Jan. 9, 1923.

1,441,362

J. A. MALCOLM.
BUILDING BLOCK.
FILED MAR. 22, 1921.

Fig. 1.

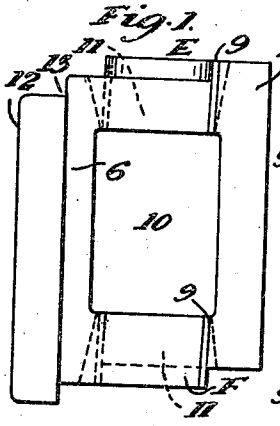


Fig. 2

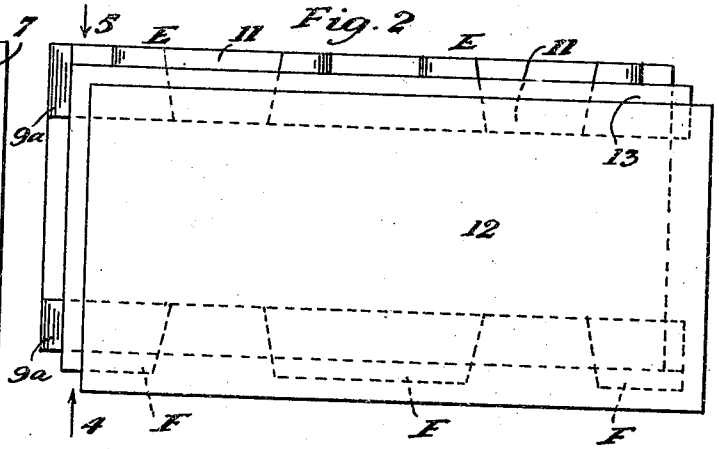


Fig. 3

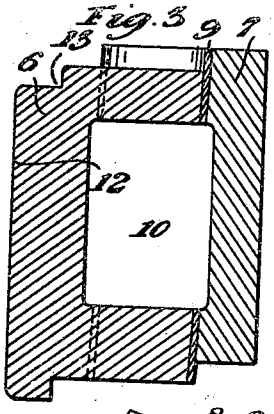
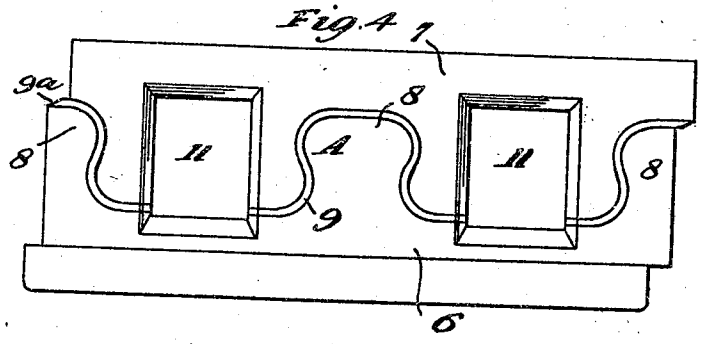


Fig. 4



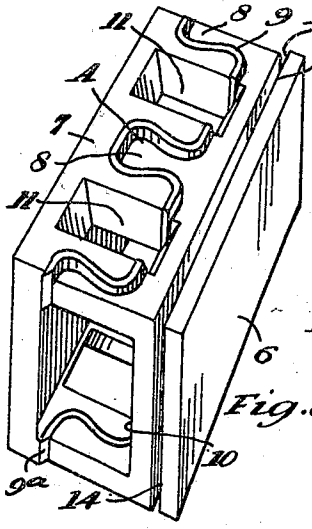
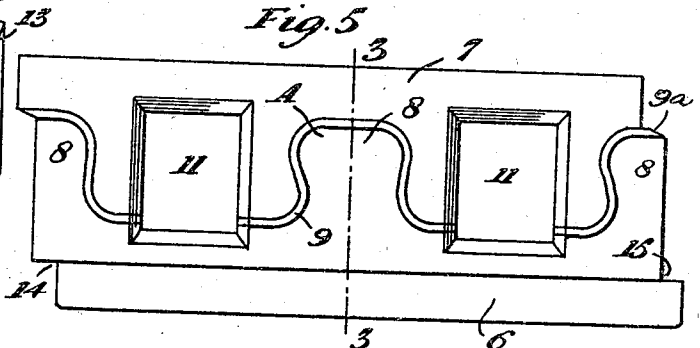


Fig. 6.

Fig. 5



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UNITED STATES PATENT OFFICE.

JOHN A. MALCOLM, OF CAPE TOWN, SOUTH AFRICA.

BUILDING BLOCK.

Application filed March 22, 1921. Serial No. 454,341.

To all whom it may concern:

Be it known that I, JOHN ALEXANDER MALCOLM, a subject of the King of Great Britain, residing in Cape Town, Union of South Africa, have invented certain new and useful Building Blocks, of which the following is a specification.

This invention relates to hollow building blocks and it has for its object to provide an improved article of this nature so constructed that the several blocks will have interlocking engagement with each other when brought together to form a wall and wherein the resultant wall will be damp-proof.

Among the objects of the invention is to provide a building block made of two parts separated by a vertical joint which extends throughout the length of the block whereby passage of moisture transversely through a wall built from said blocks is effectually guarded against.

A further object of the invention is to provide a block of the character indicated comprising the two sections separated by a vertical joint filled with water-proofing material but wherein said complemental sections are united in such manner as to positively prevent lateral separation of the two parts of the block.

In securing the objects above outlined I construct a block of concrete, cement, terra cotta or other suitable material consisting of two portions separated by a vertical joint which extends throughout the length of the block and which joint is filled with bitumen, pitch, tar or other suitable water-proofing substance, the abutting faces of the two sections being formed along irregular lines constituting interlocking projections which resist relative lateral separation of the two parts of the block. Additionally, the blocks are provided with inter-locking projections and recesses upon their upper faces and upon their ends as hereinafter described.

The two portions may be made or cast separately or in one piece in a single operation, the damp-proof seam being introduced in any suitable manner.

If cast separately, the two portions may be secured by pressure in a damp state, the damp-proof seam assisting to hold the portions together, or the portions may be cemented together in any suitable manner as long as the damp-proof seam is retained intact.

Metal reinforcements may be introduced into the blocks if desired.

To enable the invention to be fully understood, it will now be described by reference to the accompanying drawings, in which:—

Figure 1 is an end elevation of a block constructed according to the invention, the outside face being on the left of the figure.

Figure 2 is a front elevation of the block showing the external face.

Figure 3 is a section on line 3—3, Figure 5.

Figure 4 is a plan view looking in the direction of the arrow 4, Figure 2.

Figure 5 is a plan view looking in the direction of the arrow 5, Figure 2.

Figure 6 is a perspective view of the block.

As shewn, the block consists of two portions 6, 7, having converging interlocking projections 8 formed thereon. These projections are so shaped as to form a bulbous converging joint, as can clearly be seen at A in Figures 4, 5 and 6. A damp-proof layer or seam 9 is introduced between the projections and is carried to the extreme edges of the rebates on four sides of the block.

The projections form air passages 10, 11, within the block so that a hollow block is formed. At the ends of the block the seams 9 are splayed at 9^a to fit adjacent blocks.

It will be seen that the two portions of the block are off-set in two directions at right angles to one another so that at the top of the external face 12, a rebate 13 is formed against the weather, the interlocking projections on one portion projecting beyond those on the other portion on the top face of the block and forming a recess, and being below said projections on the opposite face of the block. This is clearly seen at E and F, Figures 1 and 2. Similar rebates are formed at the lower end of the face 12 and at the ends of the block at 14, 15. The damp-proof seam 9 is carried up to the extremities of the projections on both faces of the block.

This method of off-setting the faces enables a series of blocks to interlock when placed side by side or superposed, preventing movement or shifting. Although there is a complete seam between the two portions of the block as before described, which cuts the block into two distinct pieces, the block may be cast in one piece in one operation and, by reason of the converging

bulbous joint, it is impossible for the two pieces which form the block to come apart. By this means the adhesion of the two pieces forming the block is not dependent upon the bitumen or pitch or any other binding substance.

By reason of the various rebates, the engaging of all parts is assured. The placing of the different blocks requires little skill as they do not fit unless correctly laid. Owing to the special waterproofing and the strength of the blocks, buildings may be commenced from the concrete footings direct—even if these latter be below the ground. By reason of the one piece construction of block ease and simplicity of handling, and stability when laid is assured.

As will be seen from the drawings, normally a continuous air space will be formed horizontally and vertically through the walls. This ensures coolness in summer and warmth in winter; and in conjunction with the complete insulation of the block, the liability of sweating of inside walls is prevented as an even temperature will be maintained.

It will be understood that the block may be made of any desired shape and that in the following claims the word "block" is intended to cover "slab" or other desired shape within the scope of the invention.

Having thus described the nature of the said invention and the best means I know of carrying the same into practical effect, I claim:—

1. A building block comprising in combination two portions connected by interlocking projections forming a bulbous joint with a damp-proof seam between, said interlocking projections forming internal horizontal and vertical air passages in said block.

2. A building block comprising in combination two portions connected by interlocking projections forming a bulbous joint with a damp-proof seam between, said interlocking projections forming internal horizontal and vertical air passages in the block, the two portions of the block being off-set in two directions at right angles to one another.

3. A building block comprising in combination two portions connected by interlocking projections forming a bulbous joint with internal horizontal and vertical air passages in said block, the two portions of the block being off-set in two directions at right angles to one another, a damp-proof layer being inserted between the interlocking projections extending up to the edges of the off-set portions of the two portions on four sides of the block.

4. A building block comprising in combination a portion having projections thereon, a second portion having projections thereon interlocking with the first named projections, a damp-proof seam extending between the interlocking projections and air passages formed between the interlocking projections both vertically and horizontally, the two portions of the block being relatively off-set in two directions at right angles.

In testimony whereof I have signed my name to this specification.

J. A. MALCOLM. [L. S.]