

March 20, 1934.

W. S. SNEAD

1,951,778

METALLIC PARTITION STRUCTURE

Filed May 12, 1933

7 Sheets-Sheet 1

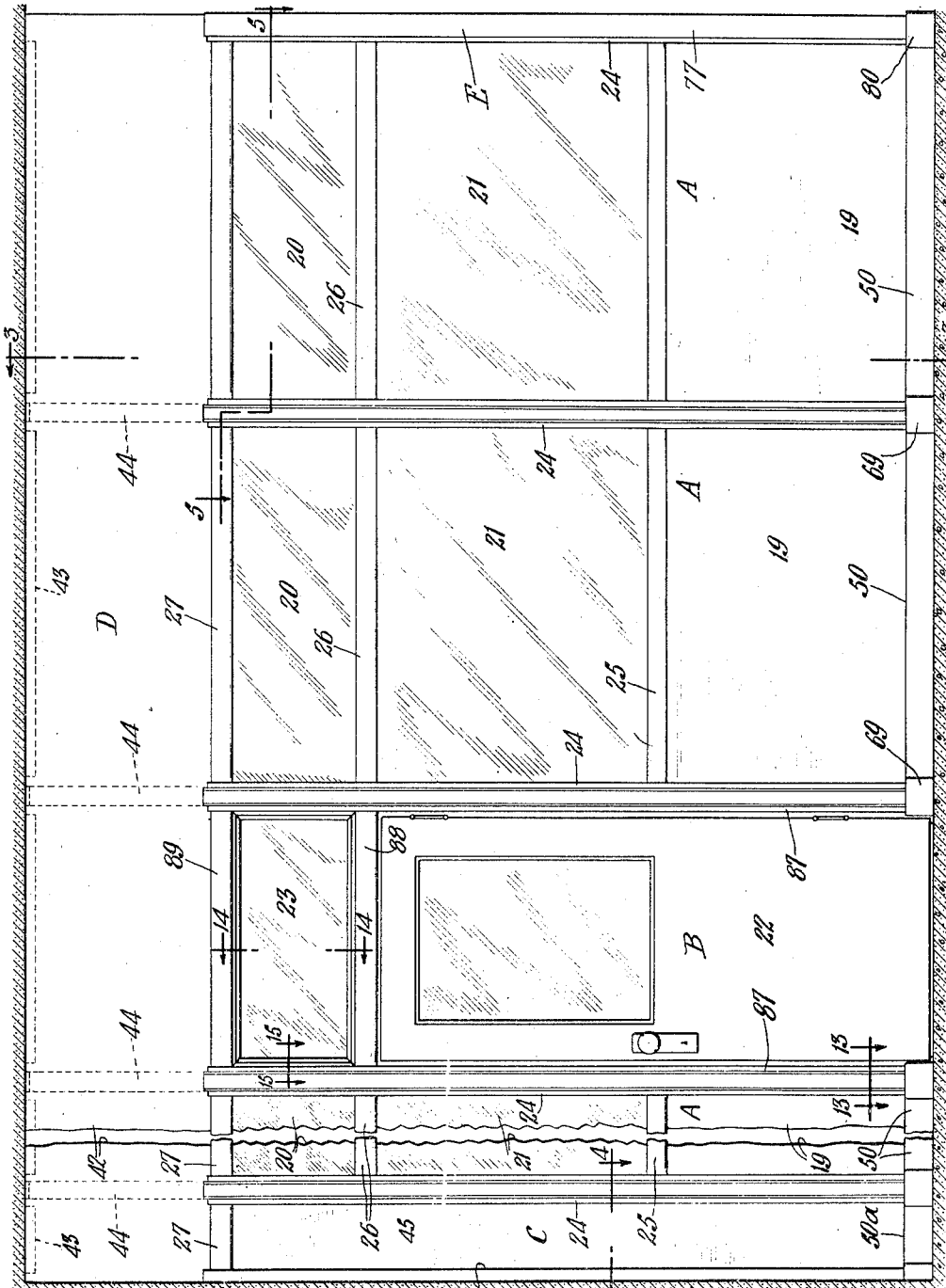


Fig. 1.

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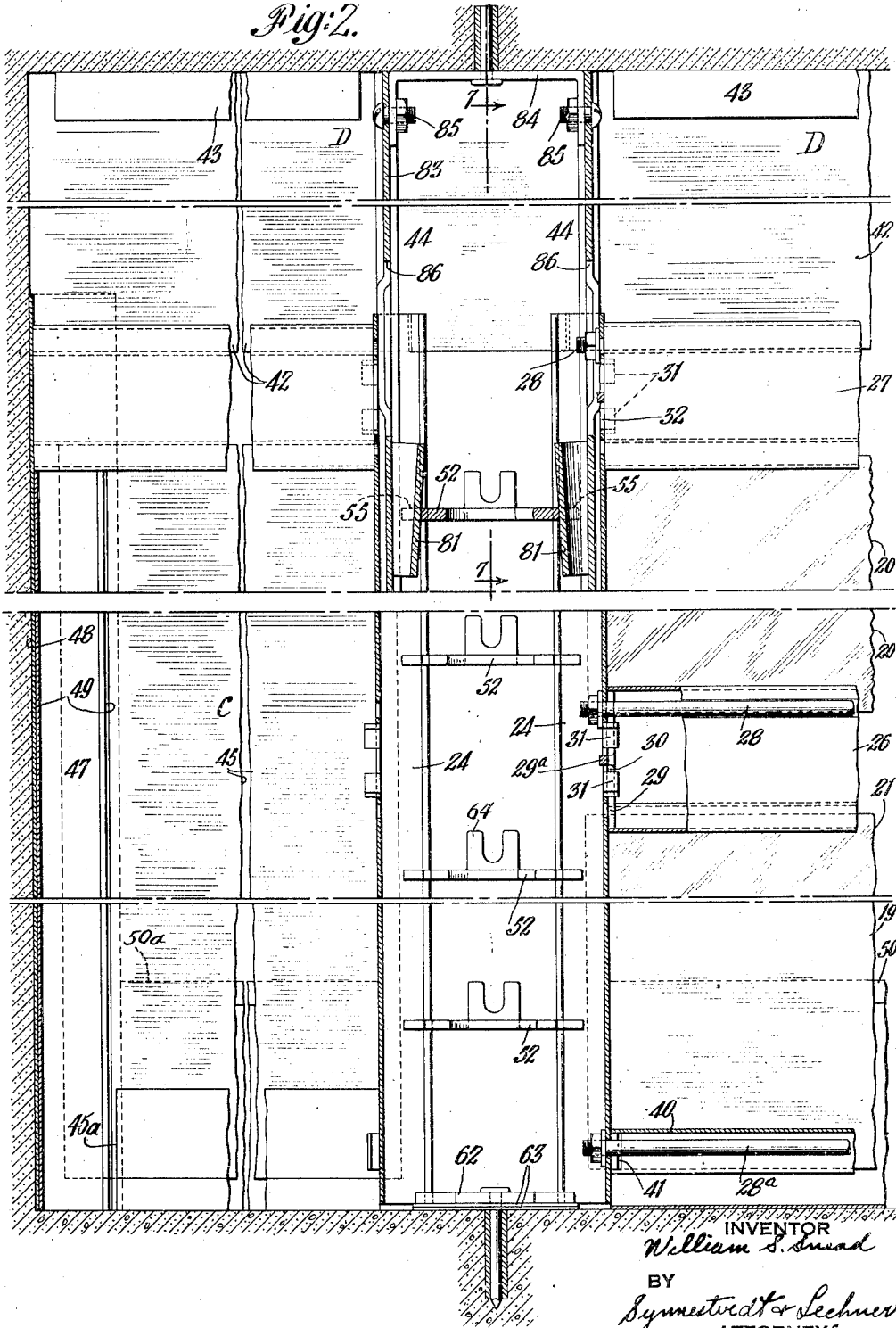
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METALLIC PARTITION STRUCTURE

Filed May 12, 1933

7 Sheets-Sheet 2

Fig. 2.



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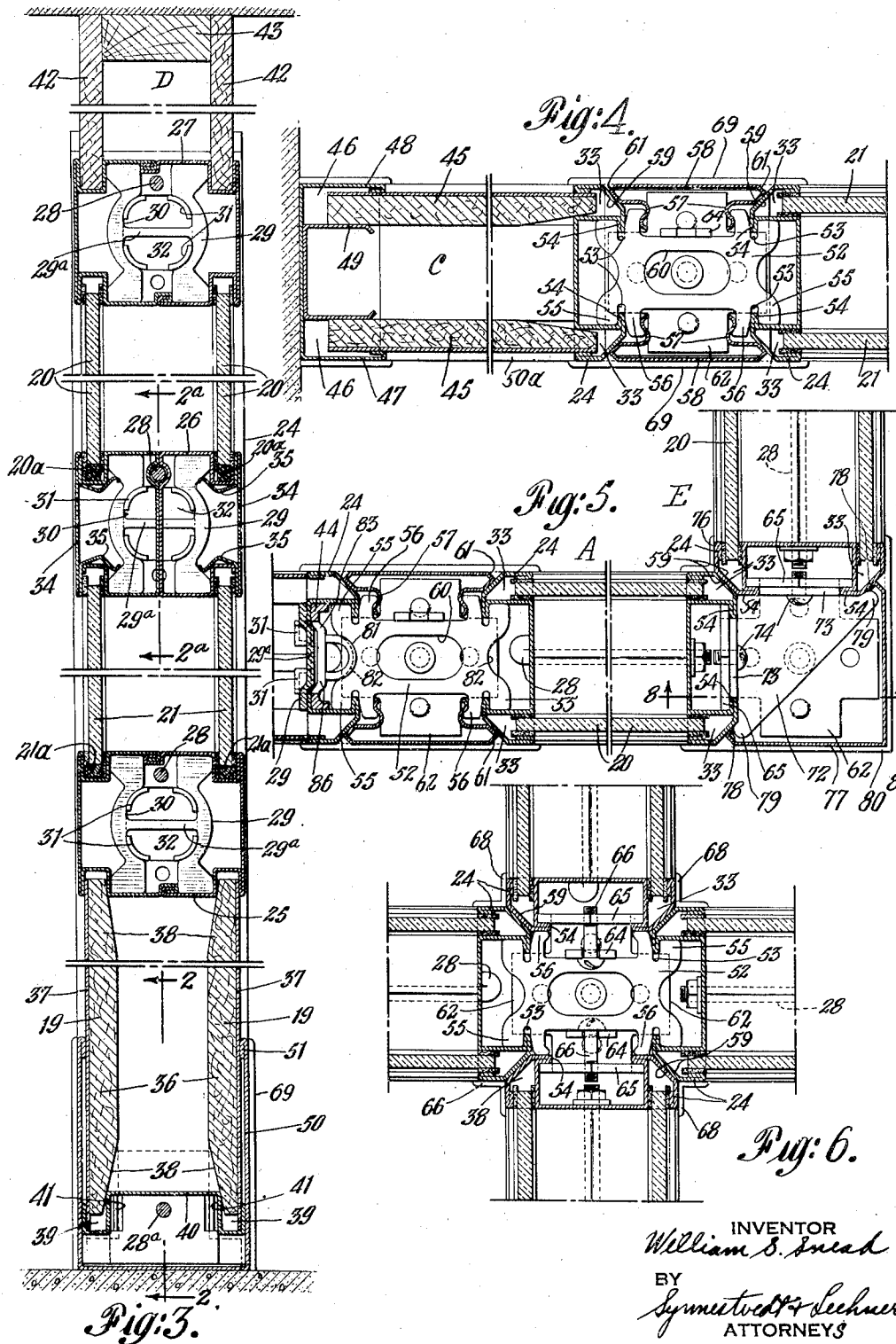
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METALLIC PARTITION STRUCTURE

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7 Sheets-Sheet 3



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METALLIC PARTITION STRUCTURE

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7 Sheets-Sheet 4

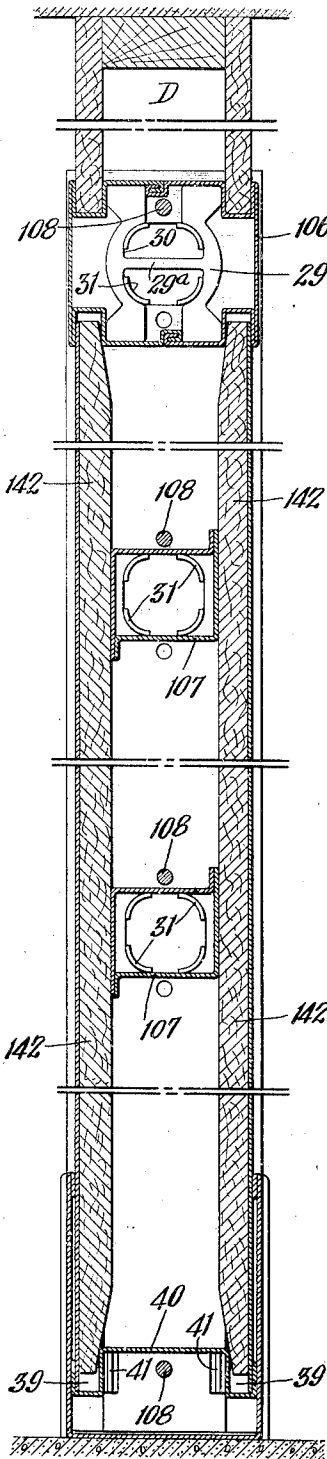


Fig. 28.

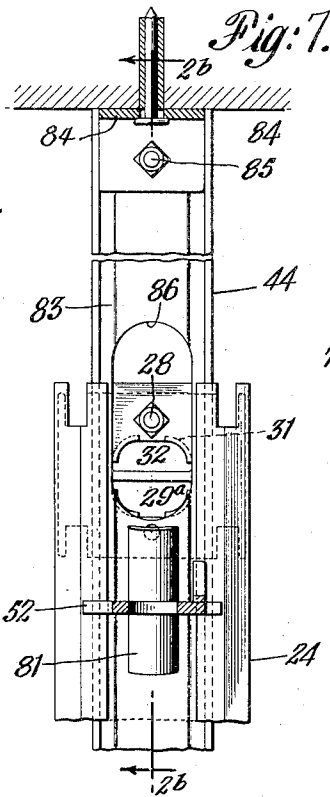


Fig. 7.

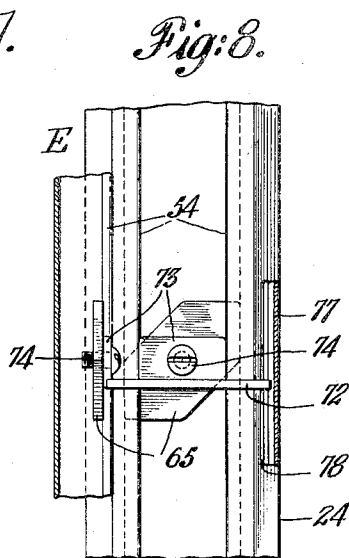


Fig. 8.

Fig. 10.

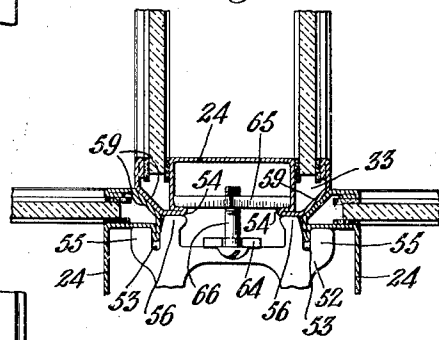
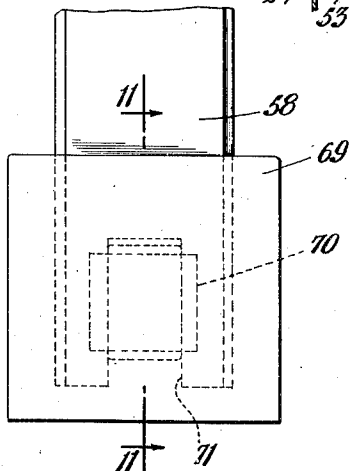
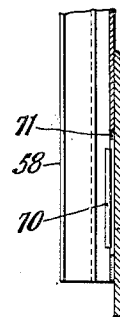


Fig. 9.

Fig. 11.



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METALLIC PARTITION STRUCTURE

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Fig:16.

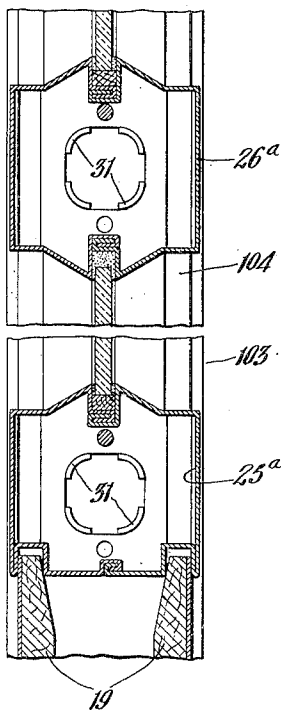


Fig:12.

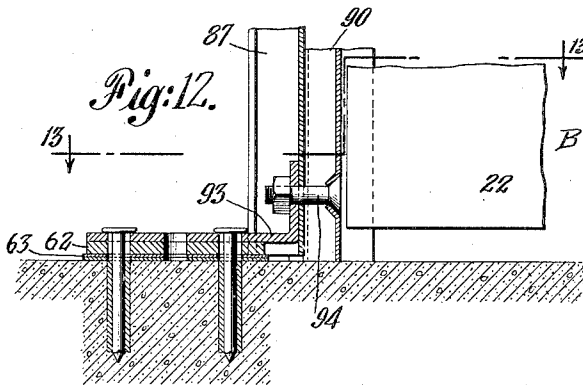


Fig:13.

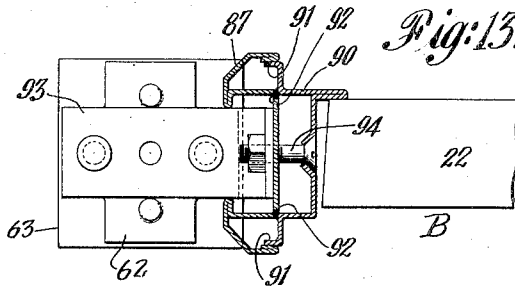


Fig:14.

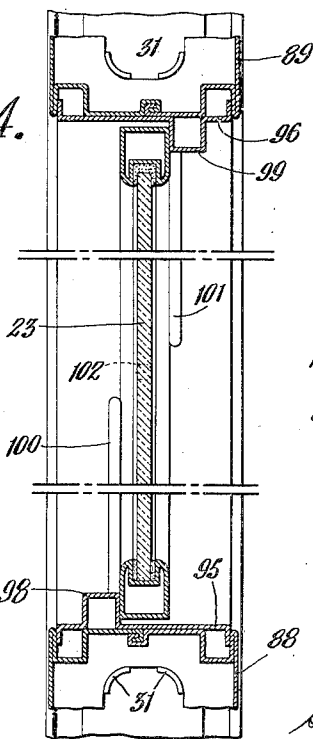


Fig:15.

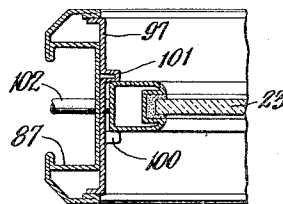


Fig:17.

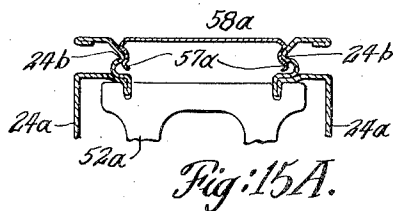
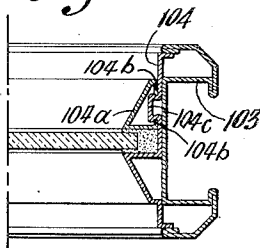


Fig:15A.

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METALLIC PARTITION STRUCTURE

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Fig:18.

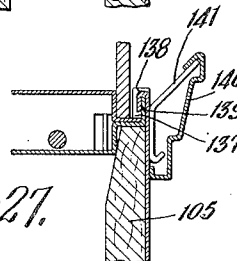
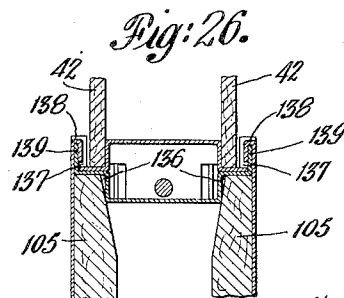
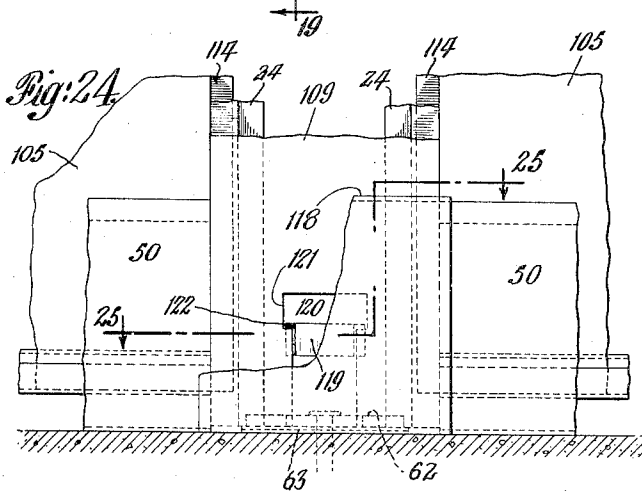
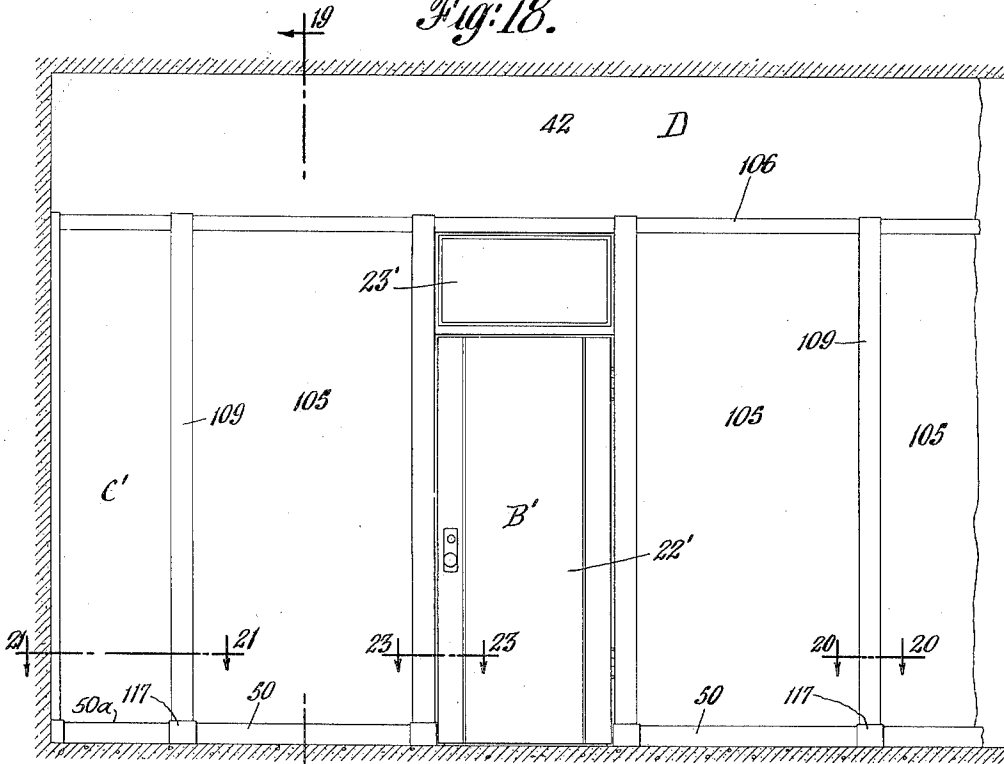


Fig:25.

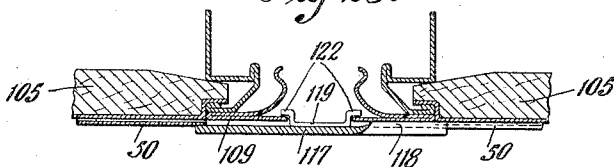


Fig:27.

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# UNITED STATES PATENT OFFICE

1,951,778

## METALLIC PARTITION STRUCTURE

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Application May 12, 1933, Serial No. 670,713

52 Claims. (Cl. 189—34)

This invention relates to metallic partition structures of the type composed of a plurality of panel units adapted to be detachably secured together to meet a variety of conditions.

In the preferred form of the invention one of the primary objects is the provision of a metallic partition structure of the above character, the wall surfaces of which are substantially flush throughout the extent of the partition.

Other objects reside in the simplicity with which partitions, whether flush or not, may be erected and taken down, and the novel manner of forming corner, three, and four-way conditions, side and top filler conditions, floor conditions, and other conditions the construction of which and advantages to be derived therefrom will become apparent from the following description.

Another object of the invention is to provide features of construction which will be more specifically pointed out hereinafter.

In another form of the invention it is an object to obtain a flush construction substantially throughout the partition.

How the foregoing, together with such other objects and advantages as may hereinafter appear or are incident to my invention are realized, is illustrated in preferred form in the accompanying drawings, wherein—

Figure 1 is an elevational view, partly broken out, of a partition constructed in accordance with my invention;

Figure 2 is an enlarged broken-out sectional elevation taken in part substantially on the lines 2—2 and 2a—2a of Figure 3, and in part on the line 2b—2b of Figure 7;

Figure 3 is a vertical cross section, partly broken out, taken substantially on the line 3—3 of Figure 1;

Figure 4 is a plan section, partly broken out, taken on the line 4—4 of Figure 1;

Figure 5 is a plan section, partly broken out, taken on the line 5—5 of Figure 1;

Figure 6 is a plan section illustrating a four-way condition;

Figure 7 is a fragmentary vertical section taken on the line 7—7 of Figure 2;

Figure 8 is a fragmentary vertical section taken substantially on the line 8—8 of Figure 5;

Figure 9 is a fragmentary plan section illustrating a three-way condition;

Figure 10 is a fragmentary view illustrating the plinth arrangement;

Figure 11 is a section taken on the line 11—11 of Figure 10;

Figure 12 is a fragmentary sectional elevation illustrating a door jamb detail;

Figure 13 is a plan section taken on the line 13—13 of Figure 12 and on the line 13—13 of Figure 1;

Figure 14 is a fragmentary section taken on the line 14—14 of Figure 1;

Figure 15 is a fragmentary section on the line 15—15 of Figure 1;

Figure 15A is a fragmentary plan section illustrating a slight modification of the post construction illustrated in Figure 4;

Figure 16 is a fragmentary broken-out vertical cross section of a modification of the invention;

Figure 17 is a plan section illustrating the post condition in a partition constructed in accordance with the modification shown in Figure 16;

Figure 18 is a fragmentary elevational view of another form of the invention;

Figure 19 is a vertical cross section, partly broken out, taken on the line 19—19 of Figure 18;

Figure 20 is a fragmentary plan section taken on the line 20—20 of Figure 18;

Figure 21 is a fragmentary plan section taken on the line 21—21 of Figure 18;

Figure 22 is a fragmentary plan section illustrating a corner condition in a partition constructed in accordance with Figure 18;

Figure 23 is a fragmentary plan section taken on the line 23—23 of Figure 18;

Figure 24 is a fragmentary elevation illustrating the plinth arrangement in a partition constructed in accordance with Figure 18;

Figure 25 is a plan section taken on the line 25—25 of Figure 24;

Figure 26 is a fragmentary vertical cross section thru a modified upper rail construction;

Figure 27 is a fragmentary vertical cross section thru a cornice construction, and

Figure 28 is a broken-out vertical cross section illustrating another form of my invention.

The particular partition illustrated in Figure 1 is of a form in which the partition proper is of less than ceiling height, and comprises a plurality of like panel units A each having lower double opaque panels 19, upper double glass panels 20, and intermediate double glass panels 21; a door unit B carrying a door 22 and a transom 23; a wall filler section C; a top or ceiling filler section D; and a corner condition E at which the partition wall extends at right angles away from the wall shown. This corner condition is illustrated in Figure 5.

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105

110

By referring particularly to Figures 2, 3, and 5, it will be seen that each panel unit A comprises in general a pair of end uprights 24 of generally channel-shape in cross section, cross rails 25, 26, and 27, of hollow-box form in cross section, panels such as above mentioned, and tie rods 28 extending from the web portion of one end upright to the web portion of the other end upright for securing the above parts together in a rigid unit.

The cross rails 25, 26, and 27, are positioned on the uprights by means of plate-like members 29 adapted to peripherally frictionally fit the interior end portions of the rails and having central cut-out portions 30 adapted to frictionally fit tabs 31 struck up from the webs of the uprights 24 in surrounding relation to wire receiving apertures 32. Thus the cut-out portions 30 and the apertures 32 register whereby electric wires may be passed from the hollow interiors of the rails to the interiors of the upright post portions of the partition later to be described. The members 29 may be held in place on the uprights as by means of spot welding.

The end uprights 24 are each provided with a pair of panel receiving grooves 33 which are located closely adjacent the side faces of the uprights for receiving the panels 19, 20, and 21, and the cross rails 25, 26, and 27, are provided with similar panel receiving grooves in their top and bottom walls.

In order to permit the glass panels 20 and 21 to be readily inserted or replaced, the cross rails 26 are provided with removable side cover plates 34, 34 adapted to be snap or friction held in place, as indicated at 35 in Figure 3, it being noted that the outside walls of the panel receiving grooves which are provided in the body of the cross rails 26 are shallow to permit entry of the glass panels. The cover plates 34 complete the grooves and also form part of the outside wall surfaces of the partition, which, owing to the thinness of the cover plates, is substantially flush with the faces of the panels. As for inserting the upper glass panels 20 this is accomplished by sidewise and upward shifting and then placing wood strips 20a under the glass as illustrated in Figure 3. The glass panels 21 are inserted by sidewise and downward shifting and rest on wood strips 21a. It is to be observed that the outer walls of the grooves 33 of the end uprights are also relatively thin and therefore here again the surfaces of these uprights which are exposed as wall surface are substantially flush with the faces of the panels.

The cross rails 26 which have the open side faces are constructed of two sheet metal members of channel-form in cross section placed back to back, and preferably spot-welded together, thus forming an internally-braced cross rail. The webs of these channel members are provided with longitudinally extending registering grooves for the reception of the tie rods 28 as shown in Figure 3.

The cross rails 25 and 27 are of closed form and are preferably made in two halves of identical section rolled together with top and bottom seams, also as shown in Figure 3. If desired, however, all of these cross rails may be made of the same form as the rails 26. This arrangement also makes it possible to substitute rail covers of one color or finish for others of a different color or finish without having to disassemble major parts of the partition. Electric wires may be readily inserted in the cross rails if desired.

The plate-like positioning members 29 above

referred to are in effect composed of two spaced half portions tied together by means of an outwardly bent strap 29a adapted to straddle the ends of the internally disposed webs of the cross rails 26. By so constructing these positioning members clearance for the tie rods and for the seams of the cross rails 25 and 27 is also provided.

In this instance the lower opaque panels 19 (see Fig. 3) are constructed of insulating boards 36 faced with metal 37 and are provided with tapering edge portions 38 adapted to enter the panel receiving grooves 33 of the uprights 24 at the sides, the bottom panel receiving grooves of the cross rails 25 at the top, and panel receiving grooves 39 in bottom internal rail members 40 secured in place between the uprights by means of tie rods 28a similar to those above mentioned. The rail members 40 are positioned on the uprights by means of tabs 41 struck up from the webs of the uprights.

The panels 42 of the top or ceiling filler sections D may be constructed of insulating boards the lower edges of which enter the upper panel receiving grooves of the cross rails 27. A strip 43 is provided at the ceiling to which the panels 42 are secured along their upper edge portions. These panels are further supported in proper spaced relation by means of extensions for the uprights 24 in the form of jack-posts 44 to be described in detail hereinafter.

The panels 45 of the side or end filler section C are of similar construction to the bottom panels 19 and as shown in Figure 4 the upright edges thereof which are adjacent the wall are adapted to fit pockets or grooves 46 provided in end mouldings 47. These end mouldings are formed of an outer channel-shaped member 48 and an inner channel-shaped member 49 of sufficiently less width than the channel member 48 so as to provide the pockets 46 just referred to. These channel members may be spot welded together at their webs, and the relative sizes of them are such that the panels 45 are frictionally received by the pockets 46. The other upright edges of these panels are received by the panel receiving grooves of the adjacent end upright 24, and the top edges thereof are received by the panel receiving grooves in the upper cross rail 27. At the bottom a supporting block 45a is employed as shown in Fig. 2.

In order to form a finish at the floor and take care of any floor irregularities, a moulding or mop strip 50 is provided as clearly shown in Figures 2 and 3. This moulding is of U-shape form in cross section and frictionally engages the outside faces of the panels 19 at 51. It will be seen that it also encloses the cross member 40 and extends from one end upright of a panel unit to the other end upright thereof. At the end fillers C metal strips 50a may be employed to match up with the mop strips 50.

The panel units A are adapted to be detachably secured in spaced aligned position by means of securing members or clips 52 of plate-like form adapted to be positioned entirely by friction. These clips are provided with open slots 53 arranged in spaced pairs longitudinally of the clips, and the slots of each pair being aligned transversely of the clips. These slots frictionally fit inturned transversely aligned flanges or tongues 54 extending along the length of the end uprights 24. Outer and inner tongues 55 and 56 are provided at each slot and it is to be noted that the outer tongues 55 engage adjacent faces of the

uprights to ensure alignment of the two end uprights of adjacent panel units. The inner tongues 56 are formed in a manner to cooperate with spring portions 57 provided on the post covers 58 which cover the space between adjacent end uprights. Thus these post covers are resiliently and detachably held in place. It is to be observed that the clips are positioned in a horizontal plane and that only one clip is employed at each point of connection. Also, these clips are located entirely within the planes of the side faces of the uprights and therefore the flush characteristic herein referred to is made possible.

The upright edges or corners of the end uprights 24 are substantially beveled as indicated at 59, the bevel being preferably of 45°. The edge portions of the post covers 58 are similarly but reversely beveled, and are adapted to be inset with relation to the uprights to provide an exposed post surface which is substantially flush for the entire width of the post including the cover. Since the faces of the uprights which were exposed as wall surface are substantially flush with the exposed faces of the panels, as above pointed out, the partition presents a substantially flush wall surface throughout its extent, including the posts and cross rails.

Any desired number of vertically spaced clips 52 may be employed in securing adjacent panels together, and since they are frictionally held in place they may be positioned vertically at any point and in any spacing desired. Also, no punchings or slots need be provided in the uprights to receive and position the clips.

It will be seen from the foregoing that a very simple and effective arrangement is provided for securing adjacent panel units in aligned spaced relation, and that in effect a very rugged hollow post is formed in which electric wires may be strung if desired, and from which they may be led into the cross rails through the medium of the apertures 30 and 32 above referred to. The clips 52 are also provided with wire receiving apertures 60.

The post covers 58 are beveled at 61 as illustrated in Figure 4, for example, which stiffens the edges so that no distortion of the cover takes place when snapped in position. Furthermore, this leaves a V-groove between cover and post the apex of which is set back from the faces of the cover and post so that dirt tending to accumulate at the joint will be less perceptible to the eye.

In Figure 15A I have illustrated a post portion of modified form in which the end uprights 24a are provided with rounded portions 24b over which the spring portions 57a of the cover members 58a snap to hold the members in place. The adjacent end uprights are secured together by means of clips 52a which engage inturned flanges on the uprights.

Rigidity at the bottom of the post portion is provided by means of flat cross-shaped plate members 62 anchored to the floor as illustrated in Figures 2 and 4. The uprights straddle these floor plates to be positioned thereby and rest on shims 63 located underneath the floor plates. The number of shim plates to be employed depends upon the floor condition.

Referring now to the three-way condition illustrated in Figure 9 and the four-way condition illustrated in Figure 6, it will be seen that the clips 52 are provided with slotted upstanding ears 64 whereby panel sections extending at right

angles to the aligned sections may be secured in place in the following manner.

In this connection it is pointed out that the slots 53 of the clips are so spaced that the aligned end uprights are spaced apart a distance such that the beveled upright edges 59 of the panel units which are to be disposed at right angles fit or mate with the corresponding beveled edges of the aligned spaced uprights so that these panel units are set in or seated between the aligned uprights to the extent of the bevel of the edges. Through this arrangement the angularly disposed panel units are laterally positioned with respect to the others. In order to detachably secure these units in place, diagonally disposed clamping plates 65 are placed in back of the inturned flanges 54 of the uprights, and clamped in place by means of screws 66 fitting the ears 64 and having screw-threaded engagement with the clamping plate 65. The plates 65 are so shaped as to be self-holding against turning when the screws 66 are tightened. Clamping action on the uprights 24 of the aligned panel units and on the upright 24 of the angularly disposed units is afforded by means of the lugs 55 and 56 respectively of the clips. Thus the angularly disposed units are securely attached to the aligned units.

It is to be noted that in constructing a three-way condition such as illustrated in Figure 9, clamping devices 65 may be associated with each clip 52 because access thereto may be had through the space between the aligned spaced uprights which space is then closed by a cover member 58. In constructing the four-way condition illustrated in Figure 6, however, the clamping devices 65 are only associated with the topmost clips 52 in order that either angularly disposed unit may be readily taken down, if desired. This arrangement is necessary because the only access to the interior of the four-way condition after assembly is from the top. Rigidity at the bottom of this four-way condition is provided by means of a cross-shaped floor plate 62 adapted to be anchored to the floor, and by means of angle irons 68 in the form of plinths secured at the four corners at the bottom.

In order to maintain the flush characteristics above referred to throughout the partition, a very simple form of plinth block is employed which, as illustrated in Figures 10 and 11, comprises a relatively thin flat plate 69 adapted to be frictionally held in place by means of a friction clamp 70 carried at its inside face and frictionally fitting an open-ended slot 71 in the lower portion of the post cover 58. This plinth block is first placed on the post cover, and after the post cover is snapped into position the plinth block may be readily adjusted to its final position. The slot in the post cover is of sufficient length to permit adjustments of the plinth.

The corner condition E is formed by placing two panel units at right angles to each other with their adjacent bevel edges in mating relation and then applying angle plates 72 thereto (see Figs. 5 and 8). These angle plates are provided with upstanding ears 73 of a width to fit between the inner edges of the inturned post flanges 54, and are clamped in place by diagonally disposed clamping plates 65 fitting in back of the flanges 54 through the medium of clamp screws 74. Rigidity at the bottom is provided by means of the floor plates 62 and inside corner angles 76. The corner is completed by angular covers 77 having inturned flanges 78 adapted to engage the rounded portions

79 of the plates 72 with snap action. Corner plinths 80 are employed at these corners.

Referring now to the extensions or jack-posts 44, these are substantially of channel form in cross section (see Figures 2, 5, and 7) and snugly fit in the channel form of the end uprights 24 in a manner well known in this art. In order to ensure rigidity, the jack-posts extend well down into the uprights and preferably to a point somewhat below the two uppermost securing clips 52. In this connection it is to be noted that the tongues 55 of the clips are of such width that sufficient clearance space is provided for the flanges of the jack-posts and if desired the fit may be snug.

The jack-posts are pressed or clamped against the webs of the uprights by means of tapered wedges 81, in this instance of half-round U-form, and adapted to be wedged between the clips 52, which are within range of the jack-posts, and the webs of the jack-posts, the clips being provided with curved notches 82 for receiving the wedges. In order to have edge line contact clamping action between the jack-posts and the end uprights, the web portions of the jack-posts are recessed as illustrated at 83. Thus the jack-posts may be rigidly but detachably and adjustably secured to the end uprights. At the ceiling the jack-posts of adjacent spaced panels are connected by U-shaped members 84 which are secured to them by means of nuts and bolts 85 and which in turn are anchored to the ceiling in any suitable manner. The jack-posts are provided with elongated apertures 86 in their webs to provide clearance for the protruding ends of the tie rods, and for the reception of wires.

The construction just described enables a partition of standard height to be readily accommodated to varying ceiling heights, and at the same time provides rigidity for the upper portion of the partition by means of light and simple structure. The protruding portions of the jack-posts are hidden from view by the filler panels 42 and by the post covers.

The door unit B comprises a pair of spaced end uprights 87 similar in form to those of the panel units A and a pair of upper cross rails 88 and 89 similar in form to the cross rails 27 of the panel units A, these parts being tied together by means of tie rods. The end upright 87 at the lock edge of the door is provided with an adapter member 90 (see Figs. 12 and 13) which provides a stop for the door. The other end upright is provided with a similar adapter member for the door hinges, and the lower face of the cross rail 88 is also provided with a similar adapter member providing an upper stop for the door. These adapter members are provided with flanges 91 adapted to fit the usual panel receiving grooves of the uprights and may be welded to the uprights as indicated at 92 in Figure 13. In order to provide rigidity of the door unit the uprights thereof are securely fastened to the floor as by means of relatively heavy angle irons 93 secured to the uprights by means of screws and nuts 94, and anchored to the floor in any suitable manner. The uprights are positioned laterally by floor plates similar to those described above.

The transom frame is similarly formed by adapter members 95 and 96 secured to the upper and lower faces of the cross rails 88 and 89 respectively as by welding, and by means of adapter members 97 secured to the end uprights 87. The bottom and top transom frame members are provided with transom stops 98 and 99, and the end

frame members are provided with stops 100 and 101, it being noted that the transom is centrally hinged at 102. It will be seen from the foregoing that the framing members of the door unit are of the same standard form as those of the panel units-A, which reduces the cost of manufacture.

In Figures 16 and 17 a modified form of partition is illustrated in which the glazed portions of the units are of single panel form, it being noted that the upper cross rail 26a is in this instance provided only with single panel receiving grooves and that the cross rail 25a is provided with a single panel receiving groove in its upper face and double panel receiving grooves in its lower face. Thus the cross rail 25a is adapted to accommodate double opaque panels 19. The end uprights 103 of this modified partition are of the same form as the end uprights 24 above described, and the double panel receiving grooves thereof accommodate the lower opaque panels 19. Above the cross rail 25a, however, these uprights are provided with adapters 104 which are provided with a single panel receiving groove for the single glass. It is also contemplated to employ cross rails in this form of partition of the same construction as those employed in the main form and to condition them for single panels by means of adapter members similar to the adapters 104. The glass may be held in place by means of glazing strips 104a having portions 104b adapted for snap engagement with rib-like projections 104c provided on the members 104. The parts of the unit are tied together in a manner similar to that above described. It will thus be seen that in constructing this form of partition many of the parts are of the same construction as employed in the main form of the invention.

It will be seen from the foregoing that a partition structure is provided of such character that main structural members of the same form may be employed for both double panel and single panel partitions, thus resulting in a standardization of parts.

Simplicity in manufacture and erection is also obtained thru the use of the simple friction held plate-like means for securing adjacent units together which require no punchings in the post members for locking or positioning them in place.

A partition constructed in accordance with the invention provides for minimum projection of post and rail parts beyond the faces of the opaque and glass panels, i. e., a substantially flush partition is provided which in addition to being sanitary also enables the placing of furniture against the paneling. Further simplicity is obtained thru the employment of flat floor plates which are universal for one, two, three, and four-way conditions.

In Figures 18 to 25 inclusive, a double-walled unglazed partition is illustrated. The opaque panels 105 of metal covered insulating material extend the entire distance from the bottom rail 40 to the top rail 106 which, as illustrated in Figure 19, is of closed box form and has double panel receiving grooves in its bottom and top walls, the former for receiving the upper edges of the panels 105 and the latter for receiving the lower edges of the panels 42 of the ceiling filler section D. The side edges of the panels 105 enter the spaced grooves of the end uprights 24 which are of the same form as described above.

The panels are braced by vertically spaced in-

ternal cross rails 107 of box-like form in cross section and of dimensions such that their side faces contact with the inside faces of the panels. The cross rails are positioned vertically by means of the tabs 31 formed on the uprights 24. Tie rods 108 similar to the tie rods 28 are employed to tie the parts together in unit form. Thus a plain continuous wall surface is presented by the panels and yet a rigid braced arrangement provided, while still maintaining all of the advantages of the unit panel construction.

These panel units are adapted to be detachably secured in spaced aligned position in the same manner as the panel units A of the first form described, by means of securing clips 52, the construction and application of which are fully described above. Like reference numerals have been applied to these clips. The space between the spaced end uprights of adjacent units is covered by means of post covers 109 which are resiliently and detachably held in place by means of the spring portions 110 of the covers coating with the inner tongues 56 of the clips 52. It is to be noted that in this instance the post covers 109 rest flat against the outer walls 111 of the end uprights and are of a width extending from the edge 112 of one upright to the edge 113 of the adjacent upright.

The panels 105 are provided at their exposed faces with recesses 114 extending along their side edges, which recesses are of a depth to receive the outer walls 111 of the uprights and the post covers 109 in a manner such that the faces of the post covers 109 which are exposed as wall surface lie in the same plane as the corresponding faces of the panels 105, thus providing an entirely flush wall surface for the partition including the post covers. Similar recesses 115 are provided along the top edge of the panels 105 for receiving the walls 116 of the top cross rails 106, it being noted that these recesses are of less depth than the recesses 114. Thus the faces of the cross rail 106 which are exposed as wall surface lie in the same plane as the corresponding faces of the panels, and here again a flush condition exists.

At the floor a floor moulding or mop strip 50 of the same form as that described above in connection with the first form of the invention, is employed.

In Figures 24 and 25 the plinth arrangement at the post portions is illustrated, and it will be seen that the plinth 117 is in the form of a flat plate having an upper intumed edge 118 fitting over the upper edge of the mop strip 50. This plinth rests against and overlaps the end portions of adjacent mop strips, and the intumed flange 118 covers the gap therebetween. A clip 119 is secured to the inner face of the plinth as by means of spot welding and is adapted to fit in a T-slot 120 provided at the lower portion of the post covers 109. In applying the plinth the clip 119 is inserted into the enlarged portion 121 of the T-slot and then moved down into its proper position so that the tongues 122 of the clip 119 frictionally engage the post cover to resiliently hold the plinth in position.

The wall filler section C' illustrated in Figures 18 and 21 comprises a channel-shaped upright 123 having laterally intumed tongues or flange portions 124 with which clips 52 such as above described are adapted to cooperate to space the end upright 123 from and align it with the end upright 24 of the adjacent panel unit; transversely spaced filler panels 125; and an end

moulding 126. This end moulding is formed of a pair of nested channel-shaped members arranged to provide pockets or grooves 127 for the reception of the panels 125, the arrangement being similar to that described in connection with Figure 4. The edge portions 128 of the panels 125 are adapted to fit in the grooves 129 provided between the post covers 109 and the side flanges of the upright 123. In this connection it is to be observed that the metal covering of these panels is inwardly bent at the edge portions 128 to provide an upright tongue 130 adapted to frictionally fit in back of vertically spaced clips 131 secured to the uprights 123 as by means of spot welding. This prevents lateral displacement of the panels. The panels are also provided with recesses 132 at the edge portions 128 for receiving the post covers 109 in inset relation to maintain the flush characteristics above referred to.

The corner condition E' is constructed and arranged in the same manner as described above in connection with Figure 5, it being noted, however, that the corner cover members 133 are also inset in the panel recesses in order to maintain the flush characteristics, and that an outside corner plinth 134 similar to the plinth 117 is employed. At the inside corner a plinth 135 is employed having an upper flange fitting over the upper edge of the mop strips 50 and adapted to close the gap at this point.

Three and four-way conditions in this form of partition are constructed in the same manner as described above in connection with Figures 9 and 6 with the exception that the outer walls of the end uprights are inset in the recesses of the panels and that plinths similar to the plinths 135 are provided at the bottom corners.

A door unit B' carrying a door 22' and a transom 23' may be employed which is of substantially the same construction as the door unit described in connection with the first form of the invention, as illustrated in Figures 18 and 23, in which the corresponding parts are identified by like reference numerals.

In Figure 26 a modified arrangement of top rail is illustrated comprising two substantially U-shaped metallic members welded together to form lower edge pockets 136 for receiving the upper edges of the panels 105 and the upper pockets 137 for receiving the top filler panels 42. The metal facings of the panels 105 are extended up above the top edges of the insulating material, and these protruding portions are rebent as indicated at 138 to fit over the upstanding flanges 139 of the upper cross rail, thus holding the panels 105 in position. It will be seen that this arrangement provides an entirely flush exposed panel surface at the upper rail. In some instances it is desirable to provide a cornice or picture moulding 140 along this upper edge, such as illustrated in Figure 27. This moulding may be detachably secured in place as by means of clips 141 secured to the faces of the panels over which it may be snapped.

The modification illustrated in Figure 28 is of the double-walled unglazed type but differs from the form described in connection with Figures 18 to 25 in that the panels 142 are not recessed along their edges to receive the post covers and upper cross rail. In this respect this form corresponds to the first form of the invention described. In this form top rail arrangements such as shown in Figures 26 and 27 may be employed in place of the top rail 106 illustrated.

It is to be understood that in all of the forms,

extension or jack-post arrangements such as described in connection with Figures 2, 5, and 7, may be employed in constructing a ceiling-high partition with top filler sections.

5 In all forms, if desired, the panels of the top filler sections may be arranged to maintain either the substantially flush or full flush characteristics in the ways previously described.

10 Also in all forms it will be seen that there is great flexibility and adaptability in that ceiling high and less than ceiling high runs may fit together without change in either a straight run or in two, three, or four-way conditions. Similarly, office rails may be associated with either ceiling, 15 or less than ceiling high runs, or both. Where there are post portions exposed because of the difference in heights, suitable covers are provided.

It will be noted that in all cases the cross rails are symmetrical so they can be used either side up, with the possible exception of arrangements 20 such as in Figure 16. This facilitates assemblage.

In the double walled arrangements the space between the wall acts as a sound deadening air space. This space may be filled with sound deadening material to make the partition more sound-proof if desired.

I claim:

1. A partition comprising units each individually complete with end stiles, cross members, and 30 panels, means for securing the units in spaced assembled relation, and means for covering the spaces between the units, said parts of the units and the cover means being so constructed that when they are assembled in partition form a generally flush outside wall surface is provided. 35

2. A partition comprising units each individually complete with end stiles and panels, means for securing the units in spaced assembled relation, and means for covering the spaces between 40 the units, the panels of the units and the cover means being so complementarily constructed that the exposed surfaces of the cover means are flush with the exposed surfaces of the panels.

3. In a partition comprising a plurality of similar panel units, the combination of means for 45 attaching said units together in spaced relation, means for covering the space between the units, panel receiving recesses in said units, panels in said recesses, said recesses being located adjacent the wall faces of the units, and edge recesses in 50 said units adapted to receive said cover means in flush relation whereby a partition substantially flush throughout its extent including the joints between units, is provided.

4. A partition comprising a plurality of units 55 each individually complete and having end stiles and panels, constructed and arranged so that faces thereof which constitute wall surface lie substantially in the same flat plane, means engaging the end stiles of adjacent units to secure 60 them together in spaced relation to form the partition, means covering the joint between adjacent units, and means lying within said plane for supporting said covering means so that the face thereof which constitutes wall surface lies 65 substantially in the aforesaid plane.

5. A partition comprising a plurality of units 70 each having end stiles, cross rails, and panels, panel receiving grooves in the stiles and rails located closely adjacent the faces thereof which are exposed as wall surface of the partition, means located entirely within the planes of said 75 faces of the stiles for laterally positioning, longitudinally spacing, and securing together adjacent units, means for covering the space between

adjacent units, and means for detachably securing said cover means in place, the opposed stiles of adjacent units having bevel surfaces whereby the cover means is adapted to fit the stiles with the face thereof which is exposed as wall surface lying substantially in the plane of the corresponding faces of the stiles, rails, and panels. 80

6. A partition composed of units each having its four upright edges substantially beveled, 85 means for securing adjacent units together in spaced aligned wall forming position, and cover means for said space having its edges reversely beveled from the upright edges of the units.

7. In a partition the combination of a plurality of units each having end uprights with panel receiving grooves closely adjacent their wall forming faces, and beveled upright edges at said faces, panels in said grooves, means for securing adjacent units together in spaced aligned wall 90 forming position, and cover means for said space having beveled edges cooperating with the beveled upright edges of the end uprights of adjacent units whereby the wall forming face of the cover means will lie substantially flush with the 95 wall forming faces of the end uprights.

8. In a partition the combination of a plurality of units each having end uprights with panel receiving grooves, panels in said grooves, means gripping the end uprights of adjacent units to 100 secure them together in spaced aligned wall forming position, said means being adapted to be friction held at any point along said uprights, cover means for said space, and cooperating means on said cover means and said securing 110 means for retaining the cover means in place.

9. In a partition the combination of a plurality of units each having end uprights, two opposite faces of which form portions of the inner and outer wall surfaces of the partition, means for 115 securing adjacent units together in spaced wall forming relation comprising friction held members located entirely within the planes of said two opposite faces of the end uprights, means covering the spaces between adjacent units, and 120 cooperating means on said cover means and said friction held members for holding the cover means in place with their exposed faces lying substantially in the planes of said two opposite faces 125 of the end uprights.

10. A securing member for use in metallic partitions comprising a plate having slots disposed to frictionally fit receiving means of uprights of adjacent partition units to be secured together in alignment and having an ear for the securing of 130 other partition units in place in right angle relation to said aligned units.

11. A securing member for use in metallic partitions comprising a rectangular plate having open slots in opposed edges adapted to frictionally fit receiving tongues of partition uprights and having an attaching ear at one of said edges for the attachment of other partition uprights. 135

12. A detachable securing member for use in sectional metallic partitions comprising a plate 140 having securing slots, aligning tongues and a securing ear, the slots to fit flanges of partition uprights and the tongues to engage surfaces of said uprights, whereby the uprights are held in spaced, aligned, and detachable relation, and the ear for receiving means whereby uprights of other partition sections are held in detachable angular relation to the first uprights. 145

13. In a partition structure the combination of panel units having end uprights with spaced in- 150

- turned flanges, plate-like securing members having open slots frictionally fitting the flanges of adjacent units to detachably secure them together in spaced aligned relation, and means for detachably securing other panel units in place to form a four-way partition condition including ears carried by said plate-like members and securing means cooperating with said ears and the inturned flanges of said other panel units.
14. In a partition structure the combination of panel units having end uprights with beveled upright edges and spaced inturned flanges, means for detachably securing panel units together to form a corner condition with adjacent bevel edges mating to form a joint including angle members and clamping means for attaching said members engageable with the inturned flanges of the units to be so secured, a corner cover member, and cooperating means carried by said cover member and said angle members for resiliently holding the cover member in place.
15. In a metallic partition structure a sheet metal cross rail internally reinforced and having open sides and covers for said open sides having means for holding them in place by frictional engagement with the rail.
16. In a metallic partition structure a cross rail constructed of two channel-shaped members secured together back to back and presenting two open sides, and covers for said open sides having means for holding them in place by frictional engagement with the rail.
17. In a metallic partition structure a cross rail constructed of two channel-shaped members secured together with their webs in contact and with their flanges forming the top and bottom walls of the rail, panel receiving grooves in said flanges, and means frictionally held in place to constitute detachable side walls of the rails giving access to the interior thereof.
18. In a metallic partition structure a cross rail constructed of two channel-shaped members secured together with their webs in contact and with their flanges forming the top and bottom walls of the rail, panel receiving grooves in said flanges, and means frictionally held in place to constitute detachable side walls of the rails giving access to the interior thereof, said means also serving to retain the panels.
19. In a metallic partition structure the combination of hollow uprights, hollow cross rails extending from upright to upright, apertures in said uprights for passing wires from within the cross rails to within the uprights, said apertures being bounded by struck-up tabs, and means for positioning the cross rails through the medium of said tabs including apertured plate-like members frictionally fitting the tabs and the cross rails.
20. In a metallic partition structure composed of a plurality of panel units each having end uprights of channel formation in cross section, clip means engaging the uprights for detachably securing adjacent sections together in spaced aligned relation, jack-posts fitting said uprights, and means for detachably securing said jack-posts in extension forming position including wedges insertable between said clip means and said jack-posts to wedge the jack-posts against the uprights.
21. In a metallic partition structure composed of a plurality of panel units each having end uprights of channel formation in cross section, clip means engaging the uprights for detachably securing adjacent sections together in spaced aligned relation, jack-posts of channel formation in cross section nesting in said uprights for a considerable portion of their lengths, and wedge means for adjustably and detachably securing said jack-posts in extension forming position, said wedge means reacting against said clip means.
22. A partition comprising a plurality of panel units each having end stiles, cross rails, and panels, grooves in the stiles and rails located closely adjacent the faces thereof which are exposed as wall surfaces of the partition for receiving panels to form a double walled partition, a door unit having end stiles and rails of similar form to those of the panel units, and adapter members secured to said stiles and rails for conditioning them to accommodate a door and transom.
23. A partition comprising a plurality of panel units each having end stiles, cross rails, and panels, grooves in the stiles and rails located closely adjacent the faces thereof which are exposed as wall surfaces of the partition for receiving panels to form a double walled partition, and adapter members secured to said stiles and rails for conditioning them to accommodate single centrally located panels.
24. In a partition composed of a plurality of similar panel units the combination of means for spacing and attaching said units together, and inset cover means for covering the space between the units, the amount of inset being such that the exposed surfaces of the panel units and the cover means lie in the same plane.
25. In a partition comprising a plurality of similar panel units having structural members and panel members, said panel members having edge portions recessed for the flush reception of structural members.
26. In a partition comprising a plurality of similar panel units having end uprights and panels extending therebetween, means for spacing and attaching said units together, cover means for covering the space between units, said panels having edge portions recessed to receive the end uprights and the cover means flush with the outside surface of the panels.
27. In a partition comprising a plurality of similar panel units having end uprights, a cross rail, and panels, said uprights and rail having laterally spaced longitudinally extending recesses for the reception of the panels to form a double walled partition, and said panels having recessed edge portions in their faces which are exposed as wall surface fitting said recesses in the uprights and rail.
28. In a partition composed of a plurality of similar panel units having end uprights, a top rail, said uprights and rail having laterally spaced longitudinally extending panel receiving recesses, panels having recessed edge portions fitting said recesses to provide a double walled partition, and cross rails extending from end upright to end upright in the space between the laterally separated panels.
29. In a partition composed of a plurality of similar panel units having end uprights, a top rail, said uprights and rail having laterally spaced longitudinally extending panel receiving grooves, panels having recessed edge portions fitting said grooves, cross rails extending from end upright to end upright located in the interior space between the laterally separated panels, and means for tying said parts together in a panel unit.

30. In a partition composed of a plurality of similar panel units having end uprights with laterally spaced longitudinally extending panel receiving grooves, panels having recessed edge portions at their exposed surfaces fitting said grooves, means for securing the units in assembled spaced relation, and cover means for the vertical spaces between units adapted to be inset through the medium of said recessed edge portions of the panels so that the exposed surfaces of the cover means are flush with the exposed surfaces of the panels.
31. A partition comprising units spaced apart and having recessed edge portions, means for securing the units in assembled relation, and means for covering the spaces between the units, said cover means being inset through the medium of said edge recesses, the faces of the cover means and units which are exposed as wall surface lying in the same flat plane.
32. A partition comprising units spaced apart, means for securing the units in assembled relation, means for covering the spaces between units, the units and cover means being so complementarily constructed that the faces thereof which are exposed as wall surface lie in approximately the same flat plane, and said units including cross rails constructed and arranged so that the faces thereof which are exposed as wall surface also lie in approximately said plane.
33. A partition comprising units having end uprights, cross rails, and panels, means for securing the units in assembled aligned spaced relation, means for covering the spaces between units, and mop strips at the bottom of the partition, said end uprights, cover means, cross rails and mop strips being provided with faces to be exposed as wall surface of the partition and having means for relatively positioning them with said faces lying in approximately the same plane, and panel receiving grooves in the uprights and cross rails for positioning the panels so that the faces thereof which are exposed as wall surface of the partition lie in a plane parallel to yet practically coincident with the aforesaid plane.
34. A partition composed of units each having its four upright edges substantially beveled at 45°, means for securing adjacent units together in spaced aligned wall forming position, and cover means for said space having its edges reversely beveled from the upright edges of the units at 45°, together with snap means on said cover means engageable with said securing means for holding the cover means in place.
35. In a partition of the unit type, the units having upright end members, and members cooperating therewith to complete the partition, said members each having upright edge portions beveled at 45° for mating, together with snap means associated with the second mentioned members for holding them in place.
36. A partition composed of units each having its four upright edges substantially beveled, means for securing adjacent units together in spaced aligned wall forming position, and cover means for said space having V-shaped upright edges.
37. In a partition composed of a plurality of similar panel units the combination of means for spacing and attaching said units together, covers for the spaces between adjacent units, said units having upright edges substantially beveled, and said covers having their longitudinal edges V-shaped, and means for attaching the covers in place in inset relation to the units, the assembled units and covers presenting V-grooves at the upright joints therebetween.
38. In a partition composed of a plurality of similar panel units having end uprights, a top rail, said uprights and rail having laterally spaced longitudinal extending panel receiving grooves, panels fitting said grooves, and interior cross rails extending from end upright to end upright.
39. In a partition composed of a plurality of similar panel units having end uprights, a top rail, said uprights and rail having laterally spaced longitudinally extending panel receiving grooves, panels fitting said grooves, and cross rails extending from end upright to end upright located in the interior space between the laterally separated panels, the said cross rails having side faces contacting with the inside faces of the panels.
40. In a partition the combination of a plurality of units each having end uprights with recessed edge portions, means for securing adjacent units together in spaced wall forming relation comprising securing members engaging the adjacent uprights of the units to be secured, a cover for the space between said adjacent units adapted to seat in said recessed portions with its outside face lying in the same plane as the side faces of the uprights, and means for holding said cover in place, said securing members and said cover holding means being located within the planes of the side faces of the uprights.
41. In a partition the combination of a plurality of units each having end uprights, means for securing adjacent units together in spaced wall forming relation comprising securing members engaging the adjacent uprights of the units to be secured, cover means for the space between said adjacent units, and means on said securing members engageable by the cover means to hold said means in place, said securing members together with the holding means thereon being located within the planes of the side faces of the uprights.
42. A partition comprising a plurality of units each having end stiles, cross rails, and panels, panel receiving recesses in the stiles and rails located closely adjacent the faces thereof which are exposed as wall surface of the partition, means located entirely within the planes of said faces of the stiles for laterally positioning, longitudinally spacing, and securing together adjacent units, means for covering the space between adjacent units, and means for detachably securing said cover means in place, the opposed walls of adjacent units having recessed surfaces whereby the cover means is adapted to fit said stiles in recessed relation with the face thereof which is exposed as wall surface lying substantially in the plane of the corresponding faces of the stiles.
43. In a partition the combination of a plurality of units each having end uprights, two opposite faces of which form portions of the inner and outer wall surfaces of the partition, means for securing adjacent units together in spaced wall forming relation comprising members located entirely within the planes of said two opposite faces of the end uprights, means covering the spaces between adjacent units, and cooperating means on said cover means and said members for holding the cover means in place with their exposed faces lying in the planes of said two opposite faces of the end uprights.
44. In a partition structure the combination of panel units having end uprights with beveled upright edges, means for detachably securing panel units together to form a corner condition

with adjacent beveled edges mating, a corner cover member, and cooperating means carried by said cover member and said securing means for resiliently holding the cover member in place.

5 45. In a partition composed of a plurality of similar panel units the combination of means for spacing and attaching said units together, and inset cover means for covering the space between the units, the amount of inset being such that  
10 the exposed surface of the cover means and the adjacent exposed surfaces of the panel units lie in the same plane.

46. In a partition comprising a plurality of similar panel units having structural members and panel members, means for spacing and attaching said units together and cover means for covering the space between units, said panel members having edge recesses in the faces thereof which are exposed as wall surface for the flush  
20 reception of structural members.

47. In a partition comprising a plurality of similar panel units having end uprights, a cross rail, and panels, said cross rail having panel receiving recesses adjacent its side faces, and said  
25 panels having recesses at their upper edge portions in their faces which are exposed as wall surface fitting the recesses in the cross rail.

48. A partition comprising units spaced apart and having receded edge portions, means for securing the units in assembled spaced relation, and means for covering the space between the units, said cover means being inset through the  
30 medium of said receded edges, the face of the cover means which is exposed as wall surface lying in the same flat plane as the corresponding immediately adjacent face portions of the units.

49. A partition comprising units spaced apart and having receded edge portions, means for securing the units in assembled spaced relation, and means for covering the space between the units, said cover means being inset through the  
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medium of said receded edges, the face of the cover means which is exposed as wall surface lying in the same flat plane as the corresponding immediately adjacent face portions of the units and the remaining face portions of said units lying in planes parallel to yet nearly coincident with the aforesaid plane. 80

50. A partition comprising units having end uprights and panels, means for securing the units in assembled aligned spaced relation, means for covering the spaces between units, said end uprights and cover means being provided with faces to be exposed as wall surface of the partition and having means for relatively positioning them with said faces lying in the same plane, and means positioning the panels so that the faces thereof which are exposed as wall surface of the partition lie in a plane parallel to yet nearly coincident with the aforesaid plane. 85 90

51. In a partition comprising a plurality of similar panel units, the combination of means for spacing and attaching said units together, covers for the spaces between adjacent units, said units having beveled upright edges and said covers having similarly beveled longitudinal edges, and means for attaching the covers in place in inset relation to the units, the assembled units and covers presenting V-grooves at the upright joints therebetween. 95 100

52. In a partition the combination of a plurality of units each having end uprights, means for securing adjacent units together in spaced wall forming relation comprising securing members engaging the adjacent uprights of the units to be secured, cover means for the spaces between said adjacent units, and means engageable by the cover means to hold said means in place, said securing members and the means engageable by the cover means being located within the plane of the side faces of the uprights. 105 110 115

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### DISCLAIMER

1,951,778.—*William Scott Snead*, Montclair, N. J. METALLIC PARTITION STRUCTURE. Patent dated March 20, 1934. Disclaimer filed February 18, 1938, by the assignee, *Snead & Company*.

Hereby enters this disclaimer to claims 1, 2, 4, 24, 31, 32, 40, and 52 in said specification.

[*Official Gazette March 22, 1938.*]

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