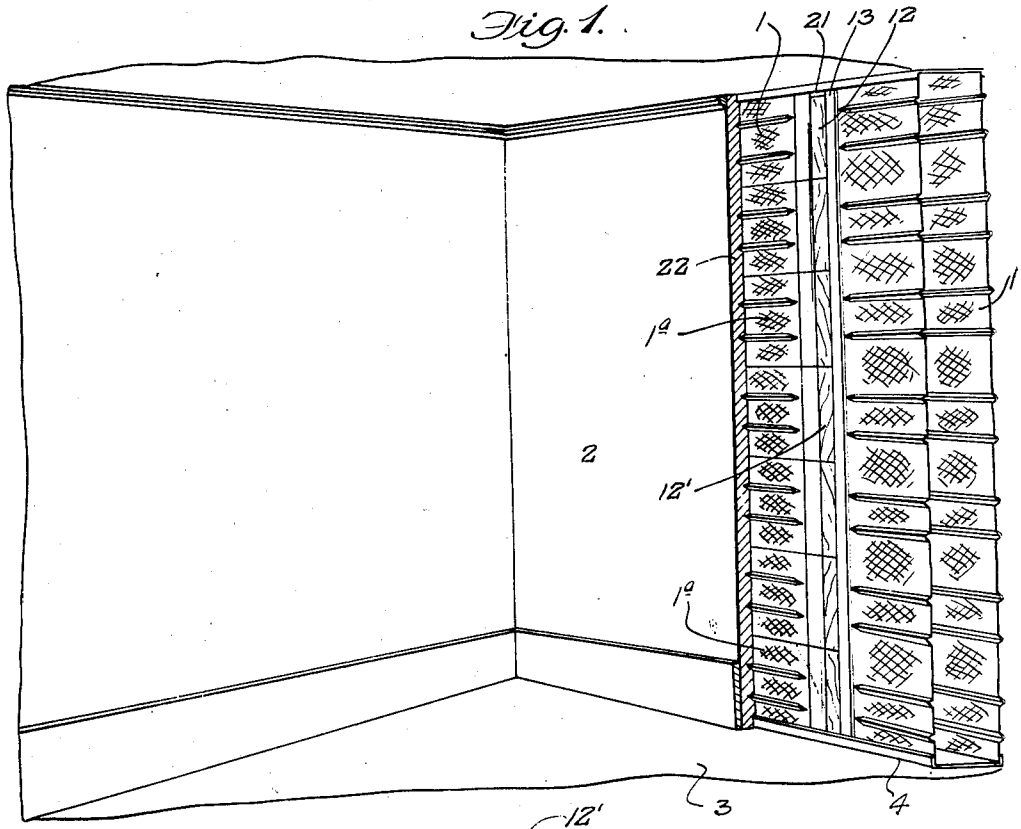
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STRUCTURAL UNIT BUILDING MEMBER

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Fig. 1.



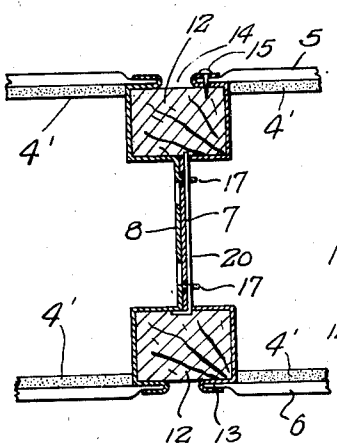


Fig. 4.

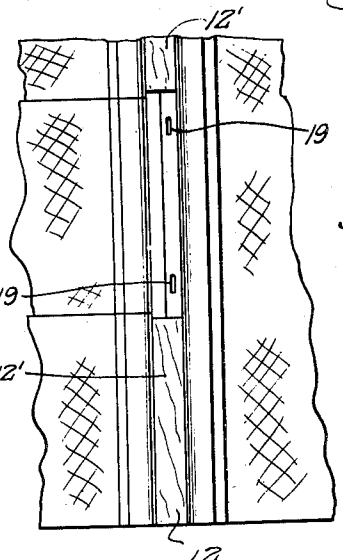


Fig. 2.

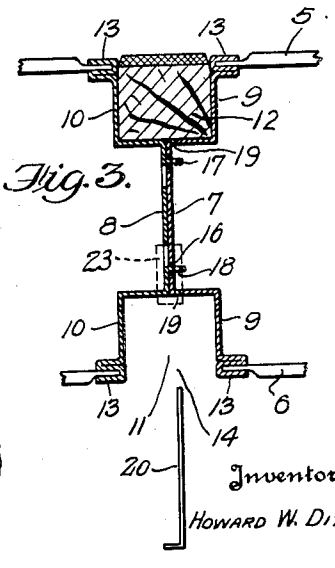


Fig. 3.

Fig 5



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FIG-6

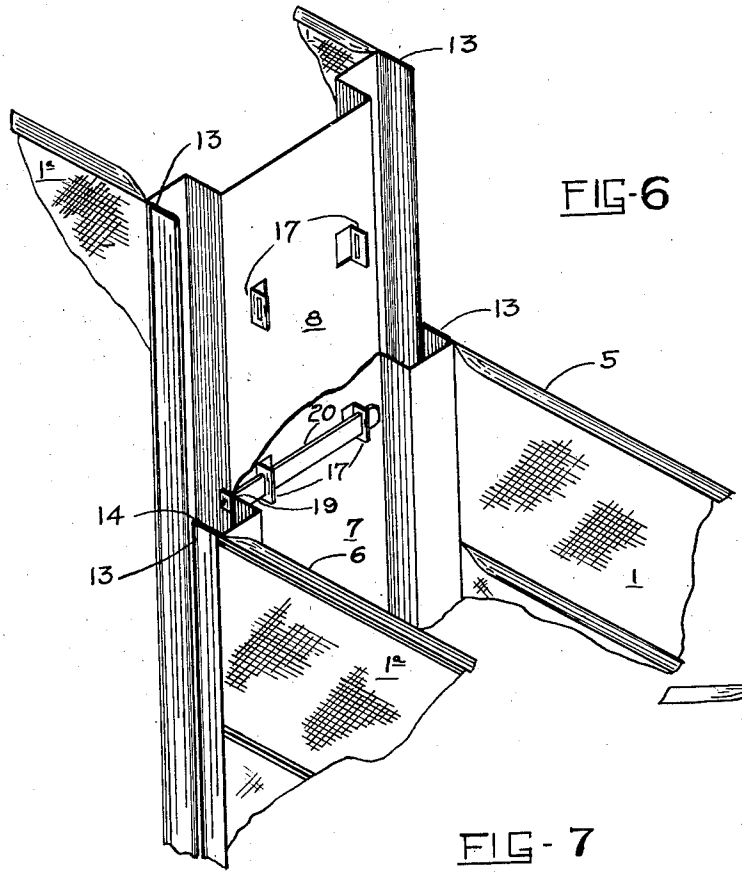


FIG-8

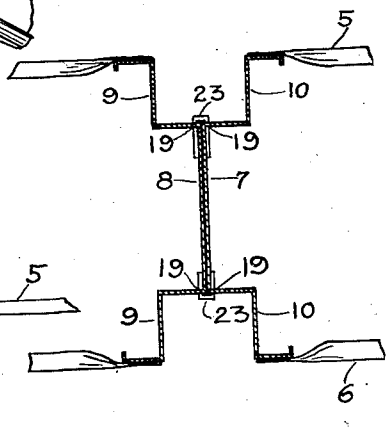
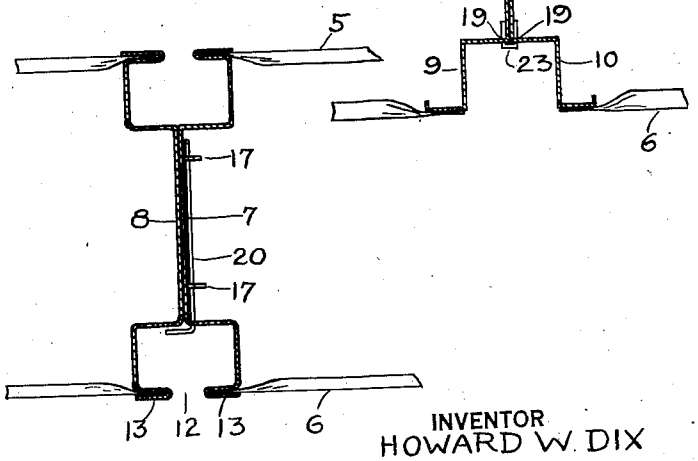


FIG-7



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UNITED STATES PATENT OFFICE

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STRUCTURAL UNIT BUILDING MEMBER

Howard W. Dix, New York, N. Y., assignor, by mesne assignments, to Ferrocon Corporation, New York, N. Y., a corporation of Delaware

Application October 28, 1933, Serial No. 695,588

6 Claims. (Cl. 72—115)

This invention relates to improvements in building constructions and more particularly to partition walls and means for securing them.

It is an object of the present invention to provide an improved locking system for abutted wall grids.

It is a further object of this invention to provide such an improved locking system with which may be incorporated unitary or segmental furring strips adapted to conceal and prevent access to the locking devices proper.

A further object of this invention is the provision of grid locking means including segmental furring pieces of wood or metal which are adapted to be disposed in their respective channels to permit locking of the grids.

These and other desirable objects and advantages of the present invention will be illustrated in the accompanying drawings and described in the specification, certain preferred embodiments being shown by way of example only, for, since the underlying principles may be incorporated in other specific structures, it is not intended to be limited to the ones here shown, except as such limitations are clearly imposed by the appended claims.

In the drawings like numerals refer to similar parts throughout the several views, of which

Fig. 1 is a perspective view of a wall construction with the plastic coat removed and some grids shown in vertical section;

Fig. 2 is an elevation of a pair of abutting grids;

Fig. 3 is a horizontal cross section taken through a pair of abutting grids and showing the locking means out of position;

Fig. 4 is a view similar to Fig. 3 showing the locking means in position and furring strips in their respective channels;

Fig. 5 is a plan view of a double gripping pin member;

Fig. 6 is an elevation partly in broken section of abutted wall members showing the method of joining and locking the structural units together;

Fig. 7 is a horizontal section of a pair of abutted grids showing pin locking means in position, and

Fig. 8 is a view similar to Fig. 7 showing the clip locking means of Fig. 5 in position in place of locking pins.

Referring now to the drawings there is shown in Fig. 1 a wall construction comprising a plurality of grids, 1, in abutting relation and coated with a suitable plastic coating, 2. The grids may be laid directly on a floor 3 or inserted in channel members 4, which, in turn, may be secured to the floor and/or the ceiling in any desired manner. A felt liner or other sound and vibration deadening material may be interposed between the grids and the floor and ceiling, as indicated generally at 4'. The grids may comprise parallel walls 5, 6, secured to end members 7, 8, as by crimping. The end members, 7, 8, comprise central portions adapted to abut against each other and lateral portions 9, 10, forming channels, 11, adapted to receive furring strips, 12, whose function will be adverted to more in detail hereinafter. It will be noted that the channel members 9, 10, are provided with edge gripping or securing members 13, which are so configured as to provide an aperture 14, between the respectively abutted members, thus permitting access to the furring pieces, 12. To secure the members 12 in position when the assembly is completed the members 13 may be tapped or drilled and nails or screws 15 forced through the aperture into the furring strip.

The members 7, 8, as above intimated, are provided with interlocking means comprising slots 16 and tongues 17. The latter are provided further with transverse slots 18 in alignment with similar slots 19, formed in the channel members 9. When grid sections are abutted so that the tongues 17 are in engagement with the apertures 16 and slots 18, 19, are in alignment, a key 20 may be driven through the slots 18 and 19, thus providing a positive lock for the abutted members. While the tongues 17 have been shown as provided with slots 18 it will of course be appreciated that the same function will be subserved by notching the tongues instead of providing apertures therethrough.

As before intimated, the locking means is adapted to be held in position, and access thereto prevented, by means of the furring strips 12. These members extend substantially the length of the channels 11 and are preferably formed of a plurality of segments 12', for a purpose now to be described. The furring strip 12 may be made of an overall length one or two inches shorter than the height of the grid assembly, this difference being indicated by a space which is designated generally by the numeral 21. In assembling the walls or partitions the grid members are abutted with the furring strips set in place in the channels 11. An appropriate number of grid elements are suitably positioned and locked together. This latter operation involves displacement of the segments 12' of the furring strips to expose a portion of the channel 11, certain of the apertures 19 being uncovered at such points. With the furring strip segments tem-

porarily displaced, a key member 20 may be passed through the apertures 18, 19, thus locking abutting grids together. After the key 20 has been driven home the furring strip segments may be allowed to slide in place, covering the key and preventing access thereto. Any number of furring strips may be used and a corresponding number of keys 20 inserted through appropriate locking apertures.

For some purposes the wall members may be held together by means of clips 23 of generally U-shape which are adapted to secure the abutting grid members 7 and 8 together, as shown more particularly in Figs. 8 and 3. These members 23 may be used by themselves, being fitted into suitable slots 19 in the several members. This type of construction is advantageously used in center wall partition work. The usual furring strips may be fitted in position as noted herein.

As noted above the furring strips may be secured in place by the use of screws or nails 15, passing through the flanges 13 of the end members. The furring strips subserve their usual function in the wall assembly or construction and serve as supports for pictures, picture moulding and the like. A coating of suitable plastic 22 may be applied over the surfaces of the grids when the assembly is completed. Where panel work is to be formed in the walls, suitable panel strips may be nailed or otherwise secured to the furring strips.

While segmental wooden furring strips have been discussed, it will also be appreciated that such members may be made of metal tubing of appropriate configuration, the necessary attachment of wooden ornamental strips, and its positioning within the channel 11 being accomplished by means of suitable screws threaded into the several parts in proper alignment.

The grids may be made in any size and height and for partition work and interior constructions where they are not required to support floor loads or act as load supporting pillars, the members 5 and 6 may be made of thin sheet metal, which may be corrugated, perforated or expanded, or the walls may comprise wooden sections such as veneer or any of the newer composite building materials such as those having cement and asbestos as components or other lighter materials such as sawdust, bagasse and other cellulose products, suitably bonded by an adhesive and sheeted in any well known manner. These various construction materials in whatever form used may be secured to the end sections as by the gripping members 13, or they may be held in place by means of screws or rivets. Where the panels are made of metal they may, of course, be secured to the end sections by means of welding, soldering, or brazing as well as by any of the well known mechanical means.

The wall grids, as stated before, may be so built as to extend the entire height of the room or they may be comprised of a plurality of segmental units of similar configuration and designated generally by the numeral 1a. The latter constructions are particularly adapted for economical use where shipment and storage charges are an appreciable factor in building costs, as with such an arrangement, a wall of any given height can be readily assembled from a number of segmental units, without requiring the maintenance of stocks of wall units of varying heights.

A distinct advantage of the present type of wall and partition construction as herein disclosed, lies in the ease with which the usual service conduits such as water, sewage and gas pipes and like conduits may be inserted into the grids, appropriate outlets being made in the grid panels where necessary.

The walls may be suitably insulated by incorporating insulating materials into the panel members proper or inserting such materials within the grid and in contact with the walls. If the material is to be used in forming the walls of refrigerators or other heat insulated rooms the members 9 and 10 could be provided with insulating inserts preventing a direct flow of heat through the conductive end members which are usually of metal.

It will now be appreciated that there has been provided a new method and means for assembling partition walls and other such sections, which means includes transverse slots and associated keys formed in respective abutting end sections of building units.

What is claimed is:

1. An improved construction unit, including, in combination, parallel wall sections, end sections bridging the wall sections, said end sections comprising a central portion and lateral channel portions, one of said central portions having vertical tongue-receiving slots, another of said central portions having outwardly extending tongues insertable in said slots, and transverse vertical slots in lateral alignment with the first said slots.

2. An end member for a wall grid comprising a central section and associated lateral channel sections integral therewith, gripping members coextensive with the edges of the lateral channels, and means in the central section adapted to engage other like sections in locking engagement, said means including aligned slots in the central and lateral channel sections each of the said aligned slots being vertically disposed and certain of the locking members having vertical key-receiving slots adapted to receive keying means and hold same against cooperating central sections.

3. An end member for a wall grid comprising a central section and associated lateral channel sections integral therewith, gripping members coextensive with the edges of the lateral channels, and means in the central section adapted to engage other like sections in locking engagement, said means including vertically disposed tongues having vertical transverse key-receiving slots therein and aligned slots in the lateral channel sections.

4. A wall construction including a plurality of abutted grids, said grids including end sections having interengaging vertical key-receiving tongues and associated vertical slots, and keys passing through certain of said slots and the tongues whereby to lock abutted grids together the said key-locking means and key-holding slots being severally vertically disposed whereby to preclude a vertical movement of the wall construction.

5. A wall construction including a plurality of abutted grids, said grids including end sections having lateral channels coextensive therewith, interengaging tongued locking means in the end sections and having transverse key-receiving slots, key-locking means in said slots, and means in said channels adapted to prevent access to said locking means the said key-locking means and key-holding slots being severally vertically disposed whereby to preclude a vertical movement of the wall construction.

6. A building construction including a plu-

rality of abutted grids, said grids including end sections having lateral channels coextensive therewith, the channels of abutting grids cooperating to form substantially hollow lateral columns having longitudinal apertures; interengaging tongued locking means in the end sections and having transverse key-receiving slots, key-locking means in said slots, and inserts in said column adapted to prevent access to said locking means the said key-locking means and key-holding slots being severally vertically disposed whereby to preclude a vertical movement of the wall construction.

HOWARD W. DIX.