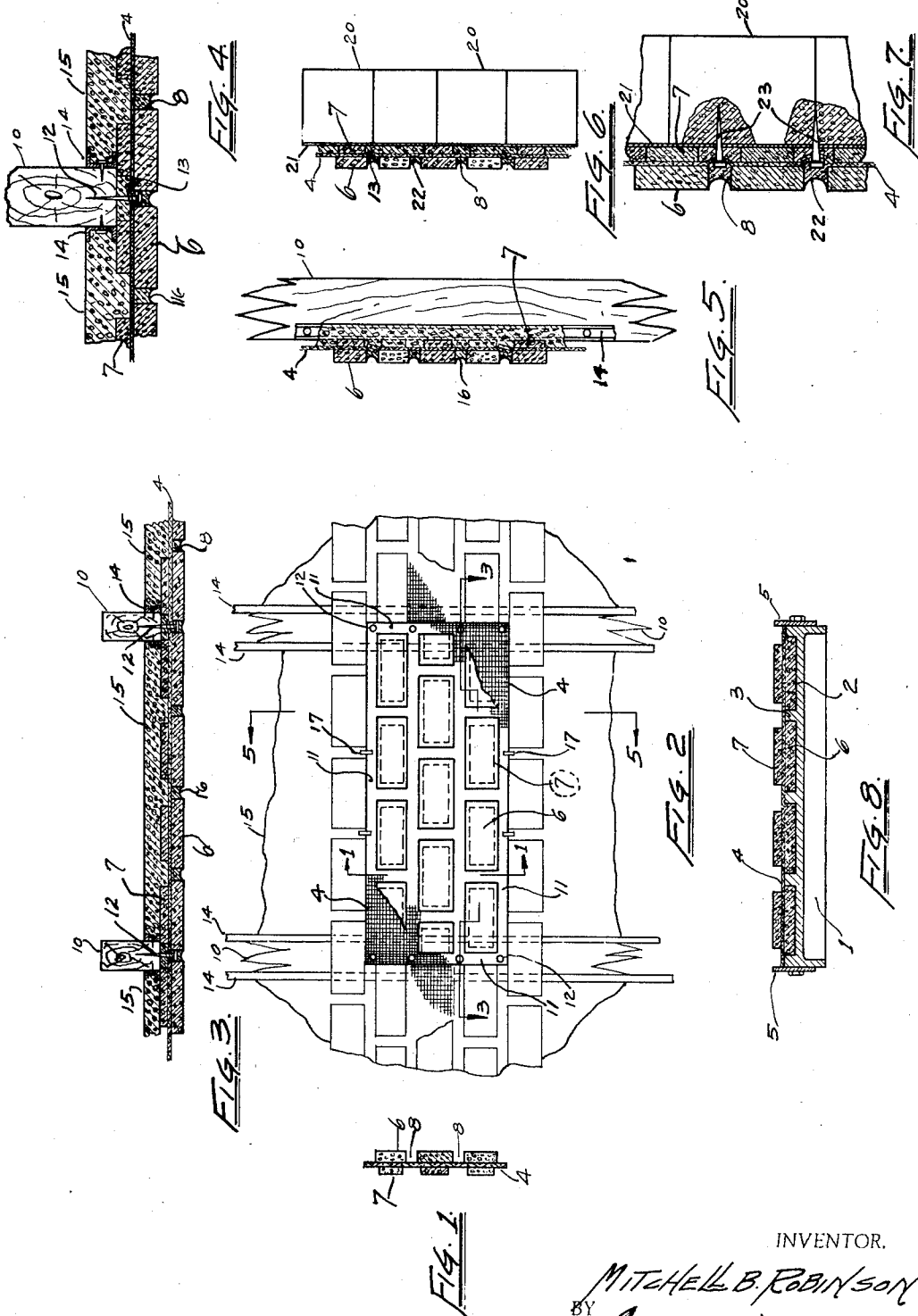


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MASONRY CONSTRUCTION

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MASONRY CONSTRUCTION

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12 Claims. (Cl. 72—20)

The present invention pertains to a novel masonry construction and is directed particularly to the building of a wall by means of a unit comprising a plurality of blocks resembling brick, tile or the like.

One of the principal objects of the invention is to provide a unit by means of which the blocks may be laid in multiple rather than one at a time. In the building of a brick wall, the blocks preferably have a standard length and breadth but a less than standard thickness. Nevertheless, these units are not limited to use in re-building work or the superficial veneering of old frame houses or stucco houses. By means to be disclosed hereinafter, the units are first mounted on the studding of a new building and then backed up to form a substantial and permanent masonry wall. In another embodiment of the invention, the units may be applied to a building block construction as will more fully be disclosed hereinafter.

The unit may be conceived as consisting of masonry elements or blocks suitably arranged and secured on opposite sides of a wire mesh or screen. The spaces between blocks on one side of the screen are in register with the spaces on the other side, and the bare areas of the screen thus provided render the unit rather flexible and pliable so that it may be mounted on an uneven framework without great difficulty. Where the unit is nailed to studding, the rear or inner surface is coated, after erection, with cement mortar which fills the spaces on the rear side and may penetrate at least to some extent into the spaces on the forward side. The forward spaces are pointed in the usual manner to resemble the usual brick joints.

Where the unit is applied to a masonry wall, the wall is first coated on the outside with cement mortar or other adhesive and the unit is nailed and pressed against the latter before it hardens. Some of the adhesive or mortar is squeezed into the joint spaces, and both front and rear spaces are filled from the front side, if necessary, the joints being pointed in the usual manner.

Other objects and important features of the invention will appear as the description is developed with reference to the accompanying drawing, in which:—

50 Figure 1 is a detail section of one of the units;

Figure 2 is a detail fragmentary elevation of a building wall consisting of the novel units applied to studding;

55 Figure 3 is a plan section on the line 3—3 of Figure 2;

Figure 4 is an enlarged detail plan section showing one of the studs;

Figure 5 is a vertical section on the line 5—5 of Figure 2;

Figure 6 is a detail vertical section of a modified construction wherein the unit is applied to a wall composed of building blocks, or brick or the like;

Figure 7 is an enlarged detail thereof; and

Figure 8 is a cross section of a mold in which the units are made.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The unit will first be described by reference to the processes of manufacture. In Figure 8 the numeral 1 designates a mold having its upper face formed with pockets or cavities 2 arranged in the conventional staggered brick formation or to correspond to any desired brick design. Where the unit is to be used in building a brick wall, the cavities 2 have the length and breadth of standard brick, but a depth of about $\frac{1}{2}$ ", more or less, which is considerably less than the standard depth of $3\frac{3}{4}$ ". The walls 3 separating the cavities would then have a width equal to that of the ordinary joint between bricks in a brick wall.

According to one of the methods of manufacture, a suitable masonry material, such as cement mortar, is poured into the cavities 2 but is not permitted to overflow on the tops of the walls 3. The poured material may be colored to resemble brick, tile or any other masonry element when dry. A screen 4 is next laid upon the walls 3 and may be located by means of guides 5 secured to the sides of the mold. A quantity of cement mortar is then thrown upon the screen over each of the blocks 6 formed in the cavities 2 and into adhering relation to said blocks. This quantity is preferably less in volume than the block 6 beneath it and is leveled off to form a rear block 7 which may be of irregular shape but which is not permitted to extend beyond the edges of the corresponding block 6. A single operation may suffice to level off all the blocks 7 of a unit and to give them uniform thickness. The material constituting the blocks 6 and 7 is then permitted to dry, and as a result of the operations described, both sides of the screen are bare at the joint spaces 8 formed by the mold walls 3.

In another method of manufacture, regular pressed bricks of reduced thickness are mounted in the pockets 2 and overlaid with the screen 4. In this case, the upper or rear surfaces of the bricks should be rather rough. The blocks 7 are

then formed upon the screen in the manner already described, it being understood that in both methods the material constituting the blocks 7 penetrates the screen to adhere to the blocks at the lower surface thereof.

Another method of forming an actual brick construction is to fill the pockets 2 with brick clay, lay the screen 4 and form the rear blocks 7 of brick clay. The filled mold is then removed to a kiln for burning. To compensate for shrinkage of the clay in burning, the mold walls 3 are made thinner than the usual joint spaces, so that the enlarged spaces, after shrinkage, are of approximately standard width.

In Figures 1, 2 and 3 and 4 are illustrated the vertical wood or metal studs 10 of a building frame. The length of the screen 4 is such as to extend from one stud to the next. A bare margin 11 is provided on the screen, and nails 12 are driven through the margin and into the studs or fastened by any suitable means. Moreover, the margins of abutting units are overlapped as indicated by the numeral 13 in Figure 4 and the fasteners 12 driven through the overlapped parts.

Gauge pieces 14, consisting preferably of metal lath, channel iron or the like, are secured to the sides of the studs 10 at the forward edge thereof. A coating 15 of cement mortar or other suitable masonry material is then applied to the rear blocks 7 to the thickness determined by the gauges 12 and naturally fills the spaces therebetween. Some of this material may even be extruded into the joint spaces 8. If there is not sufficient material in these spaces for pointing, additional material may be inserted from the face of the structure, and the joint is pointed as indicated by the numeral 16. The horizontal edges and other edges not backed up by studding, may be tied together by suitable clips 17.

In applying the unit to a wall composed of building blocks 20 as in Figures 6 and 7, the face of the wall is first coated with cement mortar or other suitable adhesive as indicated by the numeral 21. The units are then mounted successively on the wall and when nailed or fastened are drawn or pressed against the adhesive coating. The spaces between the face blocks 6 and the rear blocks 7 are filled by the extrusion from the coating 21 and with whatever additional material may be necessary to apply through the forward spaces 8. Finally, the joints are pointed in the usual way as at 22. The free screen margins 11 are overlapped as shown in Figure 7, and nails 23 are driven through the overlapping parts and into the blocks 20, drawing the margins inwardly.

Nails are likewise driven through the screen between the blocks. The word "block" is used throughout the specification and the following claims to designate any masonry or ceramic element, such as cement mortar or clay resembling brick, tile or the like. The invention is especially useful in building a brick wall, in which case the bricks are of less than standard thickness, thereby considerably reducing the weight and facilitating the handling of a unit embodying a plurality of elements. In brick work, the face bricks are approximately $\frac{1}{2}$ " thick, and in all cases the rear blocks are from $\frac{1}{4}$ " to $\frac{1}{2}$ " thick, but the unit may, for practical purposes have a total thickness up to $1\frac{1}{2}$ " as conditions require. Notwithstanding this relatively small thickness, the ultimate construction is not a makeshift or a mere resurfacing job. The unit provided by this invention is adapted to go into new buildings in the original process of construction, and the wall

is made of adequate weight and thickness by the inner coating 15 of Figures 2 to 5 or the building block construction of Figures 6 and 7. However, the unit may also be used in resurfacing work by nailing to the siding or facing of an old frame building or cementing to an old brick wall in the manner shown in Figures 6 and 7.

Although specific embodiments of the invention have been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention, as indicated by the appended claims.

What I claim is:—

1. A masonry unit comprising a screen, blocks mounted on one side of said screen and spaced from each other, blocks on the other side of said screen and secured respectively to the first named blocks through said screen, the second named blocks being spaced apart at the spaces between the first named blocks, whereby both sides of said screen are bare at the spaces between the first named blocks.

2. A masonry unit comprising a screen, blocks mounted on one side of said screen and spaced from each other, blocks on the other side of said screen and adhered respectively to the first named blocks through said screen, the second named blocks being spaced apart at the spaces between the first named blocks, whereby both sides of said screen are bare at the spaces between the first named blocks.

3. A masonry unit comprising a screen, spaced blocks of masonry material on both sides of said screen, the blocks on one side being adhered through the screen to the blocks on the other side, the spaces between blocks on one side of said screen registering with the like spaces on the other side, whereby both sides of said screen are bare at said spaces.

4. A masonry unit comprising a screen, blocks mounted on one side of said screen and spaced from each other, blocks on the other side of said screen and secured respectively to the first named blocks through said screen, the second named blocks being spaced apart at the spaces between the first named blocks, whereby both sides of said screen are bare at the spaces between the first named blocks, the blocks at each side being substantially less than $3\frac{3}{4}$ " in thickness.

5. A masonry unit comprising a screen, spaced blocks of masonry material on both sides of said screen, the blocks on one side being adhered through the screen to the blocks on the other side, the spaces between blocks on one side of said screen registering with the like spaces on the other side, whereby both sides of said screen are bare at said spaces, the blocks at each side being substantially less than $3\frac{3}{4}$ " in thickness.

6. A masonry unit comprising a screen, spaced blocks of masonry material on both sides of said screen, the blocks on one side being adhered through the screen to the blocks on the other side, the spaces between blocks on one side of the said screen registering with the like spaces on the other side, whereby both sides of said screen are bare at said spaces, the thickness of said unit not exceeding $1\frac{1}{2}$ ".

7. A masonry unit comprising a screen, spaced blocks of masonry material on both sides of said screen, the blocks on one side being adhered through the screen to the blocks on the other side, the spaces between blocks on one side of said screen registering with the like spaces on the other side, whereby both sides of said screen are

bare at said spaces, the blocks at each side being approximately $\frac{3}{4}$ " in thickness.

8. A building wall comprising a vertical supporting structure, masonry units secured thereto, each unit comprising a screen with spaced blocks of masonry material secured to opposite sides thereof and to one another through the screen, said unit being nailed to said structure at the spaces between said blocks, and joints formed in the spaces between the blocks on the outer side of said screen.

9. A building wall comprising a frame structure, masonry units secured thereto, each unit comprising a screen with spaced blocks of masonry material secured to opposite sides thereof and to one another through the screen, a coating of masonry material applied over the blocks on the inner side of said screen and extending into the spaces between said blocks, and joints formed in the spaces between the blocks on the outer side of said screen.

10. A building wall comprising studding, masonry units extending from stud to stud and secured thereto, each unit comprising a screen with spaced blocks of masonry material secured to op-

posite sides thereof and to one another through the screen, a coating of masonry material applied over the blocks on the inner side of said screen and extending into the spaces between said blocks, and joints formed in the spaces between the blocks on the outer side of said screen.

11. A building wall comprising a masonry wall, masonry units attached thereto by means of adhesive material, each unit comprising a screen with spaced blocks of masonry material secured to opposite sides thereof and to one another through the screen, and joints formed in the spaces between the blocks on the outer side of said screen.

12. A building wall comprising a vertical supporting structure, masonry units attached thereto by means of adhesive material, each unit comprising a screen with spaced blocks of masonry material secured to opposite sides thereof and to one another through the screen, said units being nailed to said structure at the spaces between the blocks, and joints formed in the spaces between the blocks on the outer side of said screen.

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