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CEMENT BLOCK CAP PLATE CONSTRUCTION

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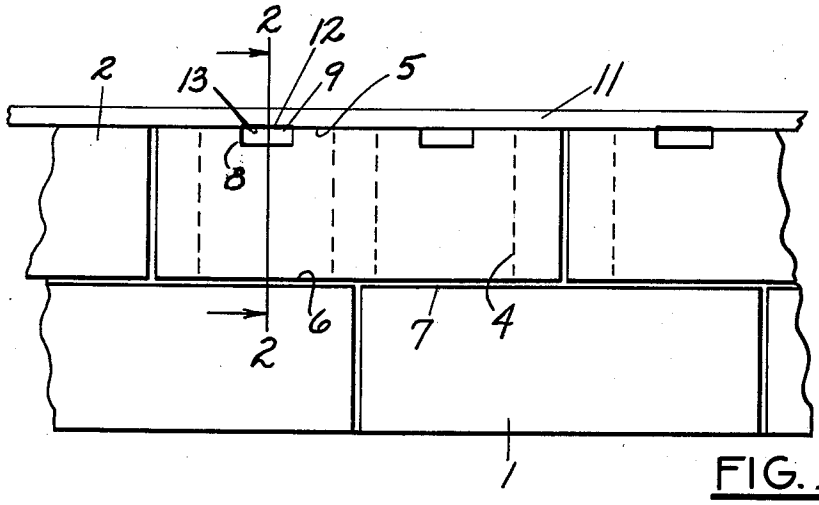


FIG. 1

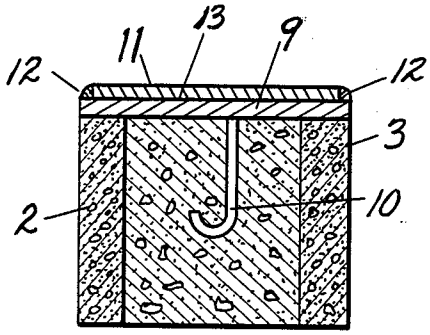


FIG. 2

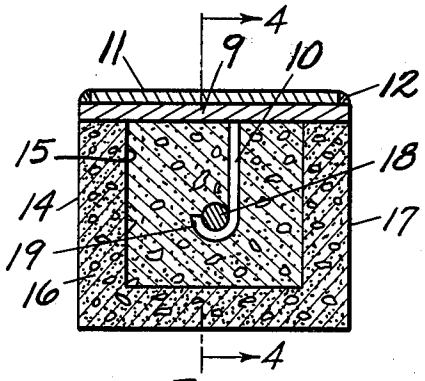


FIG. 3

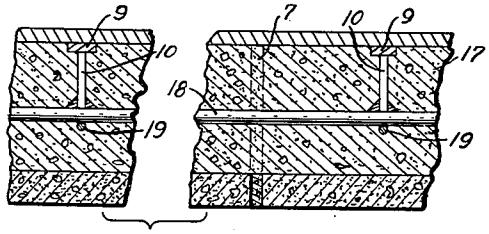


FIG. 4

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CEMENT BLOCK CAP PLATE CONSTRUCTION

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This invention is a cement block wall construction having a cap plate of variable length to which structural steel roof deck, beams, joists and the like may be welded in the field. The cap plate is anchored to underlying bridge members which are set in notches on opposite sides of the cores after laying the block side walls. The bridge members have anchor sections within the block cores. The entire upper surface of the cap plate is free to receive roof deck or other structural members. Since the cap plate does not have to be prepared to fit any particular steel structure, the wall can be completed in advance of coordination of the structural steel.

In the drawing, FIG. 1 is a side view of a cement block with a cap plate mounted thereon; FIG. 2 is a section on line 2—2 of FIG. 1; FIG. 3 is a similar section of a modification; and FIG. 4 is a section on line 4—4 of FIG. 3.

In the drawing, FIG. 1 is a fragmentary view of the top edge of a wall constructed of cement blocks 1 having front and back side walls 2 and 3 between which are located a plurality of vertical cores 4 each extending vertically through the block from the top surface 5 to the bottom surface 6. The blocks are of common construction and are shown laid with conventional mortar joints 7.

In the top course of blocks, the side walls 2 and 3 have opposed notches 8 receiving opposite ends of bridging members 9 which extend across the core openings 4. The width of the bridging members 9 is less than the width of the core openings so that there is ample space on one or on both sides of each bridging member for filling the core openings with cement which flows around anchors 10 fixed to the under side of the bridging members. In the top course of block, the core openings 4 are usually filled with cement after laying in order to increase the load bearing rating. The bridging members 9 offer substantially no obstruction to this core filling operation. After the cores are filled, a steel cap plate 11 is laid along the top surface of the blocks and is fixed to opposite ends of each bridging member 9 by welds 12. The cap plate 11 is preferably narrower than the width of the blocks so as to provide adequate space for the welds 12. The top surfaces 13 of the bridging members are substantially flush with the upper edges 5 of the blocks. The bridging members can be located along the upper edge of the wall at any desired spacing. Although two pairs of notches 8 are shown in the block illustrated in FIG. 1, it should be understood that both pairs of notches need not be used. The presence of additional notches permits a variety of spacings of the bridging members to accommodate various load requirements.

Since the surface of the cap plate 11 is free from obstruction, roof deck, joists, beams, or other structural steel members can be supported on the top plate on any desired spacing. This means that the block contractor can complete the wall with the installation of the cap plate prior to coordination of the structural steel. This results in a substantial saving of time and money in construction. If the block contractor had to delay completion of the top course of the wall and the installation of the cap plate until after the structural steel had been coordinated, not only would there be the added expense in time of moving men back onto the job but there would be the further risk of time lost due to weather conditions. By being able to carry the wall through to completion, these time consuming delays are avoided. The cost of field fabricating a cap plate with anchors spaced to correspond with the as laid block cores is eliminated.

In FIG. 3 is shown another wall construction in which the top course is of cement blocks 14 of U-shaped cross section with a single core 15 running from end to end between front and back walls 16 and 17. At the upper edge of the block the walls 16 and 17 have aligned pairs of notches 8 for receiving bridging members 9 with the anchors 10 depending into the core 15. Because the core 15 runs continuously throughout the length of the top course, it is possible to have a continuous length of reinforcing rod 18 welded to the hook ends 19 of the anchors 10. The bridging members 9 can be mounted in the blocks on any desired spacing and the reinforcing rod 18 welded to the anchors 10 while the core openings 15 are open at the top. The core openings are then filled with cement flush with the upper edges of the blocks and the cap plate 11 is mounted on the bridging members and secured thereto by welds 12.

Except for the notches 8, the blocks illustrated are standard blocks which can be handled and laid in the usual manner. Since the notches 8 are at the top surfaces of the blocks, they can be molded with the same molds used for conventional blocks by the addition of notch forming inserts.

What is claimed as new is:

1. A wall construction having a top course of cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, said front and back walls having a pair of opposed notches in the upper edges, opening into the core opening, a plurality of metal bridge members spaced along the wall and each seated in a pair of said notches with its upper surface substantially flush with the upper edges of said front and back walls of an individual cement block and with a metal anchor section fixed to and depending from the bridge member within the core opening, anchoring material in the core opening set around the anchor section of the bridge members, and a metal cap plate resting on the upper surface of a plurality of bridge members and welded to the ends of the bridge members.

2. A wall construction having a top course of cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, a metal bridge member with its upper surface substantially flush with the upper edge of said front and back walls and with a metal anchor section fixed to and depending from the bridge member within the core opening, the front and back walls having recesses receiving the bridge member, anchoring material in the core opening set around the anchor section of the bridge member, and a metal cap plate resting on the upper surface of a plurality of bridge members and welded to the ends of the bridge members.

3. A wall construction having a top course of cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, a series of the blocks having cores in end to end relation, said front and back walls having a pair of opposed notches in the upper edges, a plurality of metal bridge members spaced along said series of blocks each seated in a pair of notches with its upper surface substantially flush with the upper edges of said front and back walls of an individual cement block and with a metal anchor section fixed to and depending from the bridge member within the core opening, a length of reinforcing rod welded to the anchor sections of a plurality of bridge members, anchoring material in the core opening set around the anchor section of the bridge members and said reinforcing

rod, and a metal cap plate resting on the upper surfaces of a plurality of bridge members and welded to the ends of the bridge members.

4. A wall construction having a top course of cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, a series of the blocks having cores in end to end relation, a plurality of metal bridge members spaced along said series of blocks each with its upper surface substantially flush with the upper edge of the wall and with a metal anchor section fixed to and depending from the bridge member within the core opening, a length of reinforcing rod within the cores and welded to the anchor sections of a plurality of bridge members, anchoring material in the core opening set around the anchor sections of the bridge members and the reinforcing rod, and a metal cap plate resting on a plurality of bridge members and welded to the ends of the bridge members.

5. A wall construction having cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, said front and back walls having a pair of opposed notches in the upper edges opening into the core opening, a plurality of metal bridge members spaced along the wall and each seated in a pair of said notches with its upper surface substantially flush with the upper edges of said front and back walls of an individual cement block and with a metal anchor section fixed to and depending from the bridge member within the core opening, anchoring material in the core opening set around the anchor section of the bridge members, and a metal plate extending between and welded to the ends of at least two bridge members.

6. A wall construction having cement blocks each having front and back walls and at least one integral wall connecting the front and back walls and cooperating with the front and back walls to define an upwardly presented core opening therebetween, said front and back walls having opposed recesses in the upper edges with supporting shoulders below the respective upper edges of the front and back walls, a plurality of transverse metal bridge members spaced along the wall and each having opposite ends seated on the supporting shoulders of said recesses with its upper surface substantially flush with the upper edges of said front and back walls of an individual cement block and with a metal anchor section fixed to and depending from the bridge member within the core opening, anchoring material in the core opening set around the anchor section of the bridge members, and a metal plate extending between and welded to the ends of at least two bridge members.

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