March 15, 1927. R. F. CARPENTER ET AL 1,621,060

METAL PARTITION

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FIG. 1.

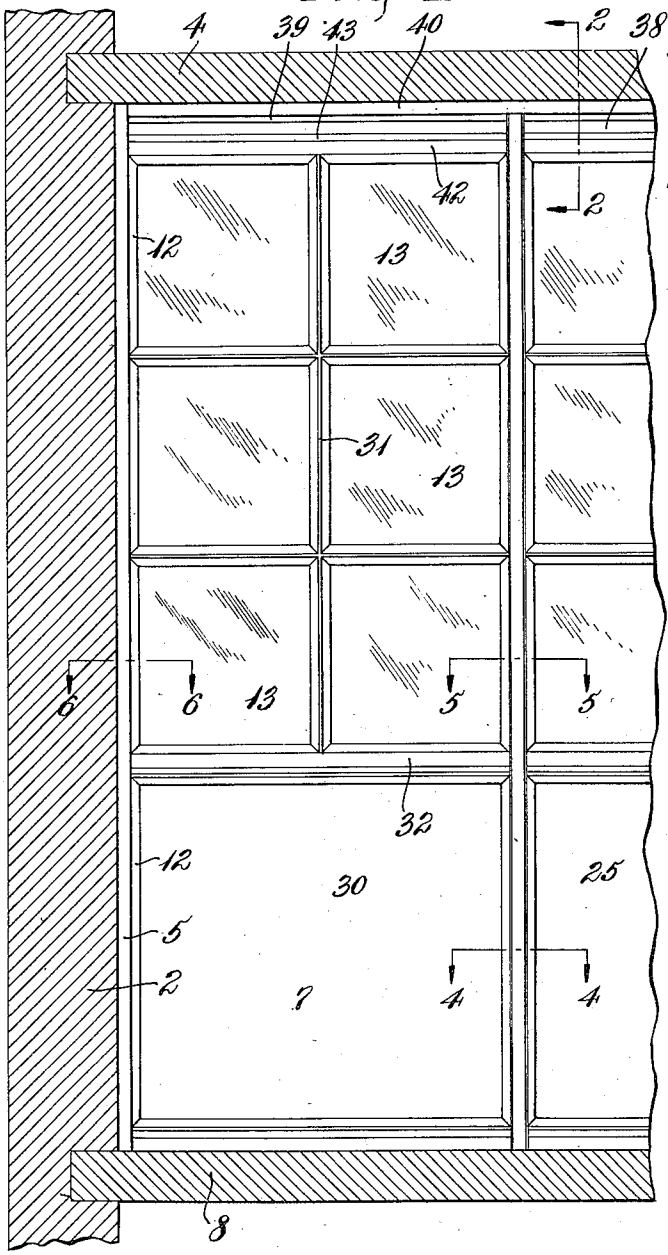
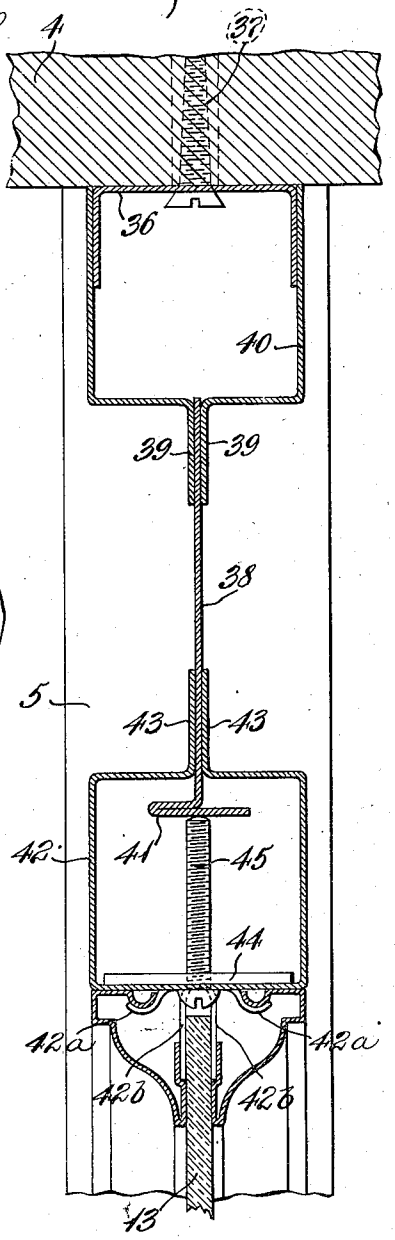


FIG. 2.



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FIG. 4.

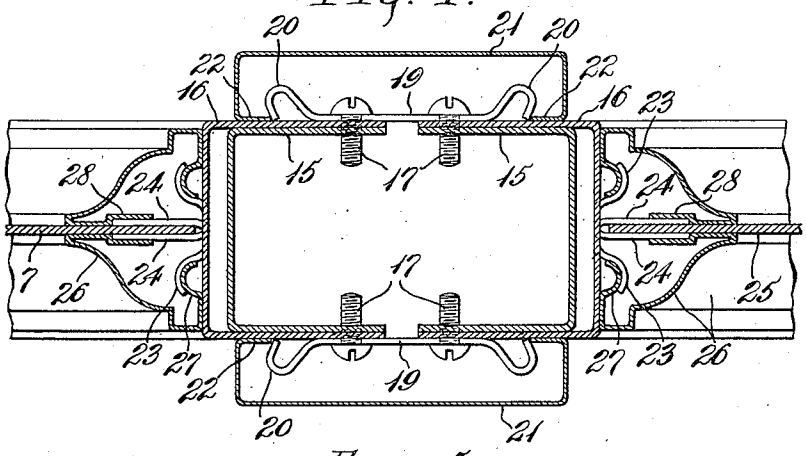


FIG. 3.

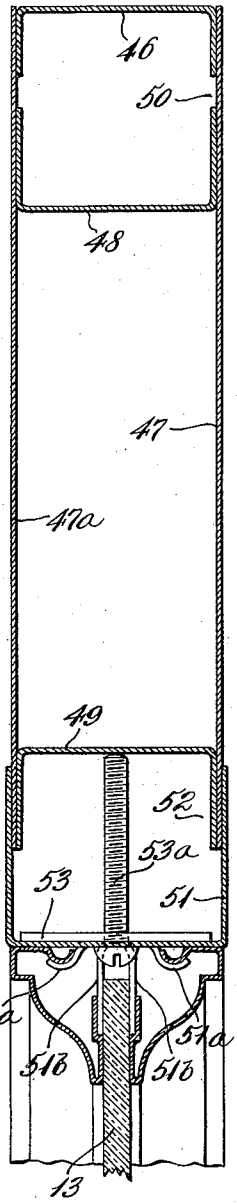


FIG. 5.

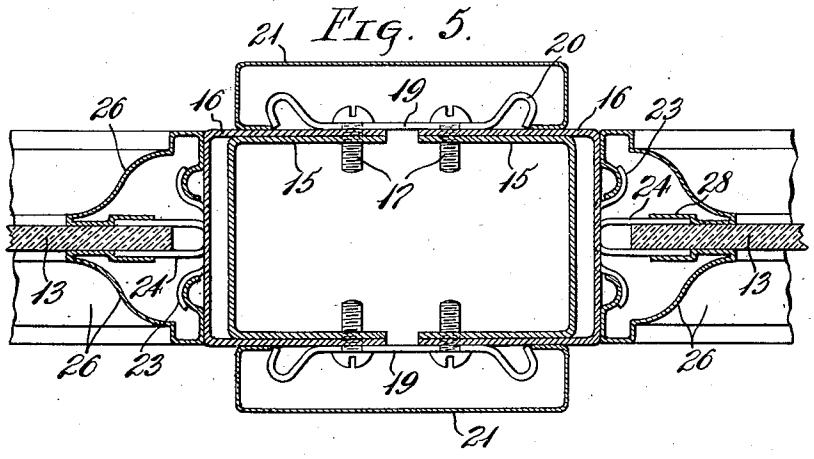
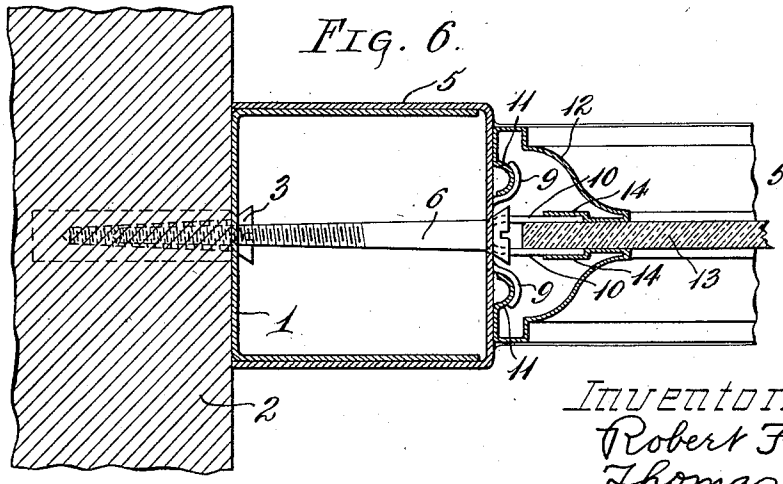


FIG. 6.



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METAL PARTITION

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FIG. 7.

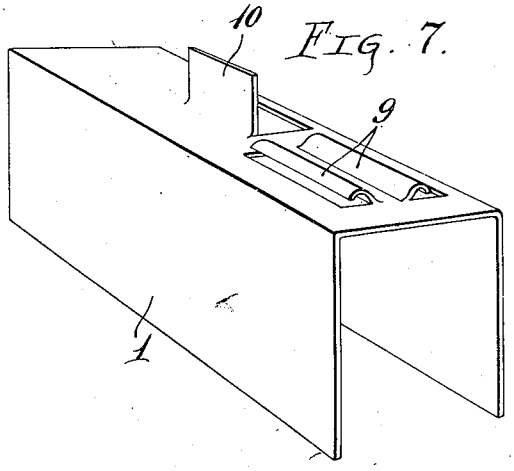


FIG. 8.

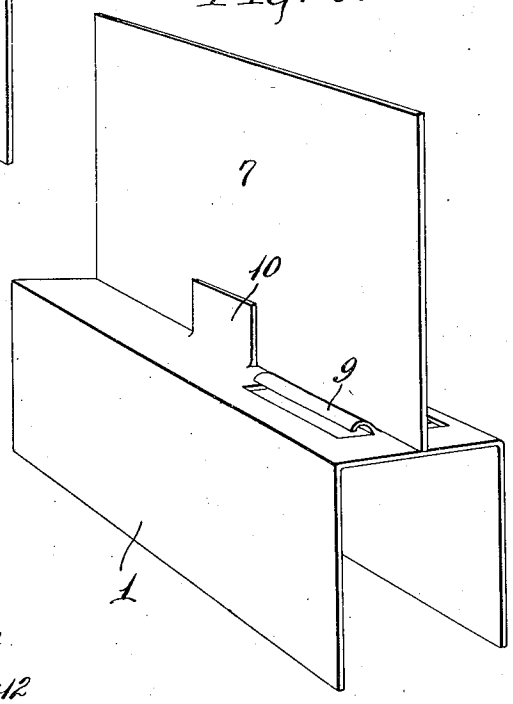
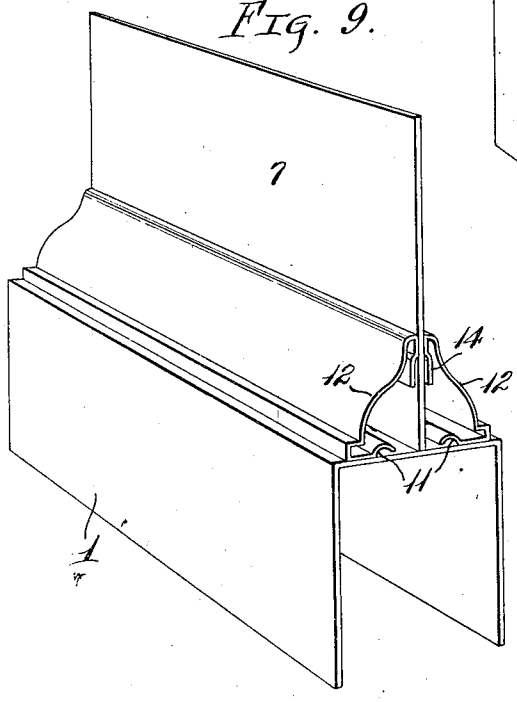


FIG. 9.



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UNITED STATES PATENT OFFICE.

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METAL PARTITION.

Application filed August 1, 1921. Serial No. 488,931.

This invention relates to improvements in sheet metal partitions.

The objects of this invention are to provide sheet metal partitions which can be easily and yet securely assembled at the place of use, and at the same time to provide a structure which is comparatively simple and highly ornamental; to provide a partition structure in which either glass or metal panels can be used with equal facility; and furthermore to provide means for compensating for any deviation of the ceiling from a true horizontal.

Other objects will appear from the following description and claims when considered together with the accompanying drawings.

Fig. 1 is an elevation of a part of our improved partition structure; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 shows a modified form of the compensating filler panel to be used at the same point as the form shown in Fig. 2; Fig. 4 is a section on line 4—4 of Fig. 1; Fig. 5 is a section taken on line 5—5 of Fig. 1; Fig. 6 is a section taken on line 6—6 of Fig. 1; Figs. 7, 8 and 9 show in perspective the channel bars from which the tangs and tabs are struck for securing the moldings and metal and glass panels in position.

The channel bar 1 is secured along the side wall 2 by means of the screws 3 and extends from the floor to the ceiling 4. Another channel bar 5 encloses or telescopes with the channel bar 1 and is secured to the upright wall or post 2 by means of the long screws 6. The metal panel 7 may be secured in any suitable manner to the post formed by the telescoping channel bars 1 and 5 and may also be secured in any suitable manner to the floor 8. The tangs 9 and tabs 10 are struck up from the outer wall of the channel member 5 along the two sides of the middle line thereof as clearly illustrated in Figs. 7, 8 and 9. The tangs 9, which are suitably curved, are adapted to receive by snap engagement the correspondingly formed ears 11 on the inwardly extending base portions of the molding strips 12. In Fig. 6 of the drawings, a glass panel 13 is shown as being held between the moldings 12 and is further secured by integral tabs 10, any number of which may be provided on the same or opposite sides of the panel member. The inwardly extending portions 14 of the moldings are flanged outwardly so as to receive the edge portions of the tabs 10, as clearly illustrated in Fig. 6. With this arrangement the heads of the screws 3 and 6 are completely hidden from view and thus a decidedly ornamental appearance is obtained.

Referring now more especially to the details shown in Fig. 4, it will be seen that a post is formed by the two pairs of channel strips 15 and 16 which lie one within the other with a space between the bottoms thereof and are secured together by means of the screw bolts 17. The outside strip 19, which is provided along its edges with the beads 20, is secured across the gap between the channel strips 15 and 16 by the same bolts 17. An outside channel strip 21 has the inwardly extending flanges 22 which snap into engagement with the beads 20 and in this way conceals from view the heads of the screw bolts 17 and strengthens the structure. Such a channel strip 21 is provided on each of the two opposite sides of the post structure. Each of the outside channel bars 16 is provided upon its one face with the tangs 23 struck up therefrom on the two sides of the middle line thereof after the same fashion as already described in connection with Fig. 6. Tabs 24 are also struck up from the same face of the channel member 16 for the purpose of receiving the edge portion of the metal panel 25. The molding strips 26 which are of the same structure as those already described in Fig. 6, have their inwardly extending curved edge portions 27 received in snap engagement with the tangs 23 and are also provided with the offset flanges 28 for engagement with the edge portions of the tabs 24. The metal panel 25 has its edge portion spot welded to the tabs 24 and is snugly engaged by the opposing faces of the molding strips. The only differences between the structure and arrangement of the molding strips in this case and that described in Fig. 6, are that in the case of the metal panel, the tangs 23 when on opposite sides are closer together, and likewise the tabs 24 are spaced at a less distance apart, these differences being due to the fact that the metal panel is of somewhat less thickness than the glass panel. With this arrangement it is possible to use the same molding strips in either case. Exactly the

same structure and arrangement of parts are found along the opposite sides of this post structure, the metal panel on the opposite side being indicated by reference numeral 7.

The detailed structure shown in Fig. 5 is substantially the same as that already described and will be readily understood without further explanation. It will be simply noted that the tangs and tabs which are struck up from the outer channel members are properly spaced so as to receive the molding strips and the panels of glass in the manner already explained.

Any suitable means may be adopted for securing together the adjacent edge portions of the glass panel sections at the point 31. Likewise any suitable means may be adopted for securing together the lower edges of the bottom tier of glass panel sections and the top edge of the metal panel section as at the point 32.

We have provided also an adjustable filler panel by which we are enabled to compensate for any deviation of the ceiling from a true horizontal. In other words, it is possible with our improvement to insert a filler panel between the top edge of the uppermost tier of glass panels and the ceiling and to adjust this filler so as to have a greater extent or dimension in a vertical direction at its one end than at the other. This improvement is illustrated in detail in Fig. 2. The channel bar 36 is secured to the ceiling by means of the screws 37 and extends from the vertical post at the side wall to the metal post already described in detail in Figs. 4 and 5. The filler panel which is here shown as being of sheet metal is indicated at 38 and has its upper edge portion spot welded between the opposing faces 39, which when secured in such manner, form a channel bar 40. The side walls of the channel bar 40 have free engagement with the upstanding flanges of the channel bar 36. The lower edge portion of the panel 38 is doubled upon itself so as to form the T 41, which is enclosed within the hollow bar 42. The opposite flanges 43 of the bar 42 have loose frictional engagement with the panel 38 so as to allow adjustment therebetween. A plate 44 with a screw threaded hole therethrough is secured within the bottom of bar 42 and receives the screw bolt 45 which engages the T-head 41 of the panel 38. Thus it will be seen that by adjusting the screw 45 the bar 42 can be raised or lowered at either end upon the panel 38, such an adjusting screw 45 being located at each end of the panel 38. As will be apparent, the bar 42 can be raised at one end and lowered at the other end; in other words, the vertical extent of the panel between the bar 42 and channel bar 36 can be made to decrease from one end towards the other, so as to compensate for whatever inclination the ceiling might have and thus have the bar 42 horizontal in spite of the inclination of the ceiling. Tangs 42^a and tabs 42^b are struck up from the lower face of the bar 42 in the same manner and for the same purpose as already described in connection with Fig. 6, as a means of receiving and securing a glass panel 13 in the uppermost tier.

In the modified form of compensating means illustrated in Fig. 3, the channel bar 46 is secured along the ceiling in the same manner as described for the channel bar 36. In this case, however, instead of using a single panel, it is possible to employ a double wall, the two walls being indicated at 47 and 47^a. These walls are spaced and braced by means of the angular strip 48 which is spot welded thereto. Another such brace strip 49 is also provided and is likewise spot welded to the same metal walls. The upper edge portions of the walls 47 and 47^a have free frictional engagement with the depending flanges of the channel bar 46 and a space 50 is allowed between the edges of the brace bar 48 and the channel bar 46. A channel bar 51 has its side portions frictionally engaging the lower portions of the walls 47 and 47^a at the point 52 and has secured in its bottom the plate 53 which has a screw threaded hole through which extends the screw bolt 53^a and by proper adjustment of the screw bolt, the bar 51 can be raised or lowered to variable extents at its two ends, such an adjusting screw bolt being provided at each end of the filler in the same manner as in the other form described in connection with Fig. 2. Like the other form of adjusting means, it is possible with this modified form to cause the vertical extent or dimension of the filler panel between the bar 51 and the ceiling to decrease from one end towards the other and in this way to set the bottom of the filler panel at a true horizontal and thus compensate for the inclination of the ceiling. The channel bar 51 is provided with tangs 51^a and tabs 51^b for attachment of the molding strips and securing of the panels in the same manner as already described in connection with the other form of compensating device.

It is within the scope of our invention to provide as many of the tangs, indicated by reference numeral 10, as may be desired, and to space them at such points with respect to each other along the channel bar as is most suitable or desirable. As for instance, the tabs may be staggered or may be formed directly opposite each other on the opposite sides of the panel member.

With our improved structure, it is possible to construct all of the parts heretofore described and to ship them to the place of use where they can be readily assembled, The molding strips can all be shipped sepa-

rately, that is in completely unassembled form, or each panel can be set in the several moldings mitered together. It is simply necessary then to set the several sections in place and to secure them together along their adjacent contacting edge portions.

Thus it will be seen that we have devised not only a decidedly simple partition structure, but at the same time one which is highly efficient both from a standpoint of strength and durability, and also from the standpoint of appearance.

What we claim is:

1. In a structure of the class described, a sectional post, means for securing the sections of said post directly to a wall or the like and having a portion located outside of said post sections, and complementary mouldings detachably secured opposite each other along one side of said post and forming a groove for a partition panel, said mouldings being so constructed and arranged as to cover the portion of said securing means which is located outside of said post sections.

2. In a structure of the class described, a plurality of channel members adapted for telescopic engagement so as to form a closed hollow post, means for securing said channel members directly to a wall or the like and having a portion located outside of said channel members, and complementary mouldings detachably secured opposite each other along said post and forming a groove for a partition panel, said mouldings being so constructed and arranged as to cover the portion of said securing means which is located outside of said channel member.

3. In a structure of the class described, a main partition wall of fixed dimensions, a self-contained filler partition of variable dimension, and means for joining said main partition wall and filler partition.

4. In a structure of the class described, a main partition wall of fixed dimensions, a self-contained filler wall portion of variable proportions, means for joining said partition wall and filler wall portion, and means for connecting said partition wall and filler wall portion to other walls.

5. In a structure of the class described, a main partition, means for connecting said partition to a given wall or the like, a channel bar secured to another given wall or the like, an adjustable filler adapted for telescoping engagement along one edge portion with said channel bar, and means for joining the other side of the filler to said partition wall.

6. In a structure of the character described, a main partition, means for connecting said partition to a given wall, a filler having sliding engagement along one edge portion with a given wall or the like, said filler along its other side being adjustable for varying the proportions thereof, and means for joining said filler and main partition.

7. In a structure of the character described, a filler comprising inter-engaging channel members, one of which is adapted to be secured to a given wall, a panel section having its one edge portion secured to said other channel member, a hollow bar enclosing the other edge portion of the said panel and having engagement therewith, and means for adjusting the angularity of the engagement between said filler and hollow bar.

8. In a structure of the character described, a hollow sheet metal post, moulding secured thereto and arranged with space therebetween for the reception of a partition panel, and tabs struck up from one of the walls of said post for engagement with opposite sides of said partition panel, said mouldings being provided with off-set portions for engagement with said tabs.

9. In a structure of the character described, a hollow post, tangs struck out of one of the walls of said post, mouldings having engagement with said tangs, and tabs also struck up from said wall of said post, said mouldings and tabs being adapted to engage a partition panel.

10. In a structure of the character described, a partition including a plurality of sections, each section comprising a plurality of panels of different thicknesses of materials, means for connecting the several panels in each section, and a sheet metal common post between the adjacent edges of said sections, and means connecting said panels of different thicknesses of materials in said sections to said post.

11. In a structure of the character described, a partition including a plurality of separated paneled sections, a hollow sheet metal post between the adjacent edges of said separated sections, said post comprising a plurality of telescoping channel members, and means for connecting said sections to said post.

12. In a structure of the character described, a partition including a plurality of separated paneled sections, a hollow sheet metal post arranged between the adjacent edges of said separated sections, said post comprising a plurality of telescoping channel members, and means for connecting said sections to said post, said connecting means comprising interlocking portions integral with said sections and said post, respectively.

In testimony whereof we hereby affix our signatures.

ROBERT F. CARPENTER.
THOMAS F. ANDERSON.