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WALL STRUCTURE OF SPACED BLOCKS

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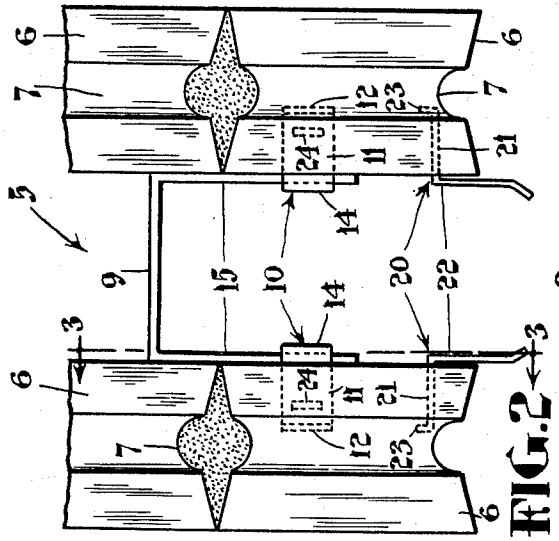


FIG. 2

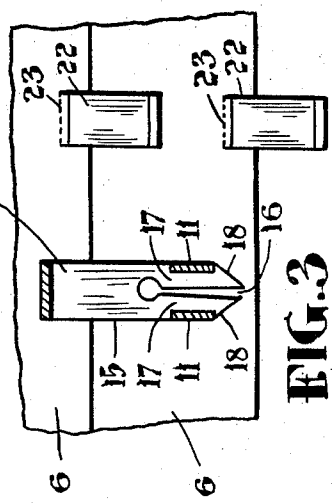


FIG. 3

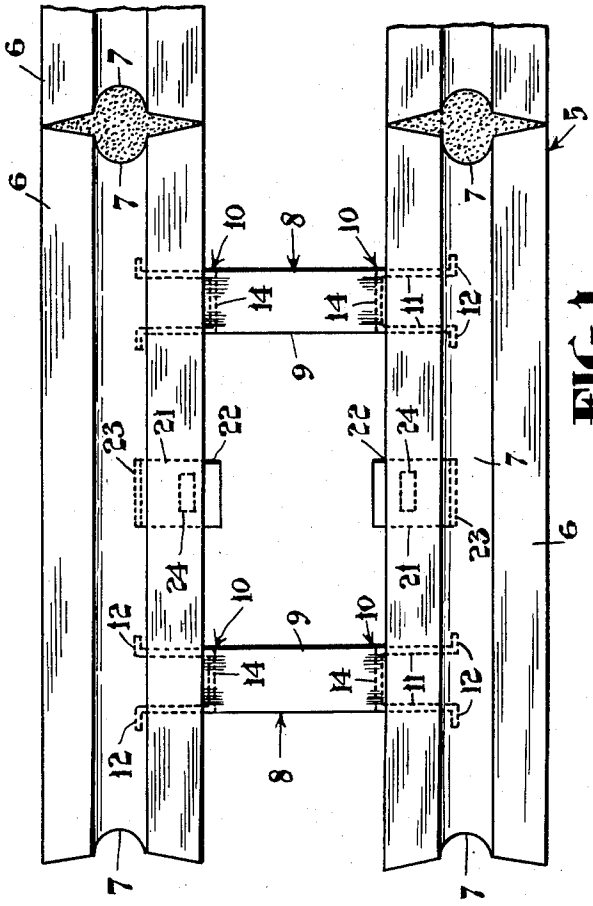


FIG. 1

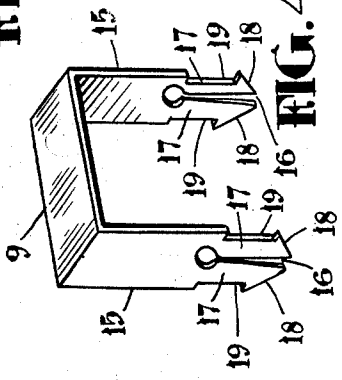


FIG. 4

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WALL STRUCTURE OF SPACED BLOCKS

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1 Claim. (Cl. 72—44)

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This invention relates to wall structures comprising inner and outer walls separated by an intervening air space and has particular reference to wall structures of this type in which the inner and outer walls are composed of superimposed courses of prefabricated concrete or cement blocks laid in courses.

An important feature of the invention consists in the provision of novel wall-spacing and bracing means interconnecting opposing blocks of the inner and outer walls and serving to maintain the desired width of air space between said walls.

Another feature of the invention consists in the provision of novel means for facilitating the accurate setting of the wall blocks of each course with reference to the underlying course.

Proceeding now to a more detailed description of the invention reference will be had to the accompanying drawings, in which—

Fig. 1 is a top plan view of a portion of the hollow wall structure showing a pair of oppositely disposed concrete blocks of the inner and outer wall sections which are separated by an intervening air space.

Fig. 2 is an end view of the hollow wall structure shown in Fig. 1.

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the U-shaped spacer strap for interconnecting opposing blocks in the inner and outer wall sections.

Referring to the drawings, the hollow wall structure, generally indicated at 5, comprises inner and outer wall sections, each composed of preformed concrete blocks 6. Blocks 6 are provided with peripheral grooves 7 about the side, top and bottom end edges in which mortar is placed to cement the blocks together in edge to edge relation to provide concealed joints. The blocks of the inner and outer wall sections are laid in spaced parallel courses, which courses are superimposed one upon the other to form the separate inner and outer wall sections.

The opposing blocks of the inner and outer walls are interconnected by wall spacing and bracing means indicated at 8. The spacing means consists of a U-shaped spacer strap 9 adapted to be fitted in U-shaped loop-forming straps 10 on the inner surface of the opposing blocks 6. The arms 11 of straps 10 are L-shaped at their free marginal ends to provide anchoring flanges 12. The arms 11 and flanges 12 are embedded in the concrete block with the marginal portions of the arms adjacent the bight projecting from the inner face of the block to provide vertically disposed spacer strap loops 14.

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Spacer straps 9 are provided with side legs 15 slotted at their free ends, as indicated at 16, to form a pair of spring extensions 17. Extensions 17 are tapered at their marginal end edges 18. Notches 19 are provided along the side edges of extensions 17 adjacent the tapered end edges 18. The side legs 15 are slightly wider than the loop 14 of strap 10 but the notched portion is substantially equal to the distance between the side arms 11 of strap 10. When side leg 15 is inserted in loop 14 the wedging action on the tapered ends 18 forces extensions 17 to close the gap provided by slot 16. The extensions then pass through the loop until notches 19 are spanned. At this point pressure is released and the extensions 17 are allowed to spring back to their normal position. Thus notches 19 serve as spring catches which hold the spacer strap 9 in clamping engagement with loop-forming straps 10.

The spacer straps 9 are arranged in the straps 10 with the upper portion of side legs 15 projecting beyond the upper edge of the blocks to which they are fitted. This projecting portion acts as a spacer guide for the bottom portion of the superimposed blocks in the next course of each wall section.

An angle iron 20 having arms 21 and 22 is fitted to the inner surface of the blocks in the lower portion thereof. Arm 21, having an anchoring flange 23 along the free marginal end edge, is embedded in the concrete block. Arm 22 extends downwardly from arm 21 to overlap the next lower block. Arm 22 serves as an alignment member for maintaining alignment of the blocks as they are superimposed one upon the other.

The spacer strap in reality serves a triple purpose. Its primary object is to provide a spacer means for the inner and outer wall sections. The side legs 15, however, being in abutting engagement with the inner surfaces of opposing blocks and being fitted in clamping engagement with loop-forming straps 10, serve as a bracing means for said blocks. Thirdly, the upper portion of legs 15, projecting beyond the top of the block, serves as a means for aligning and bracing the inner surface of the next superimposed block. Thus, while the depending alignment member 22 serves to keep the block from receding in the inner surface of the wall section, the upper portions of legs 15 serve to keep said block from protruding into the said inner surface.

The side arms 11 of straps 10 and arm 21 of alignment member 20 may be slotted, as indicated at 24, to provide a further anchoring means. The concrete which fills the slots serves

to more firmly secure the embedded arms 11 and 21 in the concrete blocks.

We claim:

A hollow wall structure comprising two vertical, spaced parallel walls, each vertical wall comprising concrete blocks laid in superimposed courses with the inner surface of each block of one wall opposing the inner surface of a corresponding block of the opposing wall, U-shaped loop members formed from flat metal plates of substantial width, bent to provide a loop bight portion, and a pair of parallel arms extending from the ends of said loop bight portion, said U-shaped loop members having their parallel arms embedded in the concrete blocks of each wall in vertically spaced parallel relation with the loop bight portion, and marginal portions of the arms adjacent the loop bight portion projecting from the inner surface of said blocks to present vertically disposed inwardly projecting retaining loops of substantial vertical depth in opposed relationship on the inner surface of the corresponding blocks of said opposing walls and removable U-shaped spacer straps interconnecting the corresponding blocks of opposing walls in spaced relation to one another, each of said spacer straps being formed from a flat metal plate of substantial width bent to provide a spacer strap bight portion, and parallel side leg members at opposite ends of the spacer strap bight portion, said leg members being slotted at their free ends and notched along their side edges

providing spring catches engaging with the projecting marginal portions of the arms of said U-shaped loop members adjacent the loop bight portion, the upper edge of said U-shaped loop members being spaced below the upper edge of its block a distance less than the length of said leg member projecting above the notches therein, whereby an upper portion of said leg members extends above the upper edge of its block and between the inner surfaces of the corresponding blocks of the next course of each opposing wall with portions intermediate the length of the last mentioned blocks freely butted against said upper portion of said leg members.

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