

Aug. 18, 1953

F. E. ALLEN
ARCHITECTURAL PANEL

2,649,172

Filed June 2, 1947

2 Sheets-Sheet 1

Fig 1

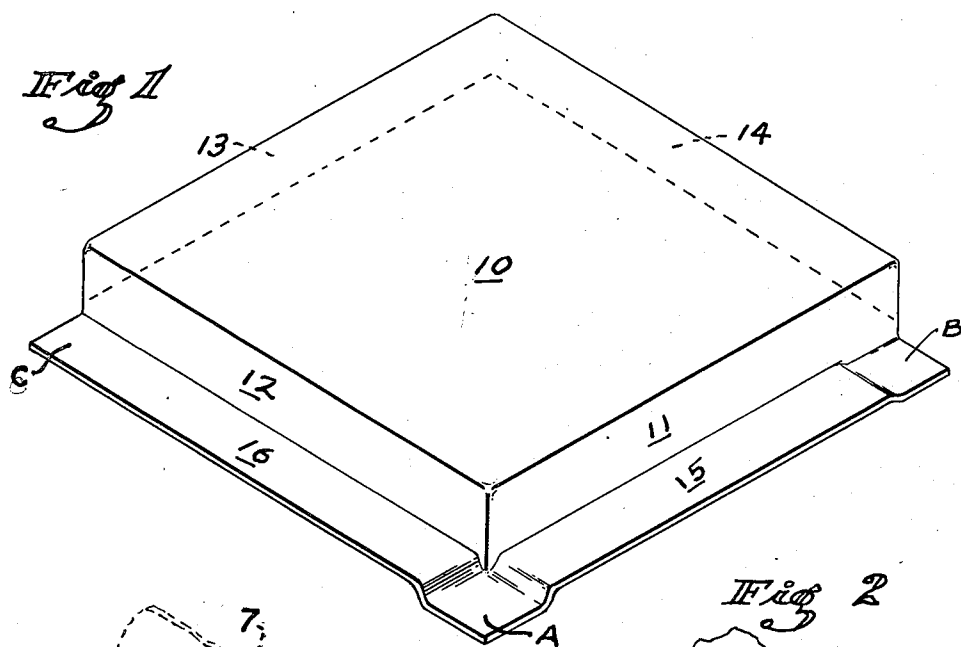


Fig 2

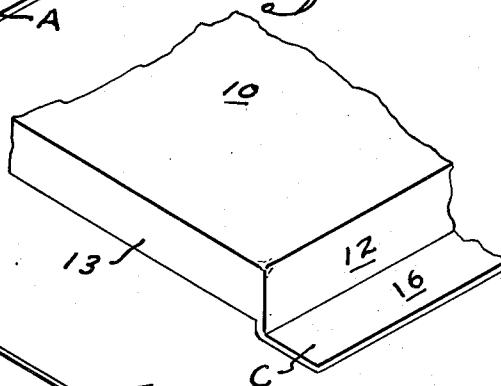
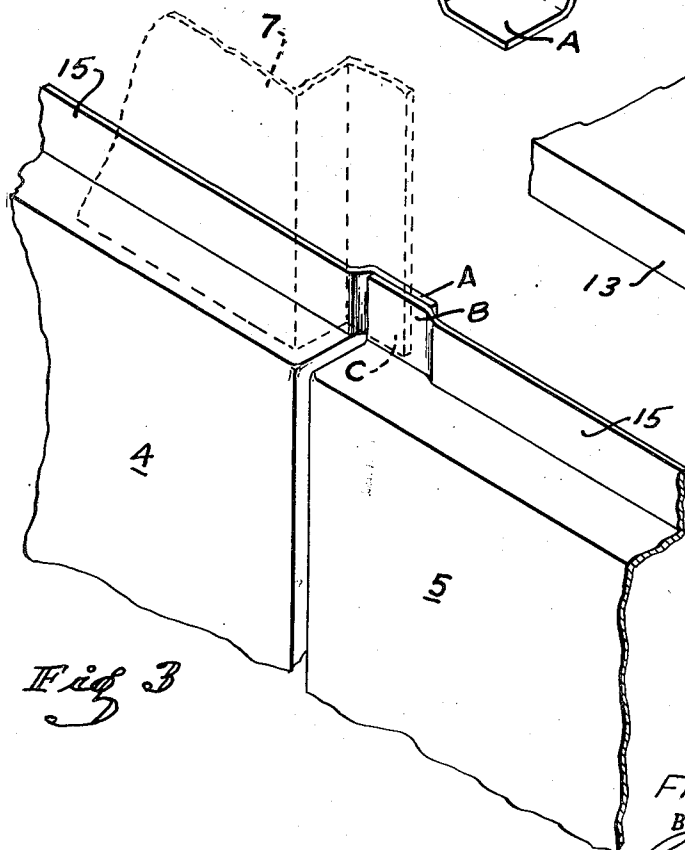


Fig 3



INVENTOR.
FRANCIS E ALLEN

BY
Charles Mc Frye
ATTORNEY

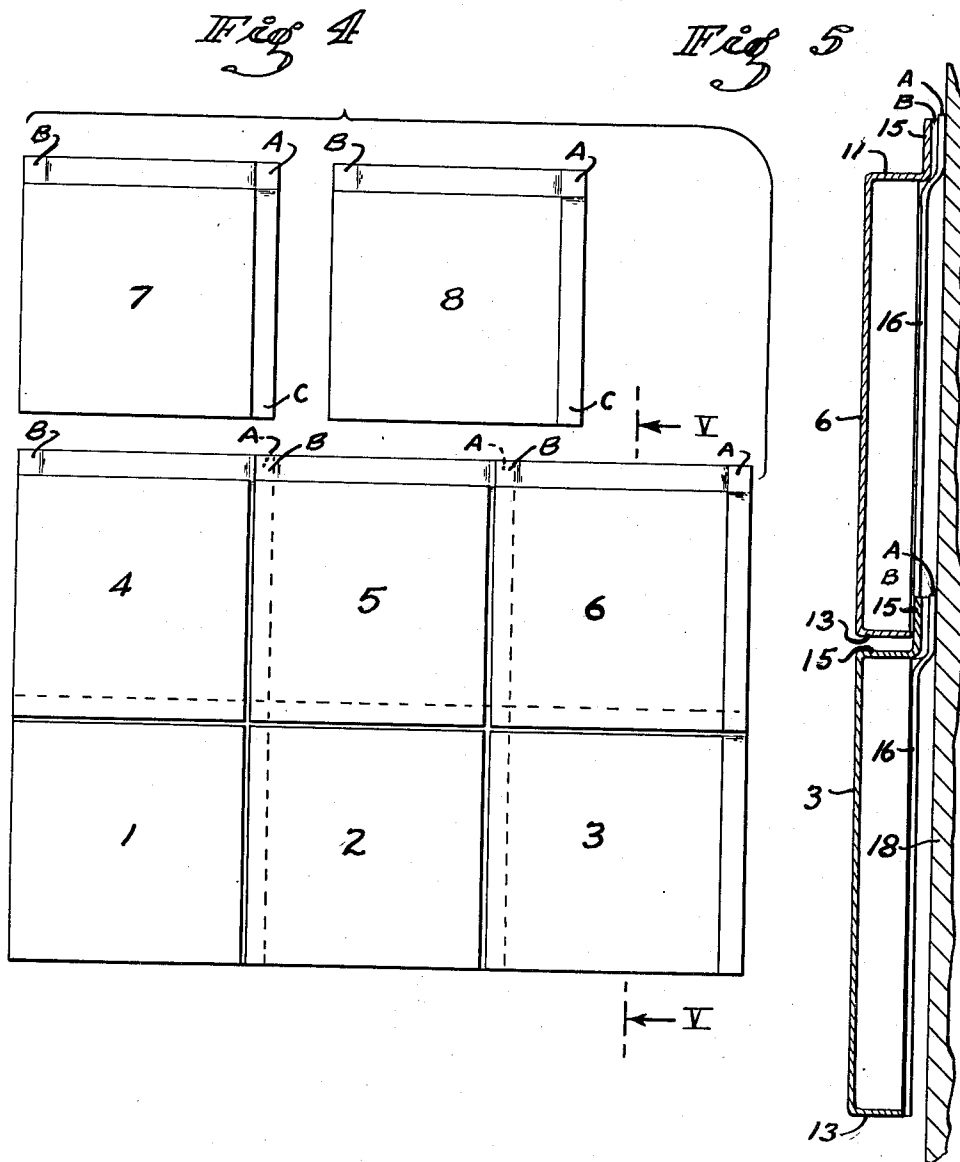
Aug. 18, 1953

F. E. ALLEN
ARCHITECTURAL PANEL

2,649,172

Filed June 2, 1947

2 Sheets-Sheet 2



INVENTOR.
FRANCIS E ALLEN
BY
Charles M. Fryer
ATTORNEY

UNITED STATES PATENT OFFICE

2,649,172

ARCHITECTURAL PANEL

Francis E. Allen, Oakland, Calif., assignor to
Architectural Porcelain Constructors, Oakland,
Calif., a corporation of California

Application June 2, 1947, Serial No. 751,772

3 Claims. (Cl. 189—86)

1

This invention relates to architectural panels, and more particularly to panels of the kind generally made of porcelain-coated sheet metal employed as a covering for building exteriors.

It is common practice to form sheet metal panels for covering the exterior of buildings and to flange the edges of the panels rearwardly to give them the appearance of tiles. The panels are usually porcelain-coated and secured to the building by some suitable fastening means in closely spaced relationship. The seams or spaces between adjacent panel edges are pointed or grouted with a soft plastic material referred to in the trade as "mastic." This grouting is intended to remain in a plastic or semi-plastic state and to adhere to the panel edges to provide an enduring seal against the entry of moisture between the panels. However, when the panels are exposed to weather on an exterior building surface, and exposed also to variations in temperature which cause expansion and contraction, the mastic sometimes loses its sealing properties or becomes loosened and drops out of the seams. One solution to this problem is to form the panels with overlapping parts so that they may be applied to a surface somewhat in the manner of ordinary shingles and thus form a natural water shed not dependent upon tightly sealed seams or joints. This solution gives rise to the further problem that any over-lapping of panels one upon the other will result in an uneven outer surface rather than the desirable flat surface that should be presented in an architectural finish of this kind.

It is, therefore, an object of this invention to provide architectural panels capable of being arranged in groups of closely spaced units with each panel overlapping adjacent panels in a manner to provide a natural water shed and with the exterior or exposed surfaces of all panels in the group being disposed entirely in the same plane.

Further and more specific objects and advantages of the invention and the manner in which it is carried into practice are made apparent in the following specification by reference to the accompanying drawings.

In the drawings:

Fig. 1 is an isometric view of an architectural panel embodying the present invention;

Fig. 2 is a fragmentary isometric view illustrating one corner of the panel illustrated in Fig. 1;

Fig. 3 is a fragmentary isometric view illustrating the overlapping relationship of two

2

panels at their adjacent vertical edges and also illustrating in dotted lines the position assumed by a third panel disposed above one of the first two panels;

Fig. 4 is a schematic view illustrating a group of panels in elevation; and

Fig. 5 is an enlarged vertical cross section taken on a line V—V of Fig. 4.

The panel illustrated in Fig. 1 is of relatively small size but it is typical of the panels actually employed in covering a building surface, each of which may have an area of several square feet of plane exposed surface. The panel shown in Fig. 1 comprises a plane surface 10 of rectangular shape with each of its four edges flanged rearwardly, as indicated at 11, 12, 13 and 14. This panel is viewed with one of its top corners foremost so that the top side of the panel is that indicated at 11 and the right-hand edge is that indicated at 12. Both the top and one edge, in this case the right-hand edge, are provided with weather flanges 15 and 16 bent outwardly at right angles to the receding flanges 11 and 12 respectively. The two receding flanges 13 and 14, which in this case represent the bottom and left side of the panel, are of somewhat less width than the flanges 11 and 12, so that when several panels are arranged in a group the sides 13 and 14 will overlies the flanges 15 and 16 of adjacent panels without causing the surface of the panel to protrude beyond the surfaces of adjacent panels.

When the panels are arranged in closely spaced relation in the manner of tiles against a flat wall surface, the flanges 15 and 16 will assume an overlapping relationship in three places. The first place will be the upper right-hand corner or at the junction of the flanges 15 and 16, indicated at A in Fig. 1, and this corner is depressed or set back a distance equal approximately to double the thickness of the material of which it is formed. The second overlapping point is at the upper left-hand corner, indicated at B, and this corner is depressed or set back a distance equal to one thickness of the material of which it is formed. The end of the flange 16, indicated at C, also overlaps. Were the portions A and B of the flanges not set back in the manner illustrated, the overlapping of the flanges would result in variations in the distance of the plane surface 10 of the panel from the wall upon which it was mounted. With the construction shown, the panels may be disposed in closely spaced relationship against a wall, as illustrated in Fig. 4, where the panels

1, 2, 3, 4, 5 and 6 have already been set in place and the panels 7 and 8 are positioned in readiness to be joined with the group in the order of their consecutive numbering.

The manner in which the flanges of the panels overlap is shown in Fig. 3, wherein the upper portion of the vertical seam between the panels 4 and 5 is illustrated and the position to be assumed by the panel 7 is shown in dotted lines. In this figure the panel 4 was applied first with its upper right-hand corner A contacting the wall against which it is placed and establishing the distance of the plane surface of the panel from the wall. The panel 5 is then put in place with its upper left-hand corner B overlying the portion A on the panel 4. As the depression in the panel A is of a depth equal to twice the thickness of the material of which it is formed, it will receive the portion B. As the portion B is depressed a single thickness, space is left for the reception of the part C on the panel 7. Thus all three of the panels have their plane surfaces spaced equally from the wall against which they are mounted and all disposed entirely in the same plane as the others.

Fig. 2 clearly illustrates the construction of the lower flange 13 on the panel as shorter than the flanges 11 and 12 so that it does not interfere with the top flange 15 of the panel beneath it. Likewise, the short flange 14 on the left side of each panel freely overlaps the side flange 16 on the right side of each adjacent panel. This is also illustrated in Fig. 5, wherein two of the panels are shown in overlapping relationship. From Fig. 5 it may be seen that any moisture running down the exposed plane surface of the uppermost panel and entering the horizontal seam between panels will not be admitted to the building surface illustrated at 18 but will be interrupted by the upwardly extending flange 15 whether or not the open seam between panels is filled with a mastic or other type of sealing compound. As the flange 16 extends along one edge of the panel in the same manner that the flange 15 extends along the top, the vertical seams between panels will be similarly protected.

In manufacturing the panels the entire shape may be pressed from a flat sheet of metal as by a die stamping operation, or the metal may be cut, formed and welded at its corners and the depressions A and B thereafter made on a suitable press. In either event the panels are finished in a conventional manner, such as by the application of a fired porcelain finish of suitable color and texture.

I claim:

1. An architectural panel comprising a plane rectangular surface flanged rearwardly on four sides, and flanges extending outwardly from the rearward flanges on two adjacent sides, said outward flanges being joined to form a full

flange surface at the corner of their junction whereby a group of panels may be arranged with each panel overlapping the outward flange on a vertical and horizontal edge of an adjacent panel to form a water shed, and depressed areas of different depths at two adjacent corners of the outward flanges the depressed area at said corner of junction being the deeper to admit portions of other flanges in overlapping relationship while maintaining the plane surfaces of all panels in the group in the same plane.

2. An architectural panel comprising a rectangular plane surface, rearwardly extending flanges on all four sides thereof, the flanges on two adjacent sides being of equal width, outwardly directed coplanar flanges extending from the rear edges of the flanges on said two adjacent sides, a depressed area of a depth equal at least to two thicknesses of the flange material at the corner of junction of the outward flanges, and a depressed area of depth equal at least to one thickness of the flange material at one end of one of the outward flanges, said depressed areas being of sufficient extent to receive overlapping flanges of adjacent panels.

3. An architectural panel comprising a rectangular plane surface, rearwardly extending flanges of equal width on two adjacent sides thereof, outwardly directed coplanar flanges extending from the rear edges of the said rearward flanges on two adjacent sides, a depressed area of a depth equal at least to two thicknesses of the flange material at the corner of junction of the outward flanges, and a depressed area of depth equal at least to one thickness of the flange material at one end of one of the outward flanges, said depressed areas being of sufficient extent to receive overlapping flanges of adjacent panels, and rearward flanges on the other two adjacent sides which are narrower than those on the first said two adjacent sides to permit them to overlie the outward flanges of adjacent similar panels in a group arranged in edge to edge relationship.

FRANCIS E. ALLEN.

References Cited in the file of this patent UNITED STATES PATENTS

Number	Name	Date
505,852	Sagendorph	Oct. 3, 1893
857,718	Calkins	June 25, 1907
1,218,873	Lennon	Mar. 13, 1917
1,535,301	Francis	Apr. 28, 1925
2,239,011	Meslin	Apr. 22, 1941

OTHER REFERENCES

"American Builder" by Simmons-Boardman Publishing Corp., Chicago, Ill., April 1941, page 158.