

April 20, 1937.

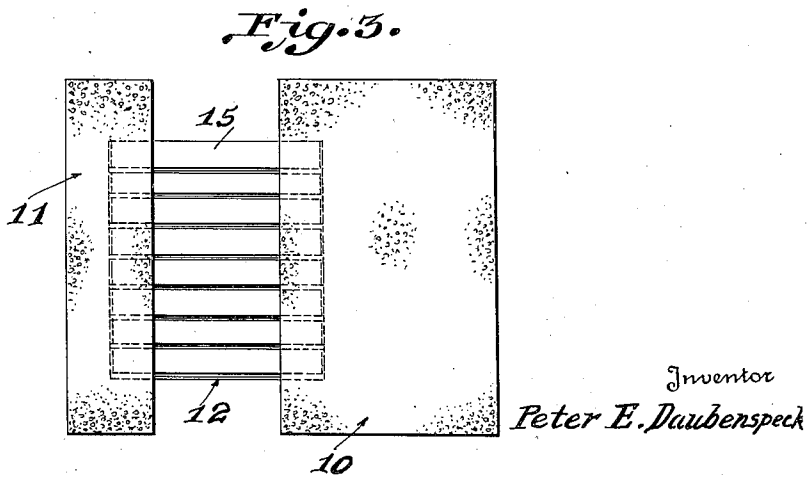
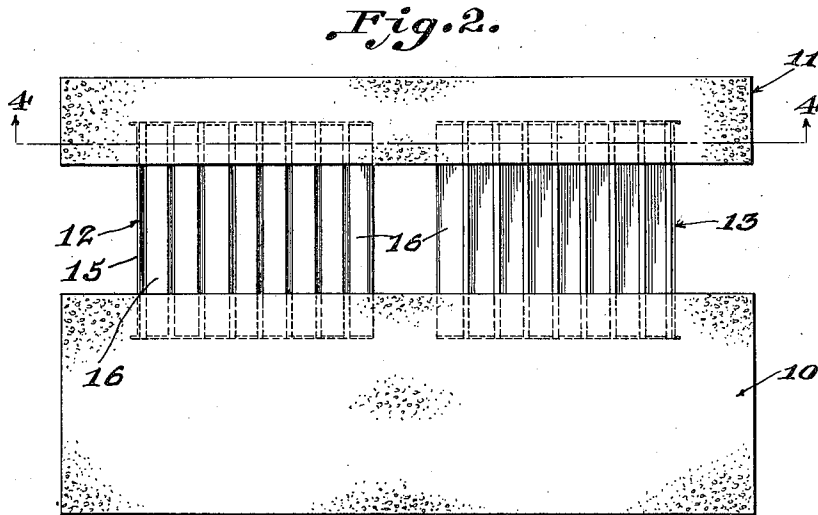
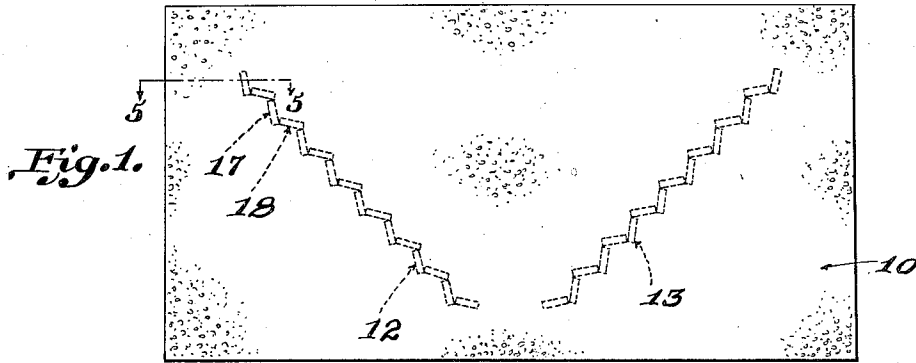
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2,077,989

CEMENT BUILDING BLOCK

Filed May 4, 1936

2 Sheets-Sheet 1



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Fig. 4.

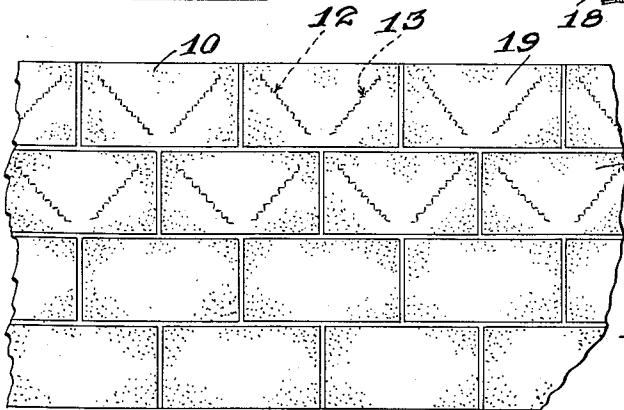
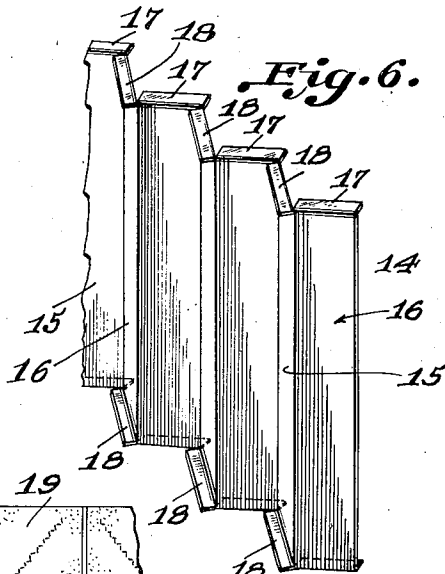
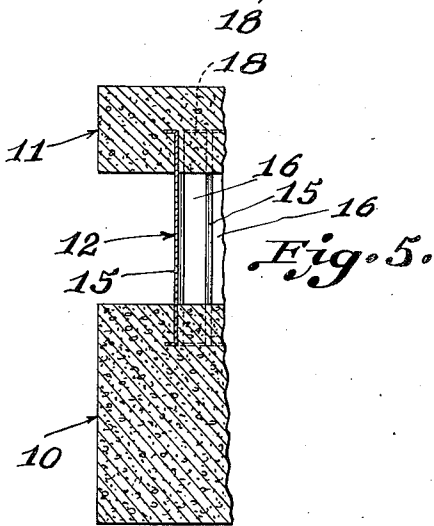
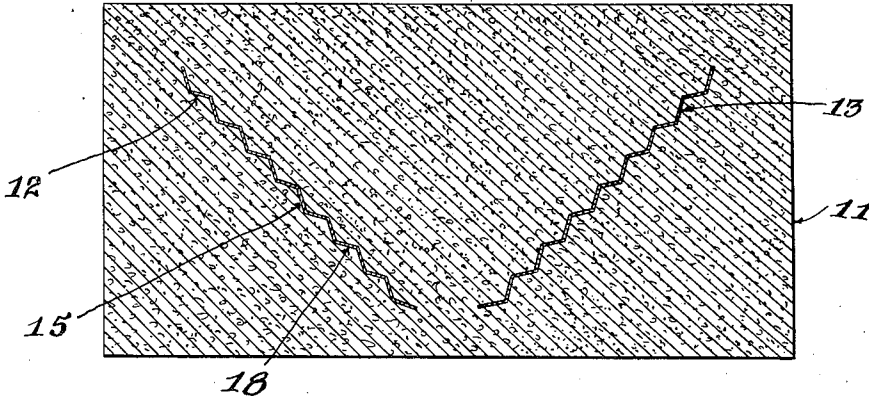


Fig. 7.

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UNITED STATES PATENT OFFICE

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CEMENT BUILDING BLOCK

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Application May 4, 1936, Serial No. 77,859

10 Claims. (Cl. 72-44)

This invention relates to a cement building block designed for use in any connection for which it may be found applicable, such as the walls of buildings, coolers or walk-in box constructions.

The object of the invention is to provide, in a manner as hereinafter set forth, a cement block for building insulated walls.

A further object of the invention is to provide, in a manner as hereinafter set forth, a cement block so constructed whereby, when laid in superposed courses, it will provide the inner and outer walls of a building and will not transfer moisture.

A further object of the invention is to provide, in a manner as hereinafter set forth, a cement block so constructed whereby, when laid in superposed courses, will provide inner and outer building walls arranged in parallel spaced relation to form an air space therebetween which may be filled with insulation material and with each block provided with means for supporting the insulation material between the walls, as well as for preventing the sagging of such material.

A further object of the invention is to provide, in a manner as hereinafter set forth, a cement building block formed of a pair of parallel spaced sections connected together by a pair of oppositely disposed bridge elements of a material which possesses non-moisture carrying and non-corrosive characteristics.

A further object of the invention is to provide, in a manner as hereinafter set forth, a cement building block formed of an outer and an inner section arranged in parallel spaced relation and connected together by a pair of oppositely inclined flanged, upstanding, corrugated bridge elements anchored at their sides within said sections and possessing non-moisture carrying and non-corrosive characteristics.

A further object of the invention is to provide, in a manner as hereinafter set forth, a cement building block of an inner and an outer wall forming section connected together and maintained in spaced relation by bridge elements formed in a manner to increase their torsional strength, constituting hand holds for handling the block, supports for insulation material interposed between the said sections and distributing means for such material.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a cement building block which is simple in its construction and arrangement; strong; durable; compact; conveniently handled; of a structural arrangement to form the inner and outer walls of a structure when laid in courses; of a form where-

by the setting up of the outer and inner walls of a structure will be had at materially less expense in relation to walls constructed from wood; of a form when used to expedite wall construction relative to the use of wood; so constructed as to be free of moisture conductivity; of a form for supporting insulating material therein; and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described and are as illustrated in the accompanying drawings wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a front elevation of the block and further showing in dotted lines the bridges,

Figure 2 is a top plan view,

Figure 3 is an end elevation and further showing in dotted lines the anchored sides of one of the bridge elements,

Figure 4 is a section on line 4-4, Figure 2,

Figure 5 is a section on line 5-5, Figure 1,

Figure 6 is a fragmentary view in perspective, illustrating the form of the bridge elements, and

Figure 7 is a fragmentary view in front elevation of a series of courses of the blocks to provide a wall.

The block includes front and rear sections 10, 11 respectively, coupled together in parallel spaced relation by a pair of oppositely outwardly inclined sidewise flanged, spaced upstanding bridge elements 12, 13. The sections 10, 11 preferably are constructed from cement, but it is to be understood that any other suitable material may be employed. The sections 10, 11 preferably are of rectangular contour, but it is to be understood that they may be of any suitable contour desired. The sections 10, 11 are of like contour, but the section 10 is of greater thickness than the section 11. The sections 10, 11 have squared top, bottom, front, rear and side faces.

The bridge elements 12, 13 are of like form and each is constructed from metallic material possessing non-moisture carrying and non-corroding characteristics. The bridge elements are of a length when coupling sections 10, 11 together, to have their upper and lower ends spaced respectively from the top and bottom of each of said sections. Each bridge consists of a strap-like body 14 of corrugated or step-like form formed with a set of spaced upstanding outwardly in-

clined stretches 15 constituting risers and with a set of spaced inwardly extending downwardly inclined stretches 16 constituting steps. Each of the stretches 15 is provided at its sides with outwardly directed flanges 17 disposed substantially at right angles thereto and also disposed at the same inclination as such stretch. Each of the stretches 16 is provided at its sides with depending flanges 18 disposed substantially at right angles thereto and also disposed at the same inclination as such stretch. The flanges 18 are spaced from and oppose the inner faces of the stretches 15. The elements 12, 13 have the side marginal portions embedded in the opposed faces of the sections 10, 11 and not only provide bridges between said sections, but also anchor these latter together in spaced relation. When the elements 12, 13 are set up relative to sections 10, 11, the exposed portions of said elements preferably will be of greater length than the embedded portions thereof.

The elements 12, 13 not only function as bridges and couplers, but further function as supports for insulation material between the block sections and distributing means for such material, as well as handholds or grips for handling the blocks. The flanges constitute anchors for the bridge elements and further increase the torsional strength of these latter.

The front section 10 of the block provides a front wall forming part. The rear section 11 of the block provides a rear wall forming part. When the blocks are arranged in superimposed courses, as indicated at 19 (Figure 7), they provide a front wall, a rear wall spaced from the front wall and with said walls connected together and maintained in spaced relation by the bridge elements. Preferably the blocks of a lower course will be staggered with respect to the blocks of an upper course when the walls are formed and with the blocks bound together by any suitable binding material.

What I claim is:

1. A building block comprising an inner and an outer section arranged in facewise opposed relation and spaced from each other, and a pair of bridge elements having their sides embedded in opposed faces of said sections for coupling them together and for maintaining said sections in parallel spaced relation, said elements being disposed at opposite outward inclinations from their lower ends, each of said elements being in the form of a metallic strap provided with two sets of stretches, the stretches of one set being arranged at an angle to and alternately disposed with respect to the stretches of the other set.

2. A building block comprising an inner and an outer section arranged in facewise opposed relation and spaced from each other, and a pair of bridge elements having their sides embedded in opposed faces of said sections for coupling them together and for maintaining said sections in parallel spaced relation, said elements being disposed at opposite outward inclinations from their lower ends, each of said elements comprising a strap-like metallic body formed with two oppositely extending sets of stretches, the stretches of each of said sets being flanged at each side thereof, the flanges of one set extending in an opposite direction with respect to the flanges of the other of said sets.

3. A building block comprising an inner and an outer section arranged in facewise opposed relation and spaced from each other, and a pair of oppositely outwardly inclined upstanding horizontally

opposed bridge elements of strap-like form having their side marginal portions embedded in the opposed faces of said sections for coupling them together and for maintaining them together, each of said elements being of continuous step-like form having each side of each step thereof formed with a flange disposed at an angle thereto, the flanges of every alternate step extending outwardly and the flanges of the other steps extending downwardly, said elements being spaced from the edges of said sections and having the downwardly extending flanges spaced from the outwardly extending flanges.

4. A building block comprising a pair of spaced opposed sections, and upstanding horizontally opposed bridges arranged between, extending into and coupling said sections together in spaced relation, each of said bridges provided throughout the length thereof with inherent means disposed at an angle to the perpendicular for supporting insulation material disposed between said sections.

5. A building block comprising a pair of spaced opposed sections, and upstanding horizontally opposed bridges arranged between, extending into and coupling said sections together in spaced relation, each of said bridges provided throughout the length thereof with inherent means disposed at an angle to the perpendicular for supporting insulation material disposed between said sections, said bridges extending at opposite outward inclinations.

6. A building block comprising a pair of spaced opposed sections, and upstanding horizontally spaced independent bridges arranged between, extending into and coupling said sections together in spaced relation, each of said bridges provided lengthwise thereof with spaced inherent means for supporting insulation material disposed between said sections, said means being arranged in step-like manner and acting to prevent the sagging of such material.

7. In a building block, an inner and an outer section arranged in inner facewise opposed relation, a pair of upstanding horizontally opposed bridges between said sections, said bridges being oppositely outwardly inclined from the bottoms to the tops thereof, each of said bridges throughout being formed with risers and steps, the risers and steps of each bridge being arranged in alternate relation, and said bridges having the side marginal portions thereof anchored in the inner faces of said sections for coupling the sections together and for maintaining the sections in spaced relation, said bridges being of strap-like form.

8. The invention as set forth in claim 7 having each side of a riser merging into a flange disposed at an angle thereto, and each side of a step merging into a flange disposed at an angle thereto.

9. The invention as set forth in claim 7 having each riser disposed at an outward inclination from its lower end and each step disposed at a downward inclination relative to the lower end of a riser.

10. The invention as set forth in claim 7 having each side of a riser merging into an upstanding flange disposed at an angle thereto, and each side of a step merging into a depending horizontal flange disposed at an angle thereto, the ends of the flanges of the risers being free of the ends of the flanges of the steps.