J. E. CONZELMAN.

DOUBLE WALL CONSTRUCTION.

APPLICATION FILED AUG. 7, 1912.

1,079,113. Patented Nov. 18, 1913.

Fig. 1.

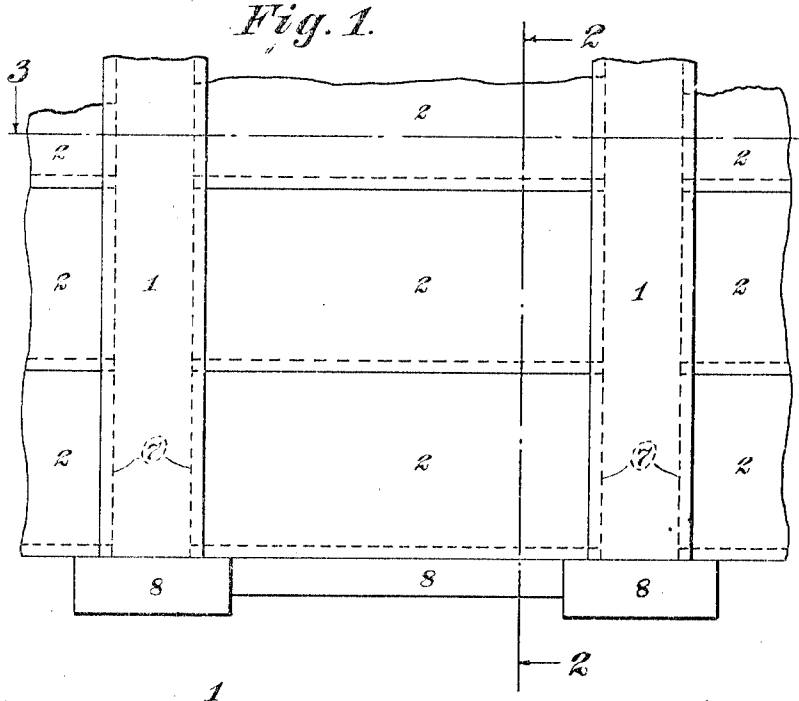
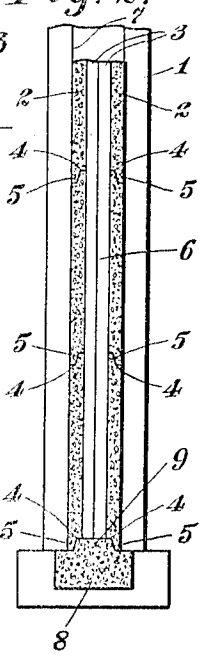


Fig. 2.



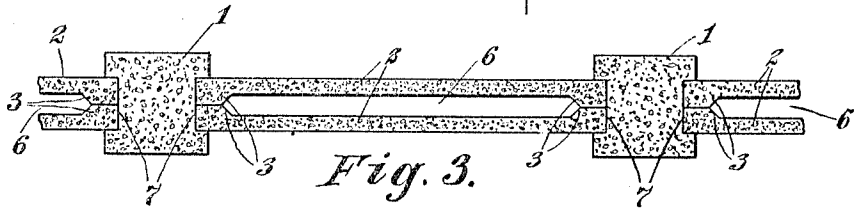


Fig. 3.

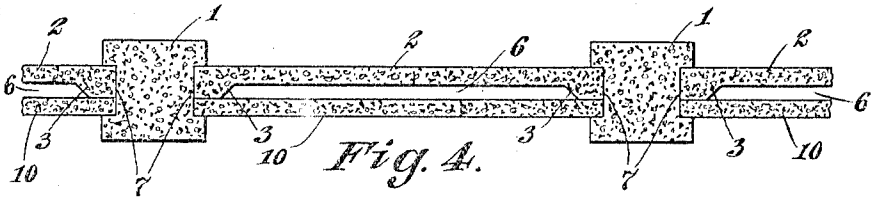


Fig. 4.

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By Hugh K. Wagner,
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UNITED STATES PATENT OFFICE.

JOHN E. CONZELMAN, OF WEBSTER GROVES, MISSOURI, ASSIGNOR TO UNIT CONSTRUCTION COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELAWARE.

DOUBLE-WALL CONSTRUCTION.

1,079,113. Specification of Letters Patent. **Patented Nov. 18, 1913.**

Original application filed November 9, 1911, Serial No. 659,298. Divided and this application filed August 7, 1912. Serial No. 713,902.

To all whom it may concern:

Be it known that I, JOHN E. CONZELMAN, a citizen of the United States, residing at the city of Webster Groves, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Double-Wall Construction, of which the following is a specification.

This application is a division and a continuation of one filed by me November 9, 1911, Serial No. 659,298.

This invention relates to concrete building structures and has particular reference to a construction in which concrete slabs and columns are united to form a wall having an air-space therein and being particularly adapted for cold storage plants, residences, and the like.

In the construction of concrete buildings, it is essential that secure and durable junctures be made between the columns and the wall slabs of the structure.

It is an object of this invention to provide a structure of concrete building elements, which coöperate and are interengaged to form a rigid, secure and lasting combination of elements.

Another object is to provide a concrete building structure in which the general construction of the coöperating uprights and wall slabs is generally improved.

With these objects in view, this invention consists of the novel features of construction and arrangement of parts, as will be hereinafter more fully described and pointed out in the claim.

In the accompanying drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is a side elevation of part of a wall embodying this invention and including two columns and wall slabs connected therewith; Fig. 2 is a sectional view on the line 2—2, Fig. 1; Fig. 3 is a sectional view on the line 3—3, Fig. 1; and Fig. 4 is a sectional view of a wall showing an alternate form of the invention.

The panel of a wall, depicted in Fig. 1, consists of a pair of columns or uprights 1 and a plurality of vertically-disposed slabs 2. Each slab 2 is preferably molded with a rectangular configuration and is provided with a pair of flanges or ribs 3 that is arranged to extend vertically on a face thereof, one flange being located at one end of said slab and the other flange being located at the other end of said slab. A rabbet 4 and rib 5 are provided on the top and bottom of said slab, so that, when one slab is placed in position on top of another, the rib 5 on the bottom of the upper slab fits in the rabbet 4 in the top of the lower slab and the rib 5 on the top of the lower slab fits in the rabbet 4 in the bottom of the upper slab, whereby said slabs are united by a rabbeted juncture. The slabs 2 are arranged one on top of another, as just described, in two vertical walls or rows, so that the flanges 3 borne by the slabs 2 of one wall fit against the flanges 3 borne by the slabs 2 of the other wall, thereby leaving an air space 6 between the two walls of slabs. The ends of the slabs 2 of each wall fit in grooves 7 in the sides of columns 1, and are thereby held in place. The columns 1 are preferably supported on a foundation 8, which extends underneath the lower slabs 2 of each wall. A rib 9 on said foundation fits in the rabbets 4 in the bottoms of the lower slabs 2 of each wall. If desired, the adjoining edges of each two adjacent slabs 2 of each wall, and the ends of said slabs may be "buttered" with grout just previous to the placing of said slabs in position in the wall, so that, when said grout sets, said slabs are united integrally and said slabs and columns 1 are, also, united integrally, thus constituting a monolithic structure. The bottoms of the lower slabs 2 of each wall may, also, be "buttered" with grout, which, when set, unites the lower slabs and foundation 8 integrally.

In the construction depicted in Fig. 4, one of the walls of slabs 2 is omitted entirely and a wall composed of a plurality of slabs 10 is substituted therefor. Said slabs 10 are preferably formed with a uniform thickness throughout and are arranged to fit against the flanges 3 on slabs 2, whereby an air-space 6 is left between the slabs 10 and 2, the ends of said slabs 10 and 2 being held in grooves 7 in columns 1, as hereinabove described.

I claim:

In concrete construction, a pair of columns having grooves, an outer series of slabs arranged in superimposed order, the slabs of said outer series of slabs being formed at their abutting edges with tongue and rabbet connections, an inner series of slabs spaced

from the outer series and being arranged in superimposed order, the slabs of said inner series of slabs being formed at their abutting edges with tongue and rabbet connections, the ends of the slabs of both series of slabs being arranged in the grooves of the columns, the slabs of one series having flanges at the ends thereof which flanges abut the slabs of the other series, the flanges acting to hold the outer faces of the two series of slabs in engagement with the adjacent walls formed by the grooves in the columns, the slabs of said inner series of slabs being placed in position independently of the outer series.

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

JOHN E. CONZELMAN.

Witnesses:
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