June 28, 1949. D. F. CARLSON 2,474,654

METHOD OF MANUFACTURING ARTIFICIAL STONE WALLS

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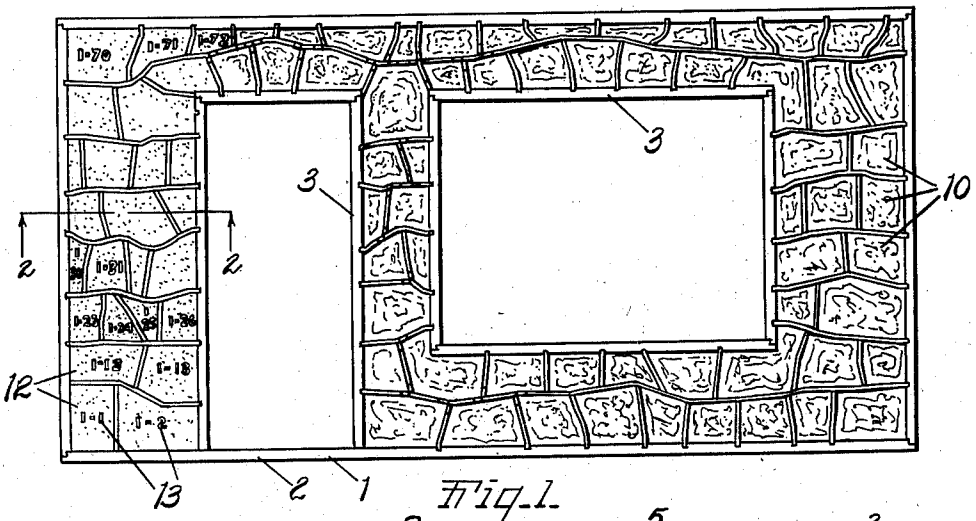


Fig. 1.

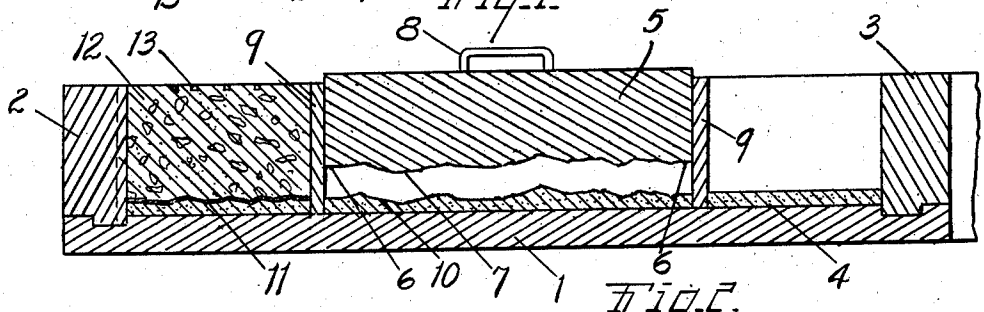


Fig. 2.

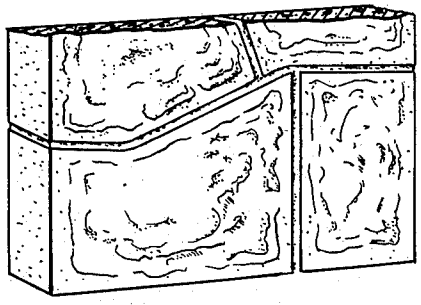


Fig. 3.

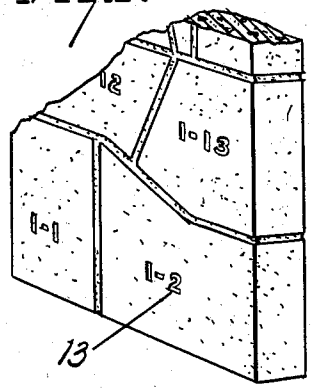


Fig. 4.

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METHOD OF MANUFACTURING ARTIFICIAL STONE WALLS

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8 Claims. (Cl. 25—155)

1

This invention relates to improvements in the method of manufacturing artificial stone walls.

The principal objects of this invention are:

First, to provide a method of manufacturing artificial stone walls by means of which highly attractive and natural appearing stone walls may be produced at low cost.

Second, to provide a manufacturing method for producing artificial stone walls with a natural stone color and surface.

Third, to provide a method for manufacturing artificial stone walls in which a large amount of the labor can be performed by relatively inexperienced workmen.

Fourth, to provide a method for facing building walls with artificial stone slabs in which the slabs can be economically produced in a variety of wall designs at a central manufacturing point and at minimum expense for later assembly on the building.

Fifth, to provide an artificial stone facing for a building which can be assembled in a wide variety of artistic arrangements to have the appearance of natural stone.

Other objects and advantages pertaining to the details and economies of my wall construction and manufacturing method will be apparent from a consideration of the following description and claims. The drawings, of which there is one sheet, illustrate a preferred form of my wall and method of manufacture.

Fig. 1 is a plan view of a pallet or platform for forming a facing for a complete wall of a building and with portions of the facing in various stages of completion.

Fig. 2 is a fragmentary cross sectional view along the line 2—2 and illustrating various steps in my manufacturing method.

Fig. 3 is a fragmentary perspective view of the outside of my wall slab in assembled position.

Fig. 4 is a fragmentary perspective view of the rear of my wall slab in assembled position.

In Figs. 1 and 2 I have illustrated a molding and casting platform or pallet 1 which is of such size as to receive slab elements for covering an entire wall or a section of a wall to be faced. The pallet 1 is provided with a border frame 2, and door and window frames 3 are provided in positions corresponding to the door and window openings of the wall to be faced.

As the second step in preparing the pallet for the formation of wall slab elements, I smooth a layer of clay or similar deformable plastic material over the surface of the pallet as indicated at 4 in Fig. 2. I next press a die 5 into the smooth

2

clay surface, the die consisting of a natural stone the edges of which have been cut or ground to have a smooth plain border between one quarter and one half inch wide completely around the face of the die as at 6. The face of the die is left with its natural cut or broken stone surface as at 7 and I preferably provide the die with a handle 8. It should be understood that the die 5 in Fig. 2 is representative of a series of similar dies having a wide variety of sizes and outlines corresponding to the outlines of the slab elements illustrated in Fig. 1.

While the die 5 is pressed into the clay I position a divider or partition member 9 along the exposed edges of the die and press the lower edges of the partition into the layer of clay. The partition 9 can consist of thin ductile metal or various types and thicknesses of foldable fibre board which can be shaped to conform to the outline of the die and retain its folded shape when the die is removed. I proceed to impress a series of different dies successively across the face of the pallet positioning a partition 9 between each die until the pallet has received a series of natural stone impressions outlined by narrow borders and thin partition pieces as at 10 in Fig. 1.

I next sift a thin layer 11 of crushed finely divided natural stone into each pocket of the mold, selecting different colors of crushed stone for different pockets to provide an artistic color arrangement in the finished wall. After the layer of crushed stone is in place I pour a mixture of concrete into all of the pockets as at 12 and strike off the surface of the entire pallet along the level of the frames 2 and 3 so that all slabs are of equal thickness. Preferably I press a code number into each individual slab as indicated at 13 so that the proper location of the slabs can be determined after they have been removed from the mold.

The concrete mixture poured onto the layer of crushed stone will penetrate into the layer of crushed stone and pick up or assimilate the crushed stone along the front surface of each slab. After the concrete has set, the frames 2 and 3 are removed and the individual slabs are separated from the partitions 9 for transportation to the building wall to be faced. The slabs can then be laid up on the wall and cemented in place by ordinary brick layers or masons without particular artistic skill to provide a facing for the wall which closely resembles a natural stone wall. It is desirable to make a chart of the several slab elements corresponding to the code numbers 13 when the wall mold is assembled to furnish to the masons who are to erect the wall.

My method of forming wall facings permits a single set of natural stone dies to be used in a central manufacturing point to form a wide variety of slab arrangements in any wall size desired, the only limiting factor being the space available for laying out the pallets 1. A single workman with artistic skill can select and impress the stone dies into the clay and locate the partitions 9 after which the sprinkling of the crushed stone and pouring of the concrete and numbering of the slab elements can be carried out by relatively inexperienced workmen. The finished wall is highly attractive and durable and can be designed for any shape and size of building.

I have thus described a highly satisfactory method for forming my wall facing and slab elements so that others may practice the same without further disclosure.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The method of forming an artificial stone wall facing on a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a pallet, spreading a layer of clay within the outline of said frame, successively impressing a series of natural stone dies into said layer of clay and pressing divider plates into said clay along the edges of each of said dies to form a series of molds, said dies having a narrow plane border formed around their front edge, removing said dies, depositing a thin layer of finely divided natural stone into each of the molds formed by said dies, the crushed stone in some molds varying in appearance from the stone in other molds, pouring concrete into the molds on said crushed stone and striking the concrete off flush with the top of said frame and said dividers, impressing a code indicia into the top of the concrete in each of said molds and permitting said concrete to set, and disassembling the slab elements thus cast and re-assembling the elements according to the code indicia on the wall to be faced with a cement mortar.

2. The method of forming an artificial stone wall facing on a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a pallet, spreading a layer of clay within the outline of said frame, successively impressing a series of natural stone dies into said layer of clay and pressing divider plates into said clay along the edges of each of said dies to form a series of molds, removing said dies, depositing a layer of finely divided natural stone into each of the molds formed by said dies, the crushed stone in some molds varying in appearance from the stone in other molds, pouring concrete into the molds on said crushed stone and striking the concrete off flush with the top of said frame, impressing a code indicia into the top of the concrete in each of said molds and permitting said concrete to set, and disassembling the slab elements thus cast and re-assembling the elements according to the code indicia on the wall to be faced with a mortar.

3. The method of forming an artificial stone wall facing on a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a pallet, spreading a layer of clay within the outline of said frame, successively impressing a series of natural stone dies into said layer of clay and pressing divider plates into said clay along the edges of each of said dies to form a series of molds,

removing said dies, depositing a layer of finely divided natural stone into each of the molds formed by said dies, pouring concrete into the molds and striking the concrete off flush with the top of said frame, impressing a code indicia into the top of the concrete in each of said molds and permitting said concrete to set, and disassembling the slab elements thus cast and re-assembling the elements according to the code indicia on the wall to be faced with a mortar.

4. The method of forming an artificial stone wall facing on a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a pallet, spreading a layer of clay within the outline of said frame, successively impressing a series of natural stone dies into said layer of clay and pressing divider plates into said clay along the edges of each of said dies to form a series of molds, removing said dies, depositing a layer of finely divided natural stone into each of the molds formed by said dies, pouring concrete into the molds and striking the concrete off flush with the top of said frame, permitting said concrete to set, and disassembling the slab elements thus cast and re-assembling the elements on the wall to be faced with a mortar.

5. The method of forming an artificial stone wall facing for a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a base, spreading a layer of deformable plastic material within the outline of said frame, successively impressing a series of natural stone dies into said layer of material and pressing divider plates into said material along the edges of each of said dies, removing said dies, depositing a thin layer of finely divided natural stone into each of the molds formed by said dies, the crushed stone in some molds varying in appearance from the stone in other molds, pouring concrete into the mold, impressing a code indicia into the top of the concrete in each of said molds and permitting said concrete to set, and disassembling the slab elements thus cast.

6. The method of forming an artificial stone wall facing for a building wall which comprises the steps of, laying out a frame corresponding to the outline of the wall to be faced on a base spreading a layer of deformable plastic material within the outline of said frame, successively impressing a series of natural stone dies into said layer of material and pressing divider plates into said material along the edges of each of said dies, removing said dies, depositing a thin layer of finely divided natural stone into each of the molds formed by said dies, pouring concrete into the mold, impressing a code indicia into the top of the concrete in each of said molds and permitting said concrete to set, and disassembling the slab elements thus cast.

7. The method of forming an artificial stone wall facing for a wall which comprises the steps of, layiing out a frame corresponding to the outline of the wall to be faced on a base, spreading a layer of deformable plastic material within the outline of said frame, successively impressing a series of irregularly surfaced dies into said layer of material and pressing divider plates into said material along the edges of each of said dies, removing said dies, pouring concrete into the mold, permitting said concrete to set, and disassembling the slab elements thus cast.

8. The method of forming an artificial stone wall facing for a wall which comprises the steps

of, laying out a frame corresponding to the outline of the wall to be faced on a base, spreading a layer of deformable plastic material within the outline of said frame, successively impressing a series of dies into said layer of material and pressing divider plates into said material along the edges of each of said dies, removing said dies,

pouring concrete into the mold, permitting said concrete to set, and disassembling the slab elements thus cast.

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No references cited.