J. H. DELANEY
MOLD BOARD FOR THE FORMATION OF WALL SLABS
Filed Dec. 24, 1925

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Inventor

Witness

John Henry Delaney

James R. Townsend
his atty.

C. C. Kelly

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John Henry Delaney, of Los Angeles, California.

Mold Board for the Formation of Wall Slabs.

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An object of this invention is to provide superior mold boards for slabs for walls, ceilings and roofs of buildings at minimum expense of time, labor and material.

I have discovered that a mixture of cementitious material such as Portland cement, plaster of Paris, magnesite and the like when mixed with lumps of light coarsely porous mineral material such as pumice stone, coke, diatomaceous earth and water, the combination can be shot under compressed air through a cement gun of common type in sufficient quantities to practically build strong and solid walls, partitions and roofs of any required thickness; and that by allowing the composition to set with or without a retarder, an upright slab may be built against an upright smooth surface, that may be removed as soon as the material has set, so that the work can proceed with great speed; and in carrying out the invention I have provided a mold board of wood, metal, or other suitable light material or a combination of wood and metal, and consisting of two sections or panels adapted to fit together at intermediate edges, and provided at the opposite edges with cleats adapted to hold the edge of the applied material while the material is setting, with or without a retarder.

An object of the invention is to provide a lighter, and cheaper construction for walls, ceilings and roofs, than has heretofore been proposed for fire proof structures.

A further object of the invention is rapidity of constructing buildings.

A further object is to minimize the amount of framing required for the structure, and to provide a lighter and stronger steel frame or steel reinforced structure and to minimize danger of destruction by earthquakes and fire.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

My discovery and invention may be understood by reference to the accompanying drawing.

Figure 1 is a fragmental view of a wall in process of construction with laterally sliding mold boards. Fragments of the cement gun are shown.

Fig. 2 is a horizontal section on line a-a,

Fig. 3 is a perspective view of one-half of the mold board, one of the marginal cleat members being removed and shown at the side of the board, and a reinforcing rod is also shown.

Fig. 4 is a fragmental view illustrating the construction by means of a vertically sliding mold board between two upright surfaces.

Fig. 5 is a plan view of said vertically sliding mold board.

The mold board shown in Figs. 1, 2 and 3 is constructed of two smooth panels 1, 2, joining at one edge 3 and provided at the other edges with retaining cleats formed of separable members 4, 5 fastened together by dowels 6 and beveled on their inner edges as at 7 to form retaining grooves 8.

In practice the operator will supply the hopper 9 of the cement gun with powdered cementitious material and lumps of coarsely porous mineral material such as pumice stone, cinders or diatomaceous earth in lumps of any predetermined size ranging from a size that would just go through a sixteenth inch mesh screen to a size that will just go through a half inch mesh screen, and sufficient moisture will be supplied to the cement gun so that the material shot from the gun will be of sufficient fluid and plastic consistency to flatten out on the mold board and cohere and form a slab of the required thickness on the surface between the cleats.

The form of mold board shown with the cleats is especially adapted to build across considerable open spaces as between the upright timbers 10; and the grooves 8 on the mold board serve to form retainers at one edge of each slab to receive the edge of the next slab as it is molded by the operation of the cement gun driving the material against the mold board.

When a slab has been molded and set the sections of the mold board will be shifted edgewise and work continued as before, and so on to the full limit when the mold board comes against the timbers at the edge of the space in which the wall is to occupy.

Then the mold board section 5 will be withdrawn from the dowels and the spaces occupied will be filled with material shot onto the face of the remaining cleat and between it and the surface by which the dowel cleat has been intercepted.

When the filling has become set the board will be withdrawn from the other side, and
the space left vacant by the removal of the dowelled cleat from that side will be filled by material from the cement gun.

I claim:

5 1. A mold board for the formation of wall slabs, removable retaining cleats on the edges of said board, said cleats comprising separable members and dowel pins extending into said members whereby said members are removably secured together.

10 2. A mold board for the formation of wall slabs, removable retaining cleats on the edges of said board, said cleats comprising separable members; and dowel pins extending into said members whereby said members are removably secured together and said cleats having retaining grooves formed thereon.

15 3. A mold board for the formation of wall slabs, removable retaining cleats on the edges of said board, said cleats comprising separable members and dowel pins extending into said members whereby said members are removably secured together.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 11th day of December, 1925.

JOHN H. DELANEY.