July 27, 1926. 1,593,831

W. KING

METHOD OF MAKING BUILDING MATERIAL

Filed June 1, 1925

Fig. 1.

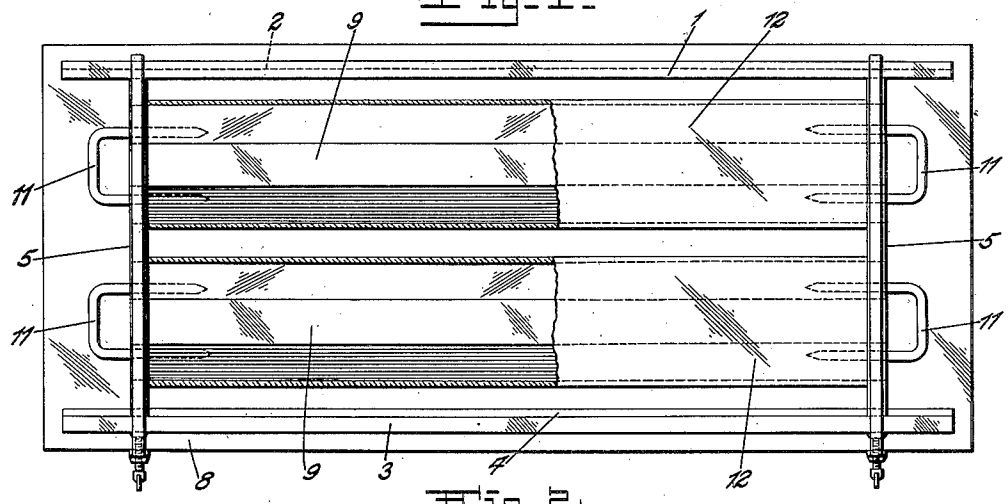


Fig. 2.

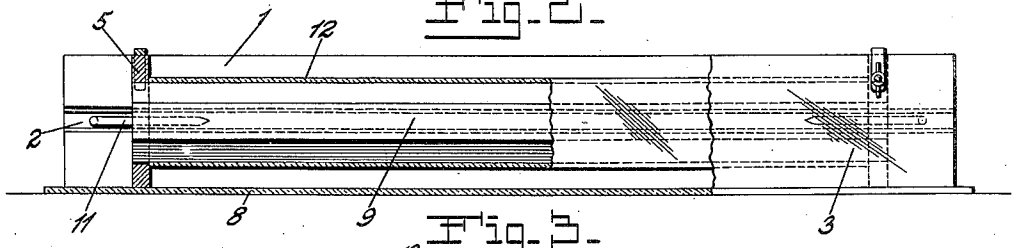


Fig. 3.

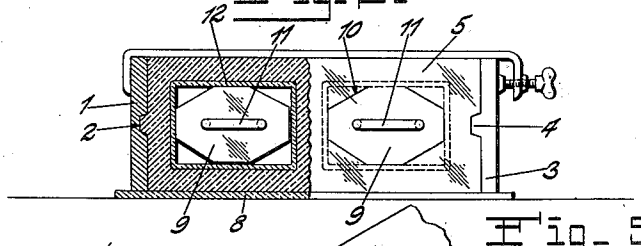


Fig. 4.

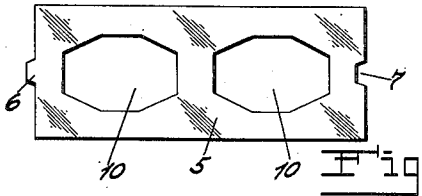


Fig. 5.

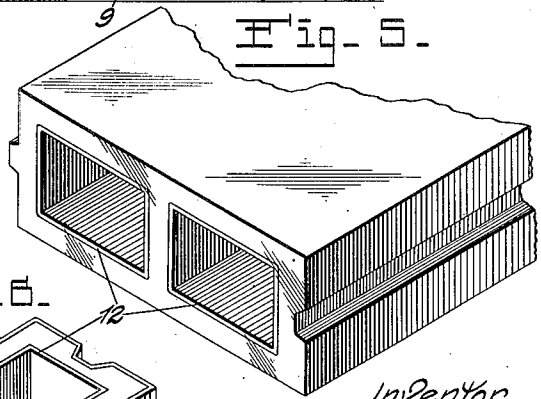
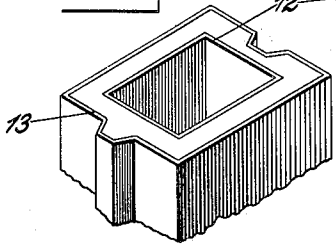


Fig. 6.



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Patented July 27, 1926. 1,593,831

UNITED STATES PATENT OFFICE.

WILLIAM KING, OF ST. LOUIS, MISSOURI.

METHOD OF MAKING BUILDING MATERIAL.

Application filed June 1, 1925. Serial No. 34,103.

This invention relates to an improved method of making building materials.

An object of the invention is to provide an improved method of making a hollow building block or body, whereby the operation of forming the block or body is facilitated and the loss resulting from injury is largely minimized.

Another object of the invention is to provide an improved method of forming a hollow building block or body with an adhesively united lining.

Other objects will appear from the following description, reference being made to the accompanying drawing, in which—

Fig. 1 shows a mold with building block linings therein preparatory to receiving the plastic material which forms a hardened block or body around the linings.

Fig. 2 is a side elevation of a part of the mold showing one of the linings in vertical section.

Fig. 3 is a view showing the mold partly in end elevation and partly in cross section.

Fig. 4 is a side elevation of one of the end walls of the mold having holes therethrough for the withdrawal of the cores.

Fig. 5 is a perspective view showing a portion of one form of a building block or body obtained by my improved method.

Fig. 6 is an end view of a block confined in a fibrous cover.

The mold may be of any appropriate structure or capacity and, as shown comprises a side wall 1 having a longitudinal groove 2 therein; a side wall 3 having a longitudinal tongue or tenon 4 on its inner side opposite from and matching the groove 2; and a pair of end walls 5 each having on one end a tongue or projection 6 fitting in the groove 2 and on the opposite end a notch 7 receiving the tongue 4. Usually the molds for molding building blocks including gypsum as the major ingredient have a flexible rubber bottom 8.

Heretofore it has been the practice to use cores to form the passages or cells in the building blocks. The cores adhered to the material of the building blocks as an incident to the hardening of the material, so that it has beer somewhat difficult to withdraw the cores and in many cases it has been impossible to withdraw the cores without injuring the building blocks. As a result of this the quantity of output is reduced and the cost is increased on account of the damaged blocks which are wasted. My present invention facilitates the withdrawal of the cores and prevents damage to the blocks and as a consequence greatly reduces the cost of production.

In the practice of the present invention I use cores 9 having beveled corners so that the beveled corners of the cores do not contact with the adjacent portions of the linings, thus reducing frictional contact of the cores and linings and facilitating withdrawal of the cores after the material of the building blocks has hardened around the linings. The cores 9 are insertable in and withdrawable through correspondingly shaped holes 10 in the mold end walls 5 and are preferably provided with handles 11 on their ends. The linings 12 are of paper or other appropriate fibrous material.

In the practice of the invention the linings 12 are placed upon the cores which support the linings out of contact with the walls of the molds, forming spaces between the linings and the mold walls (other than the mold end walls). The plastic material is then placed in the molds in sufficient quantity to form the blocks desired and to imbed the linings therein. The upper surface of the plastic material while in a plastic state is smoothed off or shaped to form a building block with a surface of a desired configuration.

It will be seen that the beveled corners of the cores are entirely out of contact with the adjacent portions of the linings so that the frictional contact of the core and lining surfaces is reduced, leaving the cores more readily withdrawable. When the plastic material hardens, particularly when gypsum constitutes a considerable portion of said material, an adhesive union results between the plastic material and the lining, so that when the cores are withdrawn the lining remains. The lining thus facilitates and expedites the operation of manufacture and forms a strengthening or reinforcing element for the frangible building block.

In the practice of the invention to provide a fibre cover or integument for the building block is used. The cover 13 is placed upon the bottom and against the side walls below the lower walls and laterally from the side walls of the linings 12 upon which the plastic material is placed. The upper surface of the plastic material is then given desired shape, and the lining may be folded over

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upon and become adhesively bonded to the building block during the hardening process; or, the cover 13 may be in the form of a tube of proper dimensions and shape, and the plastic material may be poured into the mold from one end, in which case it is only necessary to displace one of the end walls 5 during the pouring operation.

From the foregoing it will be seen that I have provided a highly improved and economical method of manufacturing building blocks of the type disclosed by which the cost of manufacture is greatly reduced and the operations facilitated and expedited with a corresponding elimination of loss resulting from damage and breakage of the blocks in the removal of the blocks from the molds and the cores from the blocks. Obviously the specific order of procedure is optional in many particulars, and I do not restrict myself specifically in this or any respect within the definite or equivalent scope of the appended claims.

I claim:

1. The method of making building blocks, having ended bores, which consists in forming a self sustaining tubular lining of angular formation in cross section; placing the lining within but out of lateral contact with a mold and supporting the lining along zones which avoid the angular corners of the lining, filling the space between the lining and the mold with plastic material; and permitting the material to remain in the mold until it has hardened and permanently united with the lining.

2. The method of making hollow building blocks having open ended bores, which consists in forming a self sustaining tubular lining of angular formation in cross section; placing the lining within but out of lateral contact with a mold and supporting the lining along circumferentially spaced, longitudinally extending zones which occur at the flat faces of the lining and thereby avoid the angular corners of the latter; filling the space between the lining and the mold with plastic material; and permitting the material to remain in the mold until it has hardened and permanently united with the lining.

WILLIAM KING.