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D. A. MCKENZIE

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BUILDING UNIT AND METHOD OF MAKING THE SAME

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Fig. 1

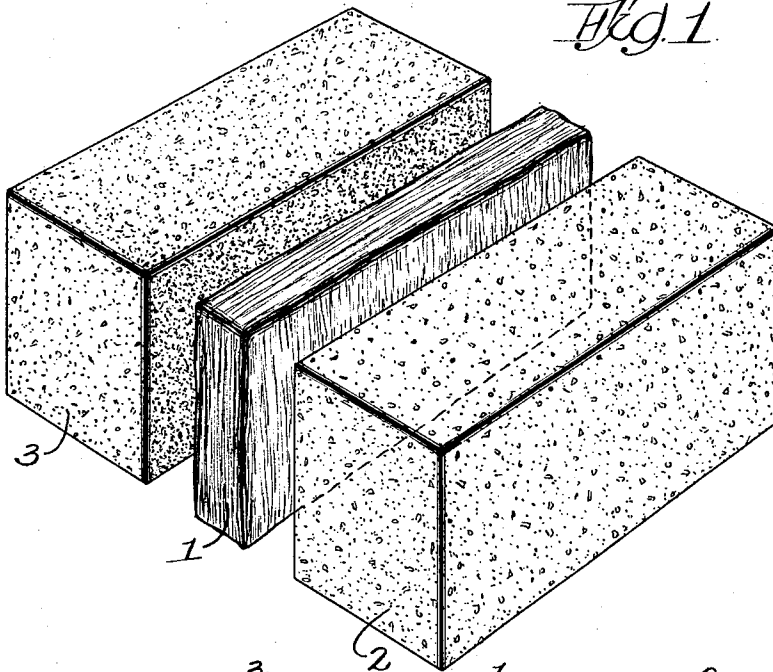


Fig. 2

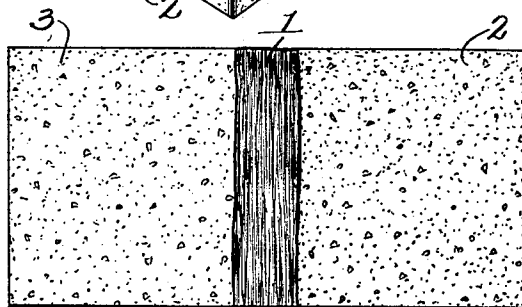


Fig. 3

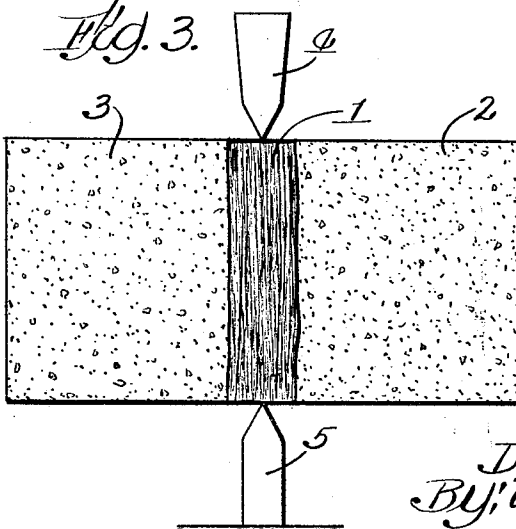
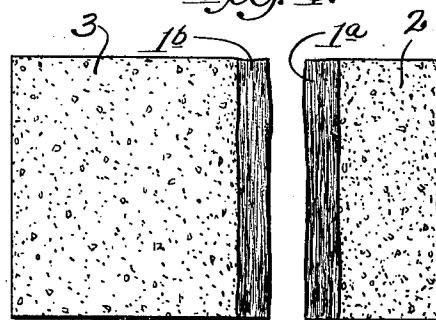


Fig. 4



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UNITED STATES PATENT OFFICE

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BUILDING UNIT AND METHOD OF MAKING THE SAME

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The present invention relates to building units and the method of making the same, preferably units having facings or veneers of natural building material, such as stone, and having body portions of artificial building material, such as concrete or similar solidifying and solidified building material.

In the making of building units with stone facings or the like, there is a limit of thickness of the stone that can be split for making facing slabs or the like. When a stone has been reduced in thickness to about an inch or two, it has been impossible to split such a slab substantially medially so as to obtain two thin slabs of about equal thickness. Usually, the cleavage runs to the side faces and the stone breaks up into chips and if one part of the stone can be saved to form the thinner slab the surface shows a chipped contour which is not always desirable. The reason for this apparently is due to the fact that there is not sufficient mass of material to laterally support the side faces of the slab when the latter is subjected to the splitting stress of the splitting chisels.

The present invention comprehends the even splitting of a thin facing member or slab when the same is united to and between solidified masses of building material which act to give lateral support to the slab or facing member when the splitting blow is applied, thus preventing the cleavage to run sidewise or to the side faces of the members or slabs, but causing the cleavage to run substantially medially through the slab. After splitting of the slab takes place in the manner stated, each having the split-off part of the slab, then becomes a building unit, the split-off part of the slab forming a facing part of the unit. This unit is then used as a building unit, or block, such as would be a brick, stone, and the like. It can also be transported without injury to the facing.

Other objects, advantages, capabilities, and features are comprehended by the invention as will later appear and as are inherently possessed by the invention.

Referring to the drawing:

Fig. 1 is a view in perspective of a facing member before splitting, and artificial build-

ing material before uniting to the facing member;

Fig. 2 is a view in vertical elevation of the parts in united position and condition;

Fig. 3 is a similar view of Fig. 2 showing the positions of the splitting chisels; and

Fig. 4 is a similar view showing the same after the facing member has been split, the split-off parts acting as facing elements for the building units.

Referring now more in detail to the drawing, the embodiment selected to illustrate the invention is shown in connection with a stone slab 1 which may be located between previously solidified blocks of artificial building material such as masses 2 and 3, or the stone 1 may be positioned in any suitable mold in which the masses 2 and 3 may be molded and placed in contact with the opposite faces of the stone slab 1 so as to be united therewith when solidifying. In the case of using previously solidified masses, they may be located adjacent the opposite faces of the stone 1, and suitable binding material, such as grouting or any other suitable uniting substance, may be applied between such surfaces so that the masses 2 and 3 may be rigidly fixed and united to the stone 1. After the masses are united to the stone 1, they will appear as shown in Figs. 2 and 3.

The resulting object is then placed in a suitable machine between chisels 4 and 5 located preferably in a medial plane of the stone 1. Relative movement of the chisels will cause the stone 1 to split in a more or less medial plane as clearly shown in Fig. 4 of the drawing.

As will be clear from Fig. 4 of the drawing, the mass 2 with the split-off portion of the stone 1, represented by the reference character 1^a, forms a single building unit made up of the natural facing part 1^a and the artificial building material part or portion 2. The other side of the object will be made up of the facing element 1^b and the body portion 3 of the artificial building material.

If attempt were made to split this thin slab of natural building material when not united between masses of material, the cleavage would run to the side and the stone would

chip off. It has been impossible to split thin slabs in that way. By using the method of this invention, whereby the side faces of the slab are united to masses 2 and 3, there is lateral support to the slab at the time when the splitting operation is being effected. In this way cleavage to the sides to break the stone into chips, is prevented. It is very much the same as if the stone itself was an integral middle part of a large stone whereby the large stone is split in the middle, with the exception that the body portions of the stone are replaced here by use of concreting material or the like, and finally resulting also in providing two building units with facings after the stone has been split.

The term concrete is used here in a generic sense to comprehend any of the solidifiable materials such as cement mixed with sand, concrete, plaster of Paris, gypsum or the like, used for building purposes. The term stone is also used generally as applying to any of the materials usually found in natural state and used for building purposes. As examples of stones, are sand stone, lime stone, marble and other like and similar natural building materials. It is preferable to use stones that are not stratified, although to a certain extent certain kinds of stratified stones may be used if the splitting is performed in the correct direction.

While I have herein described and upon the drawing shown an illustrative embodiment of the invention, and a method of producing the same, it is to be understood that the invention is not limited thereto but may comprehend other features and process steps without departing from the spirit thereof.

Having thus disclosed the invention, I claim:

1. A building unit comprising a body of solidified building material, and a split solid stone, stone facing united to said body entirely by the natural cohesion of the solidified building material for the split stone facing and forming a homogeneous building unit.

2. A process of making building units consisting of uniting by cohesion alone, blocks of concrete to the opposite faces of a thin slab of natural stone, and then splitting the slab substantially along a medial plane to form two building units, each having a natural split stone facing of approximately one-half the thickness of the original slab.

3. The process of making building unit facing members by splitting the member while said member is united between solidified masses of building material.

4. The process of making building unit facing members uniting said member to solidifiable masses of building material and splitting said member while said member is united to said solidified masses.

5. In a process for making building units,

the step of splitting a facing member while said member is united to solidified masses of building material on opposite sides of the member.

6. In a process for making building units, the steps of uniting a facing member to masses of building material on opposite sides of said member, and splitting said member while said member is united to said masses of material.

7. The process of making building units comprising uniting unit bodies to the opposite faces of a facing member, and splitting said facing member.

8. The process of making building units comprising molding concrete unit bodies on opposite sides of a facing member to form a single rigid object, then splitting the facing member to form two units each with a facing.

9. The process of making stone facing building units, comprising the steps of uniting a flat facing stone to molded masses of building material on opposite sides of said stone, and splitting said stone while it is so united to form building units each having a stone facing.

10. A process of making building blocks comprising uniting a block of stone to a mass of air-hardening material by the natural cohesion of said material to said stone; and splitting off a portion of the stone to leave a relatively thin stone facing on the hardened material.

11. A process consisting of the following steps: first, cementing by the natural cohesion of the materials, a very thin slab of natural stone between two cementitious blocks to reinforce the opposite faces of the slab, said slab being so thin that it cannot be split except when so reinforced; and second, splitting the slab longitudinally to form two stone-faced building units.

12. A process of making building blocks which consists in placing masses of wet concrete on each side of a thin stone slab; allowing the concrete to set hard to become united by cohesion to the slab; and then splitting the stone slab longitudinally, so as to form two blocks each formed principally of concrete, with one face made of a very thin slab of split stone.

In witness whereof, I hereunto subscribe my name to this specification.

DONALD A. McKENZIE.