

June 27, 1939.

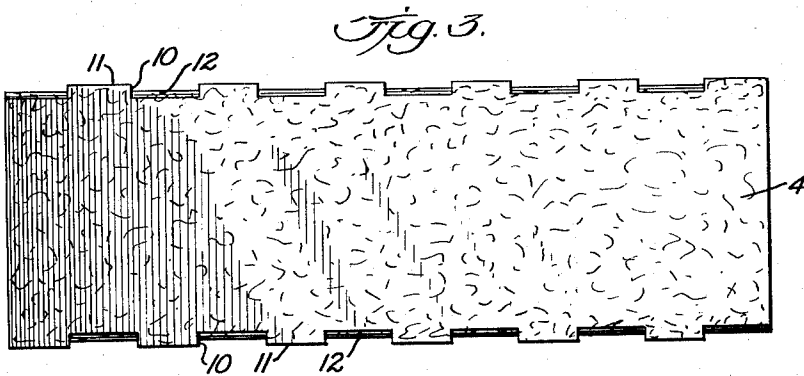
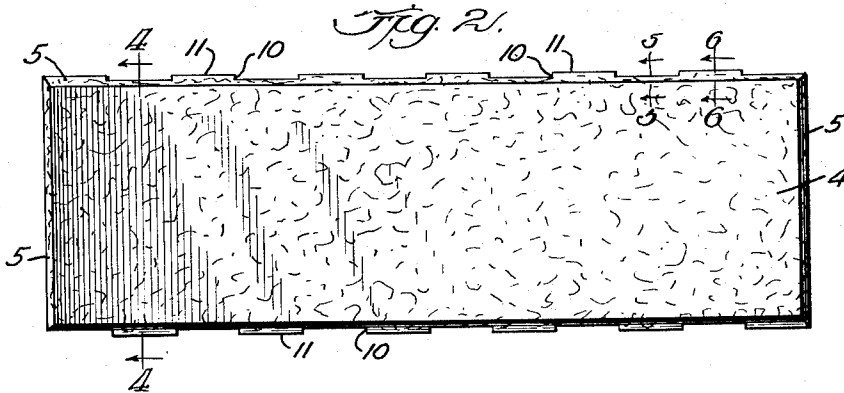
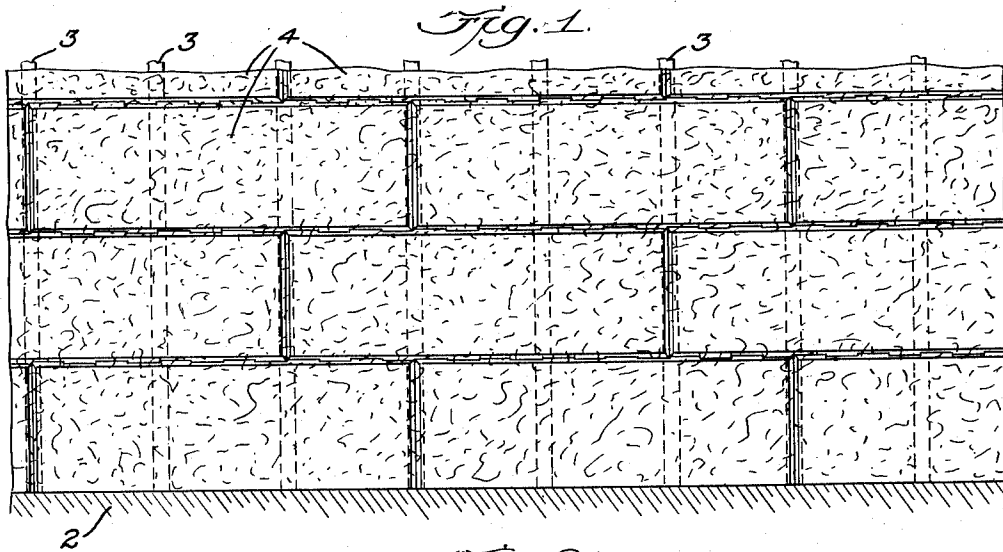
W. J. JORDAN, JR

2,164,069

PLASTER BASE UNIT

Filed Oct. 15, 1937

2 Sheets-Sheet 1



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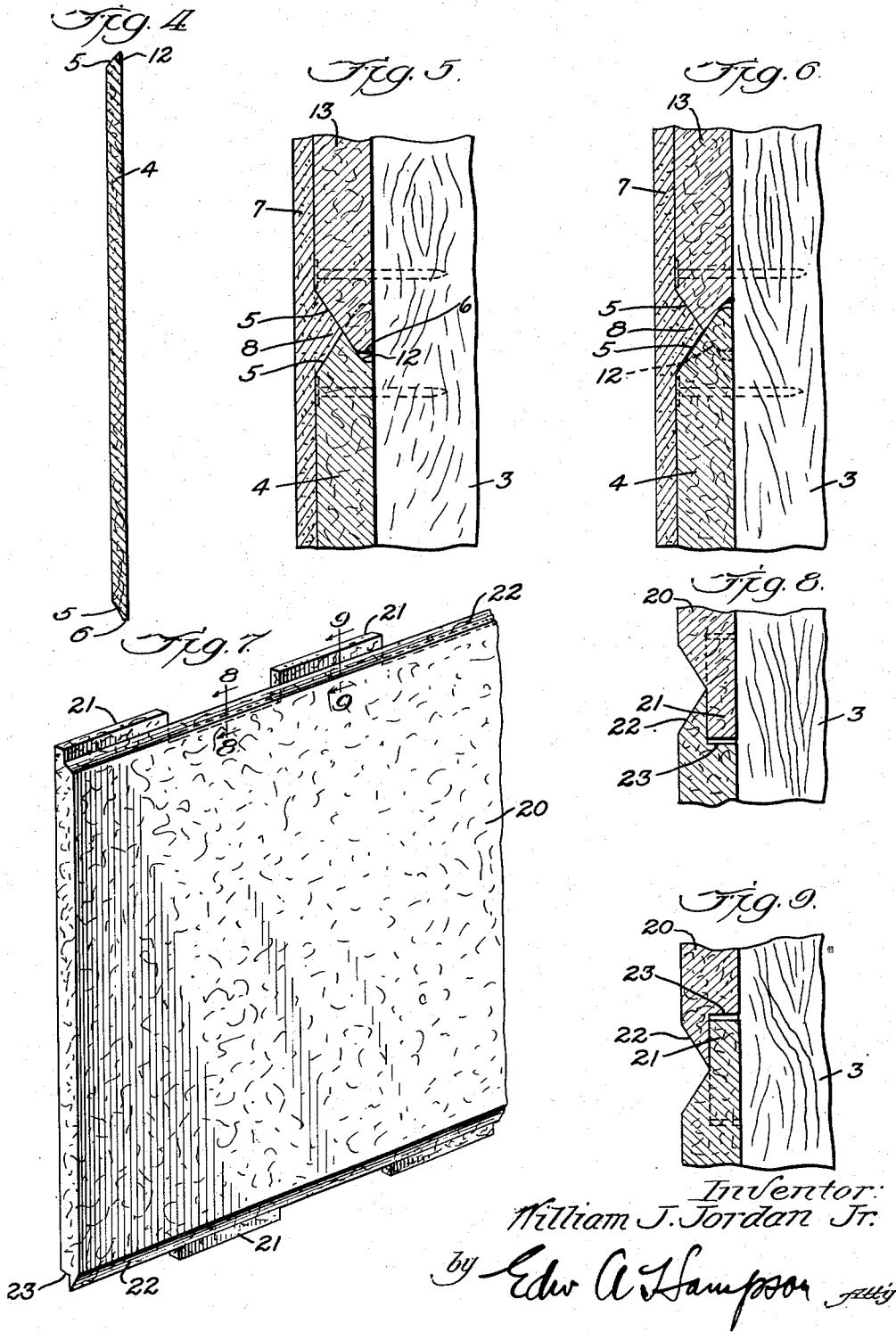
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2,164,069

PLASTER BASE UNIT

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,164,069

PLASTER BASE UNIT

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Application October 15, 1937, Serial No. 169,237

11 Claims. (Cl. 72—31)

This invention relates to a wallboard and joint made therewith and has for its object to improve the construction of walls made of a plurality of wall board units, as well as to provide wallboards and a joint made therewith which will be more efficient in use than those heretofore proposed.

With these and other objects in view the invention resides in the novel details of construction and combinations of parts as will be disclosed more fully hereinafter and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification and in which like numerals designate like parts in all the views;—

Fig. 1 is an elevational view of a portion of a wall formed by wallboards made and applied in accordance with this invention;

Fig. 2 is an elevational view of the front side of one of the wall board units incorporated in the construction shown in Fig. 1;

Fig. 3 is an elevational view of the back side of the wall board unit shown in Fig. 2;

Fig. 4 is a vertical sectional view taken transversely of the unit shown in Fig. 2 and as on the line 4—4 thereof, looking in the direction of the arrows;

Fig. 5 is a vertical sectional view, in the way of a supporting stud, of the joint formed between two adjoining units, taken as on the line 5—5 of Fig. 2 and looking in the direction of the arrows;

Fig. 6 is a view similar to Fig. 5 but taken as on the line 6—6 of Fig. 2 and looking in the direction of the arrows;

Fig. 7 is a partial perspective view of a modified form of the wallboard unit shown in the preceding figures;

Fig. 8 is a view similar to Fig. 5 but showing a joint formed by two adjacent units having the construction shown in Fig. 7, taken as on the line 8—8 of said Fig. 7 and looking in the direction of the arrows; and

Fig. 9 is a view similar to Fig. 8 but taken as on the line 9—9 of Fig. 7 and looking in the direction of the arrows.

It is well known that walls have heretofore been made from a plurality of units known as wallboards, plaster boards, etc., but one of the principal objections to said previously known types is that when the finished coat of plaster or other material is spread over the surfaces of the units and allowed to dry, there occurs a crack in said finish. The time at which said finish cracks is not always the same, due to varying conditions such as thickness of the finishing

coat, temperature extremes, humidity, etc. In substantially all cases these cracks occur at a joint between two adjacent wallboard units. Further, much difficulty has been experienced in smoothly applying the plaster finish to a wall built up of a plurality of wallboard units, due to the spring of a wallboard unit between the supporting studs, so that the pressure of the plastering trowel will cause one unit to flex or bend out of the plane of the next adjacent unit, resulting in a defect in the plaster finish in the region of the horizontal joint between the two adjacent underlying units.

The purpose of this invention therefore is to produce a wallboard which, though inherently of a somewhat yielding or springable nature, will nevertheless be interlocked with the next adjacent wallboard unit so that the edge of each unit strengthens and reinforces the edge of the adjacent unit and so that substantially no springing movement of the one unit will take place without a corresponding springing movement of the next adjacent unit, when the plaster or other finish is applied over the surfaces of both units. In practice a wallboard unit of exceptional value for walls has been found in the utilization of felted or otherwise interlockingly commingling fibers of bagasse, said bagasse being the residue of sugar cane after the sugar solutions have been extracted. This bagasse when treated by a cooking action will have its fibers loosened to the extent that they can be separated, washed, and formed by felting operation into a sheet of about one-half inch thickness which, when dried, can be cut into units of suitable lengths and widths for convenient handling in the construction of walls, the dimensions of said units being preferably multiples of the standard spacing of studing or framing members in building construction. Obviously however other sources of fibrous material than bagasse can be utilized, wherein the fiber is of such nature as to produce a semi-rigid suitable base for receiving and supporting the plaster or other finish which is to be applied to the finished wallboard unit.

Referring to the drawings, a floor or other support is indicated at 2 and extending upwardly therefrom in spaced relation to each other are studs 3 to which are to be nailed or otherwise secured a plurality of wallboard units generally identified by the numeral 4, said units being applied in horizontal courses one above the other with the joints between the units in a course broken or staggered with respect to the corresponding joints in the next adjacent course, the

vertical joints between any two units lying over a stud and the horizontal joints extending transversely of the studs, all as will be perfectly clear from Fig. 1.

A wallboard unit is illustrated in detail in Figs. 2 and 3. Each of the edge portions of the unit is furnished with a bevel or chamfer 5 extending from the front face or surface of the unit almost but not entirely to the back surface of the unit, thereby leaving an edge 6 which is substantially perpendicular to the plane of the back surface (see Fig. 5), the purpose of this bevelled or chamfered construction being to provide a V-shaped indentation which is filled by the plaster or other material of the finishing coat 7 to provide a reinforcing rib 8 of said material in the way of each joint between two contiguous wallboard units.

The longitudinal edges of the unit, or those edges intended to extend across the studding in the building of a wall, are each provided with recesses or cut-out portions 10 which are spaced from each other to provide therebetween tab portions 11, each recess cut inwardly from the extreme edge of the unit but not entirely through or coextensive with the width of the bevelled or chamfered portion 5, wherefore there is left a bevelled or chamfered portion in the way of each recess and each tab, as will be clear from Fig. 2. The recesses and tabs are alternated transversely of the unit and are of such dimensions that the tabs of one unit will interlock with the recesses of the next adjacent unit, to produce the complete interlocked wallboard formation in the wall shown in Fig. 1.

Referring to Fig. 3 the rear or back side of the unit shown in Fig. 2 is illustrated and from said Fig. 3 it will be observed that at each recess there is provided a bevel or chamfer surface 12 extending from the back surface of the unit toward the bevel formed on the front face of the unit, both of said bevels having a meeting edge that is substantially midway between the front and back surfaces of the unit. The purpose of this construction is clearly brought out in Figs. 5 and 6.

In other words, the unit 4 of a lower course is applied to the studding 3 so that its tabs will extend into the recesses of the unit 13 in the course thereabove, with the tabs of the unit 13 likewise extending into the recesses of the unit 4. The bevels 5 and 12 are made of substantially the same slope wherefore when the tabs and recesses are thus interfitted with each other, a portion of the bevel 12 of unit 4 will lie in surface contact with a portion of the bevel 5 of the unit 13, producing an overlapped as well as interlocked effect. Thus, when plaster or other suitable material is troweled over the faces of two vertically adjacent units, this overlapped relation will hold the edge of the one unit such as 13 against relative movement with respect to the contiguous edge of the adjacent unit 4, and thus permit a smooth application of the plaster in the region of the horizontal joint. The surface 6 is preferably provided to permit a more perfect fitting between the bevels 5 and 12.

A modification of the above described construction is shown in Figs. 7, 8 and 9 though the same principles of the invention are employed. Here a unit such as 20 is provided on its longitudinal edges with a plurality of spaced tabs or tenons 21 corresponding to the tabs 11 above described, but these tenons are of a thickness equal substantially to one-half the

thickness of the unit, and a bevel or chamfer 22 is provided which extends from the front face of the unit to a surface of the tenons as clearly shown. The recesses are extended inwardly of the unit beyond the extreme edge of the bevel 22 to provide what may be termed a mortise 23 into which a tenon of the next adjacent board may extend. In other words, whereas in the construction shown in Fig. 2 the tabs and recesses each have a bevelled surface to create a co-wedging effect, the construction of Fig. 7 is such that the tenons and mortises are substantially rectangular though each tenon will have an interlocking fit with the mortise of a next adjacent unit as clearly shown in Figs. 8 and 9 and thereby maintain relative rigidity or unyieldability along the horizontal joints when plaster is applied thereto. In Fig. 8 the tenon 21 of a unit 20 in an upper course is shown extending into the mortise 23 of a unit in the next lower course, with the bevelled edge portion 22 of the latter unit overlying said tenon. In Fig. 9 the tenon 21 of a unit in the lower course is shown extending into the mortise 23 of a unit 20 in the next above course, with the bevelled edge portion 22 of the latter unit overlying said tenon.

From this invention it will therefore be seen that there is provided a wallboard unit of somewhat yieldable character, having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit (substantially one-half) with a chamfer extending from a surface of said portion and merging into said front surface, with a plurality of spaced recesses extending inwardly from each edge to form edge tabs between said recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge. The spaced recesses extend from the rear surface obliquely inwardly of the unit according to Fig. 2 to a point substantially midway between said surfaces and meeting said chamfer, the bottom surface of each recess having a slope or bevel substantially equal to the slope of said chamfer, and merging with said rear surface. According to Fig. 7 the bottom surface of each recess is substantially parallel to the rear surface of the unit and meets said chamfer, the inward extension of each recess being substantially equal to the dimension of a formed tab or tenon. In all modifications of the construction the tabs or tenons in any one side edge are disposed opposite the recesses or mortises on the other side edge of the unit, this opposite disposition being in parallel transverse planes of the unit.

It is obvious that those skilled in the art may vary the details of construction and arrangements of parts without departing from the spirit of this invention and therefore it is desired not to be limited to the exact foregoing description except as may be demanded by the claims.

What is claimed is:

1. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking

purposes when two similarly formed units are placed edge to edge.

2. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces and meeting said chamfer, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

3. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface obliquely inwardly of the unit to a point substantially midway between said surfaces, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

4. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces, the bottom surface of each recess having a slope substantially equal to the slope of said chamfer, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

5. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces, the bottom surface of each recess comprising a bevel merging with said rear surface and meeting said chamfer, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

6. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces, the bottom surface of each recess substantially parallel to said rear surface and meeting said chamfer, said recesses extending inwardly from said edges and thereby forming an

edge tab between each pair of recesses, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

7. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness substantially one-half the thickness of the unit with a chamfer extending from a surface of said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces and meeting said chamfer, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, the inward extension of each recess being substantially equal to the dimension of a formed tab, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

8. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness substantially one half the thickness of the unit with a chamfer extending from a surface of said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces and meeting said chamfer, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, the inward extension of each recess being substantially equal to the dimension of a formed tab, the tabs disposed opposite said recesses in parallel transverse planes of said unit, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

9. A wallboard unit having a front surface, a rear surface, and two opposite side edges, each edge portion being of a thickness less than the thickness of the unit with a chamfer extending from said portion and merging into said front surface, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surfaces, said recesses extending inwardly from said edges and thereby forming an edge tab between each pair of recesses, the tabs disposed opposite said recesses in parallel transverse planes of said unit, said tabs and recesses having complementary configuration for interlocking purposes when two similarly formed units are placed edge to edge.

10. A wall board plaster base unit comprising a fibrous sheet having a front surface, rear surface and opposite substantially parallel side edges, a pair of the opposite side edges chamfered from the front surface of the sheet toward the rear surface with such chamfer extending for substantially half the thickness of the sheet, a plurality of spaced recesses extending from said rear surface inwardly of the unit to a point substantially midway between said surface, said recesses forming an edge tab between each pair of recesses, the tabs disposed opposite said recesses in parallel transverse planes of said unit, said tabs and recesses having complementary configuration for interlocking purposes when similarly formed units are placed edge to edge.

11. A plaster receiving surface comprising a plurality of plaster receiving units erected in edge to edge interlocking contact, each said unit having a front surface, a rear surface and opposite

substantially parallel side edges, a pair of such side edge portions bevelled from the front surface of a unit outwardly toward the side edge and rearwardly, the said bevels extending through substantially half the thickness of the unit, a plurality of spaced recesses extending from the said edges and rear surface inwardly of the unit to a point substantially midway between said surfaces, the said recesses thereby forming an edge

tab between each pair of recesses, the tabs disposed opposite said recesses in parallel transverse planes of said unit, said tabs and recesses having complementary configuration, the complementing bevels forming plaster receiving recesses on the surface of the assemblage and the complementing tabs and recesses one receiving the other to form an interlocked structure.

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