Jan. 12, 1943. M. I. DIGGS 2,308,442

BUILDING CONSTRUCTION

Filed Jan. 6, 1941

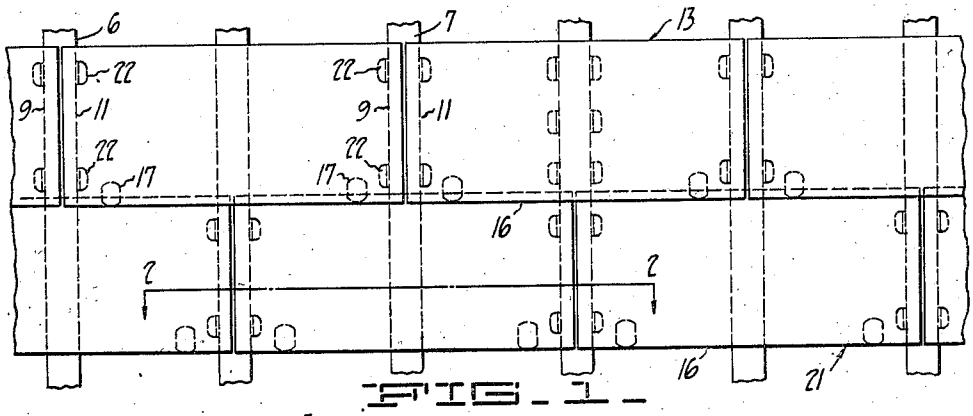


FIG. 1

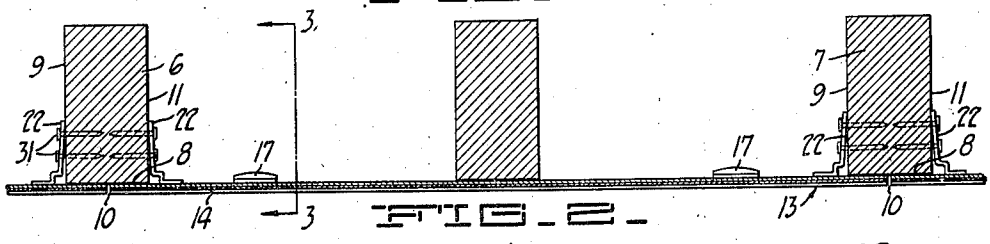


FIG. 2

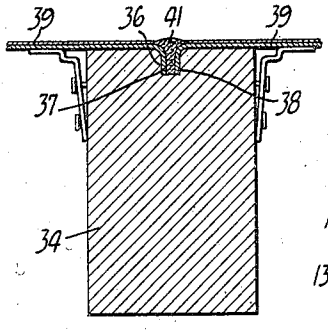


FIG. 7

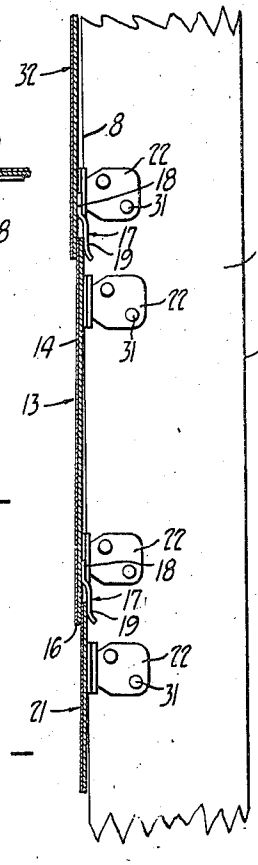


FIG. 3

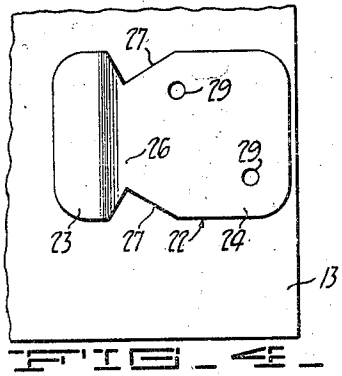


FIG. 4

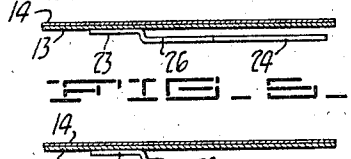


FIG. 5

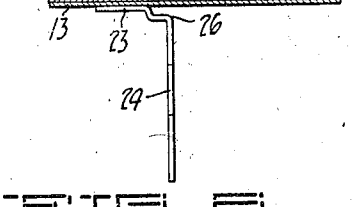


FIG. 6

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BUILDING CONSTRUCTION

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Application January 6, 1941, Serial No. 373,230

2 Claims. (Cl. 189—85)

My invention relates to means for very inexpensively yet attractively covering large areas or surfaces of building in a satisfactorily weathertight manner.

An object of my invention is to provide an attractive, durable and inexpensive surfacing for buildings.

Another object of my invention is to provide a way of utilizing enameled metal sheets for covering buildings.

A further object of my invention is to minimize the labor required in installing a covering on buildings.

While the foregoing are the principal objects of the invention, others are included in the following description and are apparent from the accompanying drawing, in which

Fig. 1 is an elevation of a portion of the building construction of my invention.

Fig. 2 is a cross section on a plane indicated by the line 2—2 of Fig. 1.

Fig. 3 is a cross section, the plane of which is indicated by the line 3—3 of Fig. 2.

Fig. 4 is an enlarged detail showing in elevation a bracket on the plate.

Fig. 5 is a plan of the structure shown in Fig. 4.

Fig. 6 is a plan of the structure shown in Fig. 4, but with the bracket bent outwardly from the plate.

Fig. 7 is a detail showing in fashion similar to Fig. 2 a variant form of the invention.

In its preferred form the building construction of my invention includes a pair of wooden uprights having a front face and adjacent side faces, there being laid on the uprights an enameled metal sheet provided preferably adjacent its lower edge and on its reverse side with clips which straddle a subjacent support and also provided adjacent each side edge with one or more brackets which initially are formed to lie substantially parallel with the plate, but which upon installation are bent to lie approximately normal to the plate, there being apertures in the brackets so that nails passing therethrough and into the uprights, secure the enameled sheet in position.

Although the building construction of my invention is susceptible to many variations, depending upon the particular environment in which it is to be used, it has been successfully employed in practice as an exterior sheathing or covering of buildings such as grandstands and is particularly adaptable for such use because of the relatively inexpensive fabrication and installation.

In a typical installation the building is provided with wooden uprights 6 and 7 based upon and usually constituting some part of the supporting agency of the structure and arranged usually with the longitudinal axes of the members 6 and 7 extending vertically, although the direction of the axes can be at an inclination or horizontal without affecting the building construction. Preferably, because of cost, the members 6 and 7 are wood, although any nailable material or other material which can receive fastenings is satisfactory. The uprights 6 and 7 are disposed with fair accuracy as to location and dimensions, but the requirement of accuracy is not acute because there are no parts which must precisely come into juxtaposition. Each of the uprights 6 and 7 has an outer face 8, the face being generally planar and all of the uprights are located so that the faces 8 of all of them occupy substantially the same plane in the usual construction. While curved and other nonplanar arrangements can be used, the planar form is used for description. Disposed then at substantially right angles to the plane of the uprights, or normal thereto, are side faces 9 and 11 on each of the uprights, the side face 9 on one upright being spaced a predetermined amount from the opposite side face 11 of the adjacent upright.

To the uprights there is applied a covering constituting a plurality of metal sheets 13. Each metal sheet is preferably a standard rectangular member, sized with sufficient accuracy at the mill, although for special architectural treatment various contours and shapes can be employed. Ordinarily, however, commercially flat rectangular sheets 13 are utilized because of their low cost and since the building construction herein admits of minor commercial variations in size and contour.

In order to provide a weatherproof surface and one which requires no maintenance or upkeep, the metal sheet 13 is afforded a coating 14 of vitreous enamel in any desired fashion, although a rather heavily mottled finish is preferable to reduce the optical effect of undulations and inaccuracies in the metal sheet 13. The vitreous coating 14 is preferably applied substantially only to the outside or weather surface of the sheet 13 and on the reverse or backside thereof adjacent the lower edge 16, there are secured preferably by spot welding, one or more metal clips 17, fabricated of material lighter in gauge than the sheet 13 to facilitate the enameling operation. Each clip has a base portion 18 in immediate contact with and secured to the sheet 13 and also has an up-struck, outstanding portion 19.

This latter part, at least, has some resiliency, and is spaced from the general plane of the sheet 13 sufficiently to straddle or overlie either a subjacent similar sheet 21, or a suitable support extending between adjacent uprights 6 and 7.

Also secured to the reverse side of the sheet 13 and disposed adjacent to the side edges thereof, are brackets 22 of relatively light gauge metal, each of which has a base portion 23 which is spot welded or comparably affixed to the metal of the plate 13. In addition, similar brackets 22 can be used elsewhere upon the sheet 13, for example adjacent the center thereof, as shown on one of the sheets in Fig. 1. Each of the brackets 22 also originally has an outstanding portion 24 joined to the base portion 23 by a weakened portion 26. Notches 27 are provided in the opposite sides of the brackets 22 so that it can readily be bent at the weakened portion 26. The portion 27, however, is provided with a pair of apertures 29 to receive fasteners such as nails or screws. The material of the clip 24 is somewhat yielding, but because of the necessity of handling and storing the sheets 13, and because in the enameling operation, the sheets must be subjected to very high baking temperatures, the brackets 22 are originally installed and located as shown in Fig. 4 so that they extend from the rear face of the sheet 13 no more than do the clips 17. Thus a plurality of sheets can be stored without occupying excessive room and since the portions 24 are not greatly spaced from the sheet 13, they are not deleteriously affected by the heat during enameling.

When the enameled sheets with the brackets 22 and clips 17 disposed thereon are ready for installation, the workman first provides the support 21, which is either a separate member or is a separate similar sheet, and covers the outer faces of the uprights 6 and 7 with a plastic or other sealing compound such as mastic. When the fastening members 24 of the brackets 22 are bent adjacent portion 26 to occupy positions substantially normal to the general plane of the sheet 13. This can readily be affected by the claws of a hammer and the bend is made only approximately correct, since the portion 24 need be turned not exactly normal to the plane of the sheet, but only approximately thereto. A workman then holds a sheet 13 in position with the side edges of the sheet adjacent the center of the uprights 6 and 7 and with the clips 17 straddling the support 21. Any reasonable inaccuracies in alignment of the uprights 6 and 7, warpage therein, or inaccuracies in positioning of the member 21 are immaterial and the sheet 13 can be appropriately positioned.

The sheet 13 then is pressed against the uprights into the position substantially as shown in Figs. 2 and 3 with brackets 22 having their bent portions 24 adjacent the side faces 9 and 11 of the uprights 6 and 7. Fastening means such as nails 31 are then inserted through the apertures 29 and driven into the uprights 6 and 7 and the installation is completed. If steel uprights 6 and 7 are used, the brackets 22 are spot welded thereto and nails are dispensed with. As shown in Fig. 2, the upstanding portions 24 may be spaced slightly from the side faces of the uprights so that when the nails are finally driven home the resiliency of the metal of the brackets is somewhat depended upon to provide very tight engagement. As each panel is placed in position it is adequately supported by itself and furnishes in addition some support for a panel such as 32 which is identical with it, but is disposed immediately above it. The installation can if desired, be further sealed by putting rubber cement, mastic or other waterproofing on the outer upper margin of each sheet, so that the horizontal overlap is blocked. The grooves 10 which are left for differences in expansion and for working of the structure, are blocked or closed to provide a sufficiently weatherproof joint by the rubber cement or mastic upon the uprights 6 and 7 and without any further treatment.

In some instances, however, more weatherproofing is desired and then each upright, such as 34, is provided with a longitudinal groove 36 and the side edges 37 and 38 of the plate 39 are turned toward the reverse side and are somewhat loosely disposed with the groove 36, which previously or subsequently is filled with mastic 41 or comparable sealing compound. Otherwise the construction is substantially the same. The flanges 37 and 38 are cut away where they would interfere with plates beneath and although the cost is increased somewhat by this construction, the resulting surface is quite weatherproof.

I claim:

1. A building construction comprising a pair of wood uprights having coplanar front faces and parallel side faces, a support extending between said uprights, a metal sheet overlying said front faces, metal clips secured to said sheet and with said sheet straddling said support, metal brackets secured to said sheet and having portions spaced from but overlying said side faces, and upright-engaging nails piercing other portions of said brackets and holding said other portions in abutment with said uprights.

2. A building construction comprising a pair of uprights having side faces and having a front face with a longitudinal groove therein, a plate adapted to abut the front face of said uprights, inturned side flanges on said plate adapted to extend into said grooves, brackets on said plate adapted to abut the side faces of said uprights, and means behind said front face for fastening said brackets to said uprights to hold said flanges in said grooves.

MAURY I. DIGGS.