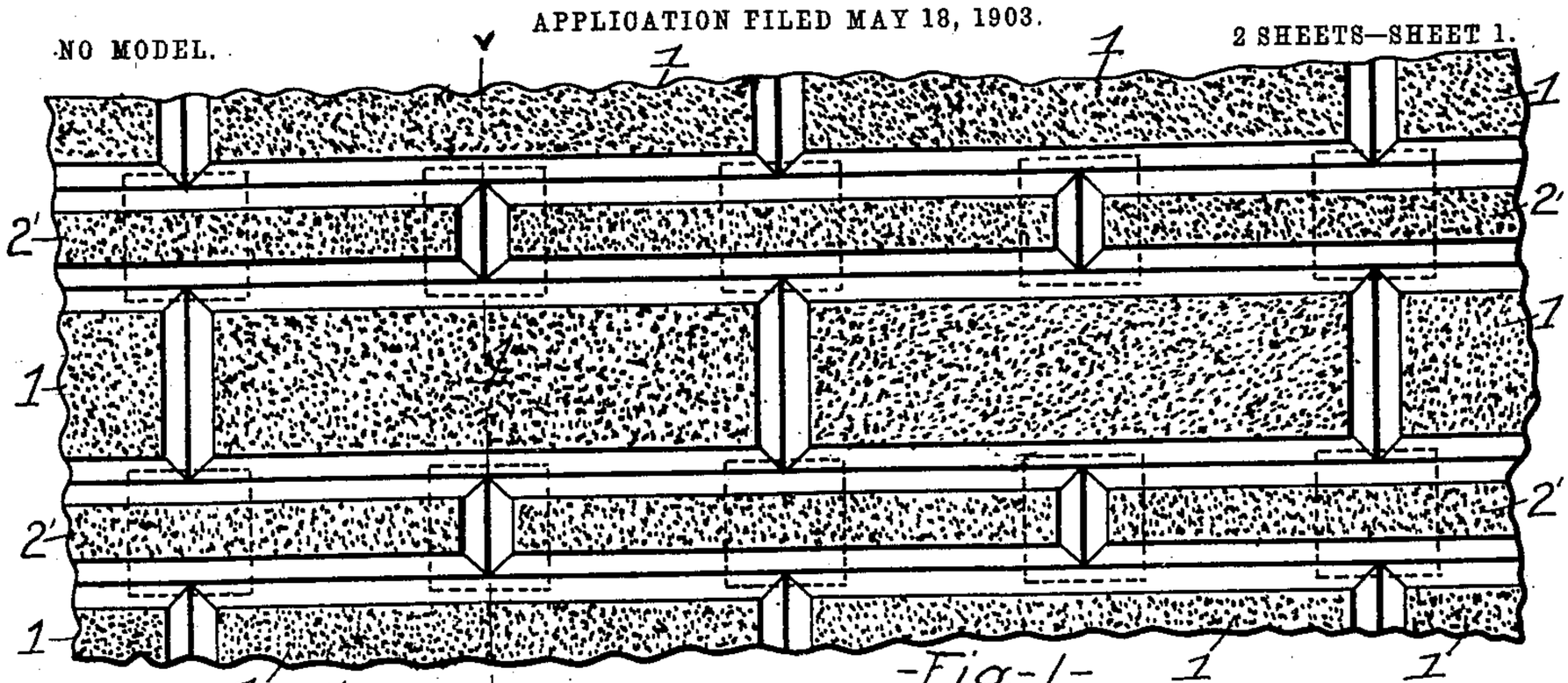
No. 749,254. PATENTED JAN. 12, 1904.

D. E. BEEGHLY.

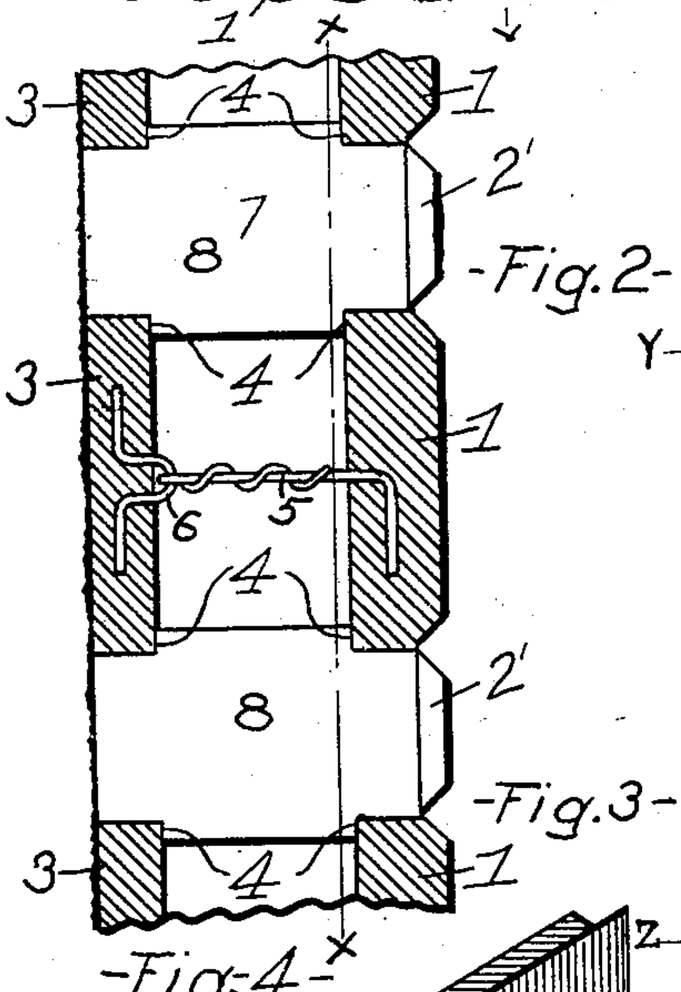
HOLLOW WALL CONSTRUCTION.

APPLICATION FILED MAY 18, 1903.

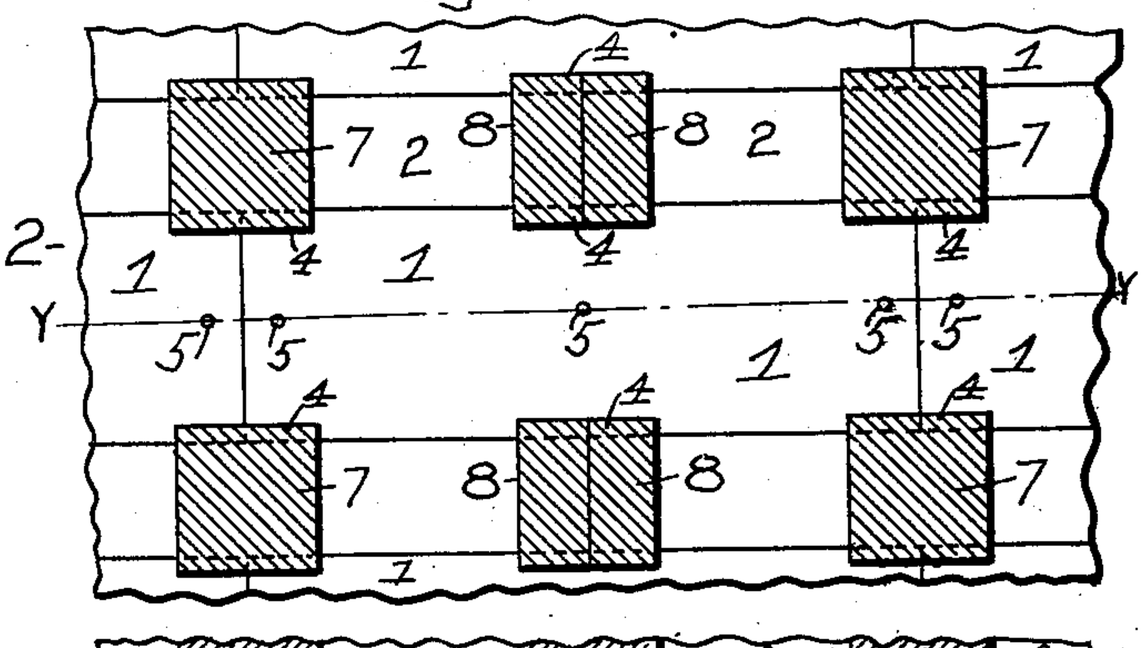
NO MODEL. 2 SHEETS—SHEET 1.



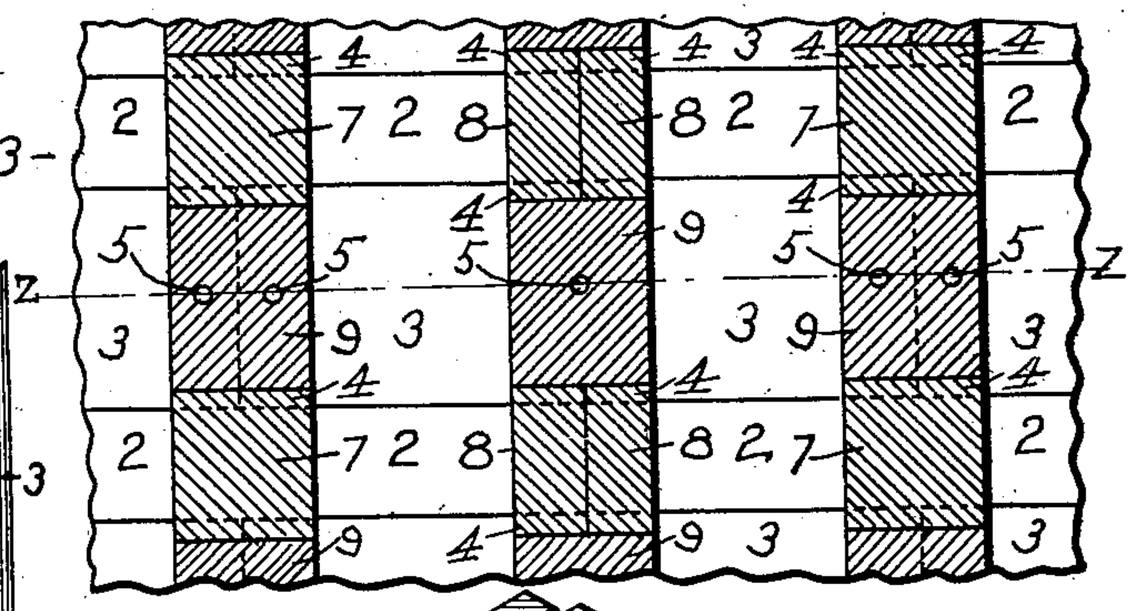
-Fig.-1-

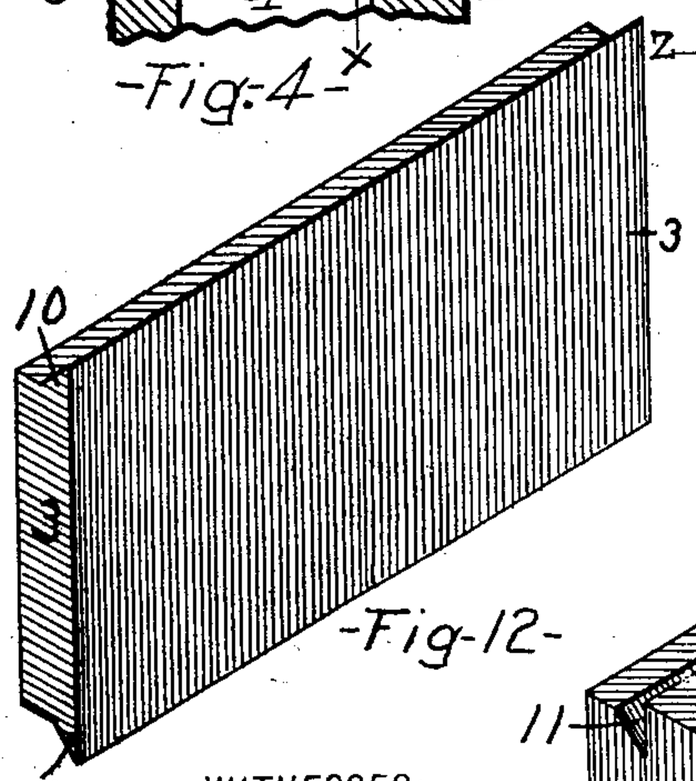


-Fig.2-

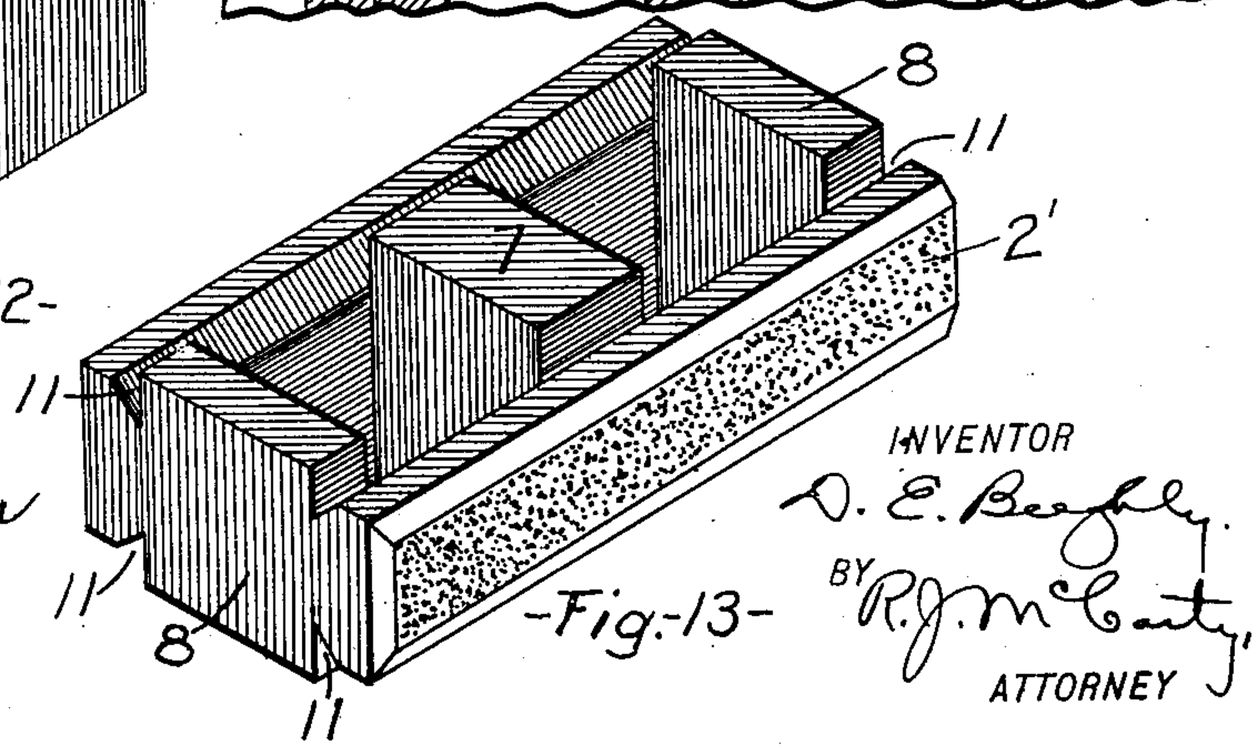


-Fig.3-





-Fig-12-



-Fig.-13-

-Fig.-4-

WITNESSES:
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HOLLOW WALL CONSTRUCTION.

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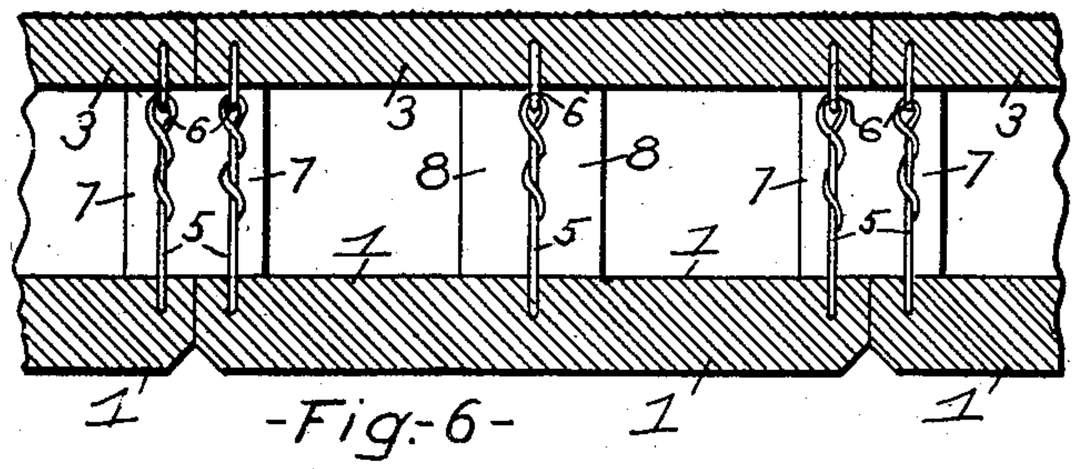
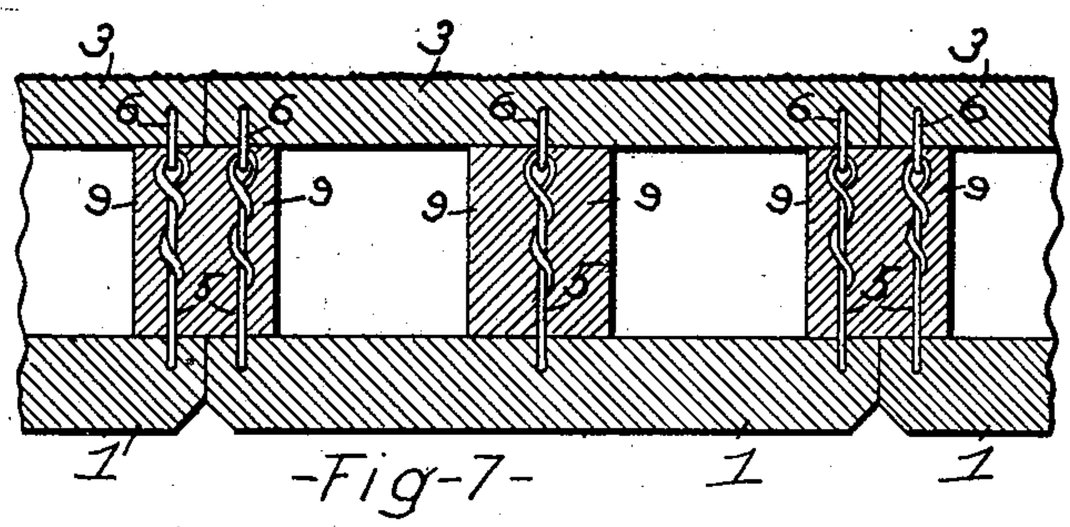
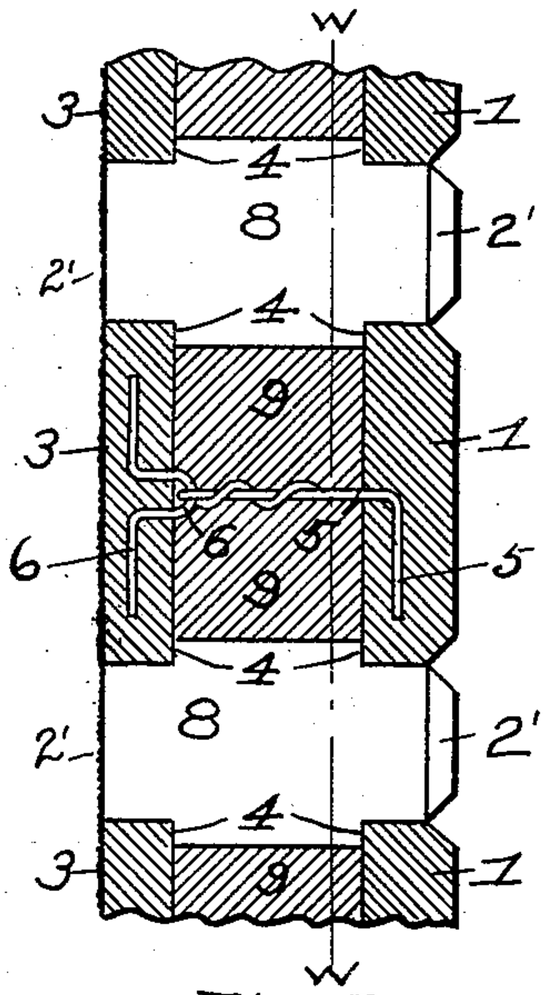
NO MODEL. 2 SHEETS—SHEET 2.



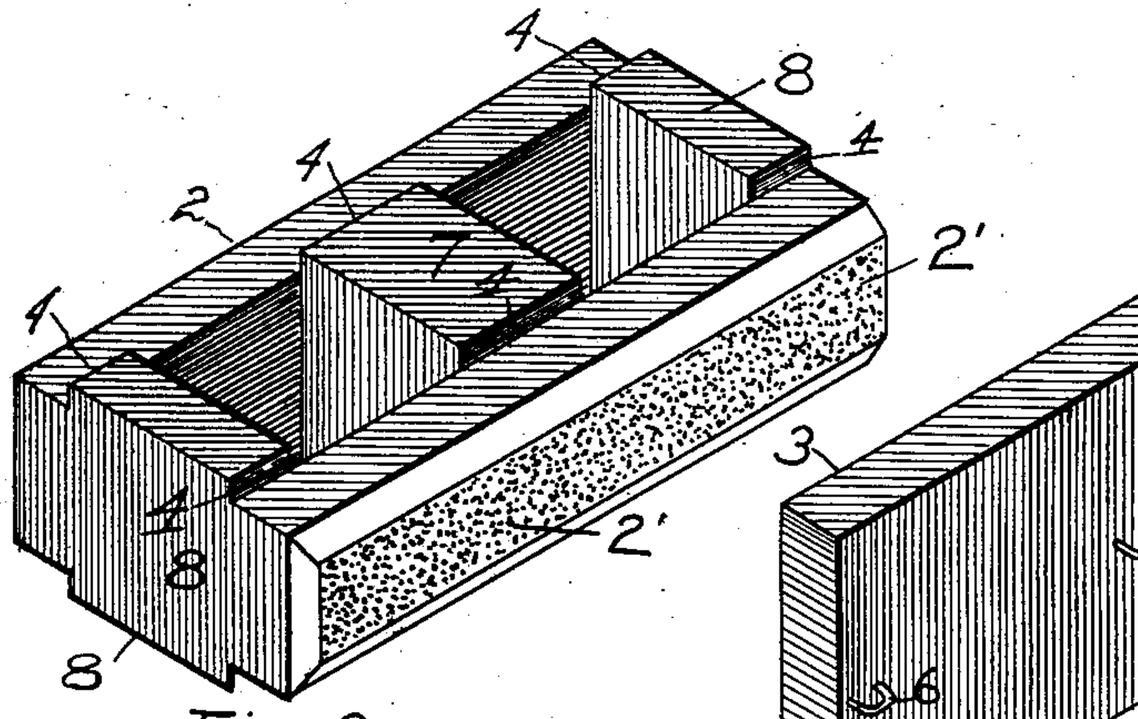
-Fig.-6-



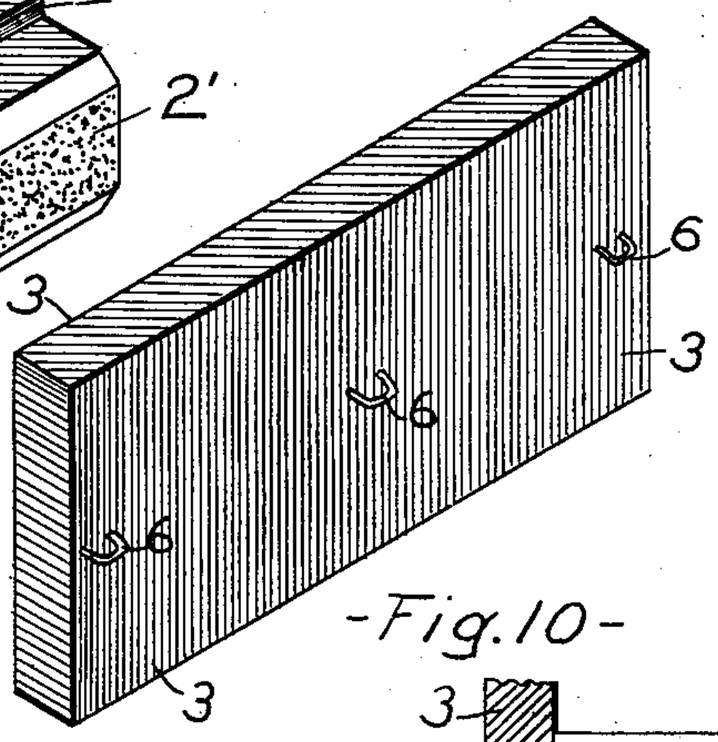
-Fig-7-



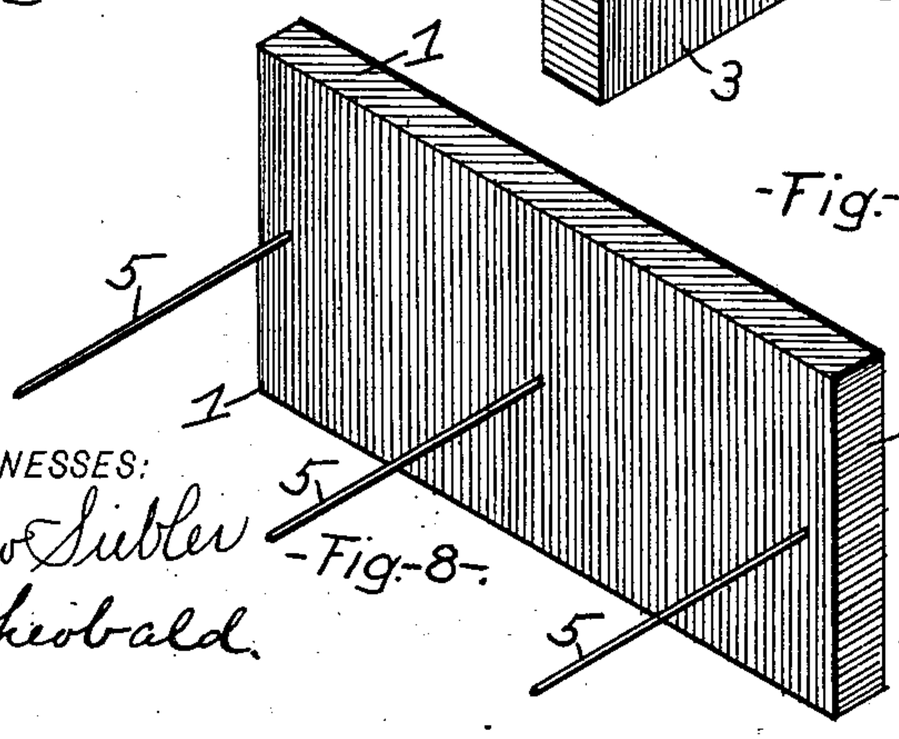
-Fig.-5-



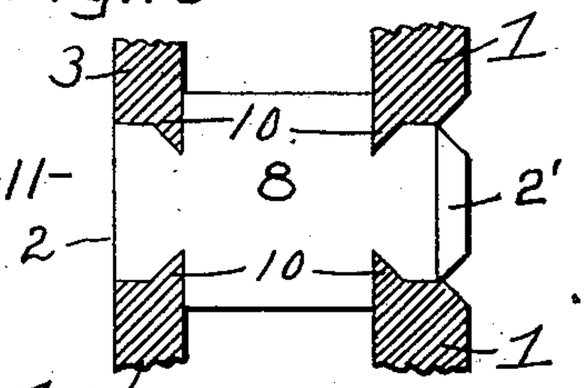
-Fig.9-



-Fig.10-



-Fig.-8-



-Fig.-11-

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No. 749,254. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

DAVID E. BEEGHLY, OF DAYTON, OHIO.

HOLLOW WALL CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 749,254, dated January 12, 1904.

Application filed May 18, 1903. Serial No. 157,731. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. BEEGHLY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Hollow Wall Constructions; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in hollow concrete wall construction.

The object of the invention is to construct a wall of the above character of a series of hollow sectional building-blocks, each of which consists of two perpendicular slabs or sections and two upper and lower horizontal sections constructed and united or joined in the manner hereinafter described and claimed.

Preceding a detail description of the invention, reference is made to the accompanying drawings, of which—

Figure 1 is a front elevation showing the face of a portion of a hollow concrete wall constructed in accordance with my invention; Fig. 2, a section of the wall on the line *x x* of Fig. 4; Fig. 3, a section of the wall on the line *w w* of Fig. 5; Fig. 4, a section of the wall on the line *v v* of Fig. 1; Fig. 5, a vertical section of the wall on the line *v v* of Fig. 1, showing a modification in the construction; Fig. 6, a section of the wall on the line *y y* of Fig. 2; Fig. 7, a section of the wall on the line *z z* of Fig. 3; Fig. 8, a perspective view of the front or face vertical slab detached; Fig. 9, a perspective view of one of the horizontal sections; Fig. 10, a perspective view of the rear vertical slab or section. Fig. 11 is a cross-sectional view showing a modification in the construction of a hollow block. Fig. 12 is a perspective view of one of the vertical slabs or sections, showing a modification in the construction thereof. Fig. 13 is a perspective view of one of the horizontal sections, showing a modification.

Throughout a detail description of my invention similar reference characters indicate corresponding parts.

1 designates the outer vertical slab or section which may have its outer surface provided with any suitable face—for example, to imitate a rock surface or a smooth surface. 3 designates the inner vertical slab or section. These two slabs or sections rest upon the inner and outer vertical walls 2 2′ of a horizontal section, the outer wall 2′ of said horizontal section being provided with any suitable face, either smooth or rock face. These horizontal sections are clearly shown in Figs. 9 and 13 of the drawings and are hollow, the same being provided with two end abutments 8 8 and a central abutment 7, which are interposed between the two vertical walls 2 2′ and provide two spaces throughout the lengths of the walls. The abutments 7 and 8 project upwardly and downwardly beyond the horizontal edges of the vertical walls and provide shoulders 4, against which the edges of the inner and outer vertical slabs 1 and 3 abut.

In the construction of the hollow block made up of the sections shown in Figs. 8, 9, and 10 of the drawings it may be desired to fill the vertical spaces throughout the height of the wall with columns of cement 9, as shown in Fig. 7. In this event it becomes necessary to rigidly maintain the vertical slabs or sections 1 and 3 in position against the shoulders 4 4 of the horizontal section. Means for accomplishing this are provided through tie-wires 5, which have their ends turned upon an angle and embedded in the outer vertical slab 1. The other ends of said tie-wires 5 are united to a staple 6, which is embedded in the rear vertical wall 3, as shown in Figs. 5 and 6. The two vertical slabs are thus rigidly maintained in contact with the shoulders 4. As before stated, this form of construction is only desirable when the vertical spaces of the hollow blocks are to be filled with the concrete filling 9, as shown in Fig. 7. It may be stated, however, that this is not the preferred construction. The preferred construction is that which preserves the hollow spaces between the abutments 7 and 8 throughout the height of the wall, and in this construction it is not necessary to employ the tie-wires

5 and 6, hereinbefore described; but in lieu thereof the horizontal edges of the vertical slabs 1 and 3 are tapered, as at 10, said tapering edges extending inwardly from the outer surfaces of the slabs, or they may extend from a point inwardly from said outer surfaces, as shown in Figs. 11 and 12. These tapering edges 10 match with similar tapering edges 11, extending inwardly from the vertical walls 2 2′ of the horizontal sections, as shown in Fig. 13. The tapering surfaces 11 may likewise extend from the outer surface of said vertical sections 2 2′, or they may extend from points inwardly from said outer surface. The said tapering surfaces 11 terminate at the abutments 7 and 8 and provide mortise-joints between each two of the horizontal sections, as shown in Fig. 13 and each two of said vertical slabs 1 and 3. In Fig. 10 of the drawings this connection is clearly shown, and it will be understood that by means of these connections any lateral movement of the vertical slabs 1 and 3 is obviated when the horizontal sections are in position above and below said vertical slabs.

In the use of the hollow building-block constructed of the slabs 1 and 3 and the horizontal sections with the tapering edges, as shown in Figs. 11, 12, and 13, the wall is provided with a series of hollow spaces made up of the spaces between the abutments 7 and 8 of the horizontal section.

Having described my invention, I claim—

1. A hollow concrete wall construction, consisting of sectional blocks of concrete, each of said blocks comprising two vertical slabs and horizontal sections, said horizontal sections consisting of inner and outer walls integrally joined by abutments and provided with intervening spaces, the said abutments projecting beyond and at right angles to the longitudinal edges of the said inner and outer walls and providing shoulders against which the longitudinal edges of the vertical slabs abut, and means for binding said vertical slabs rigidly against said shoulders, substantially as set forth.

2. In a hollow concrete wall construction, a sectional block comprising vertical concrete slabs, the longitudinal edges of which taper inwardly from their outer sides and throughout the lengths of said edges, in combination with a horizontal section consisting of inner and outer vertical walls, the longitudinal edges of which are provided throughout their lengths with tapering seats adapted to receive the tapering edge surfaces of the vertical slabs, said vertical walls of the horizontal section being joined by abutments which provide intervening spaces between said walls, said abutments projecting above and below the walls of said horizontal section and providing shoulders against which the longitudinal edges of the vertical slabs abut, said shoulders being at the lowest point of the tapering seats in the vertical walls of the horizontal section, substantially as set forth.

3. A hollow building-block constructed of concrete and consisting of a horizontal section with two vertical walls having intervening abutments, said abutments projecting above and below the vertical walls, and the longitudinal edges of said vertical walls being tapered downwardly to said abutments, in combination with vertical slabs having their longitudinal edges suitably tapered to fit the tapered edges of the side walls of the horizontal section, the said vertical walls abutting with the shoulders formed by the abutments intervening between the vertical walls of the horizontal section, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID E. BEEGHLY.

Witnesses:
R. J. McCarty,
C. M. Theobald.