May 19, 1925.

1,538,681

W. C. BUCKHOUT

WALL CONSTRUCTION

Filed May 3, 1923

Fig. 1.

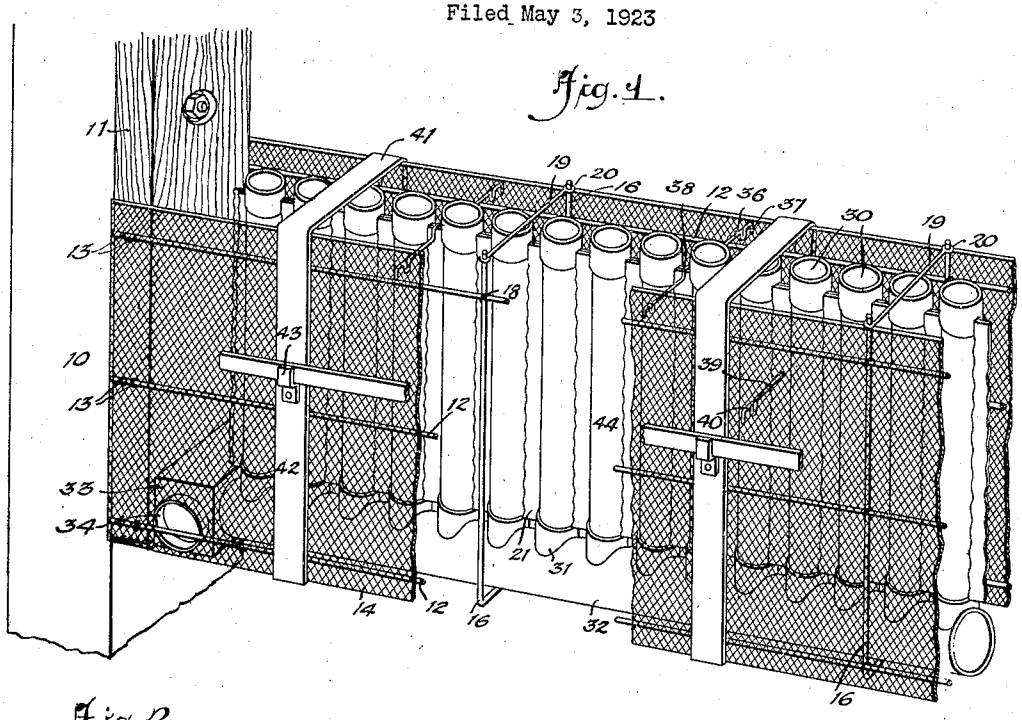


Fig. 2.

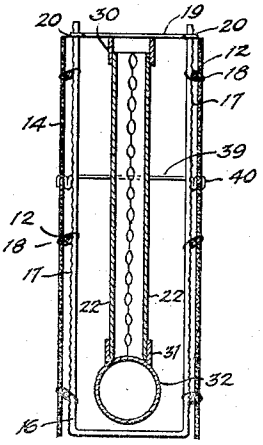


Fig. 5.

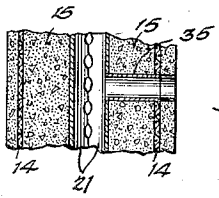


Fig. 3.

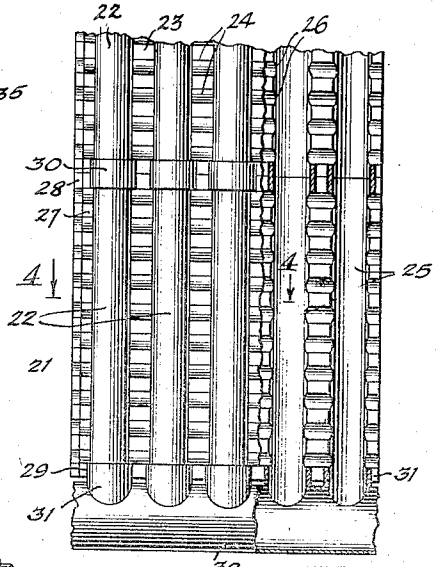
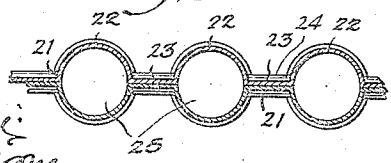


Fig. 4.



WITNESSES

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Patented May 19, 1925. 1,538,681

UNITED STATES PATENT OFFICE.

WILLIAM C. BUCKHOUT, OF YONKERS, NEW YORK.

WALL CONSTRUCTION.

Application filed May 3, 1923. Serial No. 636,499.

To all whom it may concern:

Be it known that I, WILLIAM C. BUCKHOUT, a citizen of the United States, and a resident of Yonkers, in the county of Westchester and State of New York, have invented a new and Improved Wall Construction, of which the following is a full, clear, and exact description.

This invention has relation to wall structures and a method of erecting the same and has particular reference to walls constructed of plastic material, the same being in the nature of an improvement over a prior invention set forth in Letters Patent of the United States No. 1368109, granted to me on February 8, 1921.

One of the outstanding objects of the present invention consists in employing parallel spaced foraminous surface defining and reinforcing members for the wall structure whereby the plastic filling material, when in plastic condition, will ooze through said members to form an outer coating or covering therefor to present a roughened surface upon which a finishing coating or layer may be readily imposed.

As a further object the invention contemplates in a plastic wall structure provided with vents or passages therein, vent or passage forming elements constructed in units and in such a manner that said units may be properly connected or associated with each other and supported and maintained in position prior to the pouring or filling in of the plastic material.

The invention further contemplates a method of erecting walls of plastic material without the use of forms or molds, thereby greatly reducing the expense incident thereto.

With the above recited and other objects in view, the invention resides in the novel construction set forth in the following specification, particularly pointed out in the appended claims and illustrated in the accompanying drawing, it being understood that the right is reserved to embodiments other than those actually illustrated herein to the full extent indicated by the general meaning of the terms in which the claims are expressed.

In the drawing—

Figure 1 is a fragmentary perspective view of a wall structure prior to the pouring or introduction of the plastic material.

Fig. 2 is a cross sectional view therethrough.

Fig. 3 is a fragmentary side view of the passage or vent forming elements, parts being broken away and shown in section.

Fig. 4 is a horizontal sectional view therethrough taken approximately on the line 4—4 of Fig. 3.

Fig. 5 is a detail fragmentary cross sectional view through the completed wall structure, illustrating the intake passage leading to the vent or passage in the wall structure.

Referring to the drawing by characters of reference 10 designates a corner post preferably of cement, concrete or other cementitious or plastic material between a pair of which the wall is to be erected to form a homogeneous part thereof. To the confronting faces of each pair of posts, a wooden strip or plank 11 is bolted or otherwise secured, said plank being of lesser width than the post and disposed approximately in the center of the width of said post. Wires 12 are initially strung from post to post with the ends secured as at 13 to the side edges of the plank 11. Foraminous surface defining and reinforcing members 14 which are preferably of pulled metal lathing or any other foraminous material of this character are attached to the wires 12 to define therebetween a space for the reception of the filling 15 of cement or other plastic material. In order to prevent bulging of the members 14, permanent U-shaped braces 16 are employed which are arranged within the members 14 and the wires 12 transversely of the wall. The outer sides of the legs of the braces 16 are corrugated as at 17 to coact with the wires 12 and said legs, the wires 12 and the members 14 being anchored against displacement by retaining or binding devices 18. The upper free ends of the legs of the U-shaped member 16 are retained against spreading by locking devices 19 which are preferably of wire and formed at their opposite extremities with eyes 20 receiving the upper ends of the legs. The wall further includes passage or vent defining means which consist of sections of porous material such as cardboard

arranged in units each of which units comprises a length of material 21 having parallel vertical semi-circular outwardly pressed portions 22 joined to each other by webs 23 which are horizontal or transversely corrugated as at 24. When the sections 21 of each unit are brought together in face to face relation they produce vertical cylindrical passages or vents 25 and transverse communicating vents or passages 26. The opposite ends of the sections of adjacent units are designed to overlap due to the fact that the end webs 27 and 28 of the confronting sections are of different lengths. The sections of the units are slitted as at 29 adjacent the opposite ends of the portions 22 at their juncture with the webs 21 whereby superposed units are assembled by sleeve 30. The lowermost row of units are engaged with sleeves 31 of a longitudinal manifold pipe 32 of which the sleeves 31 are preferably an integral part. The opposite ends of the manifold pipe 32 lead into a box 33 which has a right angularly disposed collar 34 extending through the cutout portion in the member 14. Adjacent the ceiling of each room, a laterally projecting pipe section 35 extends through the member 14 at its outer end and at its inner end communicates with the passage or vent forming unit. The passage or vent forming units are set up as illustrated in Fig. 1 and are centered and retained in place by transverse members and reinforcing devices 36 formed with terminal hooks 37 engaged in the interstices of the members 14 and formed with central web engaging offsets 38. The offsets 38 engage over the upper edges of the webs 21. Additional bracing and reinforcing devices 39 provided with hooked terminals 40 may be employed which are forced through openings in the webs and engaged at opposite ends in the interstices of the members 14. Removable inverted U-shaped clamps 41 are employed, the legs 42 of which embrace and lie against the outer sides of the members 14. The legs are preferably formed with keepers 43 in which longitudinal bars 44 are engaged. When thus set up, the filling 15 of plastic material is introduced between the members 14 and around the passage defining units and element. A portion of this plastic material will ooze through the interstices of the members 14 and form a coating on the outer face of the members 14 to provide a roughened outer surface for the wall which facilitates the application of a finishing coating such as plaster for the inner side of the wall and stucco or the like for the outer side of the wall. After the filling has set sufficiently, the removable clamps 41 and bars 44 are knocked down and removed. The members 14 thus constitute a surface defining member as well as reinforcing means while the wires 12, U-shaped braces 16 and the cross braces 36 and 39 go to make up reinforcing means for the complete wall structure. The passage defining sections and units will form in the wall an interior venting system which facilitates the rapid drying out of the wall and later serves as a ventilation promoting means for the rooms of the building. The cheapness of the structure is apparent, due to the fact that the necessity of employing forms of the ordinary type which are later knocked down and destroyed, is eliminated; that expensive molded plastic slabs are eliminated and in lieu thereof the foraminous members 14 are employed which are preferably of pulled metal lathing through which the ooze of the filling percolates to provide a roughened outer surface to the wall when finished. It should be further noted that great economy in time, labor and the actual cost of materials is effected and that time is saved while producing a wall structure of great strength and durability.

I claim:

1. A wall structure including upright end posts, vertically spaced horizontal wires connected to the opposite sides of and stretched longitudinally between the end posts, foraminous strips of material secured to the wires to provide spaced parallel surface defining and reinforcing elements, permanent U-shaped braces arranged transversely between the strips and having a bight portion and vertical legs formed with corrugations on their outer sides for the reception of the horizontal wires, binding devices tying the leg corrugations, transverse braces engaging the free terminals of the legs to prevent spreading thereof, transverse tie elements having offset hooked terminals engageable in the interstices of the foraminous strips to brace the same against bulging and a plastic filling between said strips extending through the interstices thereof and coating the outer surfaces of the same.

2. A wall structure including upright end posts, vertically spaced horizontal wires connected to the opposite sides of and stretched longitudinally between the end posts, foraminous strips of material secured to the wires to provide spaced parallel surface defining and reinforcing elements, permanent U-shaped braces arranged transversely between the strips and having a bight portion and vertical legs formed with corrugations on their outer sides for the reception of the horizontal wires, binding devices tying the wires within the leg corrugations, transverse braces engaging the free terminals of the legs to prevent spreading thereof, transverse tie elements having offset hooked terminals engageable in the interstices of the foraminous strips to brace the same against bulging and a plastic fill-

ing between said strips extending through the interstices thereof and coating the outer surface of the same, in combination with a plurality of centrally arranged hollow porous ventilation and drainage defining members separating the plastic filling.

3. A wall structure including upright end posts, vertically spaced horizontal wires connected to the opposite sides of and stretched longitudinally between the end posts, foraminous strips of material secured to the wires to provide spaced parallel surface defining and reinforcing elements, permanent U-shaped braces arranged transversely between the strips and having a bight portion and vertical legs formed with corrugations on their outer sides for the reception of the horizontal wires, binding devices tying the wires within the leg corrugations, transverse braces engaging the free terminals of the legs to prevent spreading thereof, transverse tie elements having offset hooked terminals engageable in the interstices of the foraminous strips to brace the same against bulging and a plastic filling between said strips extending through the interstices thereof and coating the outer surface of the same, in combination with a plurality of centrally arranged hollow porous ventilation and drainage defining members separating the plastic filling, certain of the cross tie elements being centrally offset to engage with and maintain the ventilation and drainage defining members in juxtaposition to the surface defining and reinforcing elements during the boring and setting of the plastic filling.

4. A wall structure including upright end posts, facing planks secured thereto, vertically spaced horizontal wires connected to the opposite sides of the facing planks and stretched longitudinally between the same, foraminous strips of material secured to the wires to provide spaced parallel surface defining and reinforcing elements, U-shaped braces arranged transversely between the strips, binding devices securing the strips to the legs of the U-shaped braces, transverse tie elements engageable in the interstices of the strips, centrally arranged hollow porous ventilation and drainage defining members positioned between the surface defining reinforcing elements and a plastic filling between said strips extending through the interstices thereof and coating the outer surface of the same whereby to provide separated inner and outer wall layers.

WILLIAM C. BUCKHOUT.