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E. L. SHEPPARD
BUILDING CONSTRUCTION
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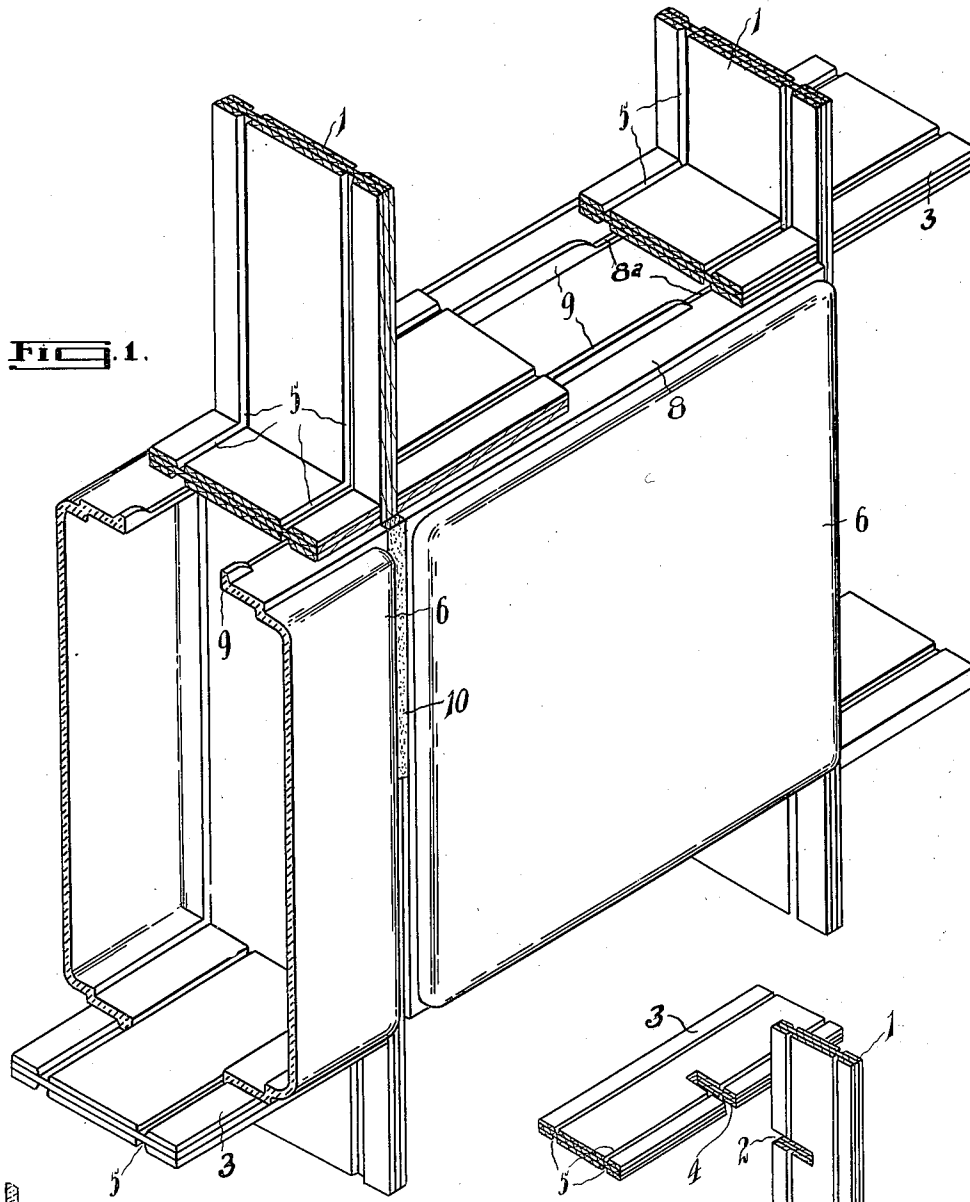


FIG. 1.

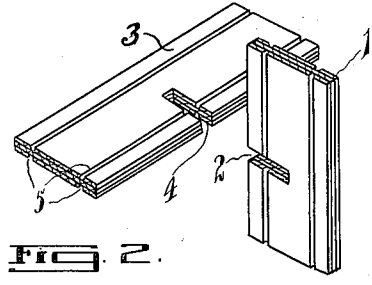


FIG. 2.

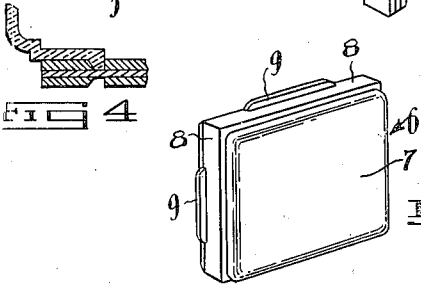


FIG. 3.

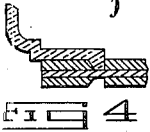


FIG. 4.

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BUILDING CONSTRUCTION

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4 Claims. (Cl. 20-4)

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This invention pertains to building constructions, and more particularly to a new and improved form of wall construction therefor.

Wall structures of the character referred to herein have been constructed by first erecting a supporting frame work of steel or other metals in the nature of a grid or lattice, and members in the nature of tiles are secured to the frame work to provide the wall surface. The present invention contemplates constructing an egg-crate type of wall structure formed of interlocking plywood strips which provide a plurality of frame members. In each frame member is inserted a substantially pan-shaped facing member, the assembled structure giving the appearance of a tile wall or of a glass brick wall.

It is an object of the present invention to provide a new and improved form of facing member that can be inserted into the frame member by unskilled labourers without the use of special tools, and whereby the necessity of using cementitious material to integrate the structure is entirely avoided.

Another object of the present invention is to provide an inexpensive and practical form of simulated tile or glass wall construction, which in the latter case may be employed for transmitting light therethrough.

A further object of the invention is to produce a simulated hollow glass or tile structure which may be opaque, translucent, or transparent, and which embodies inside and outside facing members or lenses that may be quickly and easily removed from their frames and replaced in case of breakage without the necessity of removing considerable portions of the structure.

A still further object of the invention is to produce a so-called tile or glass structure that embodies removable and replaceable facing members of various colours, so that a wall may be built up either by the use of a single colour or alternate colours or combinations thereof to produce an artistic and pleasing effect.

The facing members may be made of a suitable opaque plastic or synthetic resin, or of moulded rubber, or of formed sheet metal, so as to present the appearance of solid bricks. Moreover, they may also be made of transparent or translucent plastic so as to present the appearance of glass blocks. Walls made therewith are however considerably less expensive to manufacture and assemble than walls made of tile or glass blocks.

All of the foregoing and still further objects and advantages of the invention will become

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apparent from a study of the following specification, taken in conjunction with the accompanying drawings, wherein like characters of reference indicate corresponding parts throughout the several views and wherein:

Fig. 1 is a perspective view, partly in section, of a portion of a wall constructed in accordance with this invention;

Fig. 2 is a fragmentary perspective view of a horizontal and of a vertical frame member illustrating the construction which provides for interlocking these members;

Fig. 3 is a perspective view, on a reduced scale, of a facing member; and Fig. 4 is an enlarged fragmentary transverse sectional view of a joint between the facing member and the frame member.

The frame structure comprises a plurality of parallel vertical strips 1, preferably made of plywood, which are provided with equidistantly spaced slots 2 which extend half way across the depth of said strips and are of a width equal to the thickness of the said strips; similar horizontal strips 3 provided with slots 4 which interlock with the slots 2 of the vertical strips complete the frame structure. On each surface of strips 1 and 3 and adjacent each edge are provided parallel grooves or recesses 5; it should be noted that the side of the grooves closest to the edges of the strips are slightly bevelled, whereas the other side of said grooves is substantially perpendicular to the face of the strips.

Any suitable number of vertical and horizontal strips may be arranged so as to form a wall or a portion of a wall of any desired size.

A facing member 6 which is particularly illustrated in Fig. 3 is preferably pan-shaped. It comprises a substantially planar body portion 7 and yieldable flange portions 8 extending perpendicular to and around the body portion. Adjacent the edge of each flange portion is a ridge or projection 9 which is of a length equal to approximately one half of the length of the flange portion, and the two ends thereof are equidistantly spaced from the respective ends of the said flange portion. It should be noted that the ends of the ridges are curved to meet with the surface of the flange portion. The parts of the edges of the flange portions over which the ridges do not extend is bevelled as shown at 8a.

To construct a wall partition, the vertical and the horizontal plywood strips are assembled to form an egg-crate structure, the top and bottom ends thereof being suitably tied in say to the ceiling and to the floor, whereas the ends

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of the horizontal slats are suitably secured to adjacent walls, corner posts, or door jambs as may be required. The facing members are then fitted into the quadrilateral frame member as better illustrated in Fig. 1.

To insert a facing member into a frame member, the workman with his hands or possibly with a suitable tool, compresses toward each other the opposite flange portions of the facing member to such an extent that the ridges 9 will clear the edges of the frame member. It is obvious that if the ridges extended to the full length of the flange portions, it would be impossible for a workman to deflect the said flange portions at the corners to permit the insertion of the facing member into the frame member, and it is to overcome this problem that the ridges do not extend to the full length of the said flange portions. Since the flange portions are yieldable, it is a simple matter to bend the central parts thereof to an extent sufficient to clear the frame member for installation purposes. Moreover, the bevel of the edges of the flange portions adjacent the corners facilitates the insertion of the facing members into the frame members.

When the facing members are inserted to the proper depth in the frame members, the deflected flange portions will spring outwards, and the ridges will engage in the grooves 5 of the frame members, as better illustrated in the lower left hand corner of Fig. 1. It has been pointed out above that the outer edges of the grooves or recesses in the frame are bevelled. It will be observed that the outer sides of the ridges or projections on the flanges of the facing members are sloped to co-operate with the bevelled edges of the recesses, whereas the inner edges of the projections are substantially perpendicular so that they engage the inner perpendicular edges of the recesses, so that the facing members may be inserted in the frame a predetermined distance only, but can be removed without destroying the facing member or the frame.

While a structure having facing members on one side only may under certain circumstances be quite suitable, in the preferred embodiment of this invention the facing members are provided on both sides of the partition as illustrated. Thus, the wall structure actually becomes a plurality of hollow chambers or dead air spaces which, as is well known in the art, provide very good insulation. To the uninformed observer, the wall depending on whether the facing members are opaque or translucent, appear to be made of tile or of glass bricks. This construction however, is relatively inexpensive compared to real tile or glass brick walls.

In order to effectively seal the joints between the facing members and the frame members, suitable mastic composition may be applied on the edges of the frame members between adjacent facing members, as shown at 10 in Fig. 1. This may be particularly desirable when the structure is to form part of an outside wall. Moreover, apart from its utilitarian value in effectively sealing the dead air spaces, the wall thereby has an even closer resemblance to a real glass brick or tile wall.

In view of the fact that the facing members can be easily removed, it is a simple matter to substitute a new facing member for one that has become cracked or broken. Moreover, if desired, electric lights may be placed inside each dead air space, to provide an illuminated wall partition which under certain circumstances may give an

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effective artistic appearance. Such a structure would be particularly useful in interior rooms having no outside window.

In view of the fact that the vertical strips 1 interlock with the horizontal strips 3 and moreover since the ridges 9 of the facing members engage with the grooves 5 in the strips, the structure once assembled is very strong and rigid, without the necessity of nailing the interlocking frame members to each other.

It is thought that the construction and use of the invention will be apparent from the above description of the various parts and their purpose. It is to be understood that the form of my invention herewith shown and described, is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of my invention or the scope of the subjoined claims.

What I claim as my invention is:

1. A building construction comprising a plurality of spaced strips, each strip having a plurality of substantially equi-spaced slots extending substantially half-way through the strips, and said strips being interlocked to form a frame structure having a plurality of rectangular cells open at each side of the structure, and a plurality of rectangular pan-like facing members, each closing a side of a cell, each said facing member being provided with continuous integral yieldable flanges extending at substantially right angles to said facing member, the flanges fitting into the frame structure and the outer surfaces of the flanges and the inner faces of the cells of the frame structure having co-operating projections and recesses, said projections engaging said recesses to frictionally retain the facing members in the cells with the outer face of said facing members extending between the outer edges of the cell, the facing members serving to lock the strips together and provide a rigid frame structure without other means for securing them together, the outer edges of the recesses being bevelled and the inner edges substantially perpendicular, and the outer edges of the projections being sloped outwardly and the inner edges of the projections being substantially perpendicular, so that the facing members may be snapped into the open sides of the cells a predetermined distance only and will be held frictionally therein, but can be removed without destroying the facing member or the frame structure.

2. A building construction comprising a frame structure having a plurality of rectangular cells open at each side of the structure, and a plurality of rectangular pan-like facing members, each closing a side of a cell, each said facing member comprising a substantially planar body portion and continuous integral yieldable flanges extending generally perpendicular to and around the body portion, the flanges fitting into the frame structure, and the outer surfaces of the flanges adjacent their edges and the inner faces of the cells of the frame structure having co-operating projections and recesses, said projections engaging said recesses to frictionally retain the facing members in the cells with the body portions extending between the outer edges of the cells.

3. A building construction comprising a frame structure having a plurality of rectangular cells open at each side of the structure, and a plurality of rectangular pan-like facing members, each closing a side of a cell, each said facing member

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comprising a substantially planar body portion and continuous integral yieldable flanges extending generally perpendicular to and around the body portion, the flanges fitting into the frame structure, the outer surfaces of the flanges having outwardly extending projections adjacent their edges, the ends of the projections being spaced from the ends of the flange portions, and the inner faces of the cells of the frame structure having co-operating recesses, said projections engaging said recesses to frictionally retain the facing members in the cells with the body portions extending between the outer edges of the cells.

4. A building construction as claimed in claim 2, in which the outer edges of the recesses are bevelled and the inner edges are substantially perpendicular and the outer edges of the projections are sloped outwardly and the inner edges

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of the projections are substantially perpendicular, so that the facing members may be snapped into the open sides of the cells a predetermined distance only and will be held frictionally therein, but can be removed without destroying the facing member or the frame structure.

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10 The following references are of record in the file of this patent:

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