Jan. 13, 1953 W. M. ANDERSON 2,624,920

SOLID WALL STRUCTURE

Filed Sept. 2, 1949

Fig. 1.

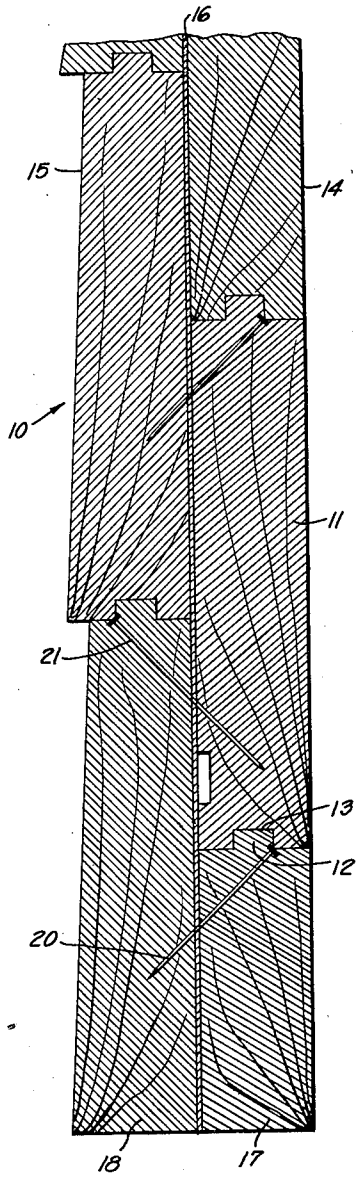


Fig. 3.

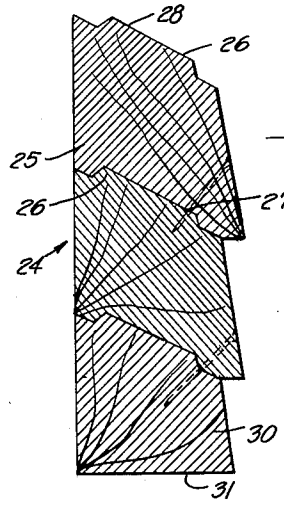
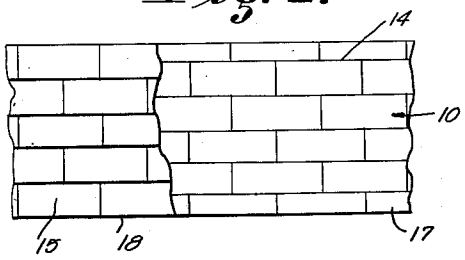


Fig. 2.



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SOLID WALL STRUCTURE

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1 Claim. (Cl. 20—4)

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This invention relates to a solid wall structure and particularly the construction of a solid wall made of more or less rectangular shaped interlocking building blocks.

A further object of this invention is to provide a solid wall made preferably of one or two or more vertical wall units wherein the blocks are placed in interlocking relationship between the tops of one layer of blocks and the bottoms of the next upper layer of blocks.

A further object of this invention is to provide a building block for a solid wall structure wherein the building block is provided with interlocking cooperating tongues and grooves.

A further object of this invention is to provide a solid wall structure made of an inner wall section and an outer wall section, with or without building paper between the inner and outer wall sections each section built up of interlocking tongue and grooved rectangular blocks, with the sections and blocks firmly secured together into an integral unit by nails extending downwardly through the tongue of one block in one wall section into the body of the block in the other section, the nail head being concealed in the groove or the bottom of the next upper block, thus making all the nails invisible to the observer.

A further object of this invention is to provide a solid wall section wherein the outside wall surface may be made to simulate lap siding or other conventional material, and the inside could be grooved to receive plaster to imitate tile or to have any desired appearance.

With the foregoing and other objects in view, as will hereinafter become apparent, this invention comprises the constructions, combination and arrangements of parts hereinafter disclosed, claimed, and illustrated on the accompanying drawing, wherein

Fig. 1 is a vertical sectional view through the solid wall structure of this invention, made of inner and outer wall blocks.

Fig. 2 is an elevational view, partly broken away, showing the overlapping relationship of the blocks to each other in the same wall and in the other wall section.

Fig. 3 is a vertical sectional view of a modified form, using one piece blocks for both inner and outer wall surfaces.

There is shown at 10 the solid wall structure of this invention. This wall 10 is made of a plurality of solid blocks 11, of wood or other suitable material. Each block 11, except the topmost and bottommost layers, is provided with tongue 12, preferably along its top arranged to fit into a corresponding mating groove 13 along the bottom of the next upper layer. As here shown the blocks are arranged in an inner wall 14 and an outer wall 15. The inner and outer walls 14 and 15 are built simultaneously, with building paper 16 therebetween if desired. The lower ends of the lowermost layer may be plain as shown at 17 and 18, and the lower layer of one wall, as for instance the inner wall 14, may be of half the height of the remaining blocks and similarly, the upper layer of blocks may have a plain top surface, with the top layer of one wall also of half height.

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In building the wall 10, the inner and outer walls 14 and 15 are integrated together by hammering nails 20 and 21 through the tongues 13 into the adjacent surface of the other wall. After setting out both lower layers of blocks, the nail 20 is hammered through the tongue 13 of the half height block of the inner wall 14 into the body of the block of the outer wall 15. Then the next layer of inner wall blocks is fitted with their grooves 13 over the tongues 12, and the nails 21 hammered through the outer wall block tongues into the inner wall, and the process continued until the wall is completed.

As shown in Fig. 2, the blocks of one layer are staggered or offset with relation to each upper layer, and similarly, they are also staggered or offset in height between the inner and outer wall sections. In addition to the interlocking of the tongues and grooves, each block has at least two nails holding to the other wall section. Further, the nail heads are easily and obviously concealed from view in the finished wall structure.

Instead of using nails, an alternative method is to glue the adjacent wall surfaces together with an appropriate wood glue, either with or without the building paper 16 therebetween.

In Fig. 3, there is shown a modified form of wall structure 24 made of single piece blocks 25 thick enough to provide the entire wall thickness. The bottoms of these blocks 25 are also provided with tongues 26 and mating grooves 27, preferably of greater width as shown. Also, the top and bottom surfaces are angular as shown at 28, with a special lower layer block 30 having a flat, right angular plain bottom surface 31. The vertical ends of each layer of blocks 25 will be offset to the ends of the blocks of each next upper layer. The blocks 25 may be secured further in their tongue and groove relationship by appropriate wood glue, or by nails 32 through the side of one layer and through the angular bottom surface 28 into the top of a lower layer, the nails being

countersunk and the holes filled, if desired, in the conventional manner.

As shown the outer wall surface of both forms may have the bottoms of the blocks project outwardly beyond the tops of the next lower layer, to provide a pleasing decorative effect.

While the prefered forms of this invention have been disclosed and illustrated, other modifications and changes in the proportions and arrangement of parts may be made by those skilled in the art without departing from the nature of this invention, within the scope of what is hereinafter claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A solid wall structure comprising inner and outer substantially contacting parallel walls each formed of a plurality of aligned rectangular blocks having interlocking tongues and grooves in their upper and lower contacting surfaces, the blocks of each layer being horizontally offset with relation to the blocks of the next vertically adjacent layer of the same wall and vertically offset with relation to the blocks of the other wall, and means securing the blocks of one wall to the blocks of

the other wall comprising nails extending through the tongues of the blocks of one wall into the bodies of the vertically offset blocks of the other wall, thereby providing a securely integrated wall structure, the nail heads being concealed in the tongues of the next vertically adjacent blocks.

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