April 11, 1939. E. O. BLACKWELL 2,153,913

BUILDING BLOCK

Filed Jan. 10, 1938 3 Sheets-Sheet 1

Fig. 1.

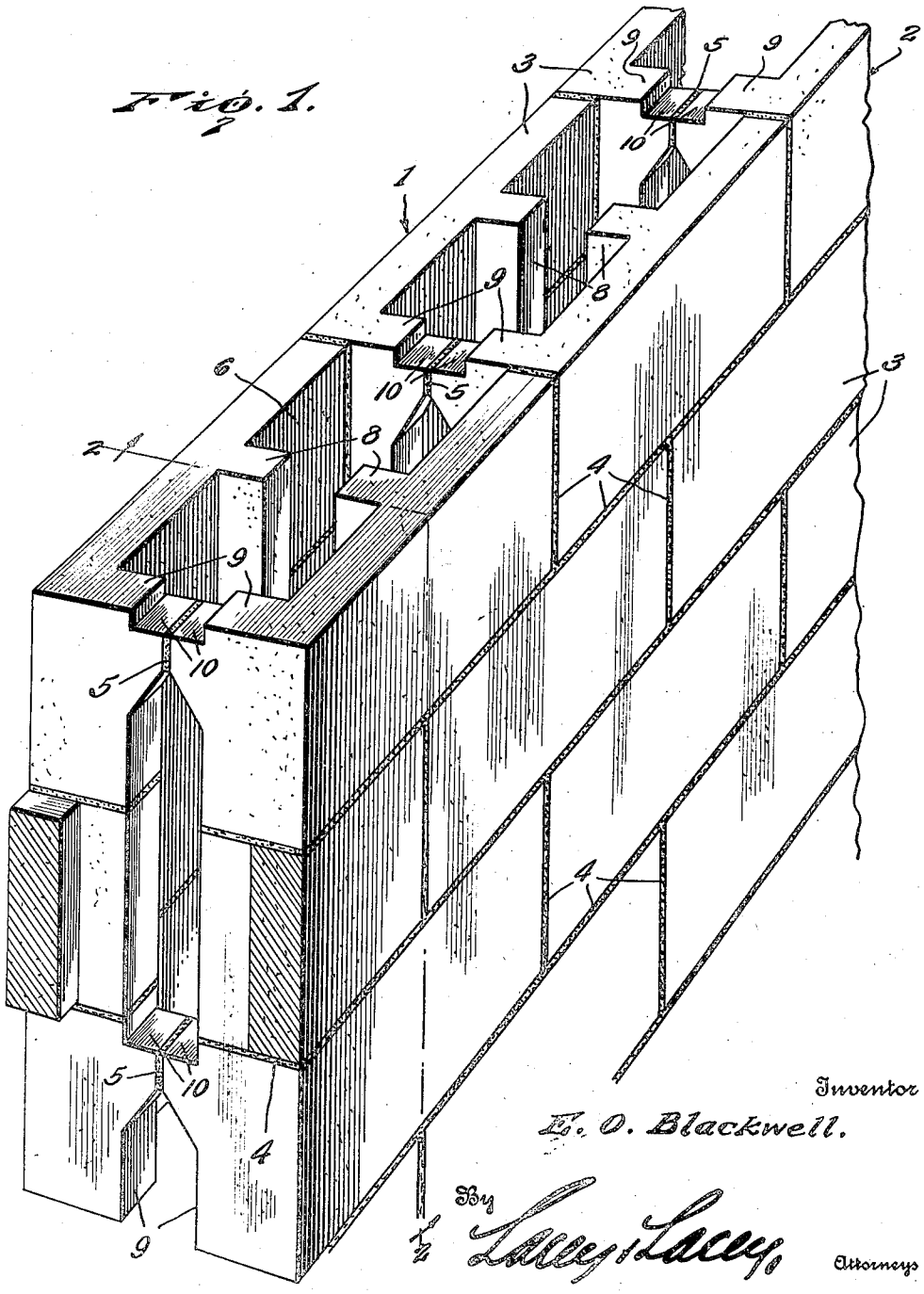

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Fig. 2.

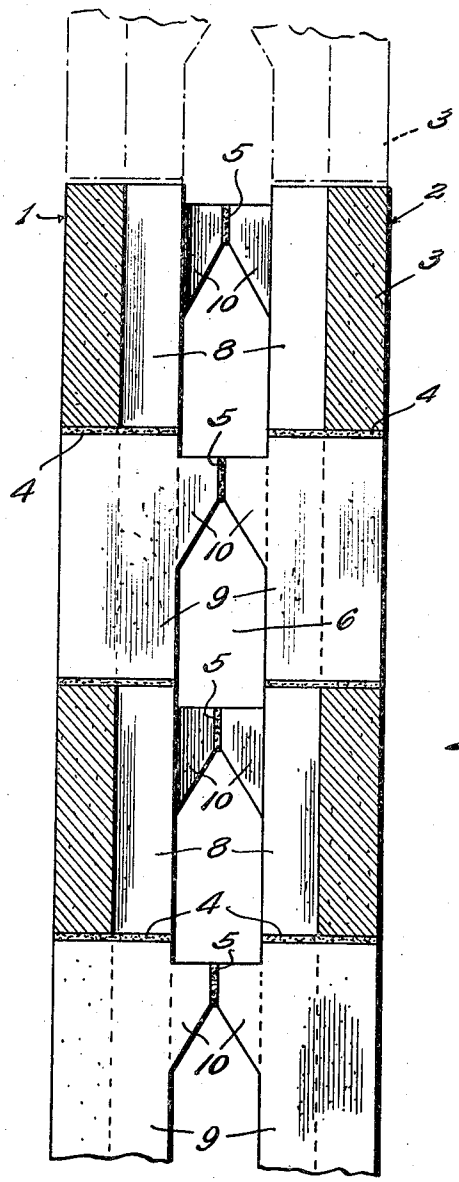


Fig. 3.

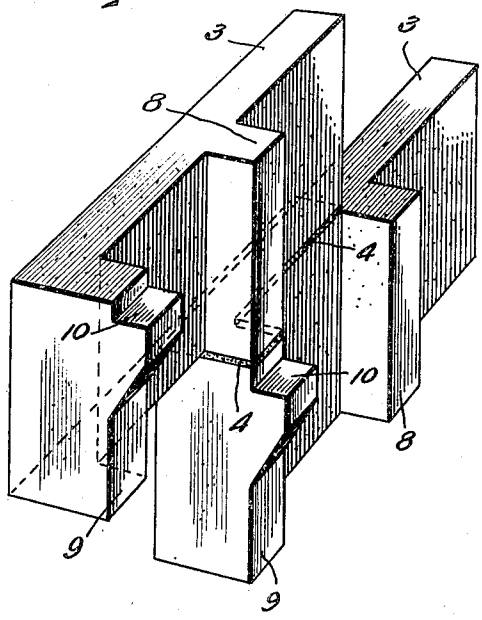
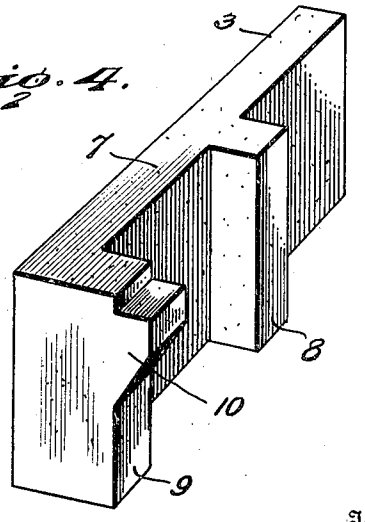


Fig. 4.



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BUILDING BLOCK

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Fig. 5.

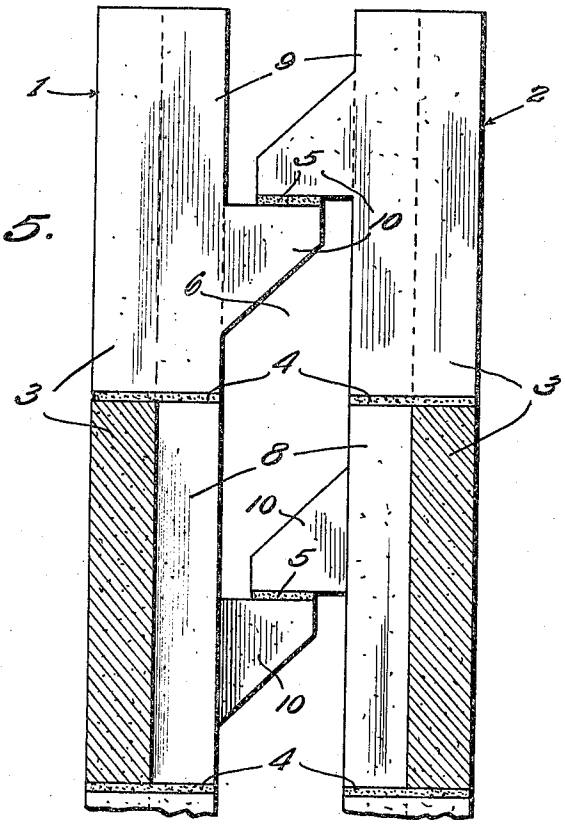
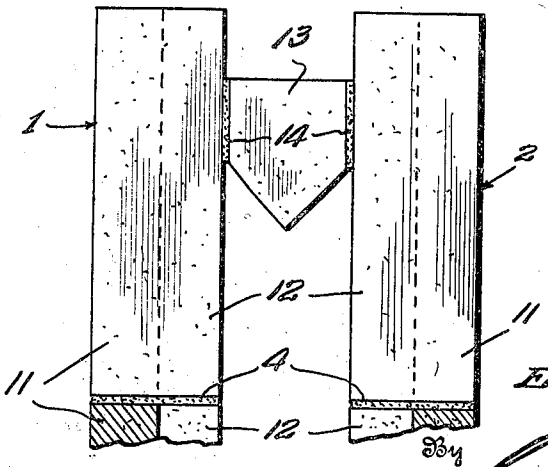


Fig. 6.



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UNITED STATES PATENT OFFICE

2,153,913

BUILDING BLOCK

Elie Owen Blackwell, Gainesville, Fla.

Application January 10, 1938, Serial No. 184,262

5 Claims. (Cl. 72—39)

This invention relates to a building block for use in erecting walls of buildings and other structures, and it is one object of the invention to provide a block of such construction that, when a number of blocks are assembled to form a wall, the wall will have inner and outer sections and an air chamber between the sections, thus forming a dead-air or circulating air space in the wall which may be made for preventing transmission of heat and cold through the wall.

Another object of the invention is to so form the blocks that, when they are assembled, they will form a wall consisting of inner and outer sections, each of which is reinforced by vertically extending pilasters formed upon and projecting inwardly of the blocks, certain of these pilasters carrying tie lugs which are secured in abutting or overlapping relation to companion tie lugs or in case of no tie lug being molded a separate tie block may be inserted for tieing the two sections of wall together. It will thus be seen that the outer section of a wall may have its tie lugs secured to tie lugs or its tie lugs secured to pilasters of the companion inner wall section by a water-proof cement or other adhesive moisture-proof binder and thus the two sections of the wall firmly secured to each other but passage of dampness through the wall is prevented by the moisture-proof binding material or substance.

Another object of the invention is to so form the blocks that, when they are laid into a wall by use of a moisture-proof material between tie lugs between tie blocks and pilasters or tie lugs, no contact of materials either of block or mortar may exist continuously between the outside surfaces of wall through which moisture may pass.

Another object of the invention is to provide a building block that, when assembled and laid into a wall, will be moisture-proof so that the wall will need no processing or painting on outside nor processing or furring and lathing for plaster on the inside and plaster, if desired, may be applied directly on faces of blocks.

Another object of the invention is to so form the blocks that, when laid into a wall, the outside section may show a veneered surface that is beautiful without the use of stucco.

Another object of the invention is to provide building blocks that, by veneering the faces of blocks forming inside section of wall, plaster is not necessary. The blocks facing into each room may be colored differently.

Another object of the invention is to provide building blocks so formed that by veneering faces of blocks from which inside wall partitions may be laid with differently colored materials the walls may be of any color desired and need not be plastered. The two sections of each wall may be built of blocks veneered with different colored materials and all walls either outside or partitions may be so built. The inside section of an outside wall may be laid of differently colored blocks facing into each room and at any time later plaster or paint may be applied if desired.

Another object of the invention is to provide building blocks which are of simple construction and may be manufactured and sold at a reasonable price.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a portion of a wall formed of blocks of the improved construction,

Figure 2 is a sectional view taken vertically through the wall along the line 2—2 of Figure 1,

Figure 3 is a perspective view showing two of the blocks in cooperating relation to each other,

Figure 4 is a perspective view of one of the blocks,

Figure 5 is a view similar to Figure 2 showing a portion of a wall formed of blocks of a modified construction, and

Figure 6 is a fragmentary sectional view illustrating another modified construction.

A wall formed of the improved blocks consists of inner and outer sections 1 and 2, each of which consists of a series of tiers of blocks 3 which extend horizontally one above another. The blocks of each tier are disposed in staggered relation to the blocks of adjoining tiers to provide offsets for the joints and the blocks are bound to each other by cement binding material 4 which is applied between confronting faces of the blocks. The two wall sections are spaced from each other except at certain points where they are bound to each other by confronting anchoring members which are united by moisture-proof material 5 and, therefore, the inner and outer wall sections define a chamber 6 between them constituting either a circulating or dead-air space and providing the wall with an insulating medium to prevent passage of heat and cold through the wall. In view of the fact that the binding medium 5 is water-proof, any moisture which may seep through the outer wall section will be prevented from reaching the inner wall section and the inner wall section will remain dry even if the outer wall section should become soaked during protracted rainy weather.

The individual blocks from which the wall is

constructed are each of the formation shown in Figures 3 and 4. Referring to these figures, it will be seen that each block has a body portion 7 of set plastic material which may be of a uniform texture and color or may have its outer portion veneered with a different material or color from the remainder of the blocks in order to provide a block with an outer surface of a desired color or ornamental pattern. Pilasters 8 and 8 which are formed integral with the body portion of the block project inwardly therefrom, the pilaster 8 being located near the center of the block and the pilaster 9 being located at an end thereof. By so locating the pilasters, the pilasters may be disposed one upon another when the blocks are assembled during erection of a wall, and the two wall sections will each be braced by inwardly projecting columns formed by the superimposed pilasters. Each block is also formed with a tie lug 10 molded integral with the pilaster 9 thereof and spaced from the upper end of the pilaster a short distance. These tie lugs constitute the anchoring members previously referred to, and from an inspection of Figures 1 and 2, it will be seen that, when the wall is erected, the anchoring members or tie lugs will be disposed in confronting relation to each other and, when the water-proof material provided between them hardens, the two wall sections will be firmly bound to each other. Therefore, a strong wall construction will be formed consisting of inner and outer sections defining an internal air chamber which is subdivided into a plurality of inter-communicating unbroken horizontal and vertical sub-chambers.

In Figure 5, there has been illustrated a modified construction. In this embodiment of the invention, the blocks are of substantially the same construction shown in Figures 1 through 4, but the tie lugs or anchoring members 10 are so located that, when the wall is erected, the tie lugs projecting inwardly from its inner and outer sections will be overlapped instead of in abutting relation to each other and the water-proof material disposed between the confronting upper and lower surfaces of the lugs instead of between their end faces. By having the lugs located in the position shown in Figure 5 and overlapped they may be disposed in predetermined overlapping relation to each other and thus permit a wall to be erected having a predetermined over-all thickness. The width of each section of the wall will be the same as shown in Figures 1 and 2 but the width of the air chamber will vary according to the distance the lugs overlap.

In Figure 6, another modified construction has been illustrated wherein the walls consist of the two sections 1 and 2 each formed of horizontally extending tiers of blocks 11 which correspond to the blocks 3 and are of the same construction shown in Figures 3 and 4 except that their pilasters 12 which correspond to the pilasters 8 and 9 are of a duplicate construction instead of one being formed with a tie lug. In place of the tie lug there are employed a suitable number of auxiliary blocks, sheets or other materials 13 which may be referred to as tie blocks and are set in place at the points between abutting lugs or occupied by the lugs 10 during erection of a wall, water-proof materials being employed to secure edge faces of the tie blocks to confronting faces of the pilasters 12. By making use of tie blocks of the proper dimension a wall of the desired thickness may be erected but the over-all thickness of the wall and the width of the air chamber can not be varied at the will of the builder as in the case of the wall illustrated in Figure 5, except by changing the dimensions of the tie blocks 13.

Having thus described the invention, what is claimed as new is:

1. A wall comprising inner and outer sections spaced from each other to provide an air space between them, each section consisting of a plurality of horizontally extending tiers of blocks, the blocks of each tier being in staggered relation to adjoining tiers, pilasters extending inwardly from said blocks and resting one upon another to provide wall sections with inwardly projecting reinforcing columns, and tie lugs extending from certain of said pilasters with the tie lugs of the wall sections disposed in opposed and confronting relation to each other and having their confronting faces bound to each other by a water-proof binder serving to prevent passage of moisture from the blocks of the outer wall section to the blocks of the inner wall section.

2. A wall comprising inner and outer sections spaced from each other to provide an air space between them, each section consisting of a plurality of horizontally extending tiers of blocks, pilasters extending inwardly from said blocks in superimposed relation to each other, the pilasters of the outer wall section being spaced fom the pilasters of the inner wall section, and tie lugs extending from certain of the pilasters, the tie lugs of the outer wall section being united to the tie lugs of the inner wall section by a water-proof binder.

3. A wall comprising inner and outer sections spaced from each other to provide an air space between the sections, each section consisting of a plurality of tiers of blocks, the blocks of each section being formed with inwardly projecting pilasters spaced from each other longitudinally of the blocks and disposed one upon another to provide the wall sections with reinforcing columns, and tie lugs extending from certain of the pilasters with the tie lugs of the inner wall section disposed in overlapping relation to the tie lugs of the outer wall section and united thereto in predetermined overlapped relation by a water-proof binder.

4. A wall comprising inner and outer sections spaced from each other to provide an air space between them, each section consisting of a plurality of horizontally extending tiers of blocks having inwardly extending pilasters spaced from each other longitudinally of the blocks and disposed in superimposed relation to each other to form reinforcing columns for the wall section, and spacing members disposed between the pilasters of the inner and outer wall sections and united thereto by a water-proof binder.

5. A building block comprising a body of set plastic material, pilasters formed integral with the body and projecting from the inner face thereof intermediate the length of the body and at one end of the body, and a tie lug formed integral with one of the pilasters and projecting therefrom in spaced relation to upper and lower ends thereof in position to have abutting engagement with the lug of an opposed block in a wall and provide for continuous longitudinal spacing between inner faces and form a break in cement joints through the wall to eliminate possibility of moisture flowing through a mortar joint between the two faces of the wall.

ELIE OWEN BLACKWELL.