Feb. 13, 1945 R. O. SHELDON 2,369,373

WALL UNIT FOR SECTIONAL BUILDINGS

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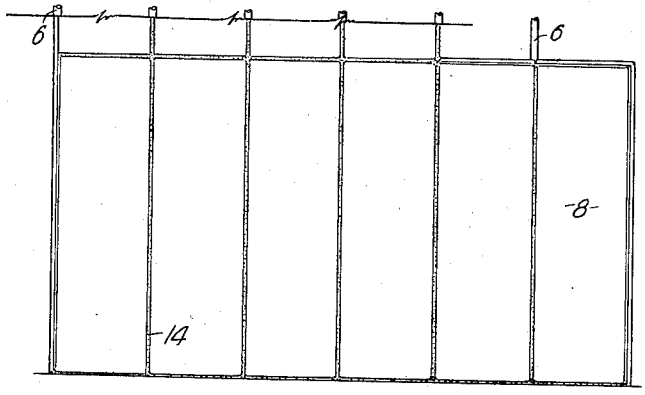
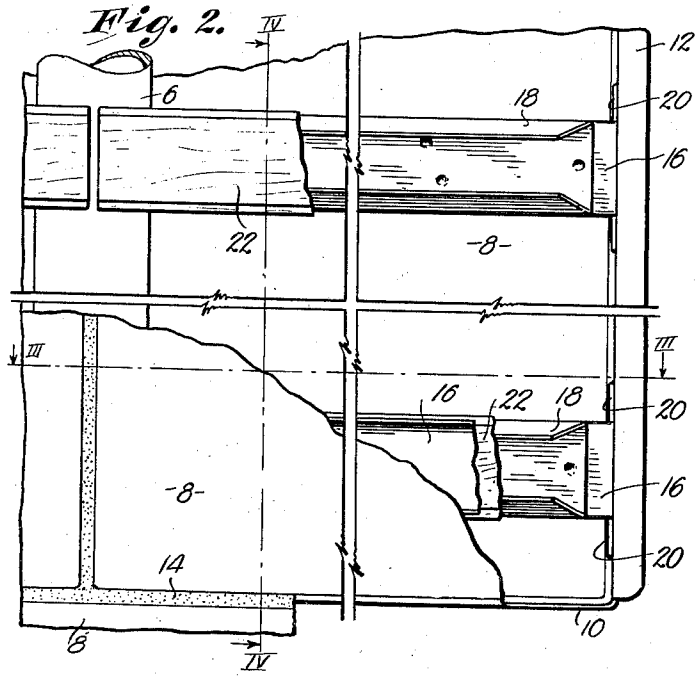


Fig. 1.

Fig. 2.



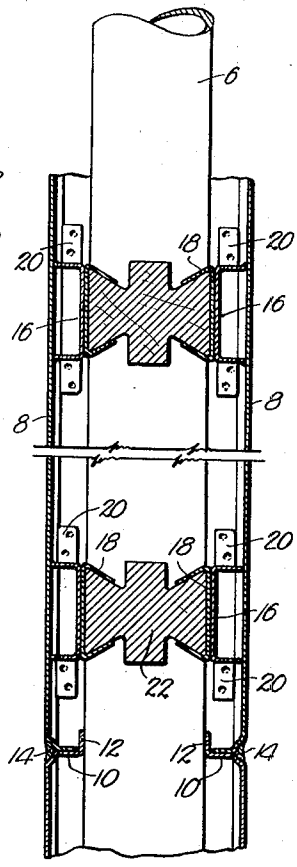


Fig. 4.

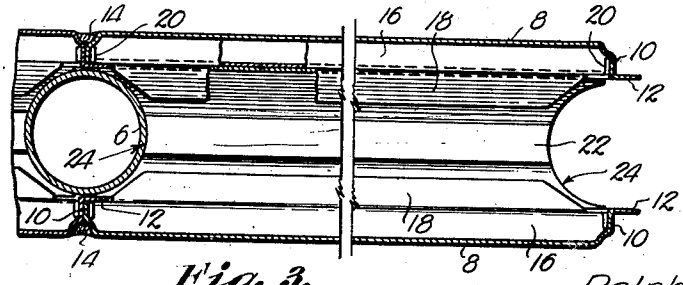


Fig. 3.

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WALL UNIT FOR SECTIONAL BUILDINGS

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6 Claims. (Cl. 189—34)

This invention relates to buildings of the character having sectional walls composed of a number of units, each specially designed to engage the frame-work of the building and to be maintained in place with the faces thereof, secured against buckling.

One of the important aims of the instant invention is the provision of a wall unit for sectional buildings, which unit comprises a pair of opposed sections having strengthening means formed to receive a coupler, which coupler is designed to engage the building frame-work to afford necessary support for the wall unit.

Another aim of this invention is the provision of a wall unit of the character just mentioned, having as a part thereof, unique fixtures functioning to prevent buckling of the relatively thin walls of the unit and to removably receive a coupler, serving to hold the sections in spaced apart relation and to engage the frame-work of the building.

Other objects of the invention including specific details of construction, will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Fig. 1 is a fragmentary face elevational view of the wall of a sectional building, composed of units embodying the present invention.

Fig. 2 is an enlarged elevational view of a portion of a sectional building wall, parts being broken away to reveal mechanical relationship thereof.

Fig. 3 is a sectional view taken on line III—III of Fig. 2; and

Fig. 4 is a sectional view taken on line IV—IV of Fig. 2.

Sectional building blocks of the general character to which this invention relates, are shown and described in U. S. Letters Patent No. 2,134,941, issued to E. S. Guignon, Jr., on Nov. 1, 1938. Frame-work with which the wall unit, about to be described, is designed for use is also shown in U. S. Letters Patent No. 2,202,850, issued to E. S. Guignon, Jr., on June 4, 1940.

The frame-work of the sectional building embodying wall units about to be described, includes a number of spaced elements 6, usually vertically disposed and suitably anchored to insure rigidity. It is contemplated that the wall unit be positioned as elements 6 are progressively placed. In following this method of procedure, a sectional building may be erected after parts of its frame-work and the component parts of the wall unit are shipped to location in a "knocked down" condition.

The wall unit per se, comprises a pair of opposed sections 8, each substantially identical in form and composed of sheet metal pressed into tray-like sections, each having rims 10 at the periphery thereof. The rims 10 along two adjoining sides of the sections, are extended outwardly to form lips 12 acting as guides and means for sealing the joint between the units, which joint may be filled with caulking compound 14, if desired.

Sections 8 are preferably relatively extensive in area for the purpose of expediting the construction of large buildings, such as hangars, warehouses, and the like. The comparatively great stretch of material between the rims 10, is braced against buckling by specially formed fixtures comprising a rib 16 and a channel 18.

Ribs 16 have out-turned ears 20 at the ends thereof in direct engagement with rims 10 to which they are spot welded, as shown in Fig. 4. Rib 16 is welded or otherwise secured to the inner surface of section 8 to prevent outward buckling as well as to preclude inward movement of the panel of the section. Channel 18 is dovetail in cross sectional form and is integral with rib 16. Any number of fixtures including rib 16 and channel 18 may be employed to extend completely across opposed sections 8 of the unit.

A coupler 22, preferably formed of wood, or a material having the quality of preventing heat exchange between the opposed sections 8, is slidably engaged with channels 18 as shown in Fig. 4. These couplers are contoured at each end as at 24 to engage elements 6 of the building frame-work.

When couplers 22 are in engagement with elements 6, the unit is maintained against lateral displacement and the sections 8 thereof are held spaced from said elements to further provide means for preventing heat exchange through the wall. Obviously, the space between sections 8 may be filled with insulating material, not here shown.

Relatively large sections 8 may be formed and moved to position on the frame-work of a sectional building when parts are constructed and combined as above set down. Buckling of the face of sections 8 is precluded and a rigid structure provided that would not otherwise be possible if an assembly were not substantially as above set down.

Obviously, modifications so far as specific features are concerned, might be incorporated without departing from the spirit of the invention or scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A wall unit of the character described comprising a pair of opposed sections; a fixture extending across the inner face of each section respectively; and a coupler removably engaging the fixtures to hold the sections in spaced apart relation, each fixture comprising a U-shaped rib rigid with the section, and a channel slidably receiving the coupler said rib and said channel being in back-to-back relation.

2. A wall unit, for sectional buildings, comprising a pair of opposed tray-like sections having the rims of their open sides in opposed, spaced apart relation; a rib rigid with and extending across each section respectively, said ribs each having a height greater than the height of the rim of the section to which it is secured; said ribs each having a channel formed therein longitudinally thereof; and a coupler slidably engaged within the channels of the ribs of opposed sections the bottoms of the channels being spaced from the respective sections a distance at least equal to the height of the rim of the section.

3. A wall unit for sectional buildings having an open framework, comprising a pair of opposed sections in spaced apart relation; opposed ribs on the sections each having a channel of dove tail cross section provided therein; and a coupler fitted into the channels of the opposed ribs to maintain the sections in spaced relation, said couplers being formed of material of low thermal conductivity and being longer than the channels to extend therebeyond at each end, to engage the framework, the extended portions at the ends of the couplers being formed to embrace the framework of the building and to hold the sections of the unit spaced therefrom.

4. A wall unit for sectional buildings having an open framework, comprising a pair of opposed sections in spaced apart relation; opposed ribs on the sections each having a channel of dove tail cross section provided therein; and a coupler slidably fitted into the channels of the opposed ribs to maintain the sections in spaced relation, said couplers being formed of material of low thermal conductivity and being longer than the channels to extend therebeyond at each end, to engage the framework, the extended portions at the ends of the couplers being formed to embrace the framework of the building and to hold the sections of the unit spaced therefrom.

5. A wall unit for sectional buildings having an open framework comprising a pair of opposed sections in spaced apart relation; opposed ribs on the sections each having a channel of dove tail cross section provided therein; and a solid coupler slidably fitted into the channels of the opposed ribs to maintain the sections in spaced relation, said couplers being longer than the channels to extend therebeyond at each end to engage the framework, the extended portions at the ends of the couplers being formed to embrace the framework of the building and to hold the sections of the unit spaced therefrom, said couplers being formed of material having relatively low thermal conductivity.

6. A wall unit of the character described comprising a pair of opposed sections; a fixture extending across the inner face of each section respectively; and a coupler removably engaging the fixtures to hold the sections in spaced apart relation, each fixture having a channel longitudinally thereof to receive a portion of the coupler, said coupler being formed of material of low thermal conductivity and being longer than the channel to present frame-engaging portions at each end thereof, the extended portions at the ends of the couplers being formed to embrace the framework of the building and to hold the sections of the unit spaced therefrom.

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