

UNITED STATES PATENT OFFICE.

FRANK ZAGELMEYER, OF BAY CITY, MICHIGAN.

METHOD OF MAKING MOLDED BLOCKS OR BRICKS.

No. 862,367.

Specification of Letters Patent.

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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 Methods of Making Molded Blocks or Bricks; 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 invention relates to a method or process of making building blocks or bricks.

One object of my invention is the provision of an article possessing a greater impermeability to moisture than the former building block or brick composed of what is technically known as a "dry mix".

Another object is the provision of an article possessing greater strength than former bricks or blocks composed of a dry mix.

A still further object is the provision of a process, whereby I am able to provide a block or brick comprising a non-plastic facing possessing a close imitation to a rock face or a cut sand stone face with a body of an originally plastic material, practically impervious to moisture and possessing greater strength than the facing material.

Hitherto, bricks or blocks have been made from what is known as a dry mix, that is, a mixture of cement, sand, gravel and broken stone, or some combination thereof, which is only dampened or moistened with water and must be tamped into the molds or subjected to pressure, in order to at least partially fill the voids necessarily formed between the larger particles of the filling material, such voids occurring owing to the non-plasticity of the dry mix. It is necessary to expend considerable time and labor in compounding this dry mix, which is more difficult to handle than the "wet mix" hereinafter referred to. Obviously, there must be some voids remaining in the block or brick after it is completed, thereby weakening the article and rendering it pervious.

The advantage of a dry mix block or brick over a wet mix block or brick is that by means of such dry mix material, rock and cut sand stone faces or other stone or rough faces can be very closely imitated, but the block itself is very pervious to water; an obvious disadvantage. Wet mix blocks or bricks are composed of the same material as the dry mix blocks or bricks, but with a much greater quantity of water, whereby the material assumes the consistency of cream and is poured into the molds. Wet mix is much easier to handle than the dry mix, and the blocks or bricks composed of such wet mix are almost impervious to moisture, but it is impossible to closely imitate stone faces, by reason of the fact that the liquid cement set-

ties to the bottom and sides, making them smooth and unnatural.

Another advantage possessed by the dry mix over the wet mix is that a dry mix can be colored, but so far as I am aware, it is impracticable to properly color a wet mix permanently.

It is another object of my invention, therefore, to so combine a dry mix and a wet mix, that the advantages of both may be retained in the block or brick, while the disadvantages will be eliminated therefrom, and to this end, I proceed as follows—The mold, of any desired shape, is first lined on one or more faces, with a dry mixed concrete, which is tamped into place, and by reason of its lack of excessive moisture, retains its position in the mold. Thus I may face the bottom and one or both ends with a dry mixed concrete, such faces of the mold being roughened or indented to imitate a natural rock face, for instance. In this manner I obtain a close imitation to a natural stone face, it being obvious that the substitution of a wet mix would be impossible, not only because of the foregoing objections, but also on account of the fact that the wet mix would slush down and fail to remain in place. Having thus arranged one or more faces of the block, I next fill the mold with a wet mixed concrete, thus obtaining the impervious qualities of the wet mix block with the imitation stone face, possible only with the dry mixed concrete. The wet mixture automatically welds itself to the comparatively dry outer shell or face composed of the dry mix, and the material is left in the molds until the initial set takes place, it being necessary to permit the block to set before the mold is opened, otherwise, owing to the excessive amount of moisture in the wet mixed concrete, the block would fall apart. Here again I diverge from the old method of making cement blocks, wherein the dry mixture is tamped into the mold or otherwise subjected to pressure, after which the block is turned out of the mold almost at once, so to speak, whereas in my process the block is left in the mold for a sufficient length of time to allow the material to obtain its initial set, thereby increasing the efficiency of the cement in both the wet and dry mixtures.

In brief, my art, process or method of making concrete bricks or blocks consists in, first, lining one or more faces of a mold with a non plastic concrete of proper consistency or dry enough to tamp, such material retaining its position after the tamping has been concluded; secondly, in filling the remainder of the mold with a plastic concrete which is wet enough to pour, thus obtaining the imperviousness which is essential in building blocks or bricks and which wet mixed concrete also readily unites and welds to the comparatively dry tamped faces of the block; and thirdly, leaving the contents of the mold undisturbed until it has attained its initial set.

By means of this process, I obtain a building block, one or more faces of which closely imitate a natural stone face and with a practically impervious body, the body being so closely united with the face that the suture is not discernible.

It is obvious that I may make blocks or bricks of any desired size or shape hollow or solid, according to my process.

Having thus fully disclosed my invention, what I claim as new is—

1. The method or process of making bricks or blocks consisting of the following steps, first, lining at least one face of a mold with concrete dry enough so as not to deposit a film of neat cement on that face of the lining in contact with the mold, then filling the remainder of the

mold with a concrete wet enough to pour, and lastly allowing the contents of the mold to attain its initial set in the mold.

2. The method or process of making bricks or blocks consisting of the following steps, first lining one or more faces of a mold with a non-plastic concrete, secondly, tamping said non-plastic lining, thirdly, filling the remainder of the mold with a concrete wet enough to pour, and lastly, allowing the contents of the mold to attain its initial set in the mold.

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

FRANK ZAGELMEYER.

Witnesses:

RALPH S. WARFIELD,
G. L. HUMPHREY.