D. J. FLYNN.

CEMENTITIOUS STRUCTURE.

APPLICATION FILED FEB. 17, 1919.

1,345,156.

Patented June 29, 1920.

2 SHEETS—SHEET 1.

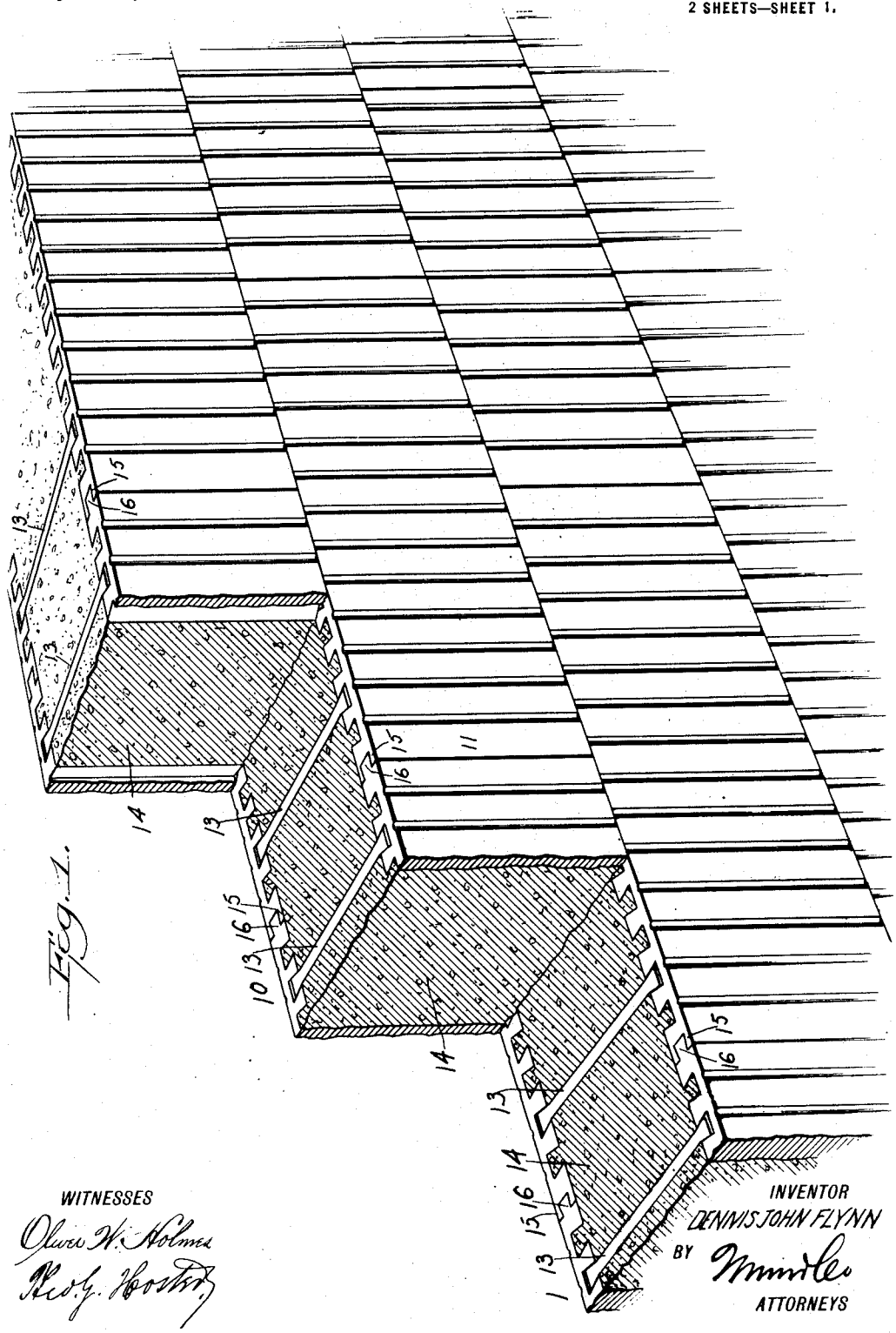


Fig. 1.

WITNESSES

Oliver W. Holmes

Roy J. Hoosier

INVENTOR

DENNIS JOHN FLYNN

BY Munn & Co

ATTORNEYS

D. J. FLYNN.

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2 SHEETS—SHEET 2.

Fig. 2.

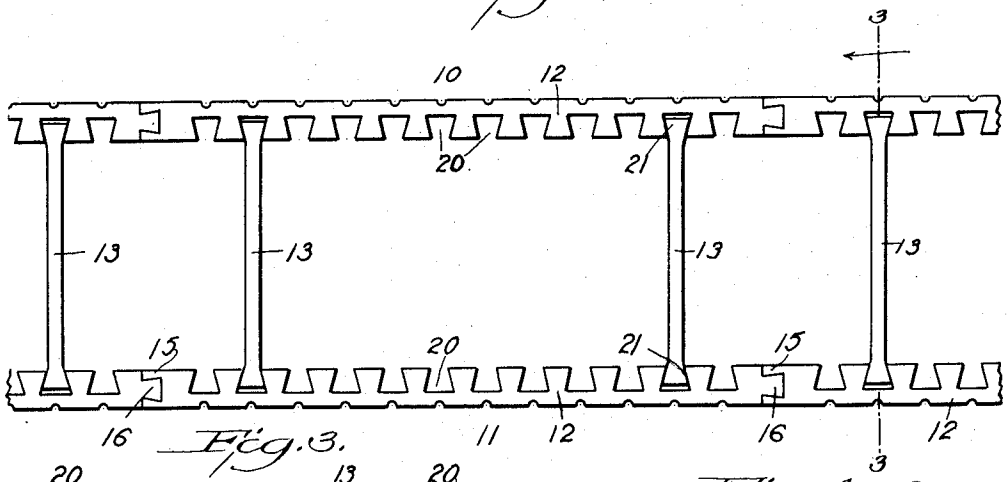


Fig. 3.

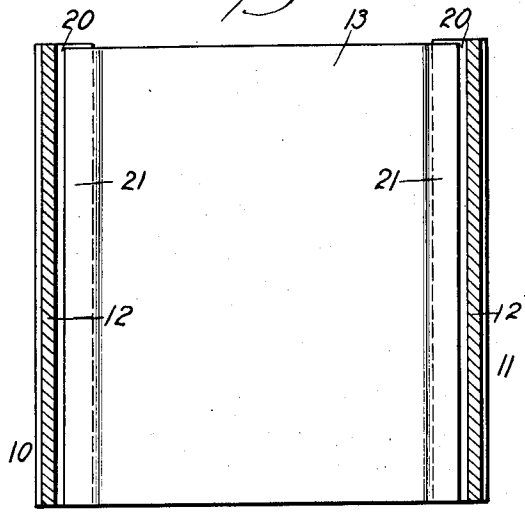


Fig. 4.

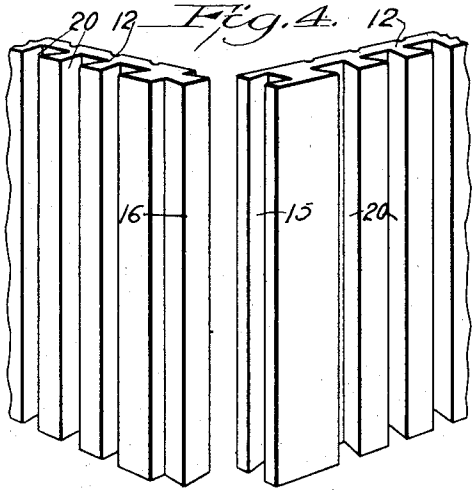


Fig. 5.

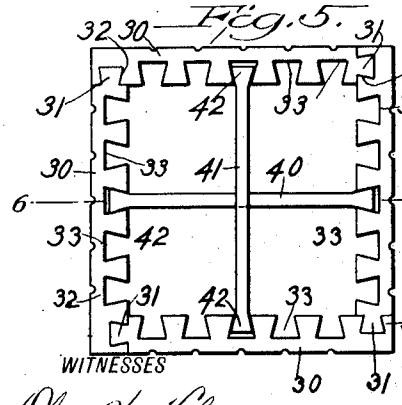


Fig. 7.

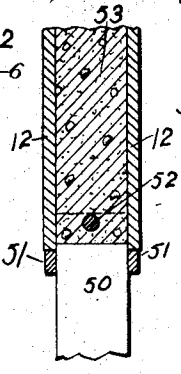
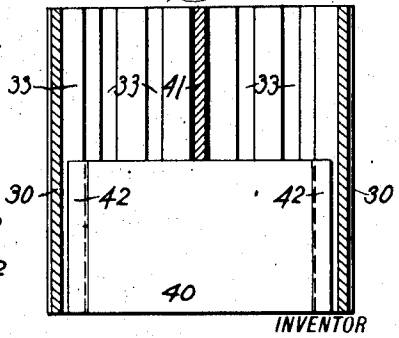


Fig. 6.



WITNESSES

Oliver W. Holmes

Fred G. Hoster

INVENTOR

DENNIS JOHN FLYNN

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

DENNIS JOHN FLYNN, OF NEW BRUNSWICK, NEW JERSEY.

CEMENTITIOUS STRUCTURE.

1,345,156. Specification of Letters Patent. Patented June 29, 1920.

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To all whom it may concern:

Be it known that I, DENNIS JOHN FLYNN, a citizen of the United States, and a resident of New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and Improved Cementitious Structure, of which the following is a full, clear, and exact description.

The invention relates to the building of walls, piers, lintels and other similar structures, and its object is to provide a new and improved cementitious structure arranged to dispense with wooden forms in building walls, piers, lintels and like structures, and to render the structure exceedingly strong and durable. Another object is to permit of quickly building the structure and without waste of concrete or other cementitious material. Another object is to obviate the formation of cracks in the structure and to practically render the structure moisture proof.

With these and other objects in view, the invention consists of certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claim.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved structure in the form of a wall;

Fig. 2 is a plan view of the same;

Fig. 3 is an enlarged cross section of the same on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of the adjacent ends of two form and facing slabs in disassembled position;

Fig. 5 is a plan view of the improved structure in the form of a pier;

Fig. 6 is a sectional side elevation of the same on the line 6—6 of Fig. 5 and with the cementitious filling omitted; and

Fig. 7 is a cross section of the structure in the form of a lintel.

The wall illustrated in Figs. 1 and 2 consists essentially of two parallel rows 10 and 11 of form and facing slabs 12 connected with each other by tie plates 13 with a cementitious material 14 filling the space between the two rows 10 and 11 and embedding the tie plates 13. Each of the facing slabs 12 is provided at one end with a vertically disposed dovetail groove 15 and at the other end with a vertically disposed tongue 16, of which the dovetail groove 15 of one slab 12 is engaged by the dovetail tongue 16 at the corresponding end of the adjacent slab. By the arrangement described the slabs 12 of each row 10 and 11 are securely interlocked with each other.

The inner face of each slab 12 is provided with vertically disposed dovetail tongues 20 extending throughout the width of the slab, and each of the tie plates 13 is provided at its sides with dovetail tongues 21 engaging oppositely located dovetail grooves 20 to securely tie the slabs of the two rows 10 and 11 together with a view to securely holding the rows of slabs in the desired spaced relation according to the thickness of the wall to be formed. The space between the slabs tied together sidewise in each row and crosswise to connect oppositely disposed slabs with each other is filled with concrete or other suitable cementitious material which not only embeds the cross ties 13 but also fills the dovetail grooves 20 not occupied by the dovetail tongues 21 of the tie plates 13. Thus the cementitious material when set and hardened securely locks the slabs 12 in position, it being understood that the slabs 12 are used as a form for the plastic cementitious material and for forming outer and inner facings for the wall. In practice, the slabs are preferably made of hard burned clay and the tie plates 13 are of a similar material. Each of the slabs 12 is preferably thirty inches long and twelve inches high but two plates 13 are found to be sufficient for connecting each pair of oppositely disposed slabs, as plainly indicated in Figs. 1 and 2.

In building the wall the preferred method is that the mason first erects one course of form and facing slabs after which the filling of concrete is placed in position and tamped in the usual manner. When one course is completed work on the second course is commenced and so on throughout the entire height of the wall. Another method is for the mason to erect all courses of form and facing slabs and their ties to the height of the desired wall and then fill in with concrete material. It is understood that by the arrangement described the slabs form permanent parts of the wall and are used as forms for holding the plastic material in place during the setting and hardening.

When is desired to build a pier, as shown

for instance in Figs. 5 and 6, then slabs 30 are used which are provided at one end with a vertically disposed tongue 31, and on the inner face at the other end the slab is provided with a dovetail groove 32 engaged by the dovetail tongue 31 of the next following slab. Thus the several slabs disposed at a right angle one to the other are interlocked. Each of the slabs 30 is provided at its inner face with dovetail tongues 33 and for each set of interlocked slabs two tie plates 40 and 41 are used set at a right angle one to the other and of an aggregate height corresponding to the height of a slab 30. The tie plates 40 are provided at their sides with dovetail tongues 42 engaging corresponding grooves 43 in the opposite slabs 30, as will be seen readily by reference to Figs. 5 and 6.

In forming a wall on the top rail 50 of a door or window casing, use is made of two slabs 51 attached to the faces of the rail 50 and on which rest the lower ends of the slabs 12 of the outer and inner rows 10 and 11 of such slabs tied together by the tie plates 13 the same as above described. A metallic reinforcing rod 52 is preferably placed in the bottom of the space formed by the two rows of slabs to reinforce the concrete filling 53 placed between the two rows of slabs.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

A structure of the class described, comprising oppositely disposed slabs, the inner faces of the said slabs having a plurality of dove-tail grooves formed therein intermediate of their ends, tying plates extending between said slabs and having their ends terminating in outwardly flaring dove-tail tongues, said tongues and grooves arranged to interlock to connect the opposite slabs with each other by means of said tying plates received in any of said opposite grooves and to hold the slabs spaced apart in parallelism, certain of said slabs terminating at one end in a dove-tail tongue engaging one of the dove-tail grooves on the inner face of another slab to form a corner construction.

DENNIS JOHN FLYNN.