TOP MEMBER FOR SELF-CONTAINED WALL STRUCTURES

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This invention relates to partition structures, and has particular reference to improvements in partition structures of the general type described and claimed in my prior application, Serial No. 6,337, filed February 13, 1935.

A partition structure of the general type referred to is characterized by a top channel member fastened to a ceiling or its equivalent, a bottom channel member fastened to a floor or its equivalent, channelled posts disposed vertically at spaced intervals between said top and bottom members, and panels engaged at their tops and bottoms in the channels of said top and bottom members whereby any panel of the assembled series may readily and easily be removed without disturbing any other panel of the assembled series.

Another object of the invention is to provide novel means for the purposes stated which means is simple, inexpensive, entirely practical and thoroughly reliable and efficient in use.

With the foregoing and various other objects in view, which will become more fully apparent as the nature of the invention is better understood, the same consists in the novel combination and arrangement of parts, and in the novel features of construction, as will be hereinafter more fully described, illustrated in the accompanying drawing and defined in the appended claims.

In the accompanying drawing, wherein like characters of reference denote corresponding parts in the different views:

Fig. 1 is a side elevation, with parts broken away, of a portion of a partition structure embodying the features of the present invention;

Fig. 2 is a cross section on the line 2—2 of Fig. 1;

Fig. 3 is a perspective view of one of the present bridge elements; and

Fig. 4 is a perspective view of a fragment of one of the present posts.

Referring to the drawing in detail, A and B designate, respectively, a ceiling and a floor as their equivalents, and 10 and 11 designate, respectively, top and bottom channel members secured in any suitable manner to said ceiling and floor, or their equivalents, respectively.

The top and bottom channel members 10 and 11 are of inverted U-shape and of U-shape in cross section, respectively, and are vertically aligned and each includes a pair of spaced side walls 12, 12. They extend, or it is desirable that they shall extend, from end to end of the partition structure, regardless of its length.

The members 10 and 11 comprise top and bottom supports for partition forming panels 13, of which there may be any desired number of any desired width.

The lower edge portions of the panels 13 may be disposed directly in the channel of the bottom channel member 11 as shown, or they may be indirectly mounted in the channel of said bottom member through the instrumentality of an interposed element or elements, not shown. In any event, the channel of the bottom channel member obviously may be equal in width or of greater or lesser width than the thickness of the panels 13, depending upon whether the lower edge portions of the panels are directly or indirectly mounted in said bottom channel member. On the other hand, the top channel member 10 preferably is of greater width than the thickness of the panels 13 by an amount to permit the as
sembly with said channel member of bridge elements 14 having downwardly opening channels 15 of a width to accommodate the upper edge portions of the panels 13.

5 Each bridge element 14 preferably is formed from sheet metal and comprises spaced side walls 16, 16 connected together at their tops by webs 17, or, if desired, by a continuous top wall, and at their bottoms by webs 18, or, if desired, by a continuous bottom wall. The spacing of the side walls 16, 16 is such that the bridge element may be engaged mesh to mesh between the side walls 12, 12 of the top channel member 10 for sliding movement both vertically and longitudinally relative to said top channel member and, as shown, the bottom webs 18, or the continuous bottom wall of said bridge element, as the case may be, are, or is, formed with the downwardly opening channel 15 to accommodate the upper edge portions of the panels 13.

20 One of the bridge elements 14 is employed at the tops of each two adjacent panels 13 to accommodate in its channel 15 the top edge portions of both panels adjacent to the side edges thereof. To this end, the bridge members may be of any desired length to accommodate top edge portions of the panels of any desired length, and since said bridge elements are slidable longitudinally relative to the top channel member 10 it is apparent that they may be properly positioned relative to said top member 10 to accommodate the upper edge portions of adjacent panels regardless of where the adjacent side edges of adjacent panels are disposed longitudinally relative to the top member 10. In other words, the bridge members 14 may be used with panels of relatively great width, or relatively narrow width, or with panels of various different widths in any given partition structure.

40 In erecting a partition according to the present invention and assuming that the top and bottom channel members 10 and 11 have been fastened in place in accordance with known practice, the lower edge portion of a panel 13 is engaged either directly or indirectly with the channel 15 of the bottom channel member 11 and the upper edge portion of the panel is brought into alignment with the top channel member 10, the height of the panel being such, of course, that its top does not reach to the bottoms of the bridge elements 14 when the latter are in their uppermost positions relative to the top channel member. The said bridge elements, having previously been slid upwardly relative to the top channel member to permit the upper edge of the panel to be moved to underline the same, are slid downwardly to cause the upper edge portion of the panel to be received in the channels 15. Thereby, the panel becomes effectively held, both at its top as well as at its bottom, against forward or backward movement relative to the top and bottom members 16 and 11, and when a complete series of panels has been erected in this manner between a pair of end walls or the like, it is apparent that the panels are held by one another against shifting in their planes longitudinally relative to the top and the bottom channel members. Also, it is apparent that any panel of a series may be erected without any necessity of horizontal sidewise movement thereof and regardless of the erection of any other panel, and that any panel of a series may be removed without disturbing any other panel of the series.

75 Preferably, but not necessarily, a post 19 is employed between the adjacent edges of each two adjacent panels 13. Said posts are of double channel form, or, in other words, are of H-shape in cross section to accommodate the adjacent vertical edge portions of the panels, and, if used, they serve not only to support the adjacent vertical edge portions of the panels against forward or backward movement relative to each other, but to cover the vertical edges of the panels and provide neat and attractive joints between adjacent panels. In this connection, where different partition structures meet at right angles or in other angular relationship to each other, posts of L-shape or other suitable shape obviously may be employed in accordance with the teaching of my aforesaid prior application.

It is desirable to provide means to retain the bridge members 14 temporarily in their upper positions relative to the top channel member 10 to facilitate erection of a partition, and while any suitable means may be provided for this purpose, one simple, practical means for the purpose comprises resilient tongues 20 struck outwardly from the side walls 16, 16 of said bridge members to frictionally engage the outer faces of the side walls 16, 16 of the channel member 10.

The channel member 10 serves conveniently as a housing for electric wires or the like designated as 21, and in order to provide supports for such wires or the like, tongues 22 may be struck inwardly from the side walls 16, 16 of the bridge elements 14.

Finishing plates 23 preferably are provided to cover the bridge elements 14, the bottom portions of the top channel member 10 and the upper edge portions of the panels 13, and in accordance with the present invention the bridge elements 14 preferably are formed to support said plates in a manner such that they may readily and easily be snapped into place and may equally as readily and easily be removed whenever desired. The upper or free edges of the spring tongues 22 are directed outwardly as indicated at 24 and lips 25 having downwardly facing convex surfaces are struck outwardly from the side walls 16, 16 of the bridge elements near the bottoms thereof. The finishing plates 23 have inwardly directed flanges at their tops terminating in downwardly directed lips 26 which are engageable behind the outwardly directed, upper, free edge portions 24 of the tongues 22 and at or near the bottoms of said finishing plates are other inwardly directed flanges terminating in upwardly facing lips 27 which are engageable beneath the lips 25. The finishing plates are resilient and the spacing of their lips 26, 27 is such that they are engageable by a snap action with the upper edge portions of the tongues 22 and the lips 25. Therefore, they may readily be applied and may equally as readily be removed. In addition to their finishing function they serve also as supports for ceiling panels designated as 28.

Obviously, one or more of the bridge elements 14 may be employed in addition to and intermediate the two bridge elements at the side edges of any relatively wide panels to afford medial support for the upper edge portion of the panel.

From the foregoing description considered in connection with the accompanying drawing it is believed that the features comprising the present invention in any other panel, and is desired to point out, however, that while only a single structural embodiment of the invention has been illustrated and described, the same is readily capable of embodiment in various other practical
I claim:

1. A partition assembly, comprising aligned top and bottom channel members, a pair of adjacent panels disposed between said top and bottom members with their vertical edges in edge to edge relationship, the lower edge portions of said panels being received in the channel of the bottom member and the upper edge portions of said panels being spaced from the top member, and a channel bridge element adjustable longitudinally along the channel of the top member and along the upper edges of the panel pair and overlapping the adjacent vertical edges of the panel pair, said bridge element being slidable upwardly in said channel of the top member to a position wherein it will clear the upper edge portions of the panel pair and then downwardly to a position wherein its own channel will receive said upper edge portions, and assist to maintain the panels correctly positioned between said top and bottom members.

2. The assembly of claim 1, and a vertical post disposed between the vertical edges of said panel pair and terminating at its top below the top member, said post having continuous channels extending substantially from end to end thereof within which the vertical edge portions of the panels are received, and said post at its lower end engaging with the bottom member of the assembly.

3. A partition structure comprising a pair of adjacent panels disposed with their vertical edges in edge to edge relationship, a bottom supporting and holding means for said panels, a fixed downwardly opening channeled top member having side walls, and a bridge element disposed between the side walls of said top member and having a downwardly opening channel to receive a top edge portion of at least one of the panels, said bridge element being vertically movable relative to said top member to effect engagement and disengagement of the top edges of the panels with and from the channel in said bridge element, and having resilient tongues extending into engagement with the outer faces of the side walls of the top member to assist in frictionally holding the bridge element against movement relative to the top member.

4. A partition structure comprising a pair of adjacent panels disposed with their vertical edges in edge to edge relationship, a bottom supporting and holding means for said panels, a fixed downwardly opening channeled top member having side walls, and a hollow bridge element disposed between the side walls of said top member and having side walls and a downwardly opening channel to receive a top edge portion of at least one of the panels, said bridge element being vertically movable relative to said top member to effect engagement and disengagement of the top edges of the panels with and from the channel in said bridge element, the side walls of said bridge element having inwardly bent supporting tongues for wires or the like.

5. A partition structure comprising a pair of adjacent panels disposed with their vertical edges in edge to edge relationship, a bottom supporting and holding means for said panels, a fixed downwardly opening channeled top member having side walls, a bridge element disposed between the side walls of said top member and having a downwardly opening channel to receive a top edge portion of at least one of the panels, said bridge element being vertically movable relative to said top member to effect engagement and disengagement of the top edges of the panels with and from the channel in said bridge element, finishing plates covering the sides of the top member, the sides of the bridge element, and the upper edge portions of the panels, and cooperating snap fastener means on said finishing plates and said bridge element.

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