Aug. 4, 1953 H. E. WILSON 2,647,392

BUILDING BLOCK WITH SPACED WALLS

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Fig. 1

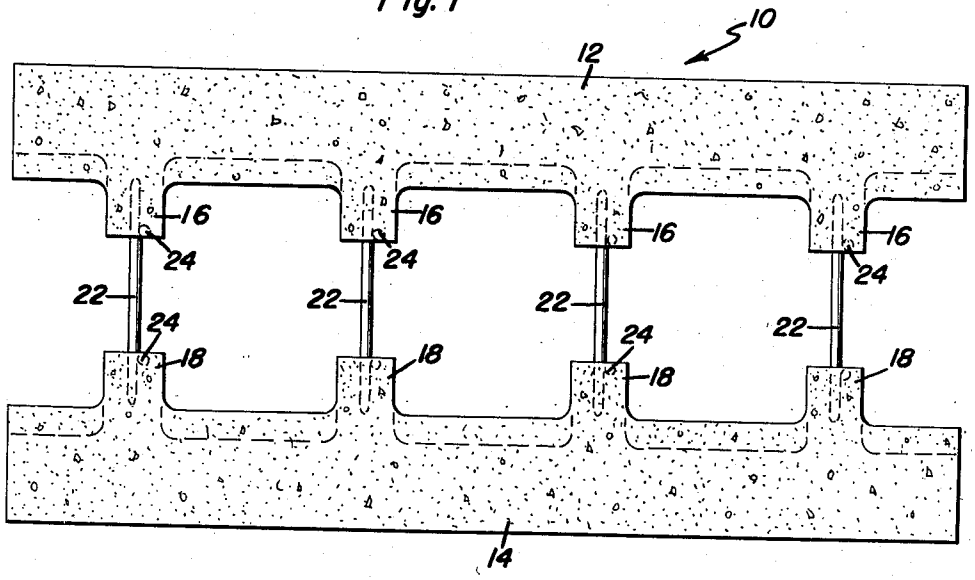


Fig. 3

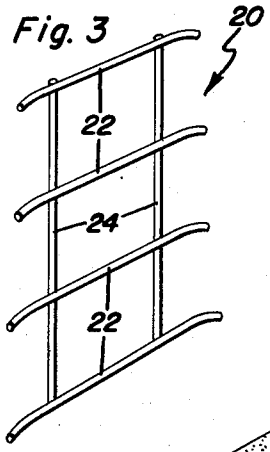
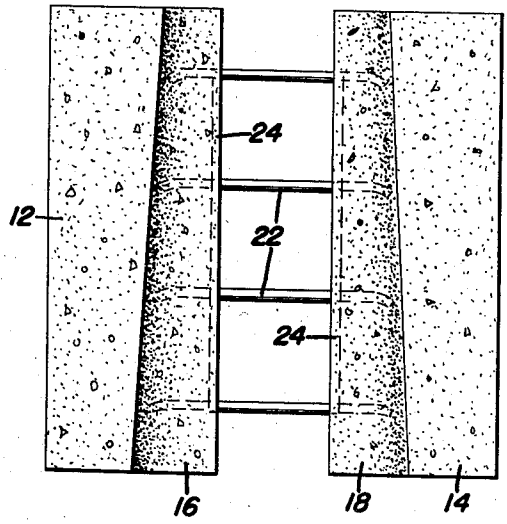


Fig. 2



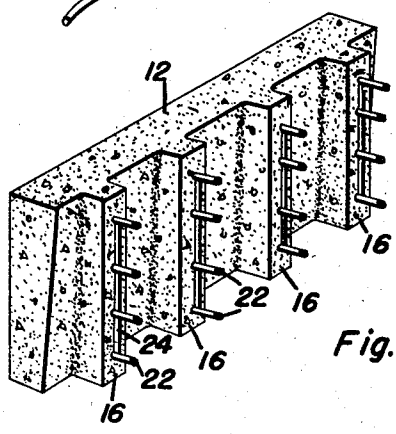


Fig. 4

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Fig. 5

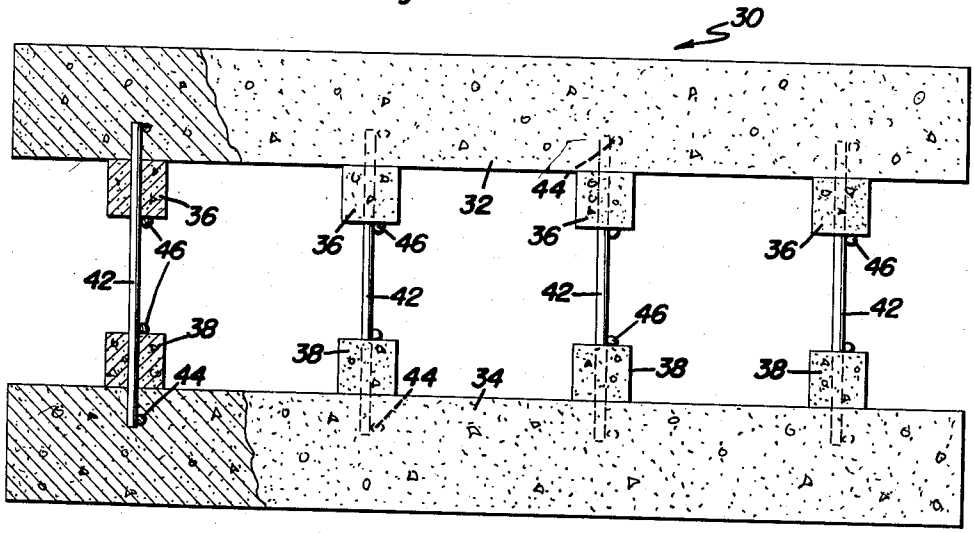


Fig. 7

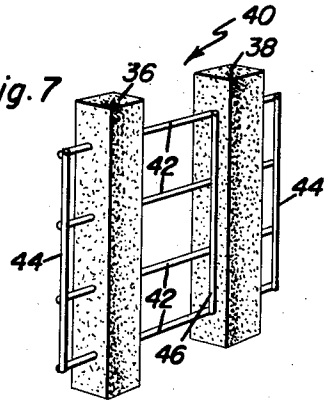
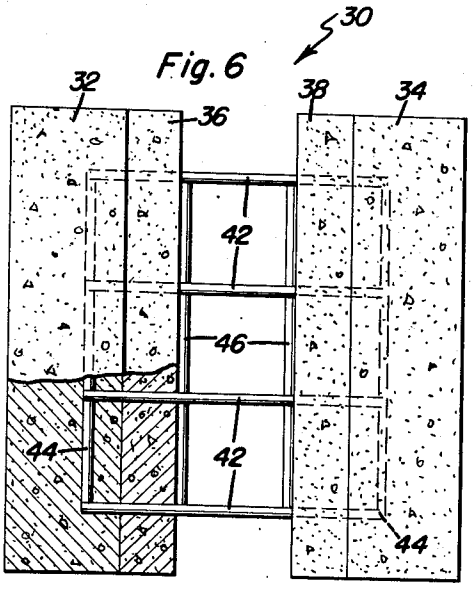


Fig. 6



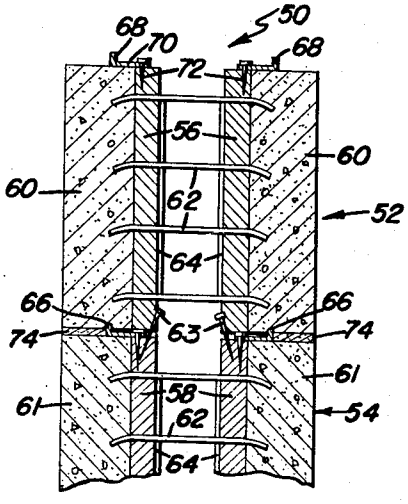


Fig. 8

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BUILDING BLOCK WITH SPACED WALLS

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Application March 15, 1950, Serial No. 149,707

4 Claims. (Cl. 72—44)

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This invention relates to masonry and concrete structures, and more particularly to a hollow building block adapted to be used in the construction of insulated masonry walls.

An object of this invention is to provide a building block for a masonry wall construction which is so designed as to be readily and easily manufactured in any conventional brick or tile making machine without necessitating any but minor changes in the machine.

A further object of this invention is to provide an insulated hollow building block which has extending between the parallel spaced walls thereof suitable reinforcing members which will hold the spaced walls of the building block in a predetermined spaced relationship.

Another object of this invention is to provide a hollow building block having a plurality of opposed ribs formed from wood or other suitable available material which can be affixed in abutting relationship to the parallel spaced walls of the building block and held thereto by suitable reinforcing or anchoring means.

Still further objects of the invention reside in the provision of a building block that is strong, durable, highly efficient in its insulative effect, light in weight, capable of being easily and cheaply manufactured, and which, when used with suitable metallic seals form a highly desirable type of masonry construction.

These, together with the various ancillary objects of the invention which will become apparent as the following description proceeds, are attained by this building block and wall construction therefrom, preferred embodiments of which have been illustrated in the accompanying drawings, by way of example only, wherein:

Figure 1 is a top plan view of the first form of the invention;

Figure 2 is an end elevational view of the embodiment of the building block shown in Figure 1;

Figure 3 is a perspective view of the reinforcing means used in this first form of building block;

Figure 4 is a partial perspective view of the building block showing the construction of the rib members thereof in greatest detail;

Figure 5 is a top plan view of another form of the invention, with parts thereof being shown in section for greatest detail;

Figure 6 is an end elevational view of the building block shown in Figure 5 with parts thereof being shown in section to show other parts more clearly;

Figure 7 is a perspective view of the reinforcing means used in the form of the building block shown in Figures 5 and 6; and

Figure 8 is a vertical sectional view of another and preferred form of building block illustrating the manner in which it is secured to form a masonry wall construction having great insulative qualities.

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With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 generally designates a first form of building block having opposed side walls 12 and 14 and a plurality of integrally folded rib members 16 and 18 formed on the wall members 12 and 14, respectively. It is to be noted that the side walls 12 and 14 are formed with a tapered inner surface in order that the bottom edges may be readily placed on the upper surfaces of the block below, the upper surface of the building block of the lower course thus having a wide shelf for supporting mortar so as to enable a better mortar seal to be formed.

Extending between the opposed pairs of ribs 16 and 18 are reinforcing means generally indicated at 20. These reinforcing means comprise a plurality of vertically spaced horizontally extending reinforcing elements or rods 22, the ends of which are embedded in the opposed rib members 16 and 18. Welded to the vertically spaced horizontally extending members 22 are a pair of spaced vertically extending members 24 which are also embedded in the opposed ribs 16 and 18. The vertically extending members 22 reinforce the ribs 16 besides maintaining the horizontally extending members 22 against buckling and further enables the entire reinforcing assembly 20 to be easily inserted in the block molding machine when the block is being manufactured.

Referring now to the embodiment shown in Figures 5 through 7, which is generally designated by reference numeral 30, and which comprises spaced parallel members 32 and 34, it will be seen that the rib members 36 and 38 are individually molded and then attached to the wall members 32 and 34, respectively. The rib members 36 and 38 form a part of the general reinforcing assembly indicated by reference numeral 40 which comprises a plurality of vertically spaced horizontally extending reinforcing members 42 which have welded at their ends vertically extending reinforcing rods 44 which are subsequently embedded in the spaced parallel walls 32 and 34 during the manufacture of the building block. Another set of vertically extending reinforcing rods 46 are welded to the vertically spaced rods 42 adjacent the opposed surfaces of the rib members 36 and 38. These reinforcing rods 44 and 46 rigidify the entire construction while maintaining the reinforcing elements in a composite group so as to enable the manufacture of the building block to be completed more easily.

Referring now to the embodiment of the invention as shown in Figure 8 which is generally designated by reference numeral 50, and which consists of an upper and a lower building block designated by reference numerals 52 and 54, respectively, it will be seen that the reinforcing assembly is formed from opposed rib members 56

and 58 which are preferably made from wood or other similar nailable material. While it is readily understood that suitable nailable cement aggregates may be used to form the ribs 56 and 58, when suitable nails 63 are used to secure the ribs 56 of the upper building block 52 to the ribs 58 of the lower building block 54, the corners of ribs formed from cement aggregates will most likely crumble. Therefore, it is highly desirable that ribs 56 should be made from wood or other materials having substantially the same properties. Nails 63 are driven through adjacent ends of adjacent vertically aligned ribs through the use of a suitable long punch and hammer.

The ribs 56 and 58 are held in abutting relation with the side walls 60 and 61 of the upper and lower building blocks by means of the vertically spaced horizontally extending reinforcing rods 62 together with the vertically extending reinforcing rods 64 which are welded to the vertically spaced reinforcing rods 62. The reinforcing rods 64 hold the entire reinforcing assembly consisting of the ribs and the vertically spaced reinforcing rods 62 in a rigid manner and enable the reinforcing unit to be readily embedded in the opposed walls 60 or 61.

Each of the side walls of the building blocks have formed in their bottom surfaces suitable grooves 66 for reception of the flanged portions 68 of the galvanized iron or other suitable metallic strips 70 which are positioned on the upper surface of the building blocks.

The metallic strips 70 are secured to the ribs 56 or 58 by means of nails 72 and, because of the height of the upwardly extending flange 68, space the side wall 60 of an upper building block from the side wall 61 of a lower building block. This permits a suitable mortar seal 74 to be positioned between the upper and lower building blocks 52 and 54, respectively, thus insuring a moisture-proof building construction. This is due to the vertically extending flange 68 preventing passage of moisture from the mortar seal 74 to the inner surface of the building block.

Since from the foregoing the construction and advantages of these building blocks and the building construction formed therefrom are readily apparent, further description is believed to be unnecessary.

However, since numerous modifications will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to limit the invention to the precise embodiments shown and described, but all suitable modifications and equivalents may be readily resorted to which fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A wall construction comprising an upper building block and a lower building block, each of said building blocks comprising a pair of opposed parallel spaced walls, a pair of spaced vertically extending parallel wooden rib members, and transversely extending reinforcing means extending through said rib members in abutting relationship to said walls, said reinforcing members being embedded in said walls, a groove in the under surface of said walls of said building block, metallic strips on said lower building block, said strips having upwardly extending flanges, said upper building block being positioned over said lower building block with said flanges in said grooves in said upper building blocks and with the rib members of said upper building block in alignment with the rib members of said lower building block, means securing said rib members of said upper building block to the rib members of the lower building block, and a mortar seal between said upper and lower building blocks.

2. A wall construction comprising an upper building block and a lower building block, each of said building blocks comprising a pair of opposed parallel spaced walls, a pair of spaced vertically extending parallel wooden rib members, and transversely extending reinforcing means extending through said rib members in abutting relationship to said walls, said reinforcing members being embedded in said walls, a groove in the under surface of said walls of said building block, metallic strips on said lower building block, said strips having upwardly extending flanges, said upper building block being positioned over said lower building block with said flanges in said grooves in said upper building blocks and with the rib members of said upper building block in alignment with the rib members of said lower building block, means securing said rib members of said upper building block to the rib members of the lower building block, and a mortar seal between said upper and lower building blocks, said reinforcing means comprising a plurality of horizontally extending vertically spaced rods and a pair of spaced vertically extending elements secured to said horizontally extending rods.

3. A building block comprising a pair of spaced parallel walls having opposed inner flat faces, a plurality of vertical ribs resting against the inner face of each wall, the ribs on one wall being arranged in pairs with the ribs on the other wall, each of said ribs having a plurality of vertically spaced horizontal apertures therein, a plurality of rods extending through the apertures of pairs of ribs and having downwardly curved ends embedded in the walls, and a pair of vertical rods joining the rods between each pair of ribs and engaging the opposing faces of each pair of ribs.

4. The combination of claim 3, wherein said ribs are wooden and include upper ends flush with the upper edges of the walls, strips overlying the walls and overlapping and secured to the upper ends of said ribs, and vertical flanges on the strips.

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