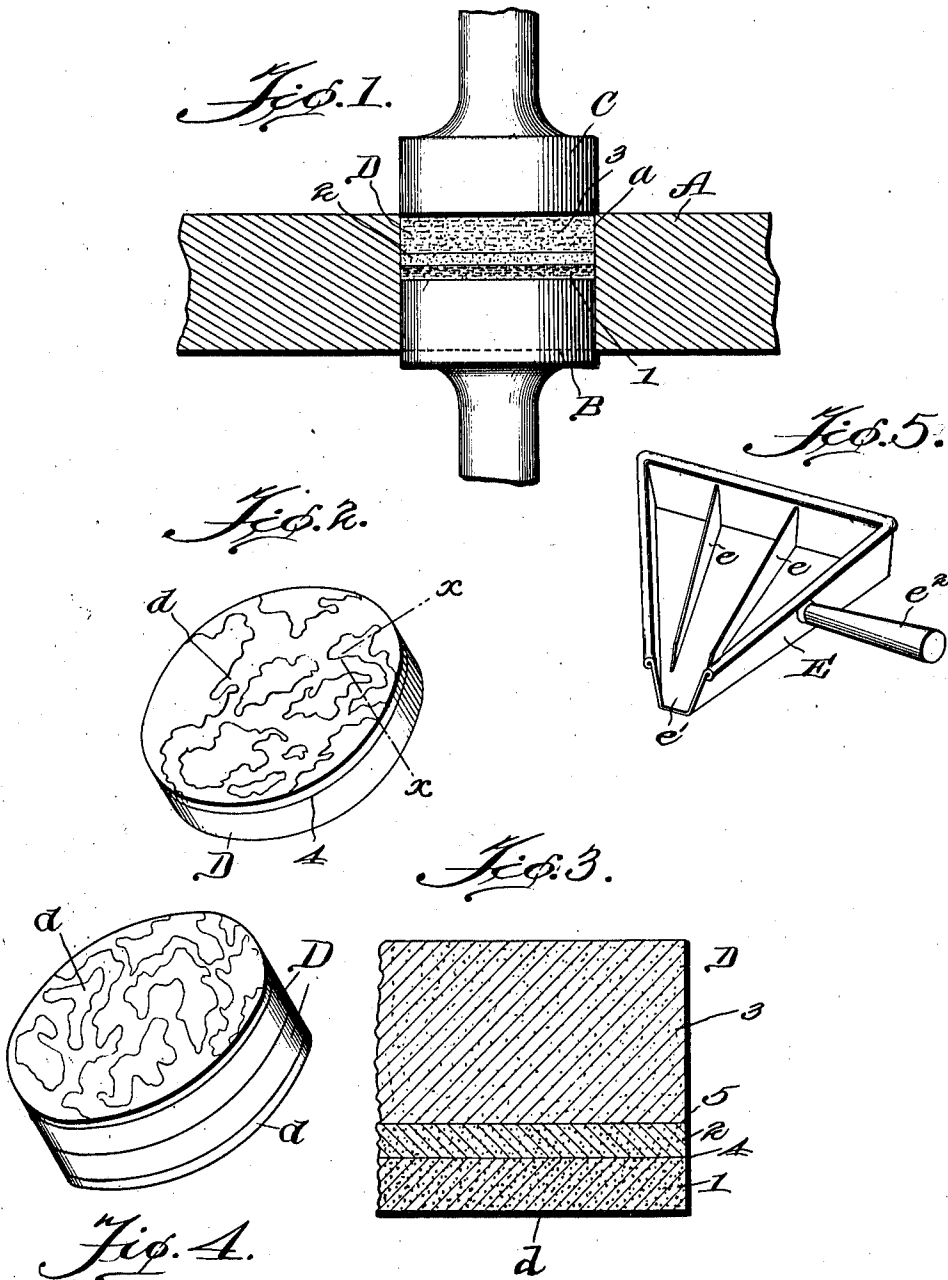


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 MANUFACTURE OF IMITATION STONE BLOCKS.
 APPLICATION FILED JUNE 11, 1910.

978,617.

Patented Dec. 13, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF IMITATION-STONE BLOCKS.

978,617.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed June 11, 1910. Serial No. 566,429.

To all whom it may concern:

Be it known that I, JACINTO MITATS, a subject of His Majesty, the King of Spain, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in the Manufacture of Imitation-Stone Blocks; 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.

My present invention relates to the manufacture of imitation stone blocks and especially to the manufacture of cement blocks having an imitation marble face, and the invention relates to the process for the manufacture of said blocks and to the product resulting from said process.

My invention will be more clearly understood after reference to the accompanying drawings in which the same parts are indicated by the same letters throughout the several views.

Figure 1 shows diagrammatically a press and one of the imitation stone blocks being compressed therein; Fig. 2 is a perspective view of one of the blocks with the imitation marble face upward, or in the reverse position from that shown in Fig. 1; Fig. 3 shows a section through the block of Fig. 2 on an enlarged scale along the broken line $x-x$ of said figure; Fig. 4 shows two of the blocks pressed back to back to form a double faced block, and Fig. 5, shows the preferred form of ladle for pouring the fluid compound used in making the imitation marble face of the block.

A represents a mold of any suitable form, the mold being shown diagrammatically in Fig. 1. B represents a plunger fitting snugly in said mold. C represents another plunger, between which two plungers the plastic material D is compressed.

E represents the ladle, which is preferably provided with a plurality of partitions e , a spout e' , and a handle e'' . This construction forms a compound ladle, as described and claimed in my application, Serial Number 562,988, filed May 23, 1910, and entitled Compound ladles.

In carrying out the process two or more separate vats are supplied with a fluid mass comprising about one part of marble dust to two parts of cement, and sufficient water to

make the same fluid enough to pour freely. Into one or all of these vats a suitable coloring mixture or mixtures are added, just for instance, if it is desired to make a black and white imitation marble face on the block, one of the vats containing the white marble solution is not colored while the other has lamp black stirred into it. These different colored fluids are poured into the different compartments of the compound ladle in a fluid state and are then poured into the bottom of the mold forming a thin layer. The top of the plunger which closes the bottom of the mold is preferably greased beforehand to prevent the adhesion of the plastic material thereto.

In pouring the fluid into the mold, the mottled effect is secured by vibrating the compound ladle while the fluid passes from the spout. If desired, the various colored fluids may be poured into opposite sides of the same pocket of the ladle, thus producing a still further streaked or mottled effect. This fluid mass so poured rests on the bottom of the mold, as shown at 1 in Fig. 1, and on top of this is sprinkled a layer of sand and cement 2; thoroughly dry and well mixed, the proportions being about equal parts of cement and sand. These proportions may be varied, however, within wide limits, according to the nature of the cement, of the sand, and of the product desired. This layer will rest on top of the fluid mass below, and above this is a thicker layer 3, of mixed cement and sand, slightly moistened, preferably about one part of sand to three of cement. The lines 4 and 5, see Fig. 3, are supposed to represent the top of the layer 1 and of the layer 2, respectively. But the line 5 would not appear in the completed product and the line 4 would be indistinct. After the three layers are in the position shown in Fig. 1, a heavy pressure is applied to both plungers and the layer 2 of dry cement and sand will absorb moisture from the fluid material and form a weld between the fluid bottom layer and the moistened upper layer, and the result will be a block with a cement backing and an imitation marble bottom layer. This block is removed from the mold in any convenient way and left to harden. In about four or five hours the cement will set.

By varying the relative thickness of the bottom layer and the upper layers, the mar-

ble face of the block may be made comparatively thinner or thicker, as desired. Ordinarily the backing should preferably be about twice the thickness of the smooth face of the block. Moreover, the proportions of the ingredients in the smooth front face and in the rough backing may be varied within certain limits according to the product desired, without departing from the spirit of my invention.

Frequently it is desirable to have a block with polished faces on opposite sides. This may be accomplished in the herein described process and apparatus by forming two blocks singly as before described, and then before the cement has set and while it is still moist, placing the block withdrawn from the mold back down on top of the block still in the mold, and applying pressure as before. The backs of the two blocks will adhere, forming a weld, and the two polished faces will remain outward forming a double faced block with a cement and sand core, as shown in Fig. 5.

While I have shown a cylindrical block and a round mold for making the same, it will be obvious that the blocks may be made of any shape desired.

While I have shown the mold only diagrammatically, it will be obvious that any suitable form of mold may be used for the purpose stated.

By using the compound ladle as described, a highly artistic striated or mottled face *d* may be obtained. This face is susceptible of a high polish if such be desired or the block may be used just as it comes from the mold, after, of course, the required hardening through exposure to the air.

In the herein described process and product, I preferably use pulverized marble, or marble dust, since this not only adheres to the cement, but it also has the property of setting of itself under the influence of moisture and atmospheric air. Pulverized lime stone may be substituted for marble since that will set like the marble, but I prefer to use pulverized marble on account of the fine polish it will take and the artistic effect secured. It will also be noted that finely crushed stone or gravel may be used as an ingredient of the upper layer 3, but I, preferably, use a mixture of coarse sand and cement in both layers 2 and 3.

I have not shown any means for removing the block from the mold, as such are well known in the art and do not constitute any part of this invention.

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

1. The herein described process of manufacture of imitation stone blocks, which

consists in pouring into a mold a fluid layer of pulverized marble, cement, and water, well mixed; in placing above said fluid layer a dry mixture of sand and cement; in placing above this dry layer another layer of sand and cement slightly moistened; and in applying heavy pressure to the mass, whereby the dry layer forms a weld between the fluid layer below and the moistened layer above, and in further applying a similar block before the cement has set back down to the formed block still in the mold and compressing the two together, substantially as described.

2. The herein described process of manufacture of imitation stone blocks which consists in pouring into a mold a plurality of striped streams of a fluid material of ground stone, cement and water, well mixed, thereby forming a parti-colored fluid layer; in placing above said fluid layer a dry mixture of sand and cement; in placing above this dry layer another layer of sand and cement slightly moistened; and in applying heavy pressure to the mass whereby the dry layer forms a weld between the fluid layer below and the moistened layer above, substantially as described.

3. The herein described process of manufacture of imitation stone blocks, which consists in pouring into a mold a fluid layer of pulverized marble, cement, and water, well mixed; in placing above said fluid layer a dry mixture of sand and cement; in placing above this dry layer another layer of sand and cement slightly moistened; and in applying heavy pressure to the mass, whereby the dry layer forms a weld between the fluid layer below and the moistened layer above, substantially as described.

4. An imitation stone block manufactured by the herein described process of manufacture of imitation stone blocks, which consists in pouring into a mold a fluid layer of pulverized marble, cement, and water, well mixed; in placing above said fluid layer a dry mixture of sand and cement; in placing above this dry layer another layer of sand and cement, slightly moistened; and in applying heavy pressure to the mass, whereby the dry layer forms a weld between the fluid layer below and the moistened layer above; and in further applying a similar block before the cement has set back down to the formed block still in the mold, and compressing the two together, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

JACINTO MITATS.

Witnesses:

MOSES ELY,

JOSEPH S. HUNT.