My invention relates to a concrete block construction with a compartment having a knock-out panel. It has to do, more particularly, with a concrete block construction which is provided with a pocket or compartment for receiving various standard electrical devices and having a knock-out panel at the outer wall or face thereof.

At the present time, it is common practice in connection with concrete block walls, to cut a hole with a chisel, or the like, in the face of the block in order to provide a pocket for receiving standard electrical boxes designed to mount electrical outlets, switches, or the like. It is generally difficult to accurately locate these holes in the face of the block, especially to locate them relative to the cell dividers in the block, and to form the holes of accurate size to receive standard metal boxes. Quite often the block cells are filled with mortar or other material which is dropped therein during building of the wall and this material makes it difficult to insert the metal box in the pocket with its outer edge flush with the face of the wall so that usually it must be thoroughly removed from the cells before insertion of the box. Furthermore, it is difficult to form a neat edge around the hole with a chisel. In modern day practice of using the inner face of the block wall as the finished wall, it is especially important to provide a neat hole at the face of the block for receiving any electrical device.

It is the main object of my invention to provide a concrete block construction which is provided with a pocket or compartment formed therein for receiving various electrical devices or the like, the front or face of this compartment being formed by a wall including a knock-out panel which can be removed easily and accurately to provide a neat opening at the front side of the compartment for receiving various electrical devices.

Another object of my invention is to provide a knock-out panel at the front of the compartment which is so designed and arranged relative to the compartment that holes of one standard height but of various selected standard widths may be easily and neatly produced in the face of the block.

Another object of my invention is to provide a concrete block of the type indicated with a compartment formed therein which is closed at its top end to prevent the dropping thereinto of mortar or other debris during construction of the wall but which is open at its lower end to facilitate the entrance of electric conduit or wires into the compartment.

Various other objects will be apparent.

In the accompanying drawings, I have illustrated one form of my invention, but it is to be understood that specific details thereof may be varied without departing from the basic concept of this invention.

In these drawings:

Figure 1 is a plan view of a wall constructed of concrete blocks, some of the blocks being provided with the compartments and associated knock-out panels according to my invention.

Figure 2 is a face view of the wall of Figure 1 indicating the knock-out panels.

Figure 3 is an enlarged plan view of one of the blocks with a portion of the knock-out panel removed, the block being an intermediate block.

Figure 4 is a face view of the block of Figure 3 showing the hole therein formed by knocking-out part of the face panel.

Figure 5 is an enlarged end view of the block, with the panel intact.

Figure 6 is an enlarged horizontal sectional view taken along line 6—6 of Figure 7 through the block.

Figure 7 is a face view of the block of Figure 6.

Figure 8 is a vertical sectional view taken along line 8—8 of Figure 7.

With reference to the drawings, in Figures 1 and 2 I have illustrated my invention incorporated in a wall structure composed of concrete blocks which are substantially T-shaped in horizontal cross section. These blocks are formed with the usual air cells or voids which extend completely vertically therethrough. The blocks used in the wall will include intermediate blocks 10a, corner blocks 10b, and end or window blocks 10c. Certain of the blocks used in the wall will be provided with the receptacle compartment and associated knock-out panel according to my invention. Thus, in Figures 1 and 2 I have illustrated at least one corner block, one intermediate block, and one end block provided with a compartment 12 in accordance with my invention. It is to be understood, however, that my invention is not necessarily limited to the T-block construction shown in the drawings but is capable of use in blocks of other forms. The arrangement of the compartment 12 and associated knock-out panel will be described with reference to an intermediate block which is illustrated in Figures 3 to 8, inclusive.

In the intermediate block 10a, the receptacle compartment 12 is formed at the face of the narrow intermediate leg of the block but it is not limited to this location and may be formed at any face of any block. The compartment 12 is formed in the outer or face wall 13 (Figure 6) and is of predetermined depth. It is provided with a back wall 14 which separates it from the adjacent vertical cell 11. The face or outer wall 13 includes a knock-out panel arrangement 15 and the top of the compartment is closed by a horizontal wall 16 which will also serve as a mortar-receiving surface. The lower end of the compartment 12 is completely open, as indicated at 17.

The knock-out panel 15 is of standard height, the height being determined by transverse or horizontal severance lines 18 which are shown as being in the form of grooves in the outer face of the wall 13. These grooves extend the complete width of the knock-out panel which is the complete width of the compartment 12. The pair of grooves 18 will be spaced apart vertically the standard distance of electrical receptacle boxes. A plurality of vertically disposed laterally spaced severance lines are formed at corners 19 on the inner surface of the wall 13. These corners provide a plurality of severance lines at each side of the panel, one line at each side corresponding with the associated side of the compartment 12. Thus, it will be apparent that at each side of the panel there are three vertically disposed severance lines. Furthermore, it will be apparent that the knock-out panel is of gradually increasing thickness outwardly so that the inner thinner portions can be severed from the rest of the panel without tending to break it at the severance lines 19 further outwardly. The severance lines 19 provide for openings of varying widths which should be of standard widths as compared to the ordinary metal box receptacles.
It will be apparent that with this arrangement the knock-out panel 15 can be easily knocked out at any selected vertical severance line 19 and the horizontal severance line 18. This will provide a standard size opening or pocket 20 for receiving electrical devices of standard type. A metal mounting frame, not shown, may be provided in the opening 20 or other suitable mounting means for receiving the electrical outlet switch or other similar device may be provided. The upper end of each compartment will be closed by the wall 16 which will prevent mortar and other materials from dropping into the compartment during building of the wall, and after completion will also serve to prevent the collection of materials therein and protect the electrical device to a considerable extent from moisture. The wires or conduit may be passed into the compartment 12 in various ways. For example, the wires may run upwardly or downwardly through the aligning front cells 11 of the completed wall and be fished out into the compartment 12 through a notch, which may be easily formed in the free lower edge of the back wall 14 of the compartment. The fact that the lower end of the compartment 12 is open and, therefore, the lower edge of the wall 14 is free, facilitates notching of the lower edge of this wall after the knock-out panel 15 is removed.

It will be apparent from the above description that I have provided a concrete block construction which has a compartment formed therein for receiving various electrical devices so as to eliminate the need of actual metal boxes. The compartment is provided with a knock-out panel which can be removed easily and accurately to provide a neat opening at the front side of the compartment or face of the wall. The knock-out panel is designed so that openings of one standard height but of various selected standard widths may be easily and neatly produced in the face of the block. The compartment is closed at its top to prevent filling thereof with mortar or other material and to protect the electrical device disposed therein and is open at its lower end to facilitate the passage of electric conduit or wires.

Many other advantages will be apparent.

According to the provisions of the patent statutes, the principles of this invention have been explained and have been illustrated and described in what is now considered to represent the best embodiment. However, it is to be understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

Having thus described my invention, what I claim is:

1. A building block comprising a body having a face wall, a receptacle compartment formed directly behind the face wall for receiving various devices, such as electrical devices, said compartment being closed at its upper end so that mortar or other material will not drop thereinto as the block is incorporated in a wall, said compartment being open at its lower end and having its outer wall formed by the face wall of the block, and a knock-out panel formed in said face wall and coinciding with said compartment.

2. A building block according to claim 1 in which a cell is formed in the block behind the compartment with the rear wall of the compartment also forming the wall of the cell.

3. A building block according to claim 1 in which the knock-out panel is defined by severance lines in the face wall of the block.

4. A building block according to claim 3 in which the severance lines comprise a pair of horizontal vertically spaced lines and a plurality of vertical horizontally spaced lines.

5. A building block according to claim 4 in which the horizontal severance lines are grooves in the outer surface of the face wall and the vertical lines are spaced shoulders at the inner surface of the face wall.

6. A building block according to claim 5 in which the vertical shoulders are arranged in groups at each side which are progressively stepped inwardly so that the panel is of progressively increasing thickness toward the sides thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Inventor(s)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>594,998</td>
<td>Lyle</td>
<td>Dec. 7, 1897</td>
</tr>
<tr>
<td>716,643</td>
<td>Miller</td>
<td>Dec. 23, 1902</td>
</tr>
<tr>
<td>1,374,955</td>
<td>Schenk</td>
<td>Apr. 19, 1921</td>
</tr>
<tr>
<td>1,748,498</td>
<td>Selah</td>
<td>Feb. 25, 1930</td>
</tr>
<tr>
<td>2,781,657</td>
<td>Taylor</td>
<td>Feb. 19, 1957</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,025,607</td>
<td>France</td>
<td>of 1953</td>
</tr>
</tbody>
</table>