includes first and second horizontally disposed shoulders, said first locking arm means including upper and lower generally horizontally disposed flanges resting in abutting relationship with respect to said first and second shoulders, said upper flange terminating in a curvilinear portion encompassing said upper shoulder permitting said clip assembly to slide freely along said supporting frame.

6. A paneling system for forming a wall or covering

an existing building front, comprising:

(A) a plurality of generally vertical panel elements having side portions lying adjacent each other, said side portions of adjacent panels including adjacent locking flanges permitting said panel elements to be assembled as a substantially vertical wall;

(B) at least one generally horizontally disposed sup-

porting frame; and

(C) a plurality of clips securing said adjacent locking flanges of certain adjacent panels to said supporting frame, said clips each including a back plate having first and second sets of locks located on the opposite side of said back plate, said first set of locks

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including a first generally converging flange assembly securing one side of one of said adjacent locking flanges and a second flange assembly including a generally converging portion adjacent said back plate and a generally diverging portion adjacent said one of said adjacent locking flanges, said converging and diverging portions securing the other side of said one of said adjacent locking flanges to said clip, said second set of locks including a generally curvilinear flange encompassing a portion of said supporting frame so as to permit said clip to slide freely along said supporting frame.

7. A paneling system as in claim 6, wherein each of said adjacent locking flanges includes a first generally curvilinear portion constituting the terminal of one panel 15 element overlying a second portion constituting the terminal of an adjacent panel element, said first portion having an opening generally smaller than the expanse of said second portion, said first and second flange assemblies of said first set of locks being generally complimentary in configuration with respect to said first curvilinear portion of said adjacent locking flanges and being spaced apart at their furthermost extremity from said back plate a distance smaller than the expanse of said first portion.

8. A paneling system as in claim 7 wherein said first generally converging flange assembly of said first set of locks comprises a downwardly tapered, overlying section together with a wedge member resting in sliding relationship within said overlying portion.

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FRANK ABBOTT, Primary Examiner.

25 JOHN E. MURTAGH, Examiner.