Nov. 1, 1932. F. M. VENZIE 1,885,496

BUILDING CONSTRUCTION

Filed Sept. 19, 1931 2 Sheets-Sheet 1

Fig. 1.

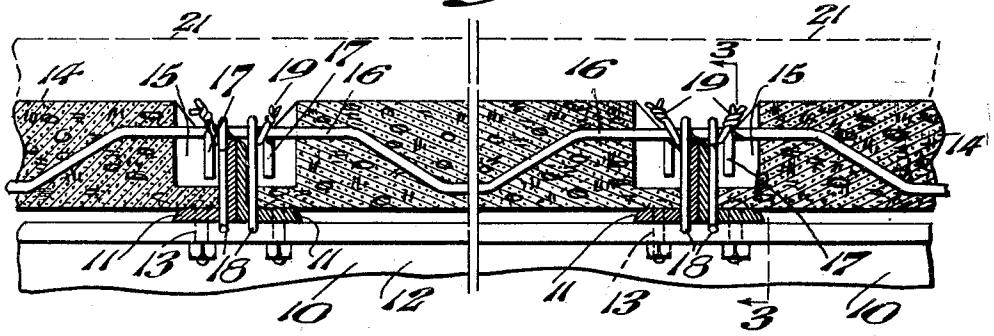


Fig. 2.

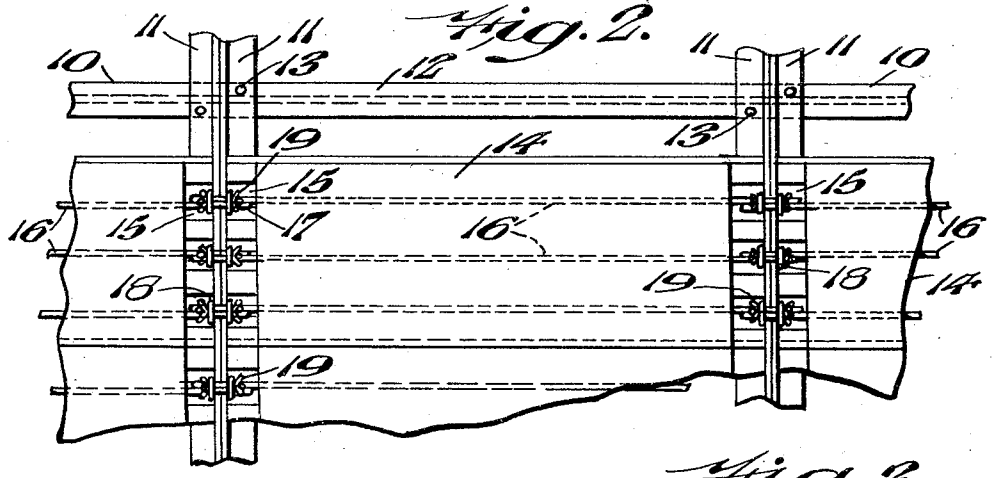


Fig. 3.

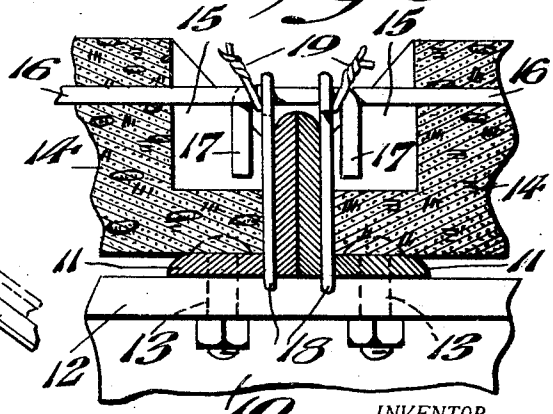


Fig. 4.

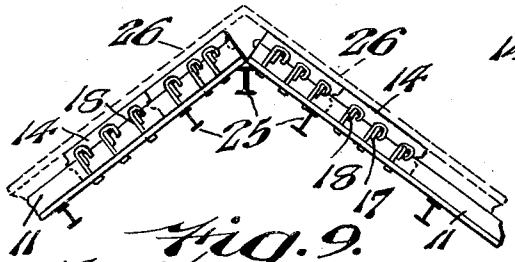
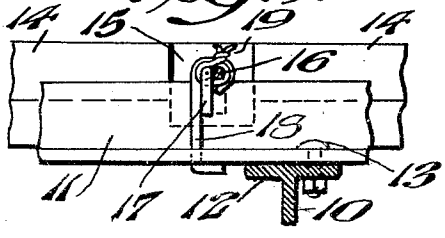


Fig. 9.



INVENTOR.
FREDERICK M. VENZIE.
BY
ATTORNEY.

Nov. 1, 1932. F. M. VENZIE 1,885,496

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Fig. 5.

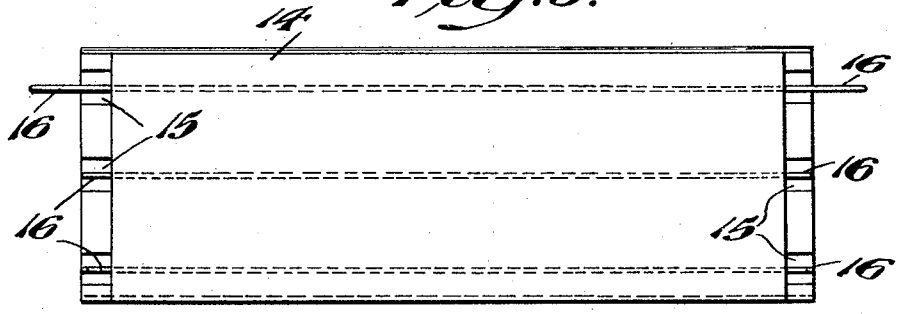


Fig. 6

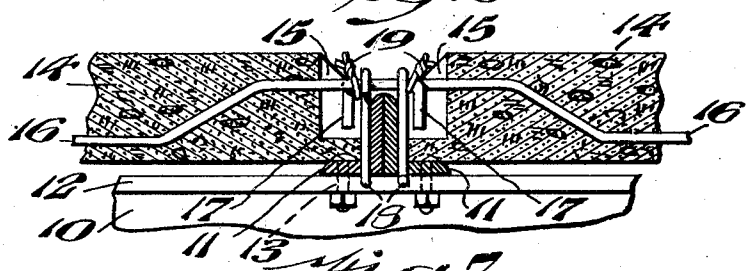


Fig. 7.

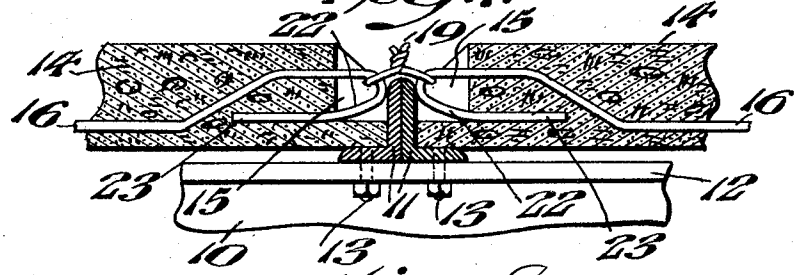
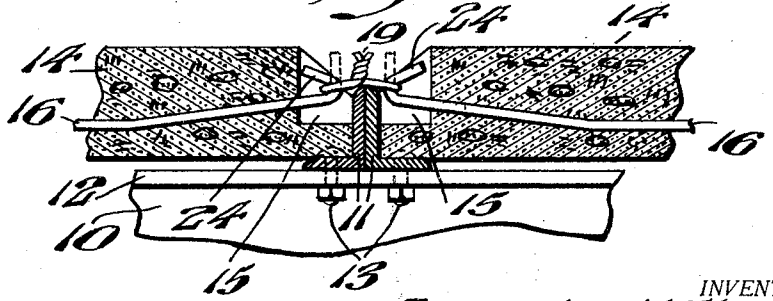


Fig. 8.



INVENTOR.
FREDERICK M. VENZIE.
BY
Williamson & Jackson
ATTORNEY.

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UNITED STATES PATENT OFFICE

FREDERICK M. VENZIE, OF PHILADELPHIA, PENNSYLVANIA

BUILDING CONSTRUCTION

Application filed September 19, 1931. Serial No. 563,693.

This invention, generally stated, relates to building structures and has more particular relation to flooring, roofing, partition, and similar constructions.

The leading object of the present invention may be said to reside in the provision of a building structure in which cementitious blocks or slabs are provided which may be of either fire-proofing or water-proofing material or both, which blocks or slabs are light in structure, inexpensive to manufacture, and which readily admit the securing thereto of nails.

A further object of the present invention is to provide a structure of the character stated in which L-shaped and I-shaped beams are utilized for the support of the blocks or slabs under construction.

A still further object of the present invention is to provide a structure of the character stated in which blocks or slabs of cementitious material are supported upon L-shaped beams and I-shaped beams in a manner to presently appear.

A still further object of the present invention is to provide a reinforcement of blocks or slabs as manufactured in accordance with the invention whereby the reinforcements of the blocks or slabs may be coupled together by tie-wires.

A still further object of the present invention is to provide an arrangement, construction, and connection of parts coupled together by means of tie-wires the tie-wires being accommodated between adjacent blocks or slabs and said tie-wires being completely concealed by means of cementitious material whereby the adjacent ends of the blocks or slabs are bonded one with respect to another.

Other and further objects of the present invention reside in the provision of general details of construction, and arrangement and construction of parts for attaining the results sought by the foregoing objects.

The invention consists of the novel construction hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which:

Fig. 1 is a fragmentary view, principally in longitudinal section, of a floor construction embodying the present invention;

Fig. 2 is a top or plan view of Fig. 1;

Fig. 3 is an enlarged fragmentary view, principally in section, illustrating the manner of tying the blocks or slabs together;

Fig. 4 is a fragmentary view in elevation illustrating a roof as constructed in accordance with the present invention;

Fig. 5 is a top or plan view of one of the slabs shown in the foregoing figures;

Fig. 6 is a fragmentary view, principally in section, illustrating the manner of tying the blocks or slabs shown in the foregoing figures together;

Fig. 7 is a similar view of a slightly modified form of the manner of tying the blocks or slabs together;

Fig. 8 is a similar view illustrating a still further modified form of the invention as regards tying the blocks or slabs together; and

Fig. 9 is a fragmentary view in elevation illustrating in detailed fashion the manner of tying together the blocks or slabs shown in Figs. 1, 2, and 3.

For the purpose of illustrating my invention I have shown in the accompanying drawings several forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawings in detail, and with especial relation to Figs. 1, 2, and 3, the reference numeral 10 designates metal beams of I-shaped cross-section. Supported upon these I-beams 10 are pairs of single irons designated by reference numeral 11. The flanges of these angle irons 11 are bolted to the upper flange 12 of the I-beams by bolts 13, see Fig. 3. Arranged between adjacent angle irons and seated upon the flanges thereof are slabs 14 formed of any desired or suitable cementitious material. These slabs are cut away at their opposed ends, as at 15, for a purpose to presently appear. Extended through each slab, which slabs are arranged in parallelism as shown in Fig. 2, are longitudinally extended reinforcement rods 16. These rods extend first adjacent the lower portion of a slab and then are projected at an angle upwardly and extended horizontally across the cut-away parts 15 of the slabs as is best seen in Fig. 3. In the connection, however, it is to be noted that the terminals of these rods at the point they project into the cut-away parts 15 are bent downwardly as at 17, as clearly shown in Fig. 3. At this point or juncture the opposed ends of the rods 16 are coupled with respect to the flanges of the L-shaped angle irons by means of wire, hook-like devices 18, as best seen in Fig. 3. These hook-like devices are arranged in parallelism with the vertical portions of the L-shaped angle irons 11.

It is sometimes necessary to couple or tie together the meeting terminals of the reinforcement rods and to take care of this I tie together by means of wire 19 the ends of the rods 16 with respect to the pendant parts 17 thereof, as clearly shown in Fig. 3. With the pendant parts secured together I add a fill of cementitious material indicated by the dashed lines 21 in Fig. 1. Thus, the floor is perfected and a bond effected between adjacent slabs.

In Fig. 7, I have shown a slightly different form in which the rods 16 at that point where they are adjacent one another in the space 15 are bent over upon themselves at 22 and extended into the blocks or slabs at 23 to provide a loop to accept the tie wires 19.

In Fig. 8, instead of forming loops at the ends of the rods 16 I upset adjacent ends of said rods as at 24 to form hook-like ends to accept the tie-wires 19. Otherwise the construction is as above described.

Referring now to Fig. 4, the construction illustrates a roof structure rather than a floor construction. The reference numeral 25 designates beams for roof support. The reference numeral 26 designates a roofing coating. Otherwise the construction is the same as that described in connection with the foregoing figures.

What is claimed is:

1. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs which project into said cut-away portions, and tie-wires for coupling together adjacent ends of said slabs.

2. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs which project into said cut-away portions, tie-wires for coupling together adjacent ends of said slabs, and means including tie-wires for coupling said angle-irons with the terminals of said reinforcing rods.

3. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, means including bolts for rigidly securing the flanges of said angle-irons to said beams, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs, which project into said cut-away portions, and tie-wires for coupling together adjacent ends of said slabs.

4. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs which project into said cut-away portions, the terminals of said rods being pendant to accept tie-wires, and tie-wires for coupling together adjacent ends of said slabs.

5. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs which project into said cut-away portions, tie-wires for coupling

together adjacent ends of said slabs, and a cementitious fill for said cut-away portions to conceal said angle-irons and tie-wires.

6. In a building construction of the character stated, metal beams arranged in parallelism, angle-irons arranged upon said beams at right angles thereto, said angle-irons having vertically arranged parts abutting, the flanges of which are adapted to receive adjacent ends of cementitious slabs, cementitious slabs supported by the flanges of said angle-irons, adjacent ends of said slabs being cut-away, reinforcing rods embedded in said slabs which project into said cut-away portions, and tie-wires for coupling together adjacent ends of said slabs.

FREDERICK M. VENZIE.