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[54] **CONSTRUCTION UNIT ASSEMBLY**

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[52] **U.S. Cl.** **206/322**, 52/173, 52/244, 52/747

[51] **Int. Cl.**.. **B65d 71/04**, B65d 85/46, B65d 85/62

[58] **Field of Search** ..... 206/65 B, 46 BK, 65 R; 52/244, 218, 219, 747, 173

[56] **References Cited**

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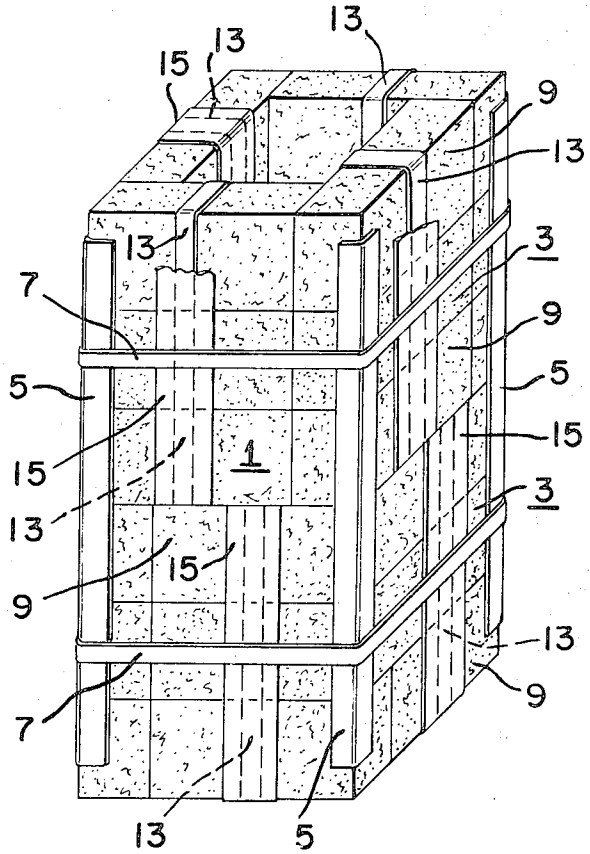
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Primary Examiner—William T. Dixson, Jr.

[57] **ABSTRACT**

A construction unit assembly comprising two or more sub-assemblies formed of light weight brick are arranged end to end in column formation and held together in a unitary assembly by corner angles maintained in position by metal banding. In the construction of a building, such hollow columnar units are adapted to provide for reinforcing members, heating or ventilating conduits and the like.

7 Claims, 3 Drawing Figures



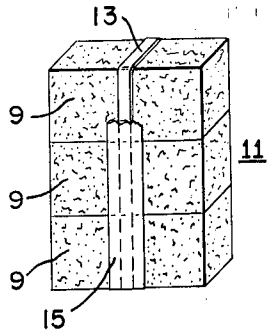


FIG. 3

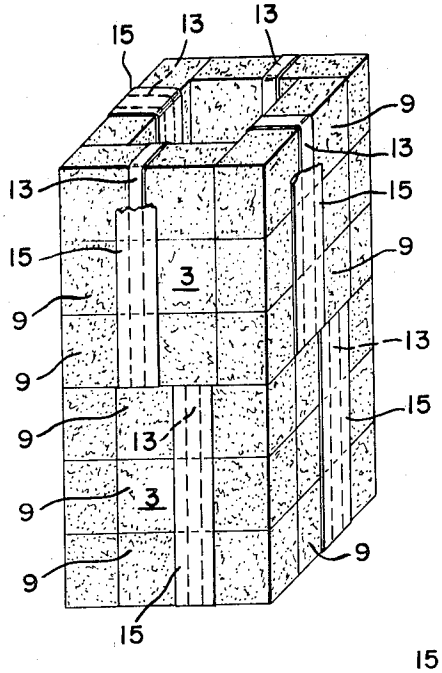


FIG. 2

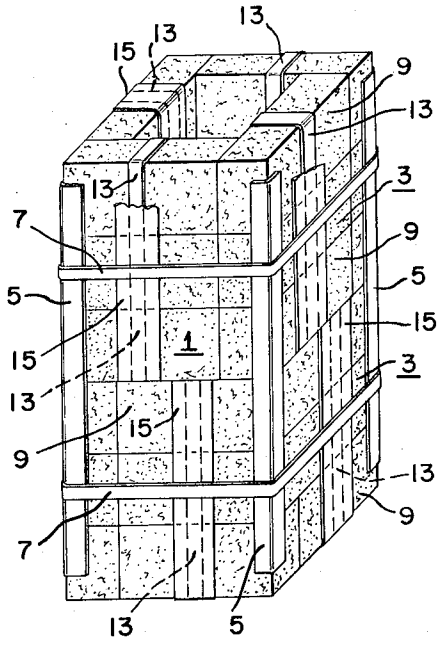


FIG. 1

CONSTRUCTION UNIT ASSEMBLY

My invention relates to building construction and more particularly to a construction unit assembly for use in the fabrication of a building structure.

Among the objects of my invention are;

1. To provide a novel and improved construction unit assembly;

2. To provide a novel and improved construction unit assembly which will enable construction with a substantial savings of time over the use of conventional brick;

3. To provide a novel and improved construction unit assembly which is very flexible as to its applications in the fabrication of building structure;

4. To provide a novel and improved construction unit assembly which, in the construction of a building, facilitates the installation of reinforcing members, plumbing, electrical conduit, heating and ventilating ducts . . . .etc;

5. To provide a novel and improved construction unit assembly of relatively light weight as compared to conventional brick.

Additional objects of my invention will be brought out in the following description of a preferred embodiment of the same, taken in conjunction with the accompanying drawings wherein;

FIG. **1** is a 3-dimensional view of a basic construction unit assembly comprising the present invention;

FIG. **2** is a three dimensional view of a pair of sub-assemblies involved in the fabrication of the unit assembly of FIG. **1**, and representing an intermediate stage in the fabrication of said unit assembly;

FIG. **3** is three dimensional view of a sub-subassembly entering into the formation of the sub-assemblies of FIG. **2**.

Referring to the drawings for details of my invention in its preferred form, the constuction unit assembly **1** of FIG. **1** comprises a plurality of rectangular sub-assemblies **3** arranged end to end, and aligning and unitizing means binding these sub-assemblies into a unitized assembly capable of being handled as such in the fabrication of a structure.

In the preferred embodiment, the unitizing means which binds these assemblies into the unitized assembly involves a length of angle **5** of relatively thin gauge metal extending along each longitudinal corner edge of the aligned sub-assemblies and in contact with each of said sub-assemblies, and these are maintained in pressure relationship to the sub-asemblies by metal bands **7** surrounding the aligned sub-assemblies and angles at longitudinal spaced points.

While two such sub-assemblies in alignment have been illustrated as constituting the preferred form of the invention, because of the ease with which they can be thus handled, more than two such sub-assemblies may be aligned and formed into a unit assembly by means of angles and metal banding as described, to form a unit assembly.

Each sub-assembly, in the preferred form of the invention, is made up of bricks **9** of preferably standardized dimensions. Such bricks are preassembled in sub-subassemblies **11**, one such sub-subassembly being illustrated in FIG. **3** of the drawings. The number of bricks involved is more or less arbitrary, but in the preferred form, three bricks are stacked on their sides of the greatest area, as this will impart greatest stability to the resulting structure. The bricks, when thus stacked, are banded together by tape **13**, preferably of the plastic type having threads or strong string running longitudinally thereof to impart great strength thereto.

Covering this tape one may, if desired, add a rather wide strip **15** of paper which adds somewhat to the overall strength of the binding that holds the stacked bricks together, the paper offering an additional advantage of providing space for imprinting information or instructions.

Four of such sub-subassemblies, preferably with the end of one stack engaging a side of a proximate stack, adjacent an end thereof, are thus assembled.

The completed unit assembly of FIG. **1** is adapted for use in the fabrication of building structures, preferably by placing then end to end to form either a vertical or horizontal column in conjunction with intermediate wall construction of more or less conventional design, inclusive of the use of high temperature block insulation.

When so embodied in a structure, the end to end arrangement of the unit assemblies provides for installation of reinforcement in the form of reinforcing rods or structural steel, which may be fixed in place by the addition of a binder such as concrete or cement poured into the space surrounding such reinforcement, such binder serving to bind the bricks and otherwise solidify the column.

The end to end arrangement of the unit assemblies in the manner indicated, also provides for the installation of electrical conduit, heating or venting ducts, plumbing...etc.

In any of the foregoing types of installation, it may be necessary to pass some of the reinforcing members, conduit, or duct through one or more of the side walls of the asembled units and for this reason, in addition to realizing a substantial reduction in weight, I prefer to utilize brick of the light weight type, one such brick **9** inches by 4½ inches, weighing under **2** pounds as compared to a weight of approximately four times as much for the conventional type brick of comparable size. Such light weight brick can be drilled and cut much more readily than conventional hard brick, and thus, when it becomes necessary to bring reinforcement or a conduit or duct through a side wall of a unit, a considerable savings in labor maybe anticipated.

While I have referred to the use of my novel and improved unit assembly in conjunction with conventional type wall construction, I have found that by utilizing in the construction of wall structure, the brick assembly package by my prior U.S. Pat. No. 3,487,603 of Jan. 6, 1970, that added economies can be realized.

When thus fabricated as described above, the columnar structure and intervening walls may be finished off to suit one's taste, as for example, by applying stucco or any type of facing available for the purpose, of which there are many on the market.

From the foregoing description of my invention in its preferred form, it will become apparent that the same is subject to alteration and modification without departing from the underlying principles involved, and I, accordingly, do not desire to be limited in my protection to the specific details illustrated and described, except as may be necessitated by the appended claims.

I claim:

1. A construction unit assembly of a size suitable for use in the fabrication of a building structure component comprising:

a plurality of bound groups of bricks, each bound group including a plurality of individual bricks arranged in proximate relationship to one another and independent binding means positively locking said bricks individually against displacement in at least one direction, and aligning and unitizing means binding said plurality of bound groups into a unitized assembly, said bound groups being arranged in said unitized assembly so that each of said bricks therein is positively locked against individual displacement in any direction by the cooperative effect of said independent binding means and said aligning and unitizing means.

2. A consruction unit assembly in accordance with claim 1 characterized by said aligning and unitizing means including a length of angle formed of a material of substantial structural strength, said angle being disposed to extend along an edge of said bricks in said bound groups, and means holding said angle in place to prevent separation of said bricks along the edges thereof.

3. A construction unit assembly in accordance with claim 2 characterized by said means holding said angle in place including a plurality of spaced apart metal binding straps encircling said bound groups and corner angles under tension.

4. A construction unit assembly in accordance with claim 1 characterized by said independent binding means for said bricks in each of said bound groups including thread reinforced plastic tape encircling the proximate bricks forming said bound group under tension.

5. A construction unit assembly in accordance with claim 1 characterized by said bound groups being arranged in a plurality of end-to-end rectangular subassemblies, and said aligning and unitizing means further binding said sub-assemblies into said unitized assembly.

6. A construction unit assembly in accordance with claim 5 characterized by each sub-assembly including a plurality of bound groups arranged on the sides of a square to form a hollow sub-assembly.

7. A construction unit assembly in accordance with claim 6 characterized by the ends of bricks in one bound group abutting the sides of bricks in an adjacent bound group.

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