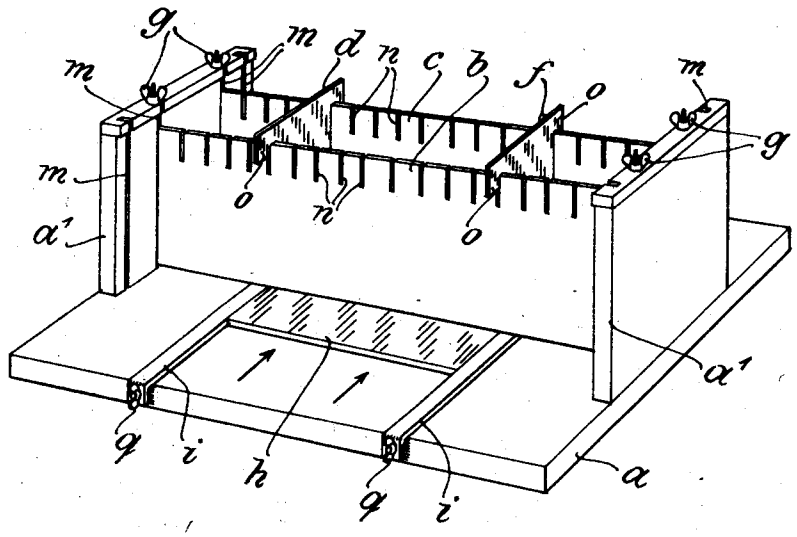
July 3, 1928. 1,675,833

A. STRITTMATTER

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL MARBLE SLABS

Filed Feb. 18, 1927 3 Sheets-Sheet 1

Fig. 1.



Inventor
August Strittmatter
by
Attorney

July 3, 1928. 1,675,833

A. STRITTMATTER

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Fig. 2.

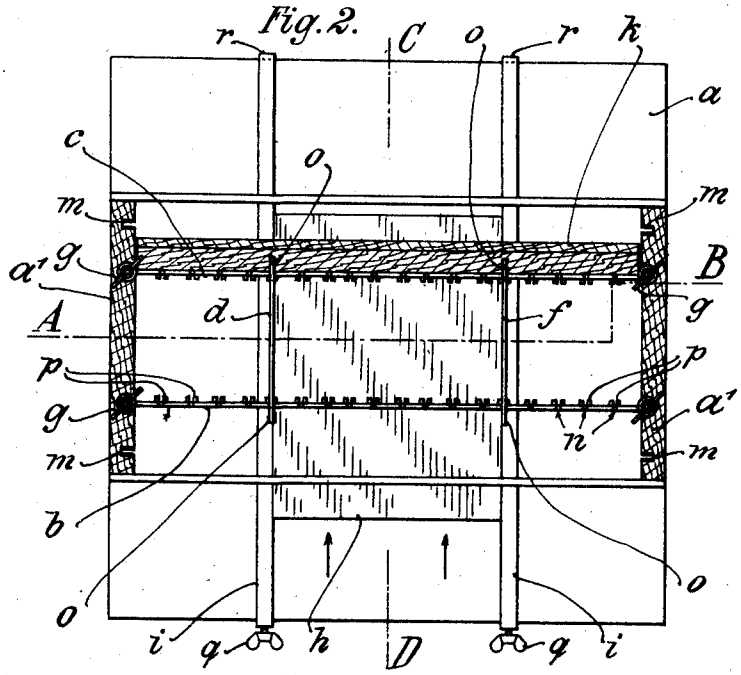


Fig. 3.

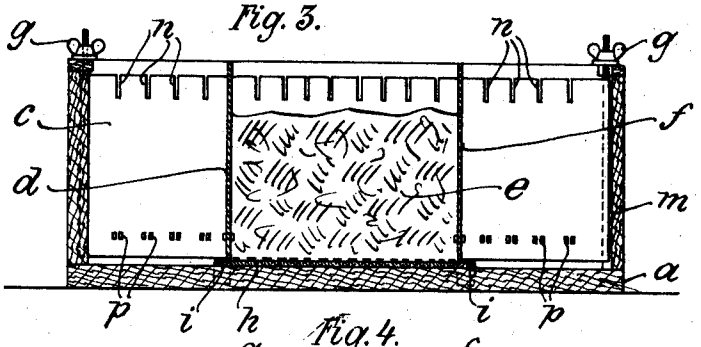
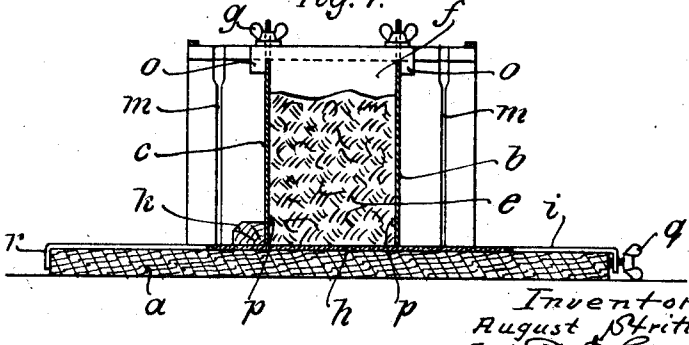


Fig. 4.



Inventor
August Strittmatter
by Paul Pollein
Attorney

July 3, 1928. 1,675,833

A. STRITTMATTER

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Fig. 5.

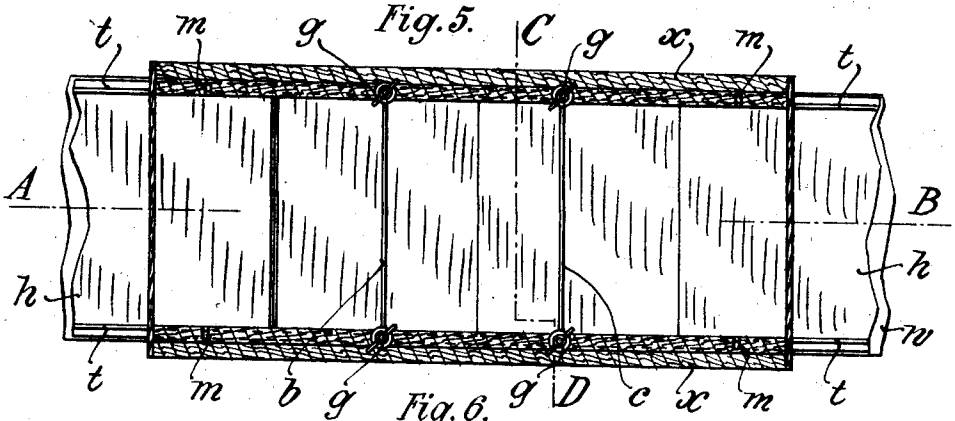


Fig. 6.

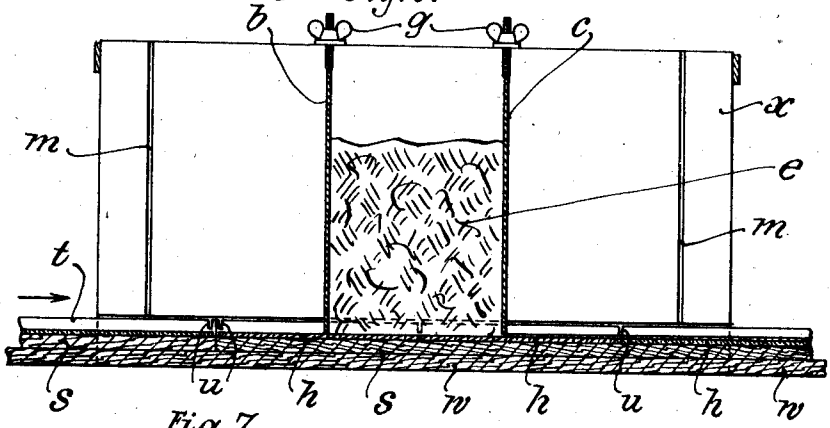


Fig. 7.

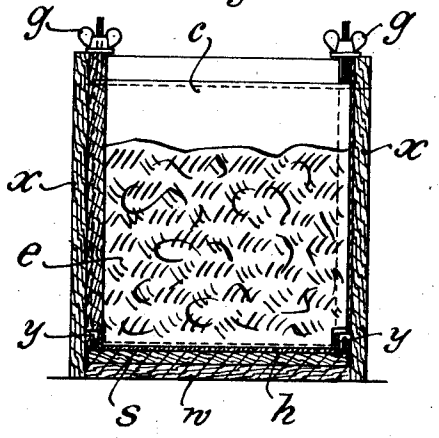


Fig. 8.

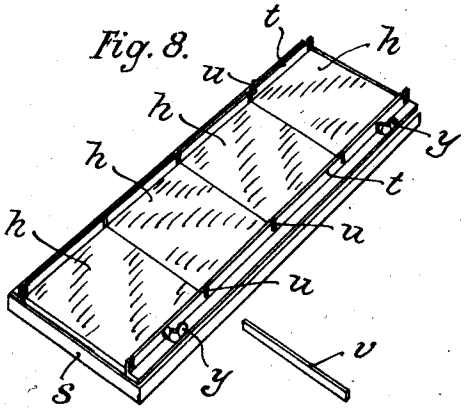


Fig. 8a.

Inventor
August Strittmatter
by David D. Schilling
Attorney

Patented July 3, 1928. 1,675,833.

UNITED STATES PATENT OFFICE.

AUGUST STRITTMATTER, OF FREIBURG, BADEN, GERMANY.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL-MARBLE SLABS.

Application filed February 18, 1927, Serial No. 169,283, and in Germany February 16, 1926.

In the manufacture of artificial marble slabs, with or without a high finish, it is the practice to employ glass plates, to which there is applied a thin color-layer, which may be variegated, and which subsequently, with the aid of a frame, receives the mortar or other body-material necessary to form a slab of the desired thickness, an even surface being produced by shaking.

The present invention relates to a novel method of applying the mass to the glass plates, whereby the manufacture of artificial marble slabs can be carried out more rapidly and economically than hitherto.

My invention ensures uniform thickness of the layer deposited upon the glass plates, and furthermore enables such thickness to be altered at any time, as may be required. Other features of the invention will be pointed out below.

According to my invention the glass plates are pushed across the bottom of the receptacle containing the color-mass, through apertures located at two opposite walls, in such manner that the glass plate can only convey material through the exit-aperture (which may be adjustable in size) in a layer whose thickness is determined by the distance between the glass surface and the top edge of the aperture.

The glass plates may be advanced in continuous succession, that plate which for the time being lies below the receptacle, being pushed forward by the succeeding, abutting, plate, which then occupies the position vacated by the front one, and so on.

The back wall of the receptacle, whose lower edge constitutes the top of the aperture, may be adjustable, so that the thickness of the layer of material deposited on the glass plates can be altered as desired, if necessary during manufacture. Instead of the entire back wall of the receptacle being adjustable, a flap or slide may be provided at its bottom portion to enable regulation of the size of the aperture, the receptacle itself being rigid.

The mortar to serve as body or foundation for the slab may be applied in familiar manner with the aid of frames placed upon the glass plates carrying the layer of color-material.

My invention is illustrated in the accompanying drawings, in which—

Fig. 1 is a perspective view of one construction of the apparatus,

Fig. 2 a plan,

Fig. 3 a longitudinal section on the line A—B of Fig. 2, and

Fig. 4 a cross section on the line C—D of Fig. 2.

Fig. 5 is a plan view showing a modified form of construction,

Fig. 6 a section on the line A—B of Fig. 5,

Fig. 7 a section on the line C—D of Fig. 5, and

Fig. 8 a perspective view of a base-board carrying a set of glass plates;

Fig. 8^a shows a detail to be hereinafter referred to.

The box-shaped receptacle for the color-mass is formed by two longitudinal walls b c adjustably fitted in the side walls a^1 of a frame a, and two cross walls or partitions d f supported by the said longitudinal walls.

By altering the distance apart of the walls b c and employing partitions d f of corresponding width, the size of the receptacle can be readily adapted to the conditions of any particular case, such as dimensions of the slabs to be produced, the quantity of the color-mass and so forth.

In the form of construction shown in Figs. 1–4 the adjustability of size of the receptacle is attained by the provision of a number of vertical grooves m in the frame-walls a^1, into which grooves the ends of the parallel walls b c can be slidden from above; whilst the walls b c themselves are furnished along their top edges with notches n, to accommodate lugs o projecting laterally from the partitions d f.

In order to impart stability and prevent lateral yielding of the lower parts of the partitions d f, the latter fit into guides, consisting of pins or other projections p, protruding from the bottom portion of the walls b c.

The bottom of the receptacle is constituted by that glass plate h which has been pushed below it for the time being. The walls b c are provided with screw-pins and thumb-nuts g, whereby they may be held in any desired elevated position. The front wall b will be raised from the base of the frame a only to such extent as is requisite to admit passage below it of the glass plate

h; whilst the back wall c must be elevated to the extent necessary to admit the exit of the glass plate carrying a layer of material of the thickness desired.

For the purpose of affording guidance to the glass plates h during their passage, two parallel fillets i are provided, capable of adjustment relatively to each other. The guide-fillets i should preferably extend right across the base of the frame a, in order that the glass plates h may be accurately guided both on introduction and exit.

The adjustment of the guide-fillets i in the construction illustrated is effected by means of thumb-screws q taking into the tapped rectangularly bent front ends of the fillets and pressing against the edge of the frame-base, whereby the similarly bent rear ends of the fillets are drawn snugly against the back edge of the frame-base.

The back wall c, which serves as it were as striker for the mass e, is preferably provided at the bottom of its outer side with a wooden or other fillet k, adapted to smooth down the surface of the layer on the glass plate h during its exit. Instead of the above arrangement any other suitable device, such as a roller wth scraper-plate, may naturally be employed.

The method of procedure is as follows:— The guide-fillets i having been adjusted to the breadth of the glass plates employed, the walls b c are slidden each into one of the pairs of grooves m in the sides a^1 of the frame, depending upon the size of receptacle required. The front wall b is so adjusted with the aid of the thumb-nuts g as to leave just sufficient space below it to permit passage of the glass plate. Similarly the back wall c is adjusted with the aid of its thumb-nuts g, but at such a height as to leave sufficient room for exit of the glass plate together with a layer of material upon it of the thickness desired. Hereupon two partitions d f, of size corresponding to the distance apart of the two walls b c, are set in position, in conformity with the width of the glass plates h. In such position the bottom edge of each partition d f will bear closely against the face of the corresponding guide-fillet i and lie flush with the inner edge thereof, making a tight joint.

The parts being so assembled, the first glass plate h is slidden in between the two guide-fillets i, and through the aperture below the front wall b, thus constituting the bottom of the receptacle for the color-mass. Differently colored masses can then be filled in as desired. The weight of the mass e is sufficient to enable exit on the glass plate of such quantity as will pass below the bottom edge of the wall c, when the glass plate is pushed from below the receptacle by advance of a succeeding glass plate.

After the first glass plate has been completely expelled from its position below the receptacle by the advance of the succeeding glass plate, the latter will constitute the receptacle bottom; and this procedure can be repeated as often as required.

It will thus be seen that in this simple method of manufacture the apparatus can be readily adjusted to the conditions of any particular case, both as respects dimensions of the glass plates and the amount of material to be worked; and that the thickness of the layer of material to be conveyed by the glass plates can likewise be regulated, even during working of the apparatus.

The modified construction depicted in Figs. 5–8^a is for the production of slabs with an unbroken striped design, the mass being applied in a continuous layer to sets or trains of glass plates mounted on a common slidable base. In such manner as sequence of slabs can be turned out, which when laid present a substantially uninterrupted striped design. With the first above described apparatus it would not be possible to produce such continuity of design, as the molding-frame which is set upon the glass plate carrying the mass takes over it at all sides, so that a considerable portion of the design will be wanting between two contiguous slabs, with the result that there will be a fault in the striped design between any two abutting slabs when laid.

In this modified constructional form a base w is provided with two wooden side walls x, furnished at intervals with vertical grooves m, into which the cross walls b c can be slidden and adjustably held in elevated position by screw-pins and thumb-nuts g, as in the case of the construction first above described.

As can be seen from Fig. 8, a desired number of abutting glass plates h are disposed in a set or train upon a common base s, and are laterally confined by angle-iron guide-rails t, screwed to the board s and provided at intervals corresponding with the length of the plates with notches u to receive cross strips v, of which one is shown in perspective in Fig. 8^a.

The procedure with this construction is as follows:—The glass plates h are disposed on the board s, between the guide-rails t, so as to abut closely one against the other, and the right-hand guide-rail t is then pressed tightly against the row of plates h and screwed fast by thumb-nuts y, so that the plates are all firmly retained in position.

The board s, with the train of plates h, is then pushed forward on the base w until the foremost glass plate arrives below the receptacle for the mass e, constituted by the side walls x and cross walls b c, and thus forms the bottom of the said receptacle. Hereupon the color-mass can be filled in, in differently colored quantities if desired.

The board *s* carrying the glass plates *h* is then advanced in the direction of the arrow (Fig. 6), until finally the last glass plate of the set arrives below the receptacle. A second board *s*, with a set of glass plates *h*, is then slidden in, so as to abut against the first board *s* and push it completely from below the receptacle, the first glass plate of the second board *s* then constituting the bottom of the said receptacle. The procedure is then continued in the described manner, and so on.

After a board *s*, with its glass plates *h* carrying a layer of the mass *e*, has passed completely from the receptacle, the cross strips *v* (Fig. 8[a]) are inserted in the notches *u* of the guiderails *t*, so that each glass plate *h* is, as it were, framed by four walls *t* and *v*, which serve to confine the mortar foundation on such being filled in.

The strips *v* being thin, no appreciable interruption of the striped design will be observable at the abutting surfaces of the thoroughly hardened slabs, which can thus be laid, in the same order in which they were manufactured, one below or beside the other, to produce a continuous striped design.

What I claim is—

1. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls, means for spacing said walls at variable distances apart, and means for holding the said walls in elevated position, in combination with plates slidable below the elevated walls, across the receptacle, and in succession constituting the bottom of the latter, the bottom edge of the rear wall constituting a striker for the mass conveyed from the receptacle by each plate.

2. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls, means for spacing said walls at variable distances apart, and means for holding the said walls in elevated position, in combination with plates slidable below the elevated walls, across the receptacle, and in succession constituting the bottom of the latter, the bottom edge of the rear wall constituting a striker for the mass conveyed from the receptacle by each plate, and adjustable devices for laterally guiding the plates.

3. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls, means for spacing said walls at variable distances apart, means for holding the said walls in elevated position, and means for spacing the other two receptacle-walls at variable distances apart, in combination with plates slidable below the elevated walls, across the receptacle, and in succession constituting the bottom of the latter, the bottom edge of the rear wall constituting a striker for the mass conveyed from the receptacle by each plate.

4. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls notched along the top edge, and two adjustable cross walls having lateral lugs engaging in the notches of the first said walls, means for spacing the notched walls at variable distances apart, and means for holding them in elevated position, in combination with plates slidable below the elevated notched walls, across the receptacle, and in succession constituting the bottom of the latter, the lower edge of the rear notched wall constituting a striker for the mass conveyed from the receptacle by each plate.

5. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls, means for spacing said walls at variable distances apart, and means for holding the said walls in elevated position, in combination with a base slidable below the elevated walls, across the receptacle, and a sequence of abutting plates carried by said slidable base, each plate in succession constituting the bottom of the said receptacle.

6. In apparatus for manufacturing artificial marble slabs, a receptacle for the colormass having two opposing vertically adjustable walls, means for spacing said walls at variable distances apart, and means for holding the said walls in elevated position, in combination with a base slidable below the elevated walls, across the receptacle, upwardly projecting rails on the base, laterally confining the plates, and cross-strips slidable through the rails and in conjunction therewith constituting box-frames to receive foundation-material for the slabs.

In testimony whereof I affix my signature.

AUGUST STRITTMATTER.