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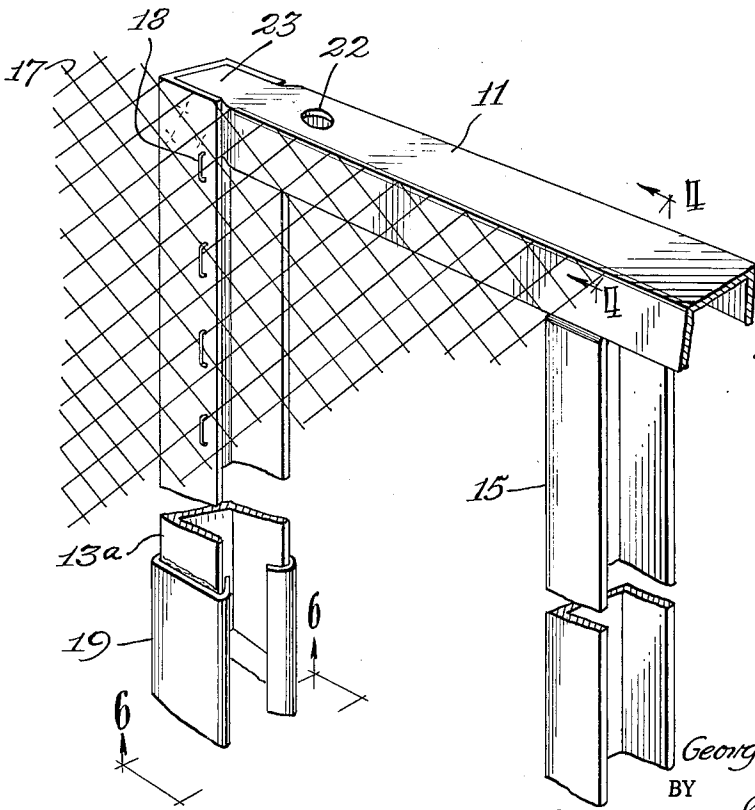
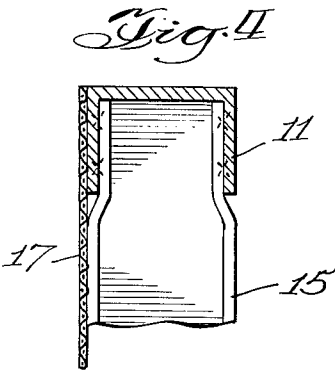
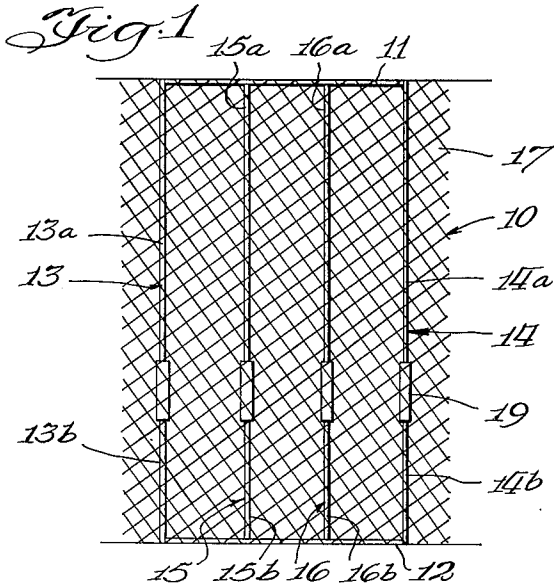
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3,204,382

FABRICATED CHANNEL METAL LATH PANEL ASSEMBLY

Filed Jan. 10, 1963

2 Sheets-Sheet 1



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Fig. 3

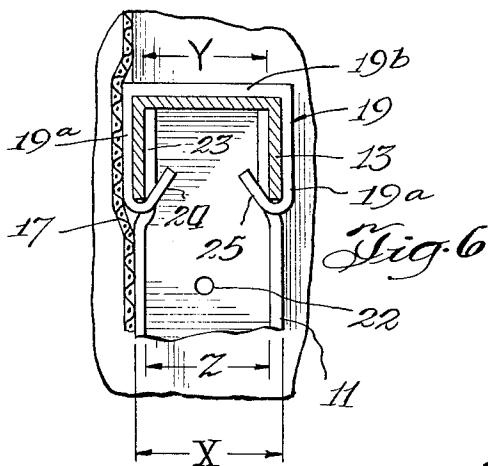
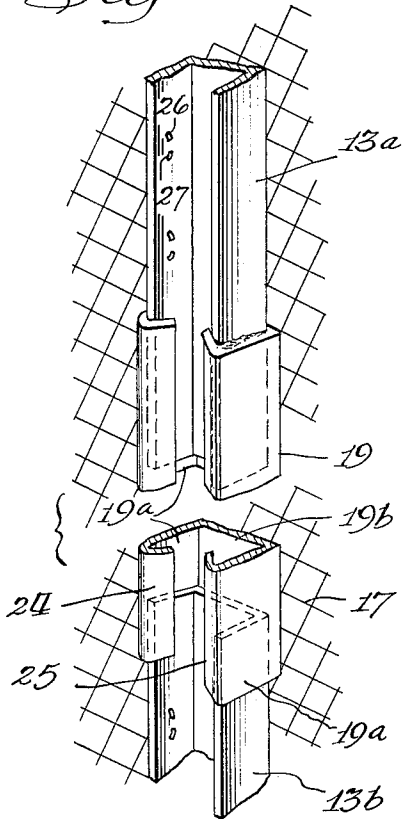
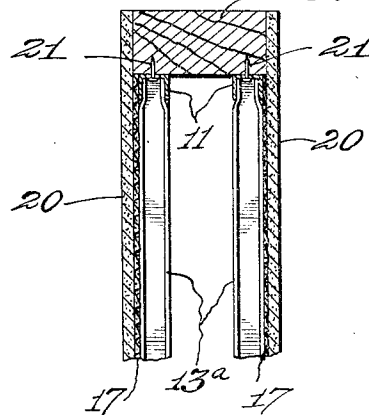


Fig. 7



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FABRICATED CHANNEL METAL LATH PANEL ASSEMBLY

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8 Claims. (Cl. 52-349)

This application is a continuation in part of my application S.N. 135,706 filed August 23, 1961, and now abandoned.

The present invention relates generally to plaster lath panels, and more particularly to a pre-fabricated vertically adjustable, metal lath-and-frame panel assembly.

In building construction, a problem has prevailed in regard to the time and cost necessary for providing a desired finish for interior surfaces of walls in buildings. Plaster, as opposed to other surface materials, has long been the preferred wall finish because it is strong, durable, lightweight, fire-retardant, sound and heat insulating, attractive, adaptable and easy to work with. Similarly, metal lath has come to be regarded as the best base for plaster because of the reliable positive keying action it provides and the freedom of design it permits the architect to employ.

However, despite the preference for metal lath and plaster construction, the cost thereof has been prohibitive in recent years due to rising building costs generally, and particularly because of the relatively high wages of skilled craftsmen heretofore employed in the relatively time consuming task of custom assembling the metal lath and supporting frame therefor on the site where the plastering is to be performed. Therefore, architects and building contractors, in order to reduce their overall cost and yet remain within the budget allocated for a particular construction, have resorted to less expensive, reduced-quality substitutes.

To overcome this cost factor and enable the use of the more desirous high quality plaster and metal lath construction, a wall panel assembly, incorporating a metal lath and plaster combination, has been developed, in accordance with the present invention, having an in-place cost which is lower than or within reasonable range of the relatively inexpensive reduced-quality constructions that have been heretofore substituted for metal lath and plaster.

In accordance with the present invention, the time previously necessary for completing the lathing and surface finishing operations has been considerably lessened due to an off-the-site prefabrication of the metal lath and supporting frame construction. This time saving feature is extremely significant in that the lathing and plastering contractor, working with standard components, is able to pre-fabricate the major share of the lath assembly in his shop well in advance of the date on which the site is ready for the lathing crew.

Additionally, the pre-fabricated panel assembly includes means for readily adjusting the panel to the necessary vertical height of a wall on which it is to be installed; and the panel has means for horizontal adjustment.

Essentially, in a typical embodiment, the pre-fabricated panel assembly consists of horizontal top and bottom members connected together by vertical side frame members and a suitable number of vertical intermediate members. The height of the side frame members and intermediate members is vertically adjustable by means of channel splices disposed between separate portions of the side and intermediate members. Metal lath, encompassing and covering at least the overall area of the panel assembly, is attached to the panel assembly by

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means of metal stitches. Holes are provided in the top and bottom frame members to allow fasteners to extend through the holes and into ceiling and floor surfaces to hold the panel assembly in position.

Other features and advantages are inherent in the structure claimed and disclosed as will be apparent to those skilled in the art from the following detailed description in conjunction with the accompanying drawings herein:

FIG. 1 is a front view showing complete panel assembly in an installed position prior to surfacing;

FIG. 2 is a fragmentary perspective view showing the connection of top and side frame members;

FIG. 3 is a fragmentary view showing a channel splice member connecting side or intermediate frame member elements;

FIG. 4 is a sectional view taken along line 4-4 in FIG. 2 showing the joining of an intermediate channel element to the top frame member;

FIG. 5 is a front view showing panel sub-assemblies prior to installation and assembly;

FIG. 6 is a sectional view taken along line 6-6 in FIG. 2 showing the channel splice member positioned over a channel element; and

FIG. 7 is a side fragmentary view showing two spaced panel assemblies attached to a ceiling surface.

A panel assembly constructed in accordance with the present invention and installed in a building site is designated generally as 10 in FIG. 1. Assembly 10, composed of sub-assemblies A and B (FIG. 5) comprises horizontal top and bottom channel frame members 11, 12 connected together by vertical side channel frame members 13, 14 which extend transversely from members 11, 12. Spaced vertical intermediate members 15, 16 are provided to furnish additional strength to the panel assembly. Metal lath 17 is attached to the assembly by means of stitches 18. When installed at a building site, panel sub-assemblies A, B are adjusted to proper relative vertical positions, said adjustment being provided by channel splices 19, to be subsequent described more fully. Referring to FIG. 7, the assembly is rigidly attached to the ceiling and floor of a room by suitable fasteners such as nails 21, which extend through holes 22 (FIG. 2) in the top and bottom frame members and into overlying or underlying surface members such as 30. Surface material 20, preferably plaster, is then applied to metal lath 17.

Referring to FIG. 6, top member 11 is a channel beam with an outside width x, an inside width z, and having ends 23 formed to a reduced width y slightly less than inside width z. As shown in FIGS. 2 and 6, reduced ends 23 of member 11 are inserted into side members 13, 14, at the tops thereof, the channel members being held together in any suitable manner, e.g. by welding. Bottom member 12 is a channel beam whose ends are also reduced in width (not shown) and also attached to side members 13, 14 in the same manner previously described for top member 11.

Referring to FIGS. 3 and 5, side member 13 comprises two elongated channel elements 13a, 13b, these elements extending transversely from members 11 and 12 respectively and being joined together by channel splice 19, a relatively short channel beam having side legs 19a connected together by a web 19b. Splice 19 has an inside width slightly greater than the outside width of side member 13. Legs 19a have ends 24, 25 bent substantially angularly inward (FIG. 6). Splice 19 slidably receives side member portions 13a, 13b. Prior to assembly of the panel at the building site, one end of splice 19 is rigidly attached to one of the two channel elements, e.g. 13a (FIG. 5). Upon installation of the panel assembly, at the building location, a complementary channel ele-

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ment 13b is inserted into splice 19 and moved slidably therein until the desired vertical height for the entire panel is obtained, after which splice 19 and element 13b are rigidly connected in any suitable manner.

Side frame member 14 is also a channel beam comprised of two elongated channel elements 14a, 14b, joined together by a splice 19 in the same manner as side member 13.

Spaced intermediate vertical members 15, 16 are each composed of two elongated channel elements, 15a 15b and 16a, 16b, respectively. One end of each element has a reduced width similar to that previously described for top member 11. The reduced ends of the intermediate elements are fitted within top and bottom members 11, 12 (FIGS. 2 and 4) and are made integral therewith in any suitable manner. The remaining ends of the elements are slidably receivable in splices 19. Prior to assembly, one end of each splice 19 will be rigidly attached to one element of each intermediate member, e.g. 15a, 16a (FIG. 5). During assembly at the construction site, remaining intermediate member elements 15b, 16b are inserted into splices 19 and moved slidably therein until the desired vertical height for the entire panel is achieved, after which elements 15b, 16b and the free ends of splices 19 are connected together in a suitable manner.

Metal lath 17 is attached to the frame members of the panel assembly by means of metal stitches 18, preferably composed of high tensile strength steel wire. The stitches are applied by a stitching apparatus such as that disclosed in the pending application of John Regan, Serial No. 222,287, filed April 19, 1962 which has been passed to issue. Stitches 18, in holding metal lath 17 to the channel beams, extend through a leg of a respective channel beam and have pairs of ends 26, 27 (FIG. 3) which are bent angularly inwardly to provide a secure engagement. Metal lath 17 extends beyond vertical side members 13, 14 in a horizontal direction to allow for horizontal adjustment of one panel assembly 10 relative to another.

As shown in FIG. 5, prior to complete on-site assembly, the panel can be pre-fabricated in a contractor's shop into sub-assemblies A, B. Consequently, metal lath 17 is attached in separate sections to each sub-assembly, with the end lath sections nearest splices 19 not being stitched to the various frame members. At the construction site, sub-assemblies A, B are engaged in the desired vertical positions and metal lath 17 can be deleted or added where necessary.

Following installation of assembly 10, plaster or other suitable surface material 20 is applied over metal lath 17 to supply the desired wall surface (FIG. 7).

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, as modifications will be obvious to those skilled in the art.

What is claimed is:

1. A panel assembly for use in building construction, said panel assembly consisting of two complementary sub-assemblies, the first sub-assembly comprising:

- a first channel member;
- a plurality of spaced elongated channel elements, each extending transversely from said first channel member and each of said channel elements having an end integrally joined to said first channel member;
- said first channel member and transverse channel elements each comprising spaced flanges and a web member connecting said flanges;
- a first covering of metal lath encompassing at least the area defined by said first channel member and transverse channel elements, said lath being integrally fastened directly to an outer face of a flange of at least said transverse channel elements, and substantially covering the area defined by said first sub-assembly whereby said lath is flush against said faces;

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said remaining sub-assembly comprising:

- a second channel member;
- a plurality of spaced second elongated channel elements each extending transversely from said second channel member and each of said channel elements having an end integrally joined to said second channel member;
- said second channel member and transverse channel elements each comprising spaced flanges and a web member connecting said flanges;
- a second covering of metal lath encompassing at least the area defined by said second channel member and said second transverse channel elements, said lath being integrally fastened directly to an outer face of a flange of at least said second transverse channel elements, whereby said lath is flush against said faces; and,
- channel splices each mounted on a free end of a transverse channel element, the free end of a transverse channel element of one sub-assembly being complementary to and engaged with a channel splice on a channel element of the other sub-assembly to form a unitary panel assembly, said first and second covering of metal lath forming a continuous plaster receiving means throughout the height of the panel assembly.

2. A panel assembly in accordance with claim 1 wherein said first and second coverings of lath are stapled directly to an outer face of a flange of at least said transverse channel elements of said respective first and second sub-assemblies.

3. A panel assembly in accordance with claim 1 wherein said lath on said panel assembly extends beyond the free edge of at least one side of said panel assembly.

4. A panel assembly in accordance with claim 1 wherein said lath extends beyond the free ends of said transverse elements of at least one of said sub-assemblies.

5. A panel assembly in accordance with claim 1 wherein said channel splices are permanently joined to the free ends of said transverse channel elements.

6. A panel assembly in accordance with claim 5 wherein each of said channel splices comprises spaced flanges and a web member connecting said flanges with the free edges of said channel splice flanges extending angularly inward in an overlapping relationship with the complementary flanges on said transverse elements.

7. A panel assembly for use in building construction, said panel assembly consisting of two complementary sub-assemblies, the first sub-assembly comprising:

- a first member;
- a plurality of spaced elongated elements, each extending transversely from said first member and each of said elements having an end integrally joined to said first member;
- said first member and transverse elements each comprising at least a first leg and a second leg angularly disposed from and integrally joined to said first leg;
- a first covering of metal lath encompassing at least the area defined by said first member and transverse elements, said lath being integrally fastened directly to an outer face of a leg of at least said transverse elements, and substantially covering the area defined by said first sub-assembly whereby said lath is flush against said faces;
- said remaining sub-assembly comprising:
- a second member;
- a plurality of spaced second elongated elements each extending transversely from said second member and each of said elements having an end integrally joined to said second member;
- said second member and transverse elements each comprising at least a first leg and a second leg angularly disposed from and integrally joined to said first leg;

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a second covering of metal lath encompassing at least the area defined by said second member and said second transverse elements, said lath being integrally fastened directly to an outer face of a leg of at least said second transverse elements, whereby said lath is flush against said faces; and

splices each having an end joined to a free end of a transverse element, the free end of a transverse element of one sub-assembly being complementary to and engaged with a splice on an element of the other sub-assembly to form a unitary panel, said first and second covering of metal lath forming a continuous plaster receiving means throughout the height of the panel assembly.

8. A panel assembly for use in building construction, said panel assembly consisting of two complementary sub-assemblies, first sub-assembly comprising:

a first channel member;
a plurality of spaced elongated channel elements, each extending transversely from said first channel member and each of said channel elements having an end integrally joined to said first channel member;

said first channel member and transverse channel elements each comprising spaced flanges and a web member connecting said flanges;

a first covering of metal lath encompassing at least the area defined by said first channel member and transverse channel elements, said lath being integrally fastened directly to at least said transverse channel elements, and substantially covering the area defined by said first sub-assembly whereby said lath is flush against said elements;

said remaining sub-assembly comprising:
a second channel member;

a plurality of spaced second elongated channel elements each extending transversely from said second channel member and each of said chan-

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nel elements having an end integrally joined to said second channel member;

said second channel member and transverse channel elements each comprising spaced flanges and a web member connecting said flanges;

a second covering of metal lath encompassing at least the area defined by said second channel member and said second transverse channel elements, said lath being integrally fastened directly to at least said second transverse channel elements, whereby said lath is flush against said elements; and,

channel splices each having an end joined to a free end of a transverse channel element, the free end of a transverse channel element of one sub-assembly being complementary to and engaged with a channel splice on a channel element of the other sub-assembly to form a unitary panel, said first and second covering of metal lath forming a continuous plaster receiving means throughout the height of the panel assembly.

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