No. 885,065. PATENTED APR. 21, 1908

F. B. MARVIN.

REFRACTORY BLOCK FOR BUILDING PURPOSES.

APPLICATION FILED JAN. 30, 1905.

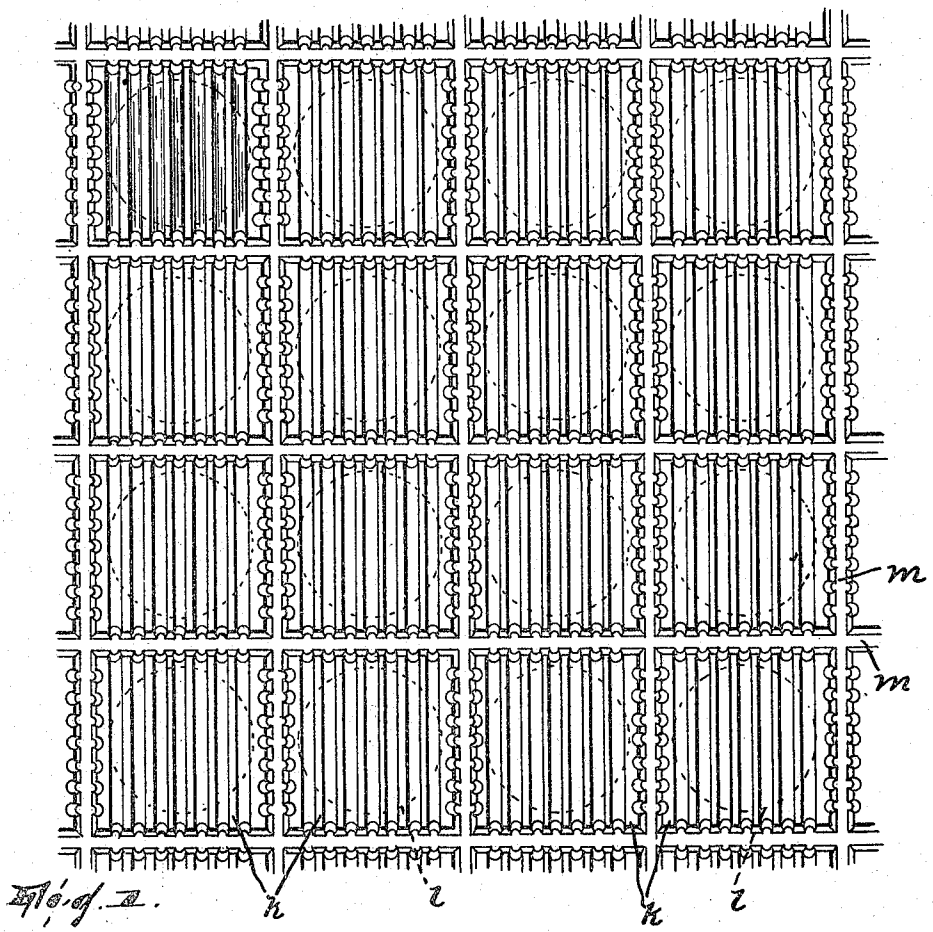


Fig. 1.

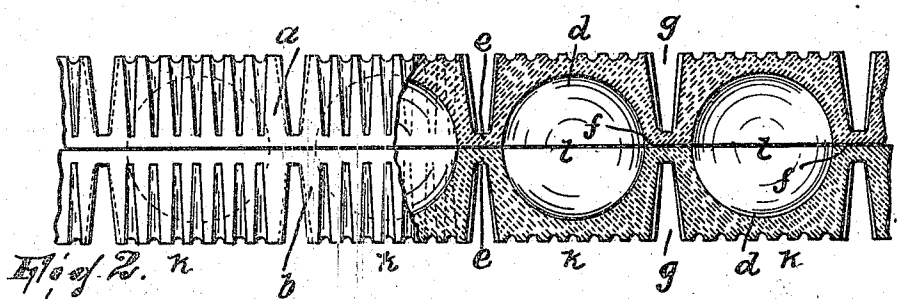


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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REFRACTORY BLOCK FOR BUILDING PURPOSES.

No. 885,065. Specification of Letters Patent. Patented April 21, 1908.

Application filed January 30, 1905. Serial No. 243,259.

To all whom it may concern:

Be it known that I, FREDERICK B. MARVIN, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Refractory Blocks for Building Purposes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to concrete and other artificial stone substances, and it has for its object to provide, in place of the cinders or broken stone usually constituting one of the ingredients of these substances, especially as they are used in the construction of buildings, pieces of refractory material made in conventional forms and cellular.

What might be termed the "solid" ingredients of such substances as heretofore compounded, such as broken stone or cinders, being irregular in form and size, tended to agglomerate itself in masses of the smaller particles, only the larger pieces standing properly dispersed through the substance. This affected materially the homogeneity of the substance and led to unevenness of strength and a lack of the desired elasticity, porosity, etc., in the mass. By providing conventionally shaped and sized "solid" bodies for this purpose, I overcome all these disadvantages, and besides have a material which is more readily handled and more at the command of the workmen in the matter of their perceiving just what quantity and disposition of "solids" is needed and attained. And by forming these blocks cellular, the lightness of the mass when the blocks are incorporated in the artificial stone substance is increased without detracting from its strength, besides increasing the porosity and the imperviousness to sounds, heat and cold incident thereto. For the purpose of facilitating transportation and packing in small compass, these blocks are preferably molded in groups held together by an integral connecting portion weak enough so that it can be readily fractured with proper tools for that purpose.

My invention will be found fully illustrated in the accompanying drawings, wherein,

Figure 1 shows a group of the blocks in plan, such group being in this instance a slab; and Fig. 2 is a view partly in end elevation and partly in section of what is shown in Fig 1.

Various materials capable of being molded and of imparting a refractory character to the resultant composition may be employed in the manufacture of the blocks. For instance, the form of blocks shown in the drawings may be made up of cement, sand and cinders.

The blocks may be formed as follows: The materials described above, being properly mixed together, are molded in two sets, *a*, *b*, of half-blocks, each such half-block in the set being formed with a semi-spherical recess *d* or otherwise hollowed. All the half-blocks in each set are interconnected at their tops by webs *e* molded integrally with them and all lying in the same plane, so that, except for the recesses *d*, a plain flat surface *f* throughout is presented. Two such sets of half-blocks are then placed face to face and cemented, their recesses *d* registering. The cementing may be derived from a special substance used or simply from the adhesion of the two faces *f* while the substance forming the blocks is still in an undry state. The result of this process is a slab divided off on both sides by registering intersecting grooves *g* into a group of blocks *k* having cells *l* and capable of being readily broken up into uniformly shaped fragments upon fracturing the slab along the webs *m* produced by the grooves.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent of the United States is:

As an article of manufacture for incorporation in concrete and other plastic artificial stone substances, a body formed of refractory material and comprising two layers cemented together, each layer having semi-spherical recesses on its inside face registering with corresponding semi-spherical recesses of the other layer, and said body being weakened on its outside surfaces along intersecting sets of lines disposed relatively between said recesses, substantially as described.

In testimony, that I claim the foregoing, I have hereunto set my hand this 17th day of January, 1905.

FREDERICK B. MARVIN.

Witnesses:

JOHN W. STEWARD,

WM. D. BELL.