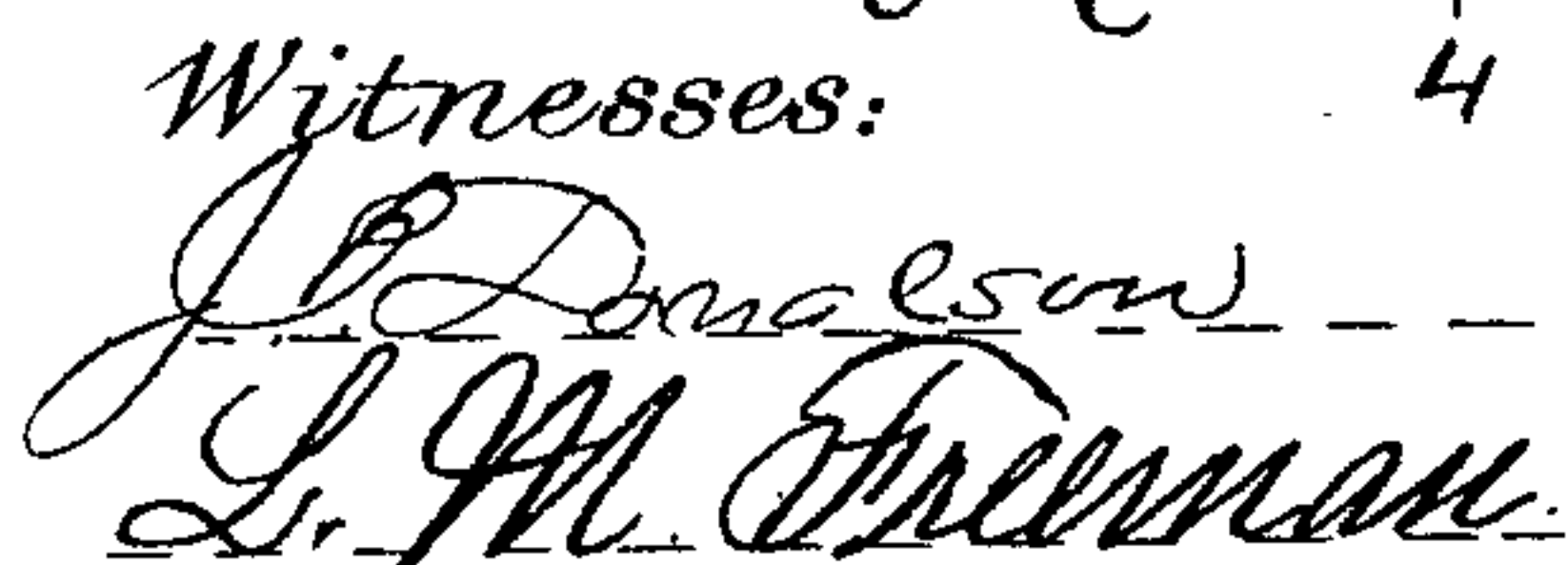


M. COVEL.
CONSTRUCTION OF BUILDINGS.

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UNITED STATES PATENT OFFICE.

MILO COVEL, OF CHICAGO, ILLINOIS.

CONSTRUCTION OF BUILDINGS.

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To all whom it may concern:

Be it known that I, MILO COVEL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in the Construction of Buildings, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this
10 specification.

This invention relates to an improvement in the construction of buildings, including not only the exterior and interior walls, but
15 also the foundations, floors, steps, sidewalks, porches, &c.

The object of my invention is the erection of cheap, durable, and fire-proof buildings, and principally of such waste material that is
20 useless for other purposes except as fuel. The most suitable material is what is generally known as "mill refuse"—such as slabs and edgings, which can be readily used in this method by cutting and splitting the same up
25 into lengths of, say, from two to four feet, and having a thickness or approximate diameter of about one and one-half inch—of any kind of wood, in the form of regular or irregular
30 pieces, small and crooked trees—such as grow upon the small streams in the far West, or small-growth timber, all of which can be split up and utilized. This is of especial advantage in sections of the country where lumber is scarce and costly.

The nature of my invention consists in building up the walls by laying the strips or pieces of material on top of each other in the form of lattice-work, the pieces running diagonally to the square of the wall, and filling
40 the interstices with mortar, cement, or stucco, as the work progresses, and finally completing the structure by plastering both sides, the exterior and interior, of the building.

Figure 1 is a broken-away elevation and
45 partial section of a building embodying my improved features; Fig. 2, a vertical section in plane 2, Fig. 1; Fig. 3, a broken-away horizontal section in plane 3, Fig. 1; Fig. 4, a vertical section in plane 4, Fig. 3; and Figs. 5
50 and 6 details of construction.

Referring to the drawings, A represents the walls of the building; B, the roof structure;

B', a window, and B² the door; B³, the exterior coat of plastering, and B⁴ the interior.

C represents the pieces forming one layer 55 and placed diagonally across the wall, and C' the companion pieces composing the next layer and placed diagonally in the opposite direction, a space being left between each piece, forming the interstices *a*, which are 60 filled with mortar, thus forming a solid wall from the bottom of the foundation to the roof. This manner of laying up the pieces or strips forming the walls provides the V-recess *a'*, both inside and out, so that when the coat of 65 plastering is applied to the ends it forms a dovetailed lock and holding-ground for the mortar and prevents the same from falling off either inside or out, thus dispensing with lathing or furring. The outside surface of 70 the wall may be finished with cement or common hard mortar and then pointed or finished as desired. The boards *a*² are built in the walls to receive and support the inserted ends of the floor-joists D, which feature also 75 adds to the strength of the structure. The roof B and the cornice are constructed of the same material and finished in a like manner. The pieces or strips *a*³ are nailed or otherwise fastened to the roof-boards and are arranged diagonally, as shown in Fig. 1, the gutter *a*⁴ being constructed of the same material. The window-caps *b* and sills *b'* are also of the same material and finish. The step *d* (shown in Fig. 5) and the porch or side- 85 walk, Fig. 6, are of the same structure. The wood material gives strength to the cement and forms steps or walks as durable as stone and at a much less cost.

The uniting of wood and cement or mortar together in the manner described forms 90 a solid, warm, and dry wall, the wood absorbing all moisture and frost that might find its way through the outside finish.

A building of this character would be 95 lighter than a brick structure and the plastering or finish less liable to crack, the cement or lime in the mortar preserving the wood from all chances of decay.

Having thus described my invention, what 100 I claim as new, and desire to secure by Letters Patent, is—

1. A building or structure the foundation and walls whereof are composed of pieces or

strips of wood laid diagonally to the square of the wall and leaving a space between each two pieces of wood, each layer alternating in opposite diagonal planes to form lattice-work 5 and provide interstices which are afterward filled in with cement or mortar, as described.

2. A roof structure for buildings, consisting of pieces or strips of wood secured to the roof-boards in the form of lattice-work, the 10 interstices being filled with cement or mortar, the exterior surface next plastered and finally given a hard finish, substantially as set forth.

3. A building structure the walls whereof 15 are built up of regular or irregular pieces or strips of wood laid diagonally to the square of the wall, the layers alternating in the form of lattice-work, as described, thus leaving

notches between the ends of the material and thereby providing a holding-ground for the 20 plastering and causing the same to adhere firmly to the walls, substantially as set forth.

4. A building structure the foundation, walls, floors, and roof whereof are composed of pieces or strips of wood of a regular or 25 irregular shape and laid up diagonally in horizontal courses in the form of lattice-work, the interstices between such strips being filled with mortar or cement and then plastered on one or both sides, and finished as de- 30 sired, substantially as set forth.

MILO COVEL.

Witnesses:

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