

Oct. 14, 1952

W. GILLETT
END FILLER FLASH SECTION

2,613,768

Filed June 1, 1948

2 SHEETS—SHEET 1

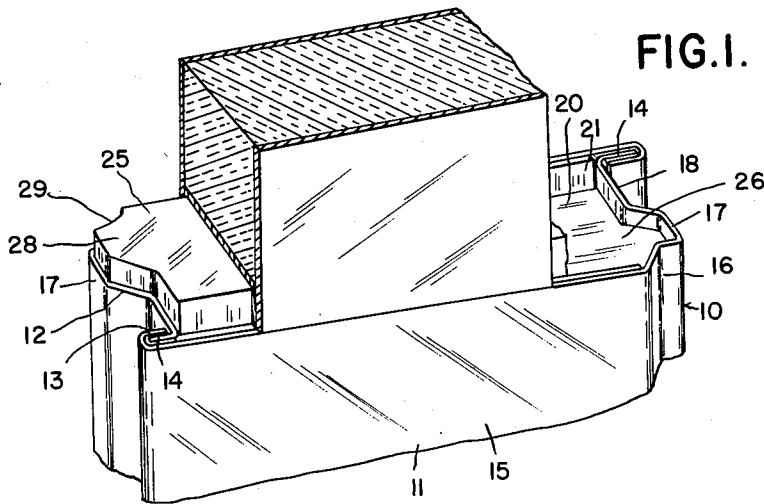


FIG. 2.

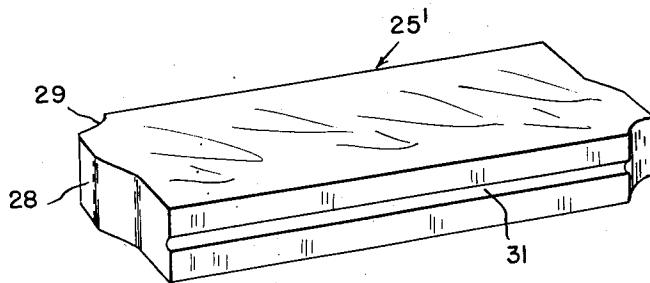
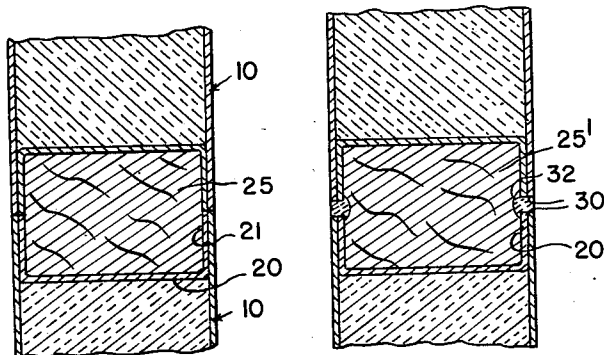


FIG. 4.

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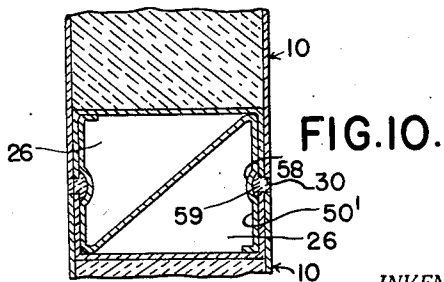
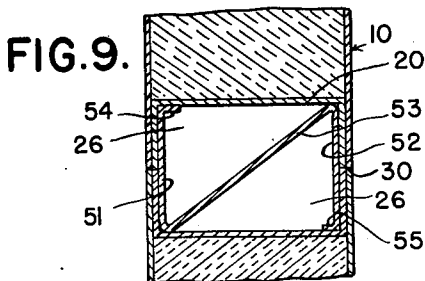
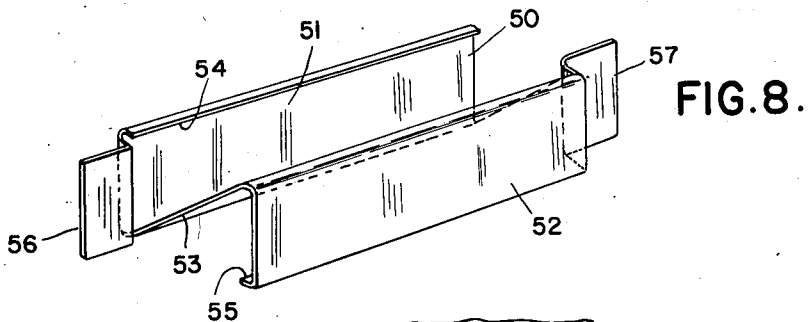
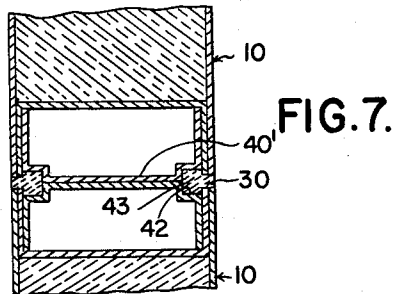
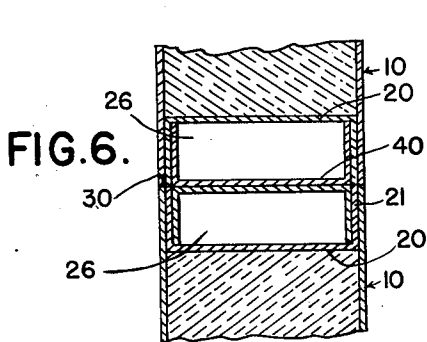
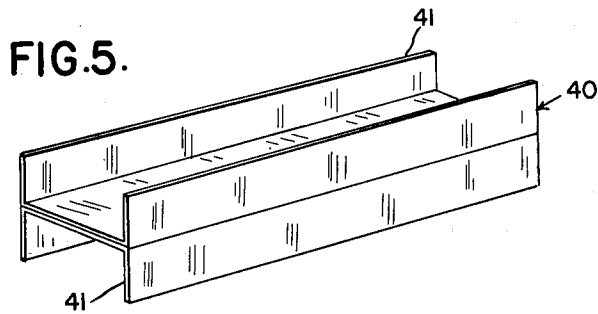
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END FILLER FLASH SECTION

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2 SHEETS—SHEET 2



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2,613,768

END FILLER FLASH SECTION

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5 Claims. (Cl. 189-34)

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The present invention relates to wall structure comprising hollow elongated panels in edge to edge and in end to end relation, the panels having interfitting ribs and grooves at their edges and shallow pockets at their ends, and end filler flash sections received in the pockets between the ends of a pair of hollow structural elements.

It is an object of the present invention to provide an end filler flash section for use between a pair of structural panels having identical recessed end portions, the end filler flash section being shaped to fit snugly within said recesses.

It is a further object of the present invention to provide an end filler flash section of the character described provided with a groove for the reception of sealing material to be introduced between the adjacent ends of adjacent sections.

It is a further object of the present invention to provide an end filler flash section of the character described for use between identically recessed ends of structural panels, the end filler flash sections serving as closures for the ends of the panels, as means for connecting the panels together, and as means for cooperating with the panels to provide grooves or channels for the reception of sealing material therebetween.

Other objects and features of the invention will become apparent as the description proceeds, especially when taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a fragmentary perspective view partly in section illustrating one form of end filler flash section and the manner in which it cooperates with the adjacent ends of structural units.

Figure 2 is a fragmentary vertical section through a joint or connection provided by the end filler flash section illustrated in Figure 1.

Figure 3 is a view similar to Figure 2 illustrating a slightly modified construction.

Figure 4 is a perspective view of the end filler flash section illustrated in Figure 3.

Figure 5 is a perspective view of a modified form of end filler flash section.

Figure 6 is a fragmentary vertical section through the connection provided by the end filler flash section shown in Figure 5 between a pair of structural elements.

Figure 7 is a view similar to Figure 6 illustrating a somewhat modified form of end filler flash section.

Figure 8 is a perspective view of yet another form of end filler flash section.

Figure 9 is a fragmentary vertical section through the connection provided by the end filler flash section shown in Figure 8 between a pair of structural elements, and

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Figure 10 is a view similar to Figure 9 illustrating a somewhat modified construction of an end filler flash section.

Referring now to the drawings the end filler flash section of the present invention is employed as a connector between recessed ends of structural units 10. Referring to Figure 1, each of the structural units 10 has front and edge portions composed of two sheet metal members 11 and 12. Each of the sheet metal members has a reversely bent portion 13 which is bent over a terminal flange 14 of the cooperating member. The members 11 and 12 each include a flat front or rear area 15 which is bent at the side opposite to the reversely bent flange to provide a rabbet recess 16, a rib 17, a groove 18 and the terminal flange 14 previously referred to. The dimensions of the rabbet recess 16 are such that the flange composed of the terminal flange 14 and the reversely bent portion 13 substantially fills the rabbet. Also as will be readily apparent, the rib 17 is shaped to fit the groove 18 of an adjacent unit.

Therefore, structural elements 10 may be inter-fitted in edge to edge relation to form a wall, ceiling, floor or the like. However, as thus far described, no means are provided for interconnecting the members 10 in end to end relationship. In the preferred construction of panel members the otherwise open ends of the panels are closed by closure members 20 of generally U-shaped cross section. These closure members have upwardly extending flanges 21 whose edge extends along the upper edge of the front and rear surfaces 15. The web interconnecting the flanges 21 is shaped to extend into the hollow interior of the ribs 17. In actual practice the interior of the panel is preferably filled with an insulating material and the closure members 20 serve to retain this material in position.

In accordance with the present invention end filler flash section or connectors are provided which are shaped to fit snugly within the recesses or pockets 26 provided at the ends of the panels 10. As seen in Figures 1-4, a connector 25 may be in the form of a block of wood or other suitable material shaped to fit snugly within the pockets 26. As seen in Figure 1 the connector 25 is shaped to substantially fill the pocket 26 having rib portions 28 extending into the hollow interior of the ribs 17 and being shaped as indicated at 29 to accommodate the rabbet recess 16. In order to effect a permanent connection between the panels 10 suitable securing means (not shown) which may take the form of nails or screws may be provided which penetrate through the ends of the panels into the connector 25.

Due to the fact that the closure members 20

are of a predetermined depth, it is possible, by selecting the thickness of the end filler flash section 25, to provide a construction in which the ends 30 of adjacent panels are spaced as indicated in Figure 3. In this case an end filler flash section or connector 25' illustrated in perspective in Figure 4 is employed which is provided with an elongated groove 31 intermediate its top and bottom edges. The groove 31 is preferably of a size somewhat greater than the amount of spacing between the top and bottom edges 30 of the panel sections when the parts are fully assembled. This results in the provision of an undercut groove or channel as indicated at 32 for the reception of suitable insulating material which may be introduced thereto to provide an effective seal. Since the edges 30 of the adjacent panels overhang the groove 31 somewhat the filler material is firmly retained in the channel 32.

Referring now to Figures 5-7, a modified construction is illustrated. In these figures a connector 40 is provided from sheet metal having an H-shaped cross section. Conveniently the connector 40 may be formed by welding or otherwise securing together a pair of channel members 41 of U-shaped cross section as well illustrated in Figure 5. In Figure 6 the connector 40 is illustrated as of a size to completely fill the recesses 26 when the edges 30 of the panels 10 are in abutment. If preferred, however, a modified form of connector 40' may be provided whose thickness is somewhat greater than the combined depth of the recesses 26, so that when the parts are assembled together as illustrated in Figure 7, the edges 30 of the panels 10 are spaced apart. In this case it is preferred to provide a groove 42 in the connector members 40' which will register with the space between the panel edges 30 and as in the embodiment previously described, the width of the groove 42 is somewhat greater than the spacing between the edges 30 of the panels 10. This results in the edges 30 overhanging the groove 42 to assist in the retention of the sealing material 43 introduced into the channels 42.

Referring now to Figures 8-10, there is illustrated yet another modification of the end filler flash section or connector. In these figures the flash section is indicated at 50 as formed of sheet metal and provided in a generally Z-shaped cross section, having vertical legs 51, 52, a transverse diagonal leg 53 and inturned flanges 54 and 55 provided on the vertical legs 51 and 52. In addition and in order to provide a portion of the connector element 50 which may enter into the hollow interior of the ribs 17, opposite ends of the vertical legs 51 and 52 are offset and flanged as indicated at 56 and 57.

As illustrated in Figure 9 the connector 50 may be of a thickness just twice the depth of the recesses 26 so that when the parts are assembled together the ends 30 of the panels are brought into abutment.

If preferred and as illustrated in Figure 10 the thickness of the filler which in this figure is designated 50' may be somewhat greater than twice the depth of the recesses 26 so that the ends 30 of the panels 10 are spaced. In this case the vertical legs of the connector 50' are provided with grooves 58 which in the assembly are in registry with the space between the ends of the panels 30. Preferably the grooves 58 are somewhat wider than the space between the ends 30 of the panels so that the ends 30 overhang the channel to assist in retaining the sealing mate-

rial 59 therein. In the modification illustrated in Figures 5-10 a permanent connection between adjacent panels may be provided by spot or otherwise welding the end portions of the panels to the connector elements. Alternatively if it is desired to provide a releasable connection, self-tapping screws or the like may be provided for securing the ends of the panels to the connectors. Obviously, of course, it is within the purview of the present invention to provide a permanent connection between a connector element and one of the adjacent panels, and a releasable connection between the same connector element and the other panel.

The present application is in part a continuation of my prior copending application Serial No. 539,136, filed June 7, 1944, and entitled "Building Structure."

The drawings and the foregoing specification constitute a description of the improved end filler flash section in such full, clear, concise and exact terms as to enable any person skilled in the art to practice the invention, the scope of which is indicated by the appended claims.

What I claim as my invention is:

1. Wall structure comprising a plurality of hollow elongated sheet metal panels having flat sides assembled together in edge to edge and in end to end relationship, said panels having interfitting ribs and grooves at their edges, the end portions of the sides and edges of said panels forming a continuous wall completely surrounding the ends of said panels and terminating in a plane perpendicular to the length of said panels, end closure members within the ends of said panels, said end closure members being of U-shaped cross-section and including bottom walls spaced inwardly from the plane occupied by the ends of the sides and edges thereof, said end closure members having side flanges engaging the inner surfaces of the sides of said panels, said flanges having their free edges co-terminal with the ends of said panels, the ends of said panels and said end closure members defining shallow pockets having bottom, side and end walls, and an end filler flash plate located between each pair of end to end panels, each end filler flash plate being partially seated in each of a pair of confronting pockets at the ends of a pair of end to end panels to mechanically interconnect said pair of panels and to prevent relative lateral movement therebetween in any direction.

2. Structure as defined in claim 1 in which said end filler flash plates have a thickness slightly greater than twice the depth of said pockets to space the ends of adjacent panels apart.

3. Structure as defined in claim 2 in which said end filler flash plates are provided with grooves in their sides in registration with the space between adjacent panels, and sealing material in said grooves.

4. Structure as defined in claim 3 in which said grooves are wider than said spaces, and said sealing material fills said grooves and underlies the end portion of said adjacent panels.

5. Structure as defined in claim 1 in which said end filler flash plates have a thickness equal to twice the depth of said pockets whereby the ends of adjacent panels abut when said end filler flash plates are fully seated in said pockets.

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