April 12, 1932. J. KRAUSS 1,853,824

WALL COVERING

Filed March 9, 1931

Fig. 1

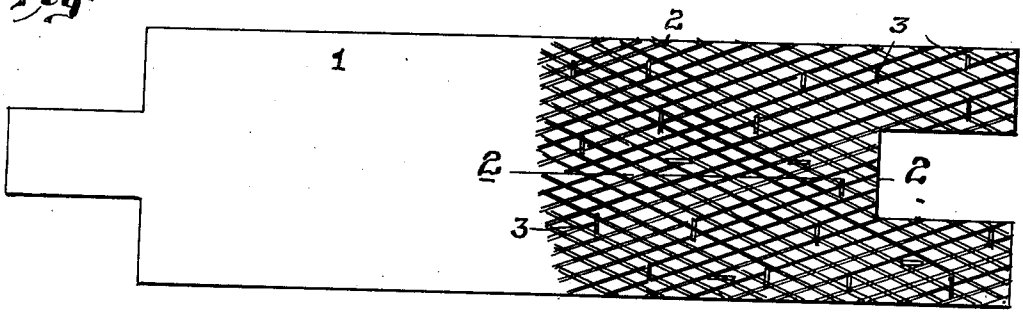


Fig. 2

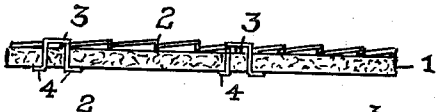


Fig. 3

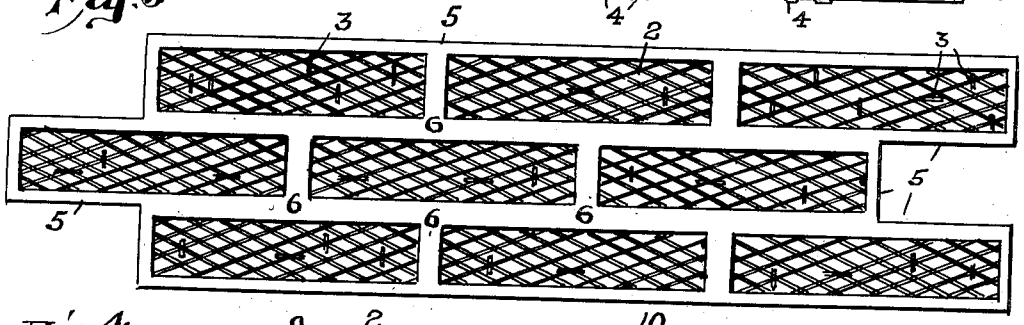


Fig. 4

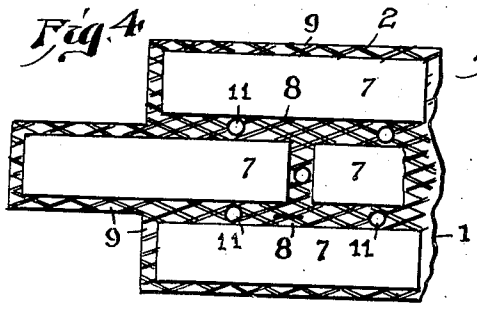


Fig. 5

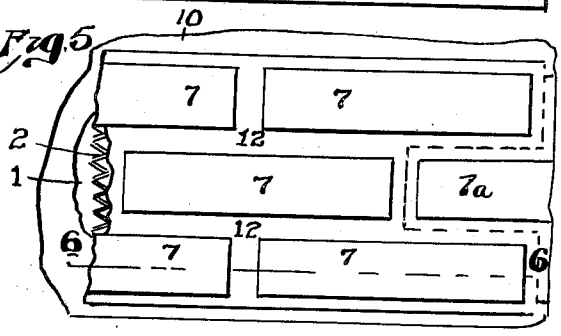


Fig. 8

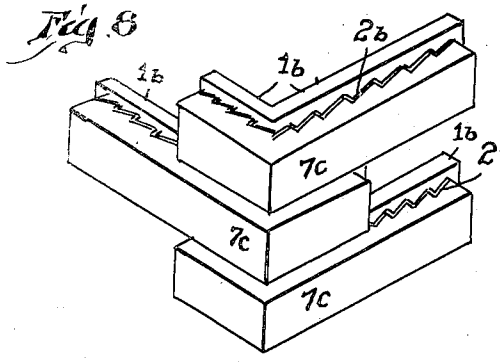


Fig. 6

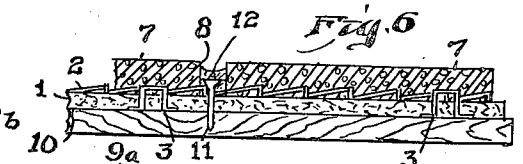
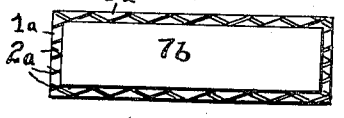


Fig. 7



INVENTOR

Joseph Krauss,

by Edward A. Lawrence.

his attorney.

Patented Apr. 12, 1932 1,853,824

UNITED STATES PATENT OFFICE

JOSEPH KRAUSS, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO NEW BRICK CORPORATION, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

WALL COVERING

Application filed March 9, 1931. Serial No. 521,083.

My present invention relates to the wall covering art wherein a wall, usually the exterior wall of a wooden building, is to be provided with a surface design to give the appearance of being formed of brick or the like.

Frequently for this purpose metal sheets colored and marked off to represent bricks, or other laid building units, are nailed to the wooden wall, but the artificiality of such a surface is usually quite apparent and the general effect cheap and tawdry.

Again blocks of plastic material, such as cement, designed to represent bricks or other laid building units have been formed or attached on backing surfaces such as pieces of composition board and the latter have been nailed or otherwise secured to the wall. In many of such cases difficulty has been experienced in maintaining a permanent bond between the backing and the blocks and therefore in time the blocks tend to become loosened so as to admit moisture between them and the backing, and may eventually become detached from the backing.

One of the objects which I have in view is the provision of an inexpensive wall covering which may be readily and securely attached to the wall of a building, which will present a close resemblance to a wall laid of bricks or other building units, and which will remain permanently in place while indefinitely retaining the desired appearance.

Another object which I have in view is the provision of such a wall covering which will be of relatively light weight so as to be readily handled and put in place, and which will not impose too much weight on the wall to which it is applied or upon the securing means whereby it is attached to the wall.

Another object which I have in view is the provision of a new and improved process of manufacturing such wall covering whereby the product may be more inexpensively and expeditiously produced and a wall covering of an improved and more durable quality may be obtained.

Generally speaking my improved wall covering comprises units consisting of a board, preferably a composition board backing upon the face of which are mounted one or more blocks in properly spaced relation with each other, formed of plastic material, such as cement, and the blocks having embedded therein a sheet of metal mesh which is permanently secured to the outer face of the board. In the spaces or valleys between the blocks the mesh is exposed and is later covered with suitable mortar which represents the mortar bonds or pointing between the blocks.

In the preferred embodiment of my invention each unit presents a plurality of blocks, the number of blocks being such as will not render the unit too heavy or too cumbersome to handle, and the ends of the units being offset so that the end blocks of horizontally alined units will interlock to form the usual staggered joints in adjacent rows of blocks.

After the units have been nailed or otherwise secured to the building wall the valleys between adjacent blocks and at the perimetral edges of adjacent units are filled or pointed with mortar, and thus the completed wall presents a faithful reproduction of a regularly laid and pointed brick or block wall.

I also provide a new and improved corner unit in accordance with my invention whereby the latter may be applied to the covering of corners of buildings and the sides of window and door openings and the like.

I further have invented a new and improved process of manufacturing my wall covering, as will appear from the following description.

I further have provided a new and improved grid-mold for use in forming my wall units.

In the accompanying drawings, Fig. 1 is a face view of the composition board which I use as the backing of the wall covering unit, the metallic mesh being partially omitted for the sake of clearness.

Fig. 2 is a broken section taken along the line 2—2 in Fig. 1.

Fig. 3 is a plan view showing the grid-mold laid on the backing board and the mesh showing in the mold cavities.

Fig. 4 is a broken plan view of the unit after the blocks have been cast and have hardened and the grid-mold has been removed.

Fig. 5 is a broken elevation of a portion of a building wall with two horizontally alined units assembled thereon.

Fig. 6 is a sectional view taken along the line 6—6 in Fig. 5.

Fig. 7 is a face view of a unit having a single block thereon.

Fig. 8 is a perspective of one of my corner units.

Referring first to Figs. 1 to 6, inclusive, of the drawings, 1 represents the backing board of the wall covering unit, the same being preferably of composition such as is commonly known in the building art as "wall board". The board is cut into proper shape, such as illustrated in Figs. 1 and 3, so that two units will interlock when secured in position in horizontal alinement and adjacent horizontal rows of blocks will present the usual staggered joints.

On the face of backing board 1 I secure a similar size and shaped sheet of metallic mesh 2. This may be as shown, a sheet of expanded metal or may be of woven wire or of other suitable construction.

The mesh is permanently secured to the face of the board 1, as by the staples 3 which are driven through the board 1 and have their ends clinched against the back of the board, as best illustrated at 4 in Fig. 2.

The board 1 with its facing of metallic mesh 2 is then laid in a horizontal position with the mesh upwardly, and the grid-mold 5—6 is placed thereon as illustrated in Fig. 3, the perimetral edges of the grid-mold matching the perimetral edges of the board 1. Suitable clamps or other means may be employed to hold the grid-mold rigidly in position on the backing board.

The grid-mold is formed by a relatively narrow perimetral wall 5 which follows and matches the perimetral contour of the board 1 and interior partitions 6 which preferably are of twice the width of the perimetral wall. These partitions 6 are arranged to divide the interior of the grid-mold into molding cavities each the size and shape of the blocks which are to be cast, and the width of the partitions is that desired for the width of the valleys or mortar spaces desired between the blocks. The reason for making the perimetral wall 5 of the grid-mold but half the width of the partitions 6 is that the valleys or depressions to be formed about the edges of the unit are to mate with like valleys about the edges of the adjacent units when the units are assembled on the wall, thus jointly forming the valleys or mortar spaces between the contiguous blocks of adjacent units.

The grid-mold may be made of suitable material. Thus it may be cast or otherwise formed of metal to provide the necessary strength and rigidity.

The cement or other material in plastic form is then filled into the mold cavities, the walls of said cavities, formed by the perimetral wall 5 and the partitions 6 of the grid-mold, and said walls of the proper height to give the desired thickness to the blocks. A quarter or a third of an inch mold-depth is usually sufficient.

The mesh 2 is embedded permanently in the block material when the latter sets and hardens, so that the block is rigidly and permanently secured to the surface of the backing board 1.

The blocks are indicated at 7 in Figs. 4 and 5. The valleys 8 between the blocks as indicated in Fig. 4 are the width of the partitions 6 and along the perimetral edges of the unit are the half-width valleys 9 which mate with similar half-width valleys of adjacent units, when the units are secured to the building, to form full width valleys. As will be noted the mesh is exposed in these valleys 8 and 9.

When the units are secured to the building wall which is indicated at 10 in Figs. 5 and 6, nails or other fasteners 11 are driven through the mesh 2 and the backing board 1 along the valleys into the wall 10. Such fasteners are provided with relatively large head portions so as to engage and bear down on the mesh.

After the units are secured in place on the building wall the valleys 8 and 9 are filled in or pointed with suitable mortar 12 which bonds in with the mesh 2 and covers and protects the heads of the fasteners 11.

The interlocking of the blocks of adjacent units is illustrated in Fig. 5, portions of the blocks of the next unit to the right being indicated at 7*a*.

In Fig. 7 I have shown a unit comprising a backing board 1*a* provided with a mesh 2*a* and having a single block 7*b* formed thereon, the same being surrounded by a valley 9*a* which mates with like valleys on adjacent single-block units, the unit being secured to the building wall by fasteners driven through their perimetral valleys, and the valleys being filled or pointed with mortar after the units have been secured to the building wall.

In Fig. 8 I show a unit for forming corners of walls, the corners of window and door openings, wall ends and the like.

In such case the backing board 1*b* is angular to fit against two faces of the building wall and the mesh 2*b* is likewise angular and is stapled to the board 1.

The blocks 7*c* are disposed alternately as shown, each block exposing a side and an end surface.

The alternate disposal of the blocks enables the corner members to interlock with the standard unit shown in Fig. 4.

The units may be formed with any desired

number of rows of blocks and any number of blocks in a row, but the units are preferably of an area which will be convenient and light enough to handle and put in place with convenience and dispatch.

One of the marked advantages of my improved wall covering is its relative toughness, as the blocks may be relatively thin, preferably not more than a quarter inch in depth. This also reduces the cost of the material. The backing board, which may be any wall board of good quality need not be relatively thick, a quarter inch thickness being ample.

The wall covering may be formed to simulate any character of laid building units, such as brick, tile, artificial stone blocks, building stone and the like, the material of which the blocks are formed being colored or tinted to reproduce exactly the effect desired. The valleys may likewise be pointed with any desired color and character of mortar. The mortar being bonded by the mesh will be permanently held in position.

I claim:—

1. A wall covering unit to be fastened to a building wall and comprising a backing board having a metallic mesh secured to its face and a block of plastic material cast onto said board and having the mesh embedded therein.

2. A wall covering unit to be fastened to a building wall and comprising a backing board having a metallic mesh secured to its face and a block of plastic material cast onto said board and having the mesh embedded therein, the edges of the board extending beyond the edges of the block to form valleys for pointing with mortar when the unit is in place.

3. A wall covering unit to be fastened to a building wall and comprising a backing board having a metallic mesh secured to its face and a block of plastic material cast onto said board and having the mesh embedded therein, the edges of the board and the mesh extending beyond the edges of the block to form valleys for pointing with mortar when the unit is in place.

4. A wall covering unit comprising a backing board, a sheet of metallic mesh covering and secured to the face of the board, and a plurality of blocks of plastic material cast on said board and having portions of the mesh embedded in their material, the blocks being in spaced relation to each other to provide for intervening valleys.

5. A wall covering unit comprising a backing board, a sheet of metallic mesh covering and secured to the face of the board, and a plurality of blocks of plastic material cast on said board and having portions of the mesh embedded in their material, the blocks being in spaced relation to each other to provide for intervening valleys, and the mesh being exposed in said valleys to form a bond for the mortar pointing.

6. A wall covering unit comprising a backing board, a sheet of metallic mesh covering and secured to the face of the board, and a plurality of blocks of plastic material cast on said board and having portions of the mesh embedded in their material, the blocks being in spaced relation to each other to form intervening valleys and the blocks being also set back from the perimetral edges of the backing board so that valleys may be formed at the contiguous edges of adjoining units when the units are fastened to a building.

7. A wall covering unit comprising a backing board, a sheet of metallic mesh covering and secured to the face of the board, and a plurality of blocks of plastic material cast on said board and having portions of the mesh embedded in their material, the blocks being in spaced relation to each other to form intervening valleys and the blocks being also set back from the perimetral edges of the backing board so that valleys may be formed at the contiguous edges of adjoining units when the units are fastened to a building, the perimetral valleys of the units being substantially half the width of the valleys between blocks on the same unit.

8. A wall covering unit comprising a backing board, a sheet of metallic mesh covering and secured to the face of the board, and a plurality of blocks of plastic material cast on said board and having portions of the mesh embedded in their material, the blocks being in spaced relation to each other to form intervening valleys and the blocks being also set back from the perimetral edges of the backing board so that valleys may be formed at the contiguous edges of adjoining units when the units are fastened to a building, the blocks in adjacent rows on the same unit being in staggered relation so that the ends of adjacent units will interlock.

9. A wall covering unit comprising a block of plastic material cast on top of a sheet of metal mesh, the sheet extending beyond the sides and ends of said block, and being exposed to form the interventing valleys between adjacent blocks.

10. A wall covering unit comprising a plurality of blocks cast of plastic material on top of a continuous sheet of metal mesh, the units being separated by valleys.

11. A wall covering unit comprising a plurality of blocks cast of plastic material on top of a continuous sheet of metal mesh, the units being separated by valleys, and the mesh being exposed in said valleys.

12. A wall covering unit comprising a continuous sheet of metal mesh on top of which are cast a plurality of blocks of plastic material, the mesh being exposed in the valleys between the individual blocks to permit pointing with mortar.

13. A wall covering unit comprising a continuous sheet of metal mesh on top of which are cast a plurality of spaced apart blocks of plastic material, the mesh being exposed around the blocks to form valleys between the blocks of the unit and between such blocks and the blocks of adjacent units, said valleys permitting subsequent pointing with mortar.

14. A wall covering unit comprising a continuous backing board, a metal mesh permanently secured to the face of said board, and spaced apart blocks of plastic material cast onto said mesh and board.

15. A wall covering unit comprising a continuous backing board, a metal mesh permanently secured to the face of said board, and spaced apart blocks of plastic material cast onto said mesh and board, said mesh being exposed between the blocks to form the valleys for pointing with mortar.

16. A wall covering unit comprising a continuous backing board, a metal mesh permanently secured to the face of said board, and spaced apart blocks of plastic material cast onto said mesh and board, said mesh being exposed between and around the blocks to form valleys for pointing with mortar.

Signed at Pittsburgh, Pa., this 7th day of March, 1931.

JOSEPH KRAUSS.