UNITED STATES PATENT OFFICE.

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PROCESS FOR MAKING BLOCKS.

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To all whom it may concern:

Be it known that I, FRANK ZAGELMEYER, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Processes for Making 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.

This invention relates to the manufacture of concrete blocks and pertains more particularly to an improved method for producing ornamental faces on blocks made of concrete or similar material.

The objects of the improvement are to provide a method by which a face may be produced of natural rock on a block made of concrete so that the face of the finished block will present a surface composed entirely of the natural rock without showing traces of cement.

It has heretofore been common in the manufacture of concrete blocks to mold the face, which usually consists in a layer of crushed rock, directly into the cement or "backing" of the body of the block, after which the face of the block is scrubbed with a diluted solution of muriatic acid or other acid to disintegrate the cement exposed on the surface of the rock particles and thus bring out the natural color of the rock, although this method leaves lines of cement exposed between the rock particles.

It is the purpose of my invention to provide a method of facing the block with crushed rock so that no particles of cement will show on the exterior face of the block, either between the particles of rock, or upon the exposed faces of particles, thus rendering the scrubbing operation unnecessary and doing away with weakening of the face of the block by acid treatment.

A further object of my invention is to provide for firm anchorage for the particles of the rock face to the body of the block.

A still further object is to enable a block to be provided with a face of rare or expensive rock at a very low cost. This I accomplish in my improved method by enabling the rock face to be made exceedingly thin so that only a very small quantity of the expensive facing is used.

With these and certain other objects in view, which will appear later in the specification, my improved method consists in the following steps and the equivalents thereof.

In carrying out my method I first, coat that face of the mold which corresponds to the exposed face of the finished block, with any suitable adhering substance capable of being dissolved by water. I prefer to use glue as a coating for the face of the mold, but find in practice that a mixture of glue, flour and water is satisfactory for this purpose and in some cases even a mixture of flour and water is suitable. Having coated the face of the mold with an adhesive substance, I next spread over the adhesive surface a layer of the crushed rock, or other material to be used for the exterior surface of the block. This spreading is preferably accomplished by covering the gummed face of the mold with the crushed rock and then tipping up the mold so that the surplus rock drops away. I next cover the first layer, which is of coarser material, with a second layer of finer material. The finer particles of this second layer fall between the coarser particles and adhere to such parts of the gummed surface as are left exposed in the voids of the larger particles that are already adhering to the surface. The surface to which the second layer of finer particles has been applied is then tipped up and shaken in the same manner as before to remove the surplus of finer particles that have not adhered to the mold surface. Similarly I apply a third layer of still finer particles to fill the remaining voids and remove the surplus as before. By this means I cover the entire surface of the face of the mold with a thin layer of rock. I then coat this layer of rock with neat or very rich cement mixed with sufficient water to reduce it to about the consistency of thick paint. This may be done by pouring the liquid cement over the mold, or by applying it with a brush, or both. I then fill the mold with concrete made sufficiently thin to pour easily, thus forming a body or backing of the block.

As the material of the block sets, the moisture disintegrates the adhesive and when the block is sufficiently set it may be removed from the mold and it will be found that the resulting exposed surface of the block is free from all traces of cement and that the glue

has so effectively separated from the particles of the facing that the resulting exposed surface is that of the pure rock.

The glue or adhesive usually falls away from the block and remains on the face plate, but adheres to it so slightly that it can be wiped away. Under some conditions, however, the adhesive may remain on the face of the block, in which case it may be loosened and blown away by directing a jet of steam against the face of the block.

By the means above described I have devised a method of making a concrete block having a natural rock face that exactly matches in color and general appearance the natural rock of which the facing is made.

Even in blocks made at very low cost it is possible to employ what would otherwise be very expensive facing material, for the reason that only a very small amount of facing material is used. The particles of the facing are firmly cemented to the body of the block by the coating of neat cement.

What I claim as my invention and desire to secure by Letters Patent, is as follows:

The herein described method of making a faced block, consisting in: first, coating with adhesive a face of the mold in which the block is made; second, covering the adhesive surface with particles of facing material in a coarse state; third, removing such particles as do not adhere; fourth, covering the spaces between coarse particles with a layer of finer particles; fifth, removing such particles as do not adhere; sixth, covering the exposed surface of said particles with liquid, neat, or rich cement; seventh, filling the mold with wet concrete and allowing it to set; and finally removing the block from the mold.

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

FRANK ZAGELMEYER.

Witnesses:

CHRISTINE A. BRAIDEL,

WINIFRED DE VANEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."