April 29, 1958 A. C. OLSEN 2,832,212

BUILDING PARTITION

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Fig. 1.

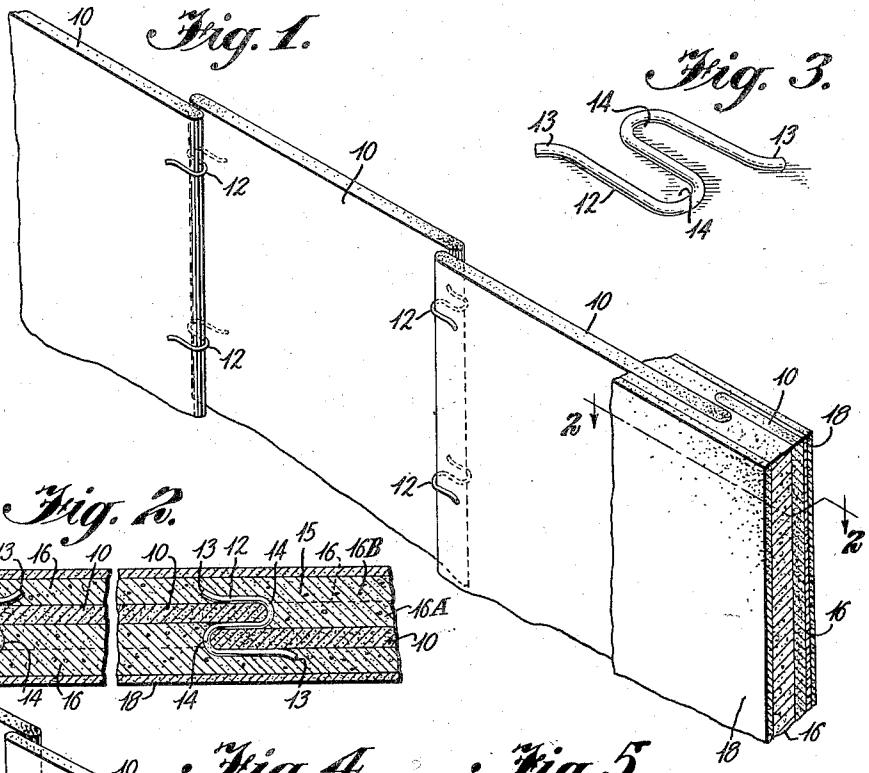


Fig. 3.

Fig. 2.

Fig. 4.

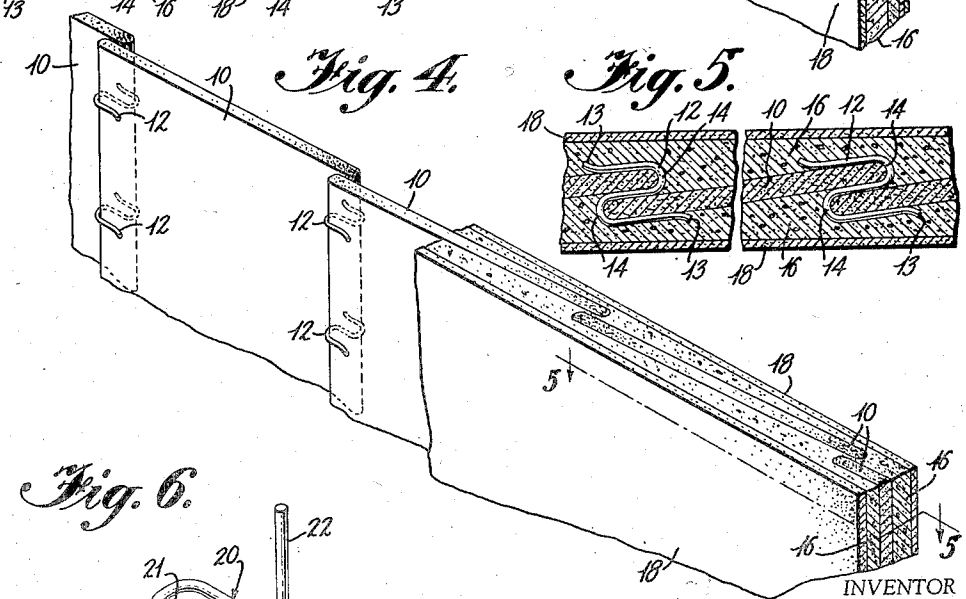
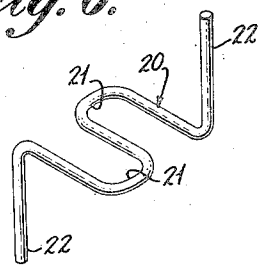


Fig. 5.

Fig. 6.



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BUILDING PARTITION

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Fig. 7.

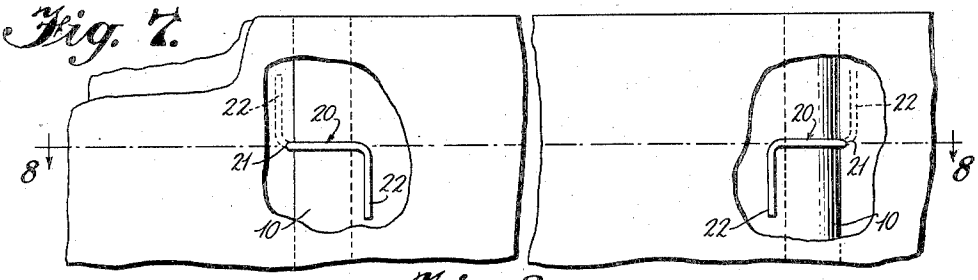


Fig. 8.

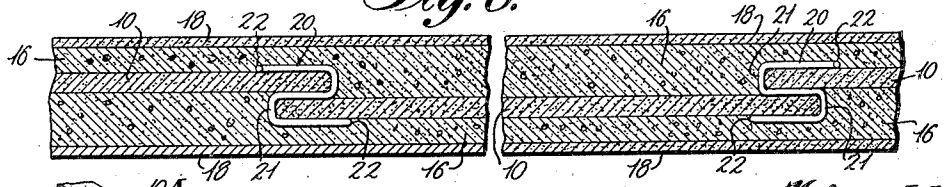


Fig. 9.

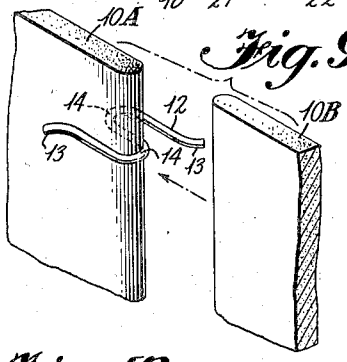


Fig. 10.

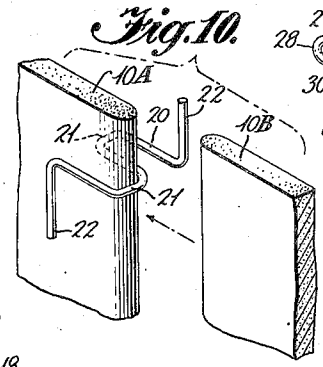


Fig. 11.

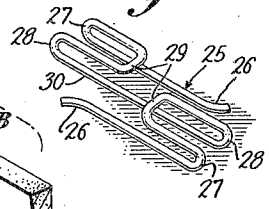
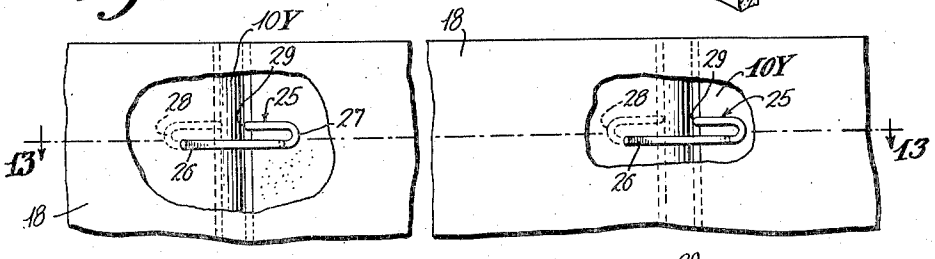


Fig. 12.



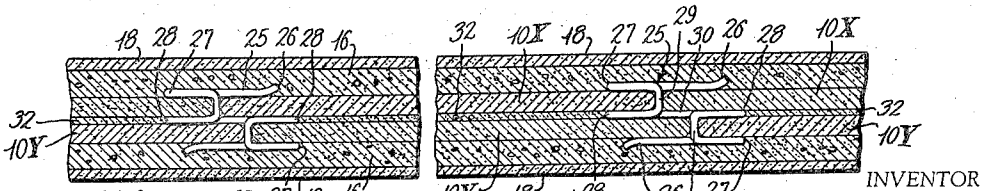


Fig. 13.

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2,832,212

BUILDING PARTITION

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Application October 10, 1950, Serial No. 189,369

3 Claims. (Cl. 72—46)

This invention relates to building constructions and more particularly to interior partitions for buildings.

The general object of the invention is the provision of a novel and improved fireproof partition of simple and light construction and adaptable for either permanent or temporary installation.

The invention, in its preferred embodiments, contemplates the provision of a relatively thin and light partition or wall structure, the basis of which is a series of panels of wall-board, gypsum lath, or any other desired material, and which preferably extend from floor to ceiling, being secured to those parts of the interior structure of the room by conventional connecting and aligning elements.

The basic structure is preferably covered with plaster or other coating material in the usual way and a finish coating of white plaster, or any other desired or conventional material may be applied to the base coat.

One of the principal features of the invention consists in the interconnecting of the slightly overlapped edges of the basic panels of the partitions to position them in proper alignment, but spaced very slightly apart transversely of the partition and also to ensure that, upon the application of the plaster or other coating, a quantity of such coating or plastering material will pass through the small space between the adjacent margins of the panels and aid in cementing the panels together.

Further objects of the invention include the provision of novel and improved clips for connecting the panel edges and holding them in alignment until the plaster is applied, and thereafter becoming embedded in the plaster coating and still serving to reinforce the joints.

Others objects and features of novelty will be apparent from the following specification when read in connection with the accompanying dawings in which several embodiments of the invention are illustrated by way of example.

In the drawings:

Figure 1 is a fragmentary perspective view of a portion of a partition structure embodying certain of the principles of the invention;

Figure 2 is a horizontal sectional view taken on line 3—3 of Figure 1;

Figure 3 is a view in perspective of one of the clips employed in this embodiment of the invention;

Figure 4 is a view similar to Figure 1 but showing a modified ship-lap panel partition construction;

Figure 5 is a fragmentary horizontal sectional view taken on line 5—5 of Figure 4;

Figure 6 is a view in perspective of a modified form of clip employed in connecting the panels of the partitions;

Figure 7 is a fragmentary view in elevation (certain portions being broken away) of a partition in which the clip shown in Figure 6 is employed;

Figure 8 is a horizontal sectional view taken on line 8—8 of Figure 7;

Figure 9 is a fragmentary view in perspective showing

the application of one panel to an adjacent installed panel employing the clip shown in Figure 3;

Figure 10 is a similar view involving the clip illustrated in Figure 6;

Figure 11 is a view in perspective of another form of clip adapted to engage and secure the edges of panels in similar partition structures;

Figure 12 is a fragmentary view in elevation, similar to Figure 7, but illustrating the application of the clip shown in Figure 11; and

Figure 13 is a horizontal sectional view taken on line 13—13 of Figure 12.

In Figures 1 and 2 of the drawings, there is illustrated a partition structure for use particularly in light building constructions and in which the panels 10 are preferably of gypsum lathing, these panels being staggered but occupying parallel planes, with their adjacent edges overlapping but slightly spaced one from the other in order to permit the applied plaster or coating material to pass between the edges and make a strong bond between the panels in the finished construction. This connection of the panels is attained by the use of generally S-shaped wire clips, one embodiment of which is shown on an enlarged scale at 12 in Figure 3 of the drawings. These clips preferably have slightly flared ends 13 and oppositely directed bight portions 14, each adapted to receive the edge of a panel. The clips are applied only at intervals along the vertical panel edges and serve to space the panels a slight distance apart as clearly shown in Figure 2, and this is an important feature of the invention since it permits the applied plaster to work between the panel edges. In Figures 1 and 2, the undercoat of plaster is indicated generally at 15 and may be applied all at once, or in separate layers suggested by the construction line 16 in Figure 2 whereby the space between panels upon the same side of the center line of the partition is filled in with plaster as at 16A and then the second coat covering the gypsum lath panels 10 and the already applied coating 16A laid on as at 16B. Finally the white coats 18 may be applied to each side of the partition.

In Figures 4 and 5 of the drawings the panels are arranged in an overlapping pattern similar to a ship-lap installation. This places the panels 10 in an inclined position with relation to the direction of extent of the partition and the edges are connected by the clips, one form of which is shown again at 12. The undercoat 16 of plaster is then applied to both sides of the connected lath units and the final coating 18 laid on in the usual way.

A slightly modified form of clip is shown in enlarged detail in Figure 6 of the drawings, this clip being designated generally by the numeral 20 and comprising the oppositely directed bight portions 21 but having their terminal portions bent in opposite directions parallel with the plane of the panels to which the clip is applied, as clearly indicated at 22. The application of this type of clip to a paneled partition installation is clearly shown in Figures 7 and 8 of the drawings, the panels being designated as before by the numeral 10 and the plaster undercoat by the numeral 16, and the outer white coat by the numeral 18. It will be seen that the upwardly and downwardly extending ends 22 of the clips 20 lie closely alongside the surfaces of the panels 10 and canting of the clips is effectively prevented by the contact of the ends 22 with the panels.

Figures 9 and 10 clearly illustrate the method of installation of the panels, the panel 10A having been installed in the line of the partition, the clip 12 applied to the edge thereof, and then the next succeeding panel 10B being moved into position within the remaining bight portion 14 of the clip. In Figure 10 it is clearly

shown how the clip 20 is applied to the installed panel 10A and the panel 10B moved into place in an adjacent plane.

In Figures 12 and 13, there is shown an embodiment of the invention in which a double row of gypsum lathing or other wall-board panels is provided, the panels in one row being designated 10X and those in the other line being indicated 10Y. The novel clip which serves to connect the edges of the panels of both rows is shown in enlarged detail in Figure 11 of the drawings and is designated generally by the reference numeral 25. It will be seen that it comprises the terminal portions 26 which may be outwardly flared for ease of application if desired, these terminal portions occupying the same horizontal plane. Then at alternate opposite points on the clip assembly the wire is bent not only in a loop to form a bight but also backwardly to occupy a plane spaced slightly from the plane of the terminal portions 26 in a vertical direction. This convolution thus forms two spaced loop portions 27 and 28 between which is provided a bight 29. The same convolution is applied at the opposite end of the clip and the respective parts are given similar reference numerals. The inward ends of the peculiar convolutions are connected by the intermediate straight portion 30 of the clip. Thus there is provided a total of four clamping recesses or jaws for the reception of panels in two parallel planes, certain of the panels being received between the end or terminal portions 26 and the straight intermediate portion 30 which develops into the bends 28, and the other panel receiving portions being within the bights 29 between the loops or bends 27 and 28. The installation is clearly shown in Figure 13 of the drawings in which the panels 10X are received by the recesses or jaws on one side of the installation and the panels 10Y on the other.

After the rows of panels 10X and 10Y are assembled by means of the novel clip 25, the first coating 16 of plaster may be applied and a considerable quantity of this plaster passes within the joints of the skeleton panel structure provided by the thickness of the wire clip 25. Finally the outer white coat 18 is applied in the usual way.

If desired, the intermediate space between the rows of panels may be filled in with plaster or other coating material as at 32, or this space may be left unfilled to provide an air cell for insulation purposes. Due to the seeping in of the plaster from the coating 16 at the edges of the panels, such air cells would be sealed off at least at their lateral edges adjacent the junction points of the panels of each row.

It is understood that various changes and modifications may be made in the embodiments illustrated herein without departing from the scope of the invention as defined by the following claims.

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

1. In a wall or partition construction of the class described, in combination, two closely adjacent rows of substantially vertical panels, the successive panels in the respective rows being in approximate alignment, wire clips connecting the adjacent edges of adjoining panels in the respective rows at vertically spaced points therealong, each of said clips being of spring wire material, initially in the shape of a horizontally extended S, the section of each leg of the S and of the intermediate straight portion of the S adjacent each bight portion thereof being bent laterally of the plane of the S and reversely upon itself to define with the bight portion two oppositely facing U-shaped jaws, the unbent section of each leg and of the intermediate straight portion also defining with the bight portion two oppositely facing U-shaped jaws, said jaws resiliently embracing the respective panel edges, a layer of plastic coating material covering at least one side of the row of panels, said wire clips serving to space the panel edges apart sufficiently to permit the flow of a portion of said material into the spaces and effect a better bonding of the panels upon hardening of the material.

2. In a wall or partition construction of the class described, in combination, two closely adjacent rows of panels, the panels in the respective rows being in alignment so as to occupy substantially the same plane, the junction of adjacent edges of adjoining panels in both rows occurring in close proximity, a plurality of wire clips applied to said panel edges at points spaced vertically therealong, each of said clips being formed of a single continuous length or stiff resilient wire which is bent to provide three spaced parallel sections, each having a thickness in a direction at right angles to the length of the sections of a single thickness of wire, and interconnecting portions extending substantially at right angles to said sections between the first and second and also between the second and third sections intermediate the ends thereof, the sections and interconnecting portions defining two pairs of oppositely facing U-shaped jaws having a common wall constituted by said second section, said jaws receiving the panel edges, and a layer of plastic coating material applied to at least one surface of the partition, a portion of said plastic material passing into the space between the panel edges to effect upon hardening better bonding of the panels.

3. A clip for supporting in close proximity the adjoining edges of four similar panels arranged in two parallel rows, said clip consisting of a single continuous length of stiff resilient wire bent into a configuration having three spaced parallel substantially coplanar main sections; two pairs of relatively short sections of substantially equal length, one at each end of said main sections, overlying said main sections and in substantial parallel relationship therewith, said short sections extending from the ends of said main sections inwardly thereof and together constituting a major portion of the length of said main sections, the outer ends of one pair of said short sections being joined by return bends to one end of the intermediate main section and the corresponding end of one outer main section, respectively, the outer ends of the other pair of short sections being joined by return bends to the other end of said intermediate main section and the corresponding end of the other outer main section, respectively, each of said short sections being in alignment with the main section to which it is connected in a direction perpendicular to the plane of the main sections; and a bight portion interconnecting the inner ends of each pair of short sections and extending generally transversely of said short sections, whereby the main sections, short sections and bight portions define two oppositely facing pairs of juxtaposed panel receiving and engaging pockets, the pairs being disposed end-to-end.

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