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PARTITION CONSTRUCTION AND ASSEMBLY

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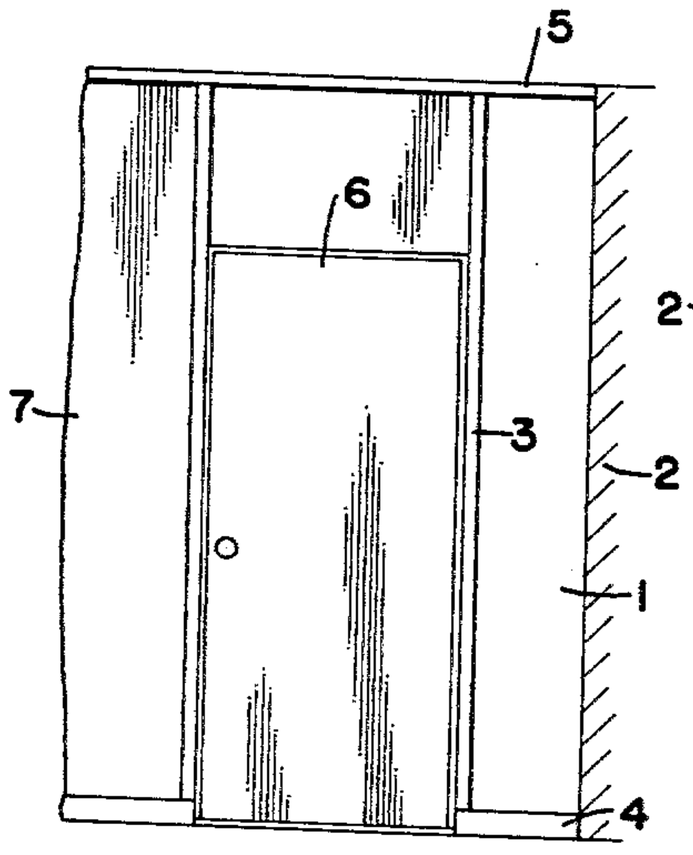

FIG. 1

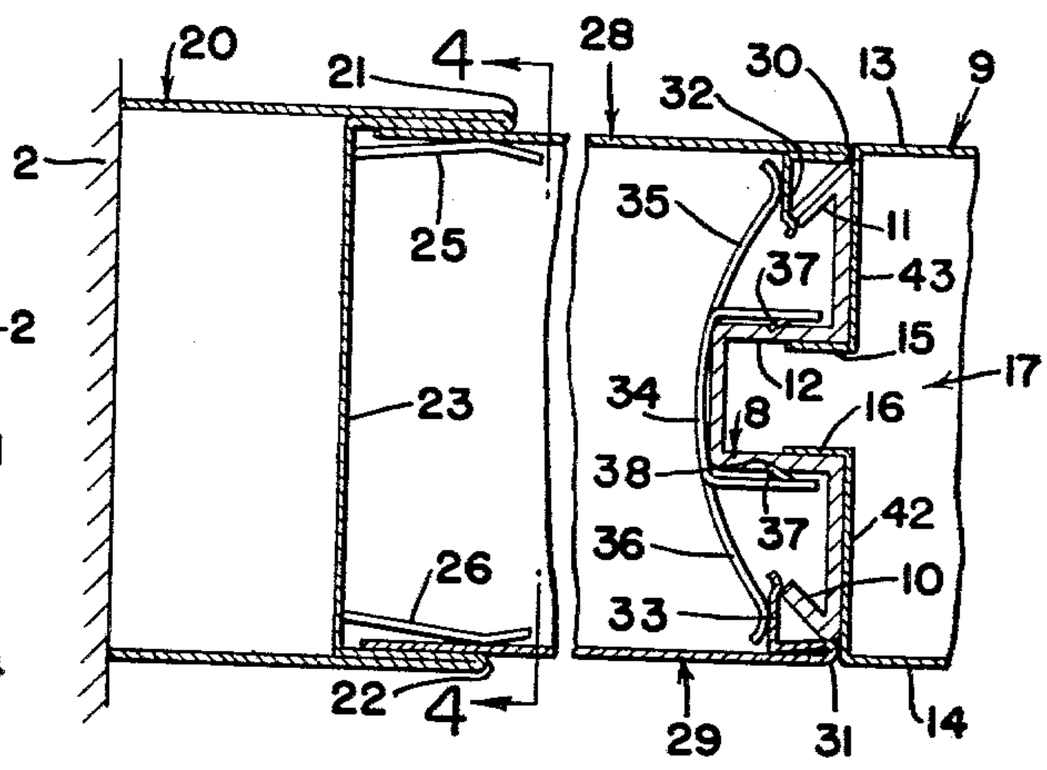

FIG. 2

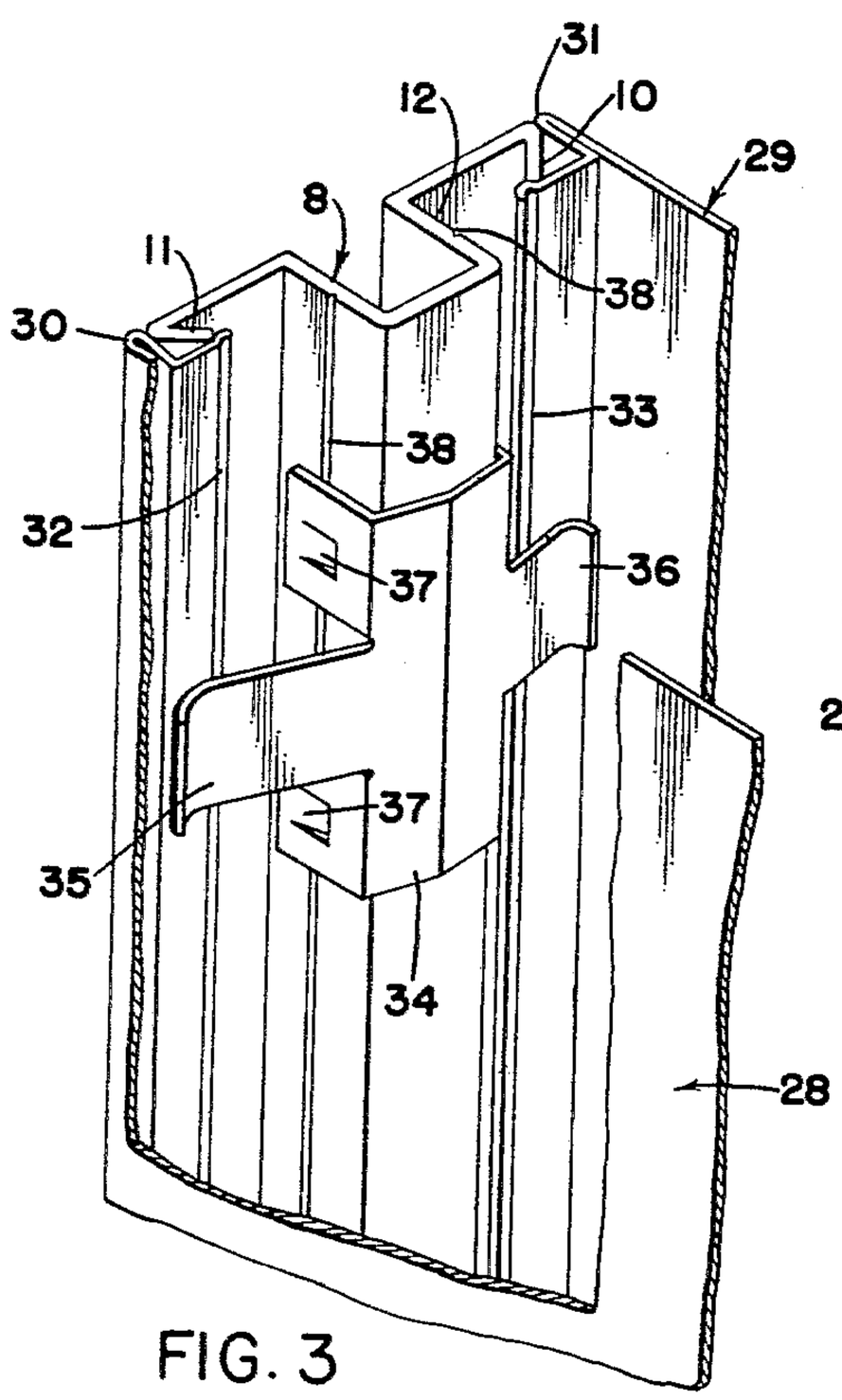

FIG. 3

FIG. 4

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FIG. 5

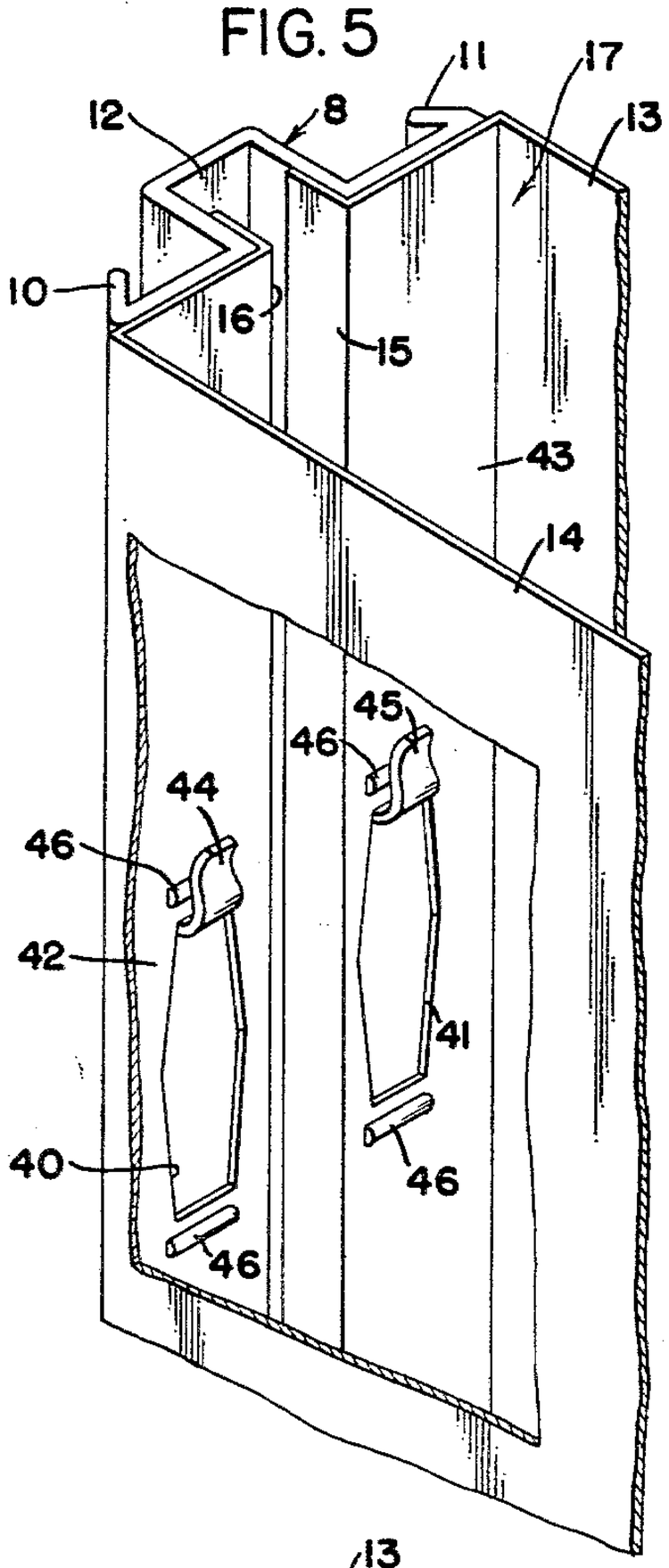
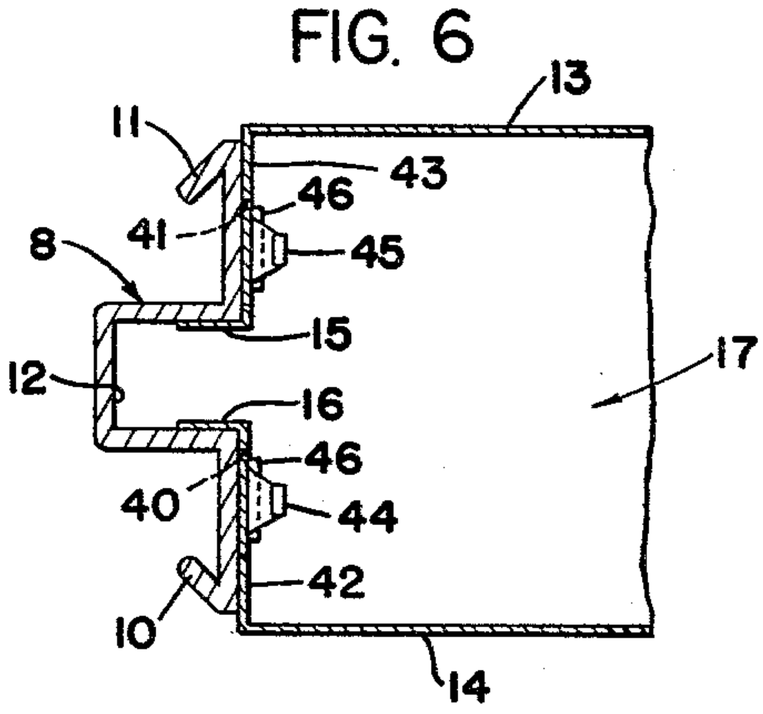


FIG. 6



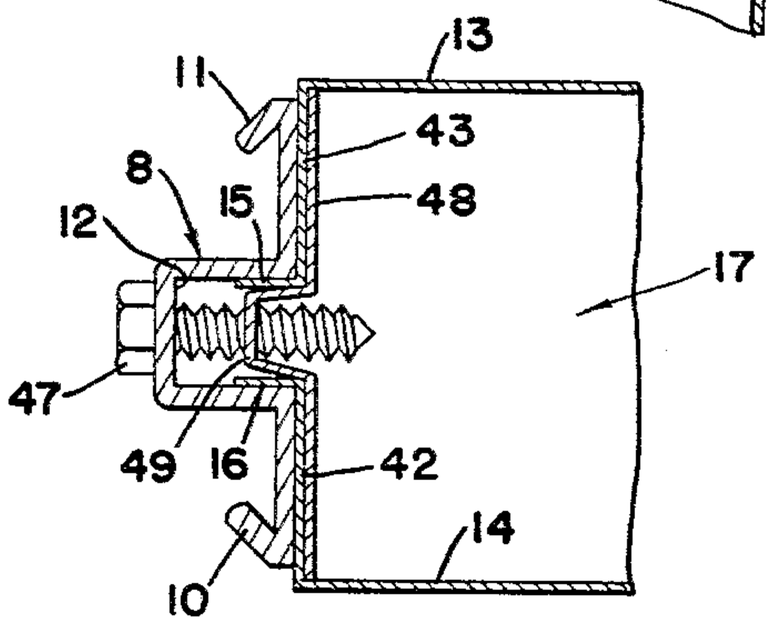


FIG. 8

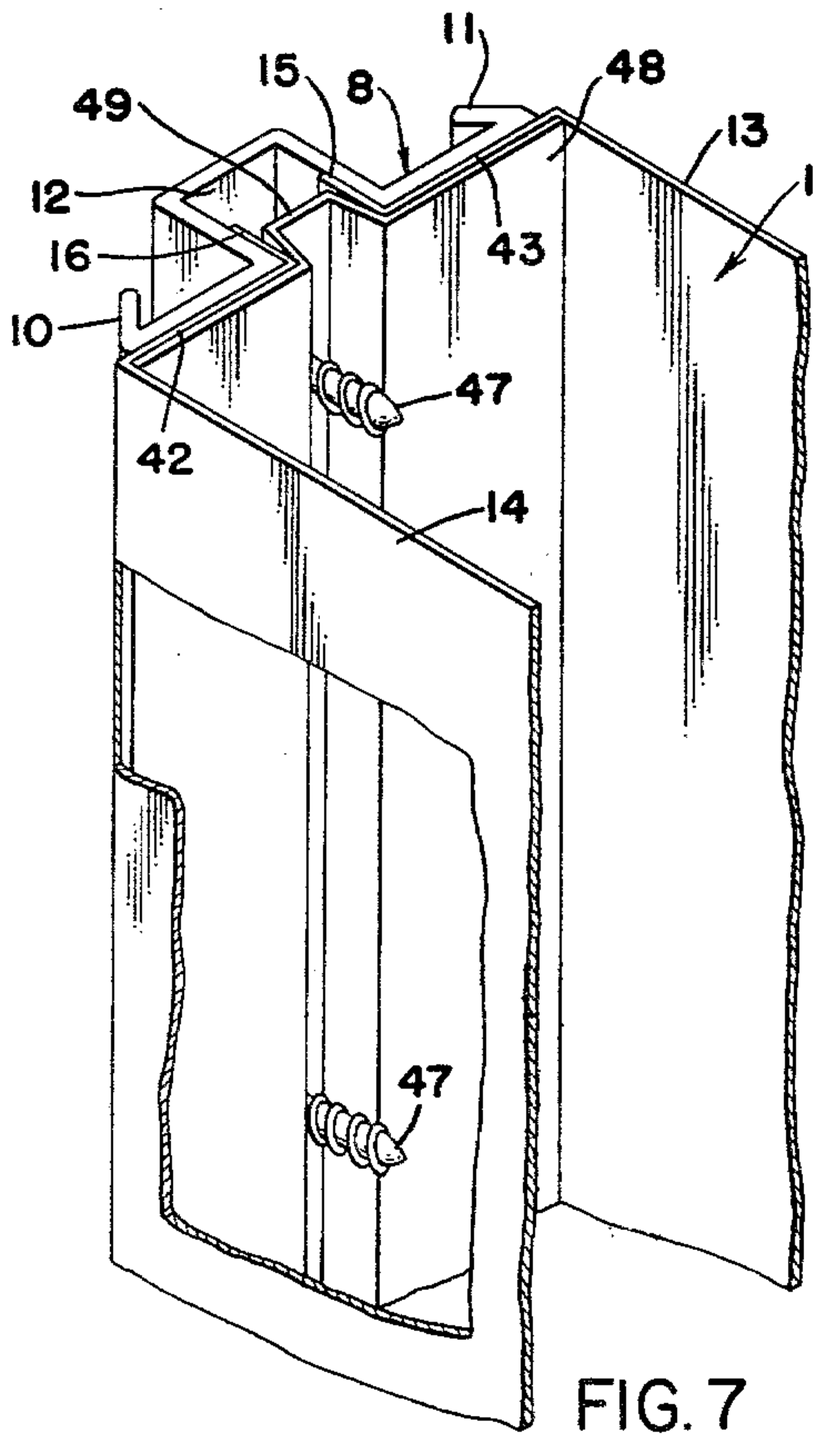


FIG. 7

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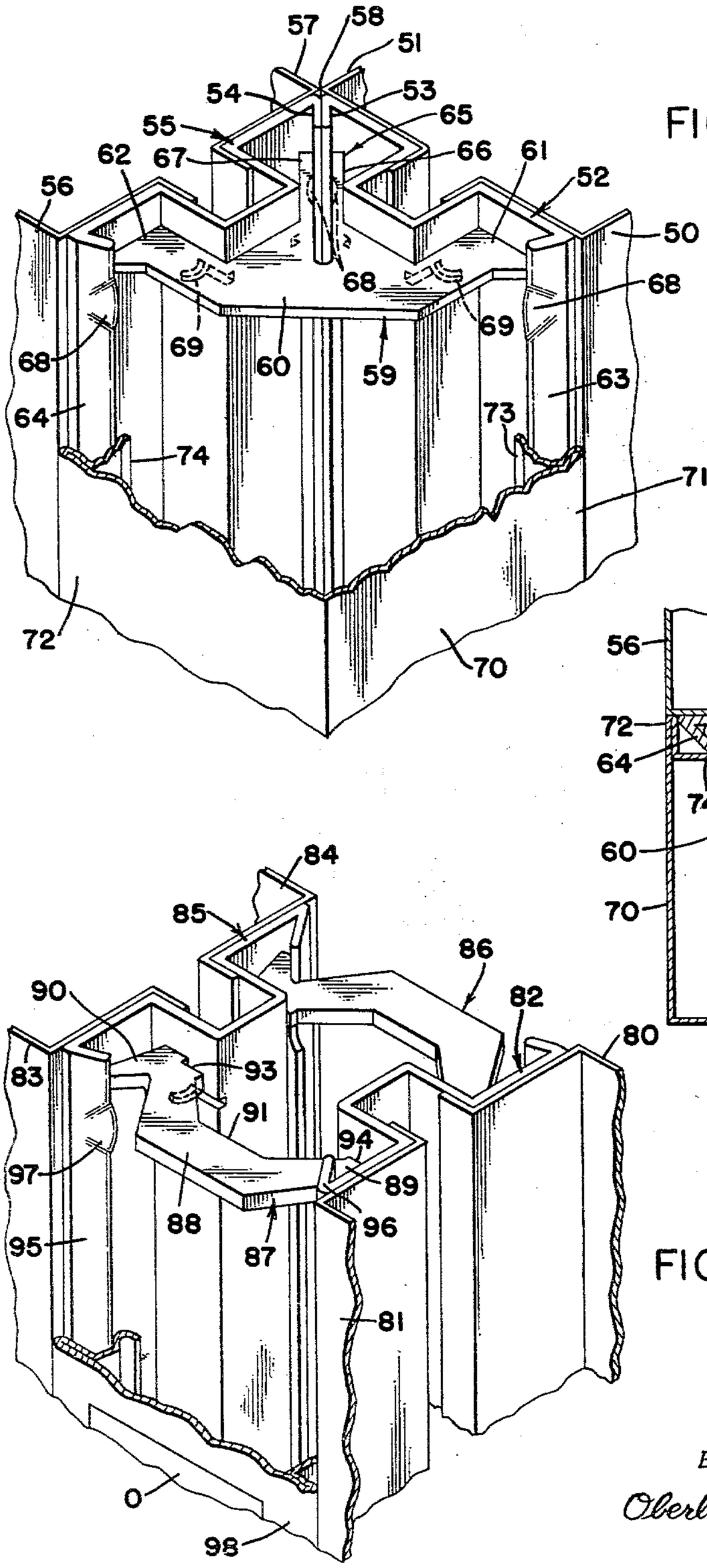

FIG. 9

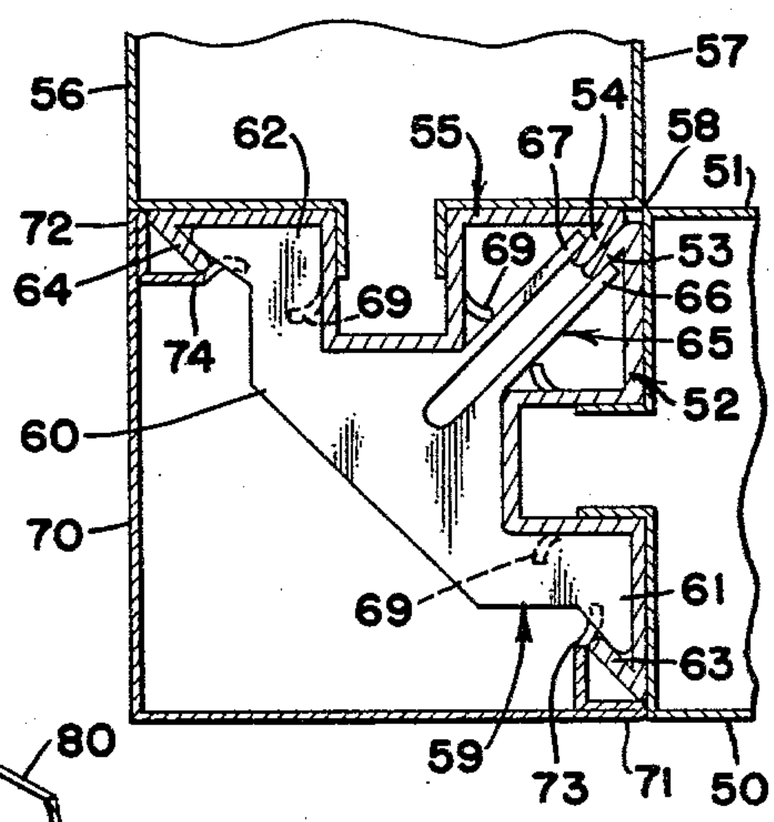

FIG. 10

FIG. 11

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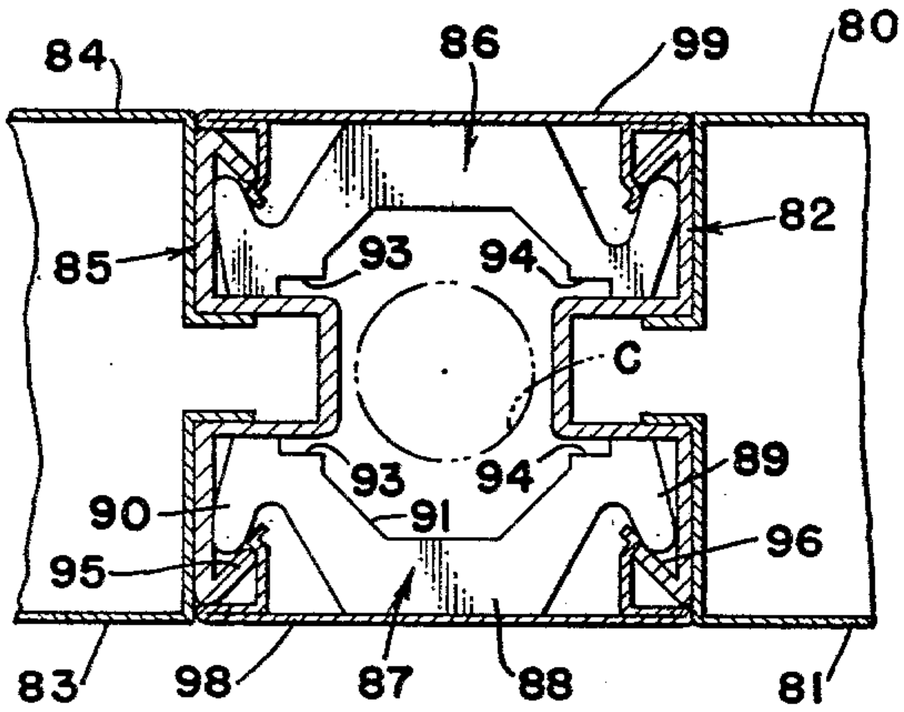
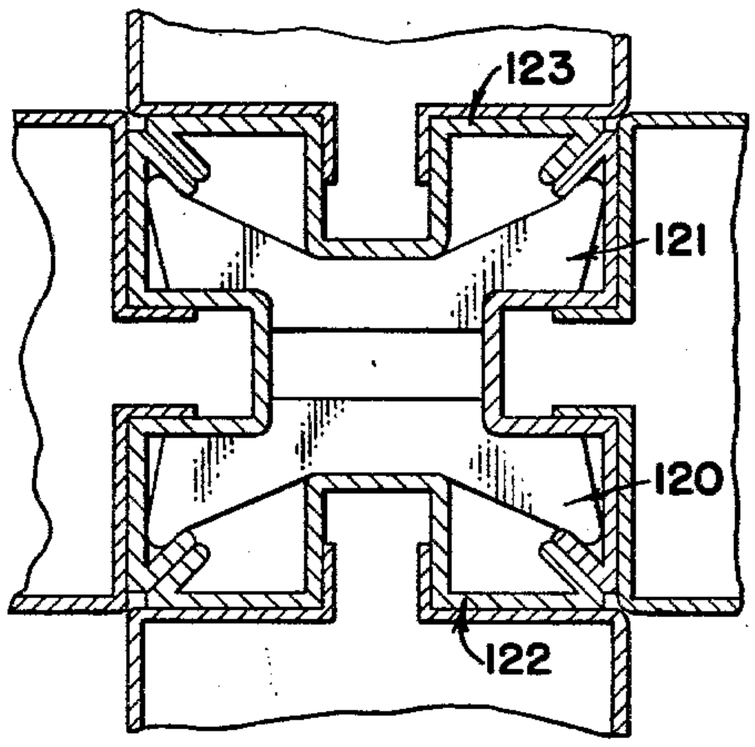


FIG. 12

FIG. 14



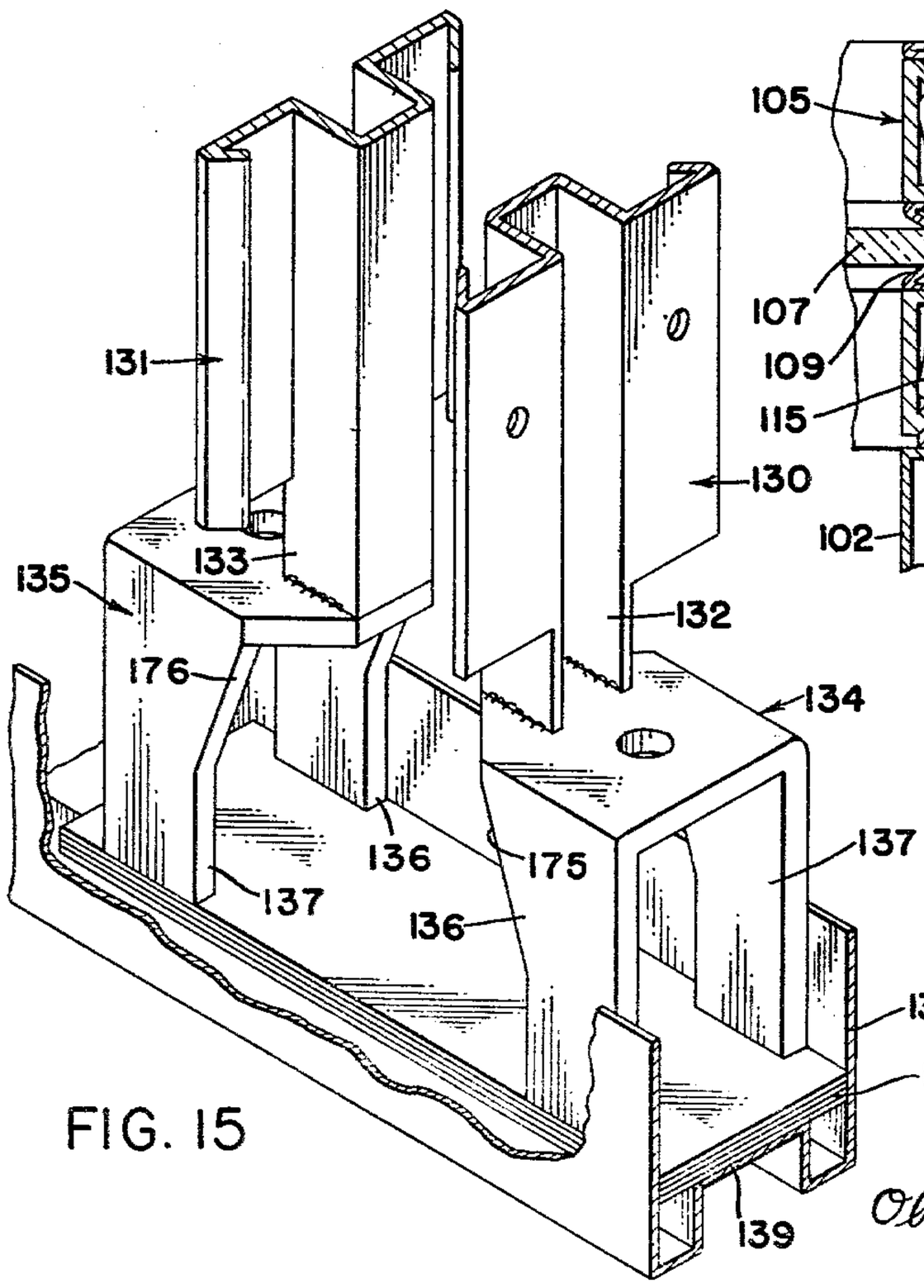


FIG. 15

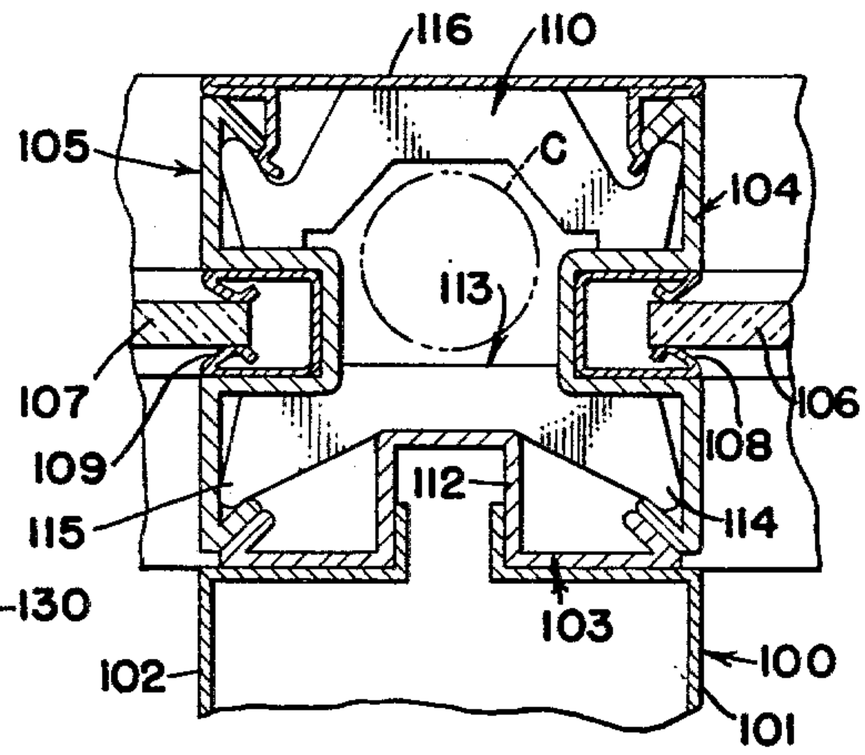


FIG. 13

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PARTITION CONSTRUCTION AND ASSEMBLY

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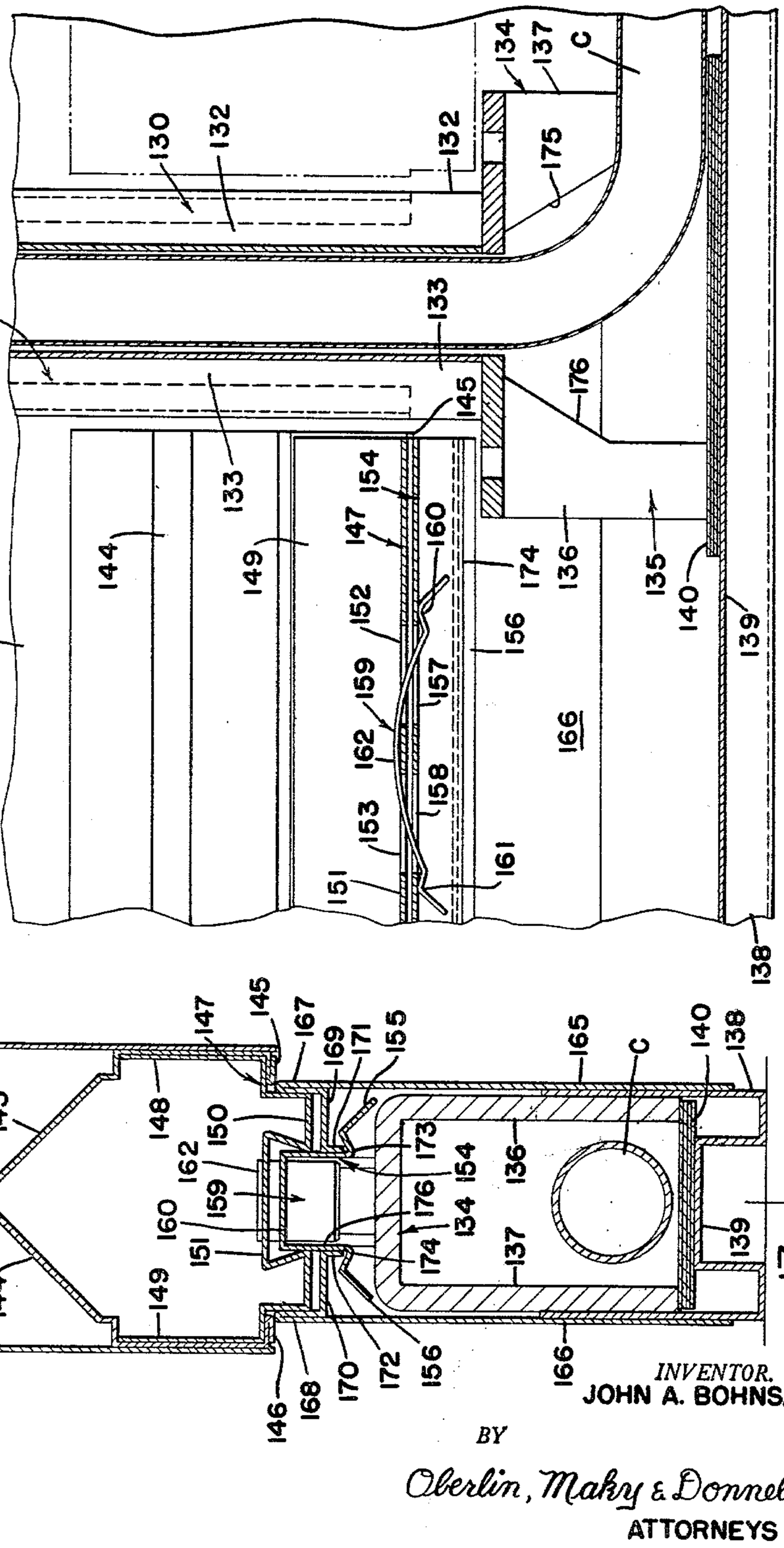

FIG. 17

FIG. 16

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PARTITION CONSTRUCTION AND ASSEMBLY

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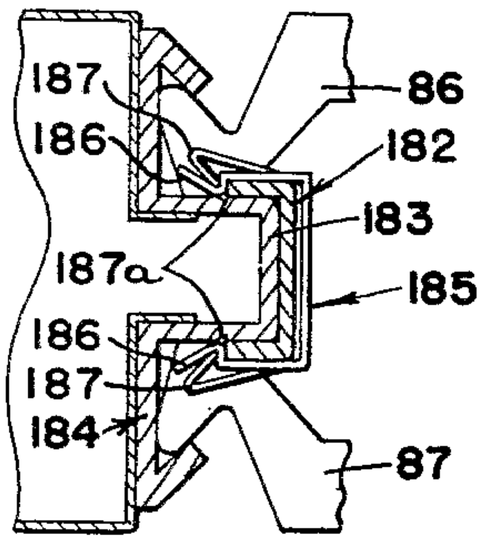

FIG. 19

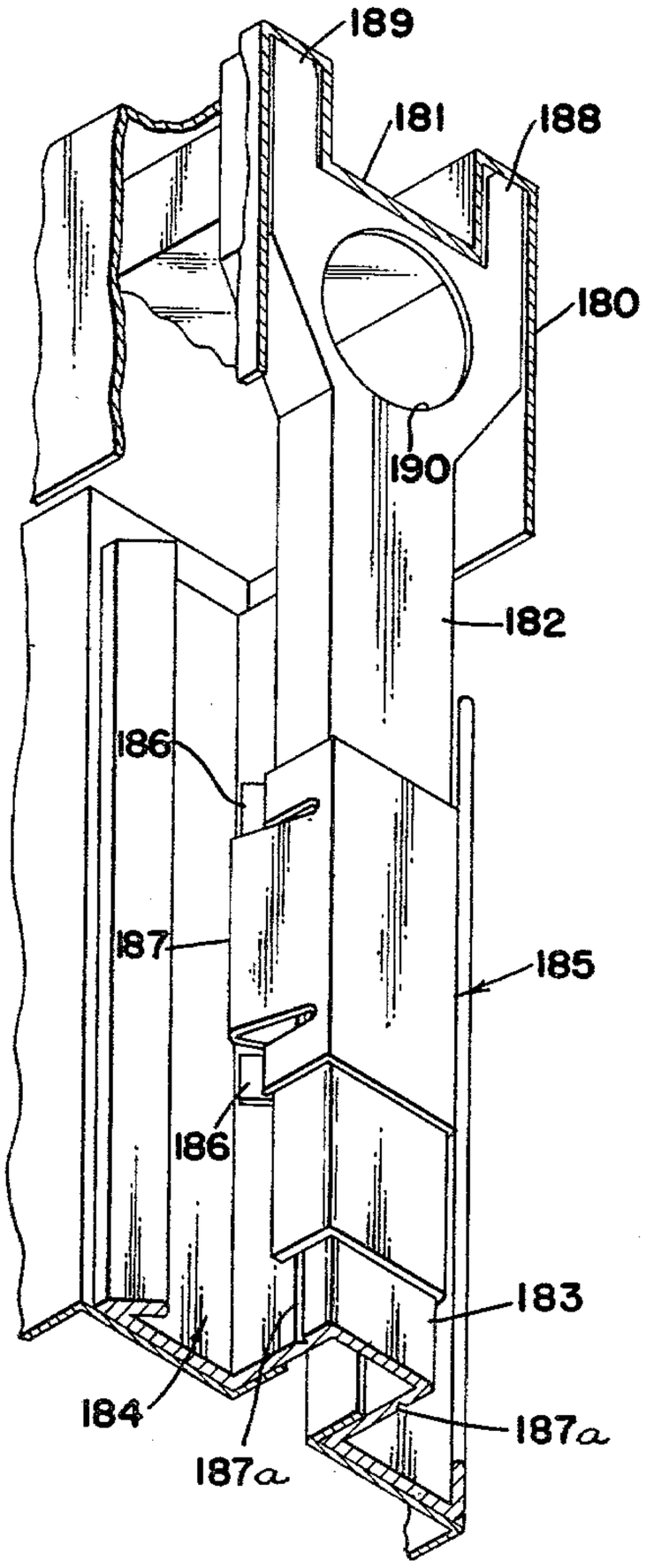

FIG. 18

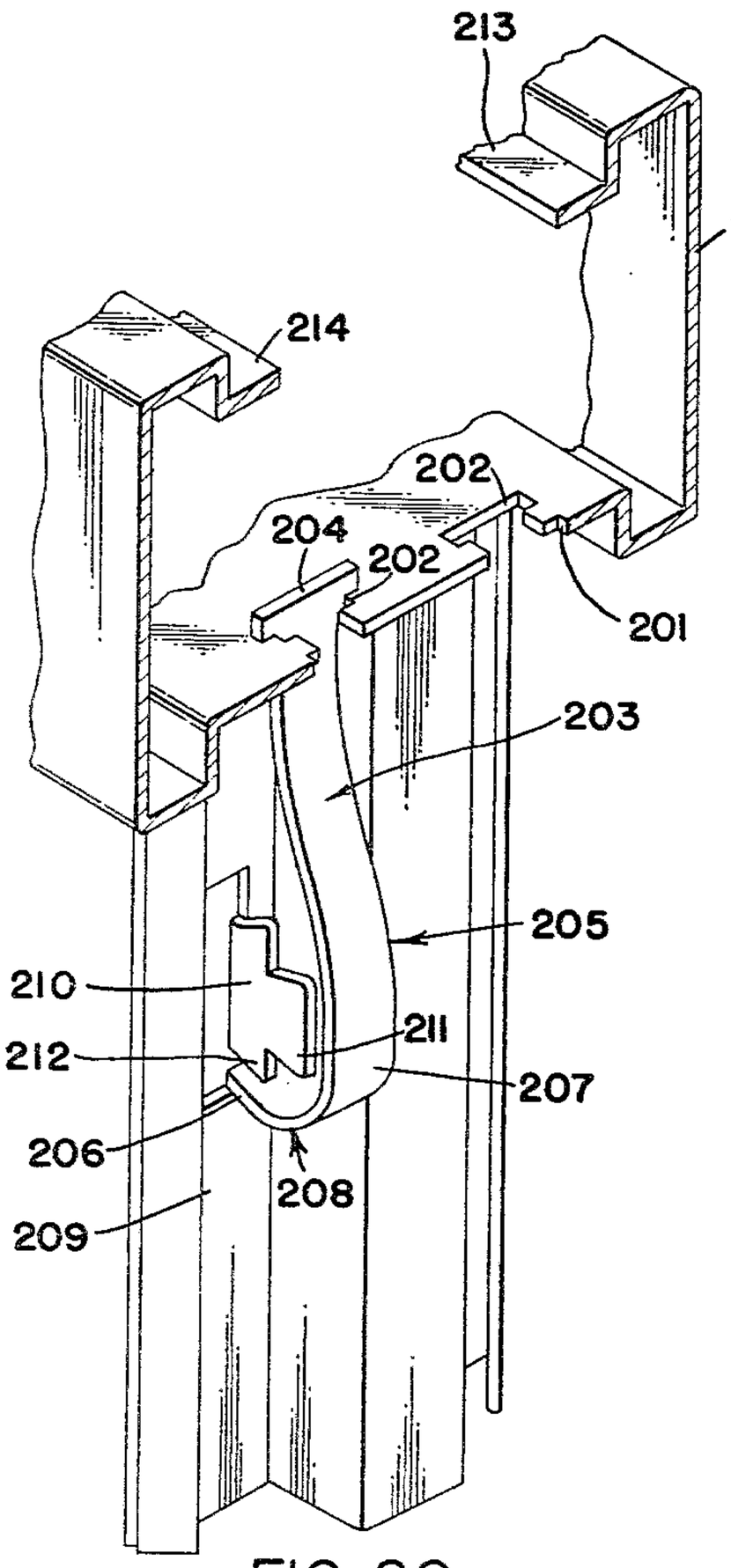

FIG. 20

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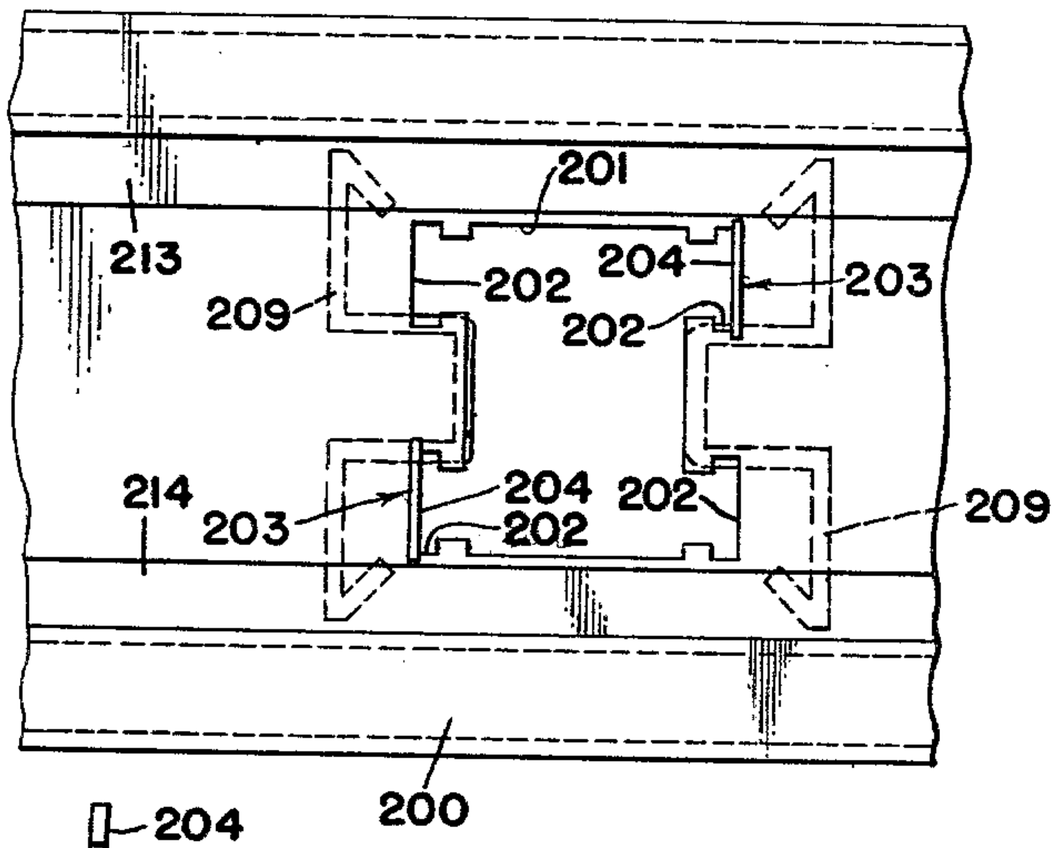
FIG. 21



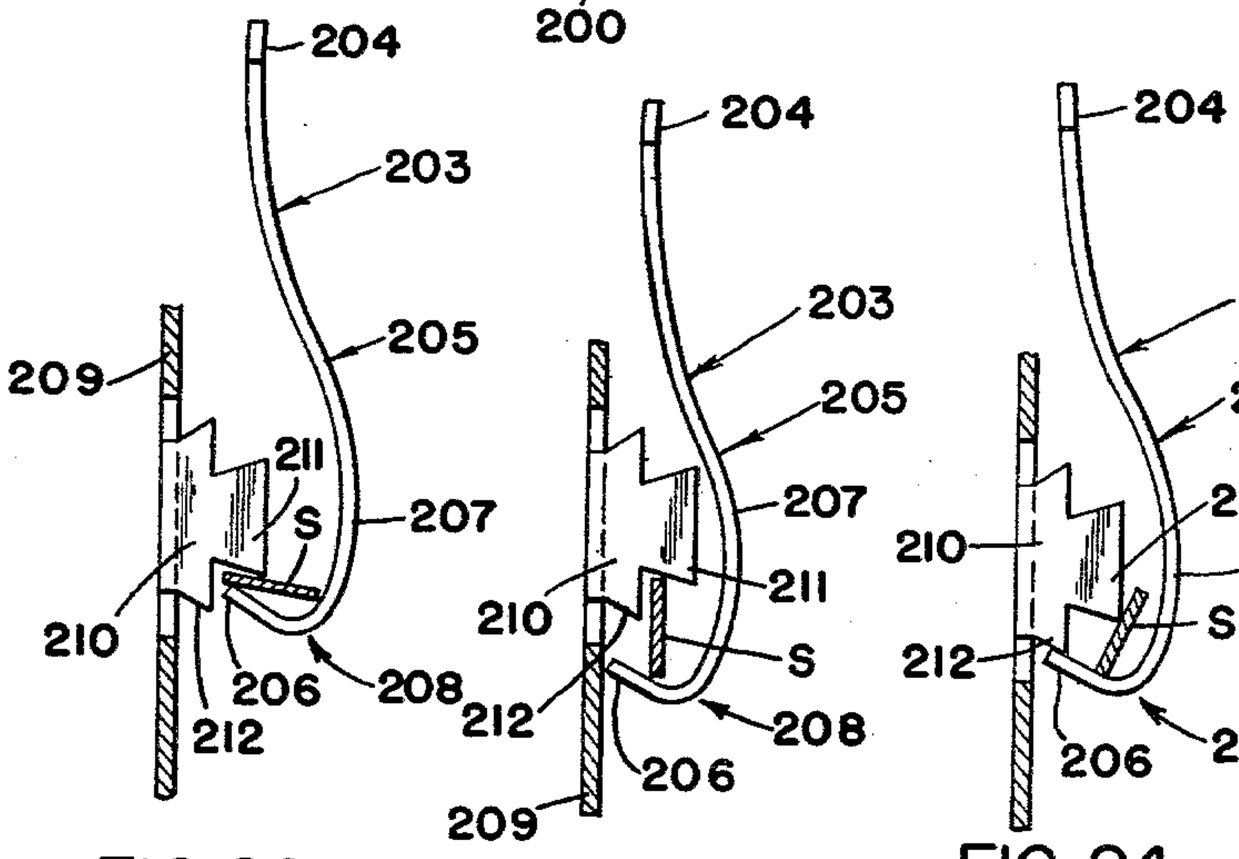


FIG. 22 FIG. 23 FIG. 24

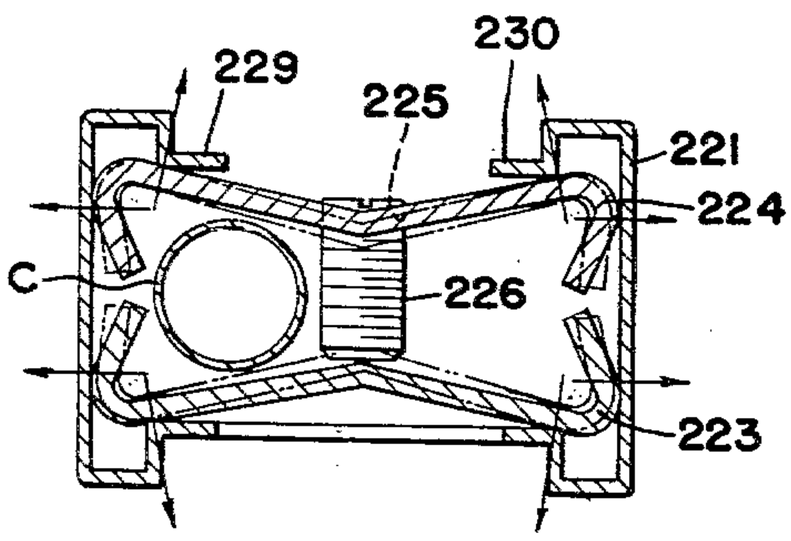


FIG. 25

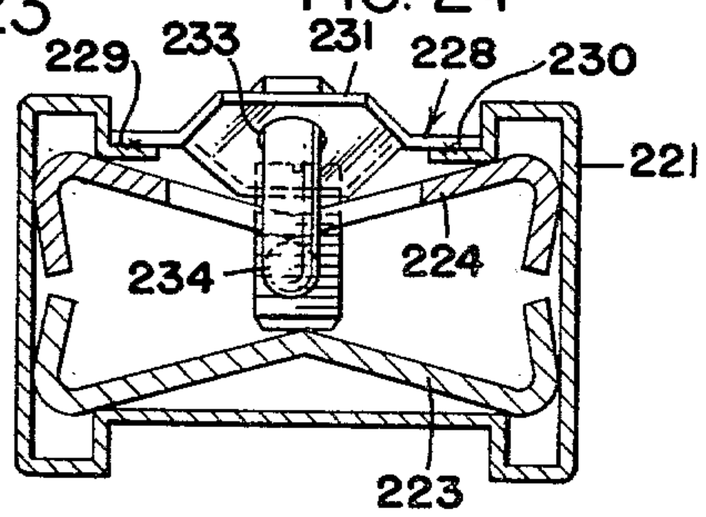


FIG. 28

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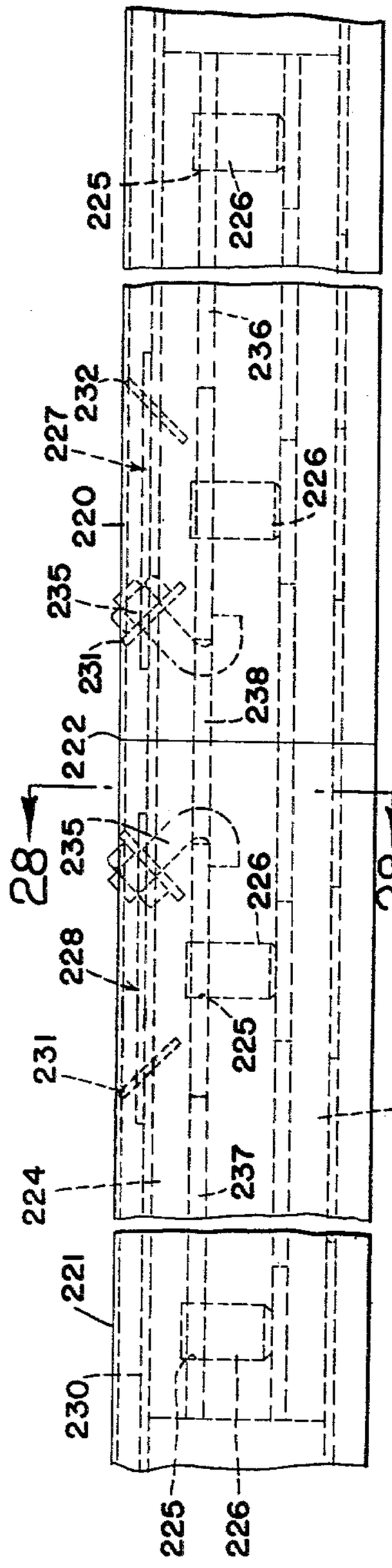

FIG. 26

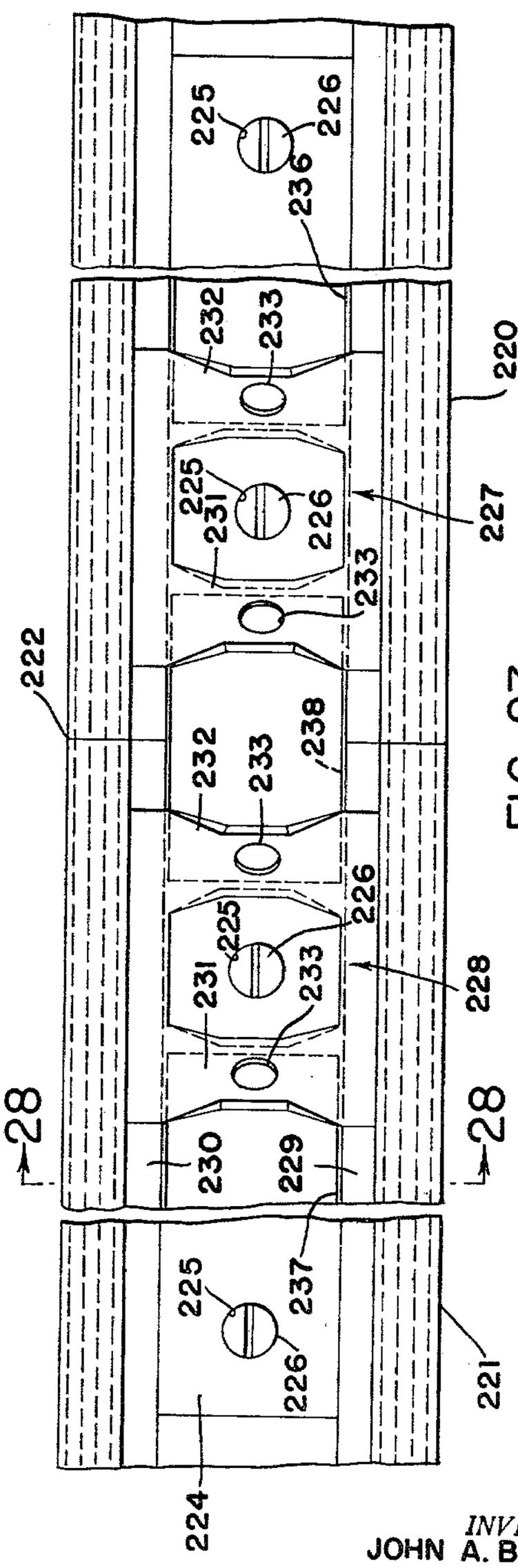

FIG. 27

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PARTITION CONSTRUCTION AND ASSEMBLY

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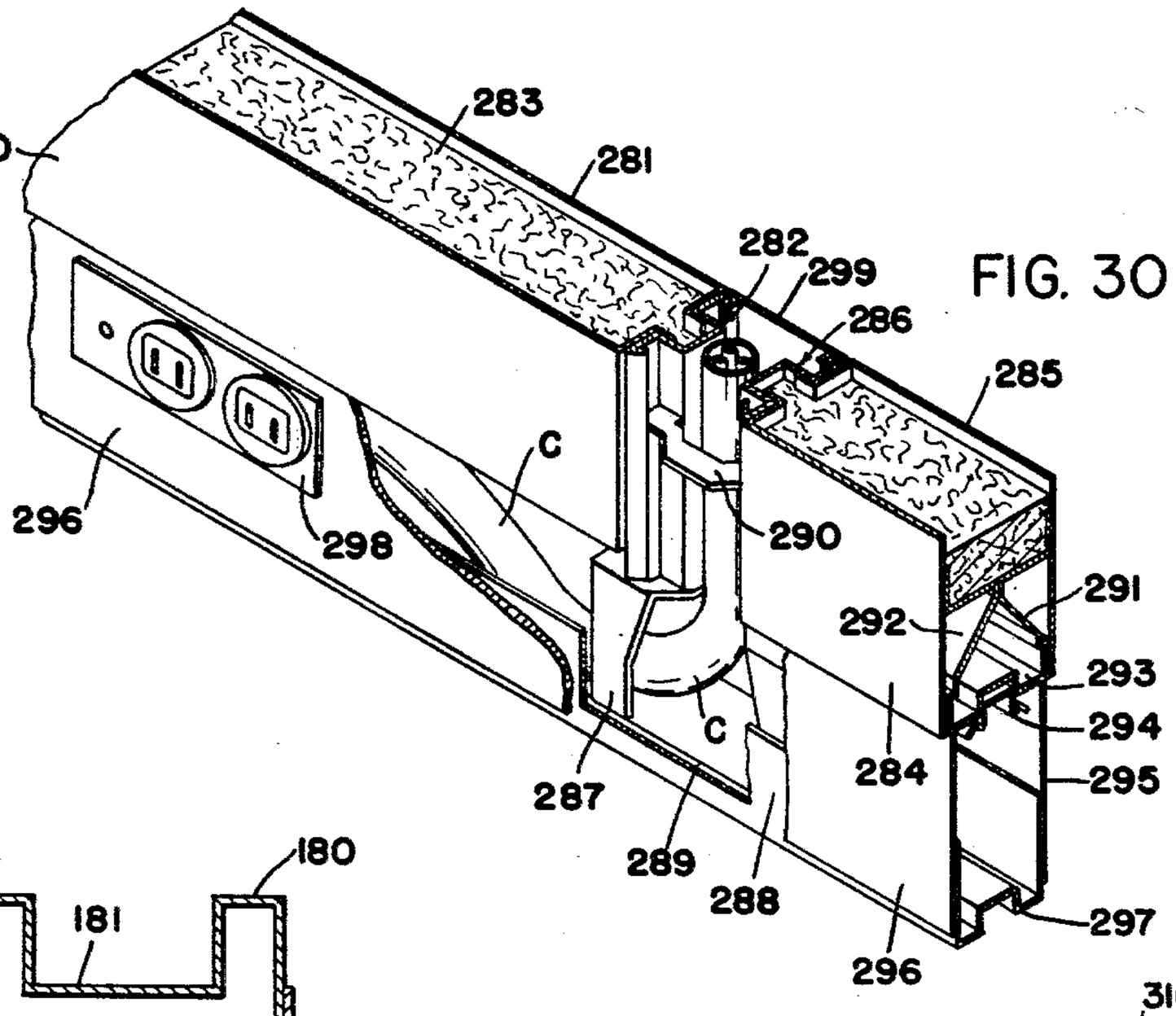

FIG. 30

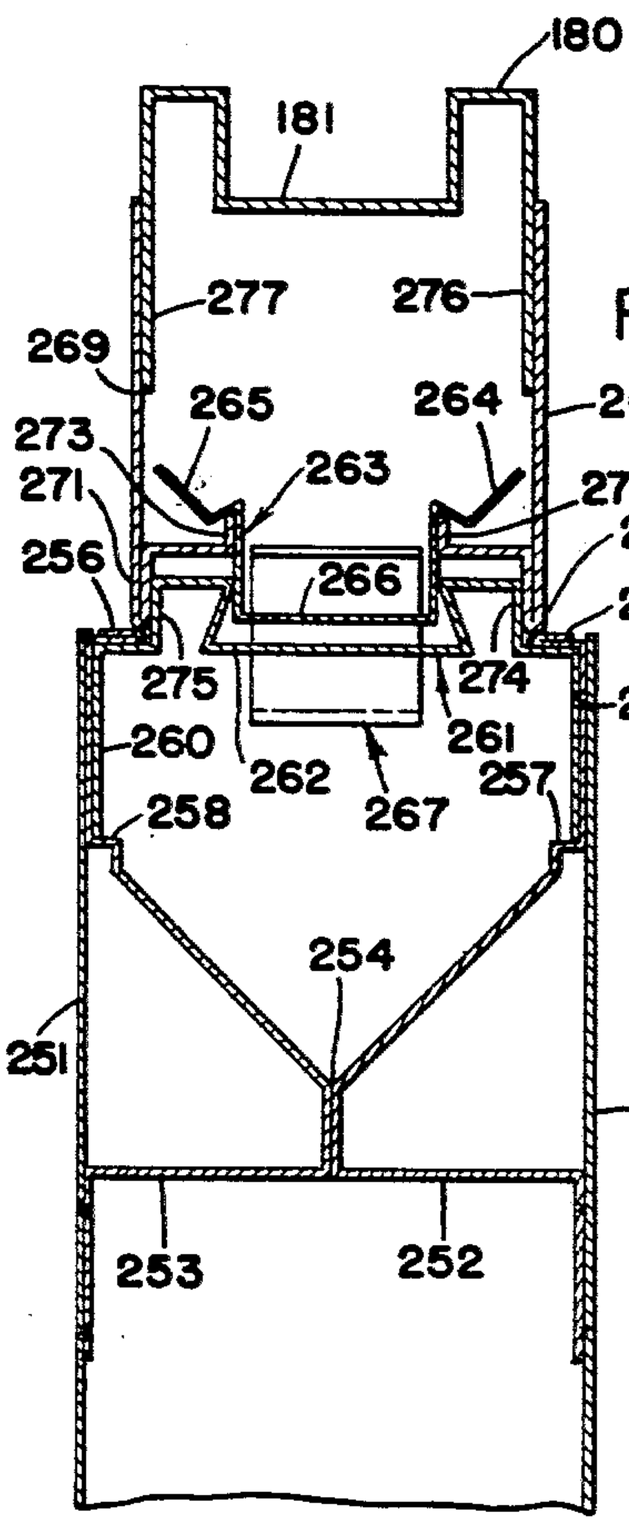

FIG. 29

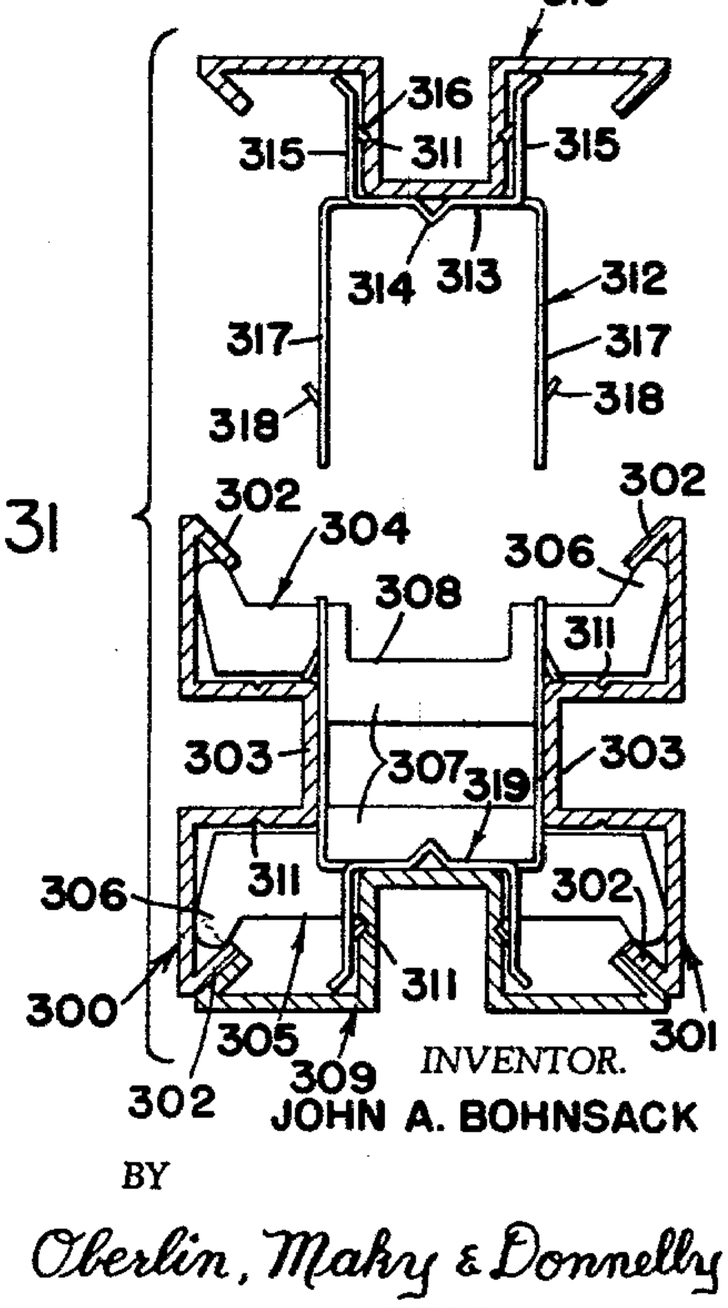

FIG. 31

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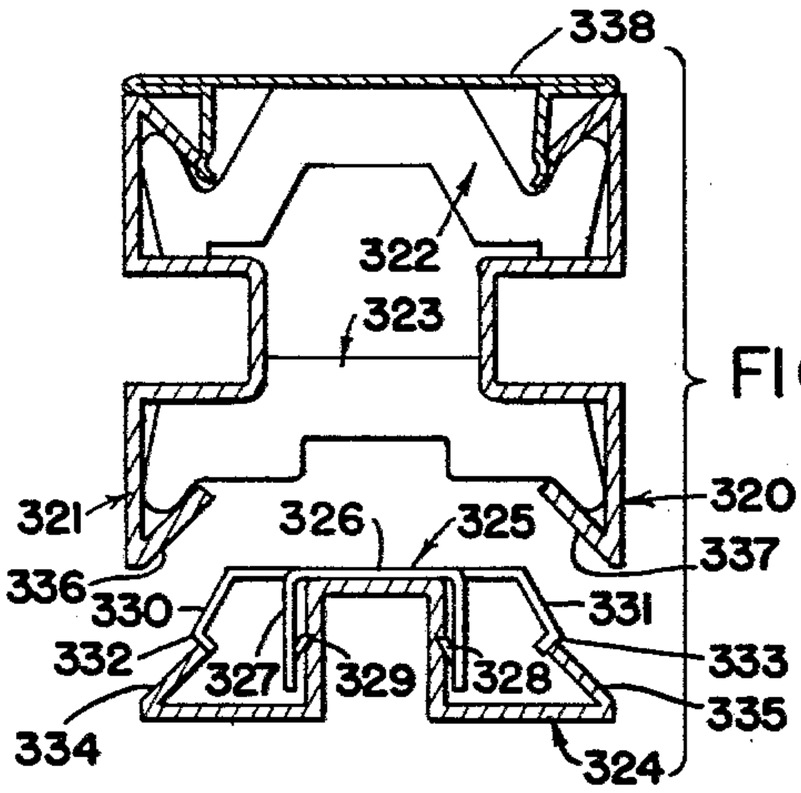


FIG. 32

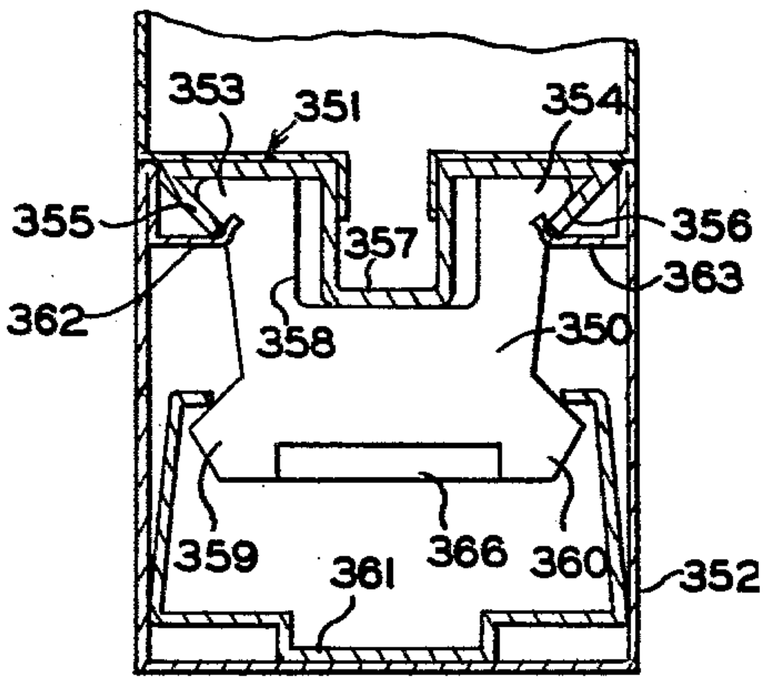


FIG. 36

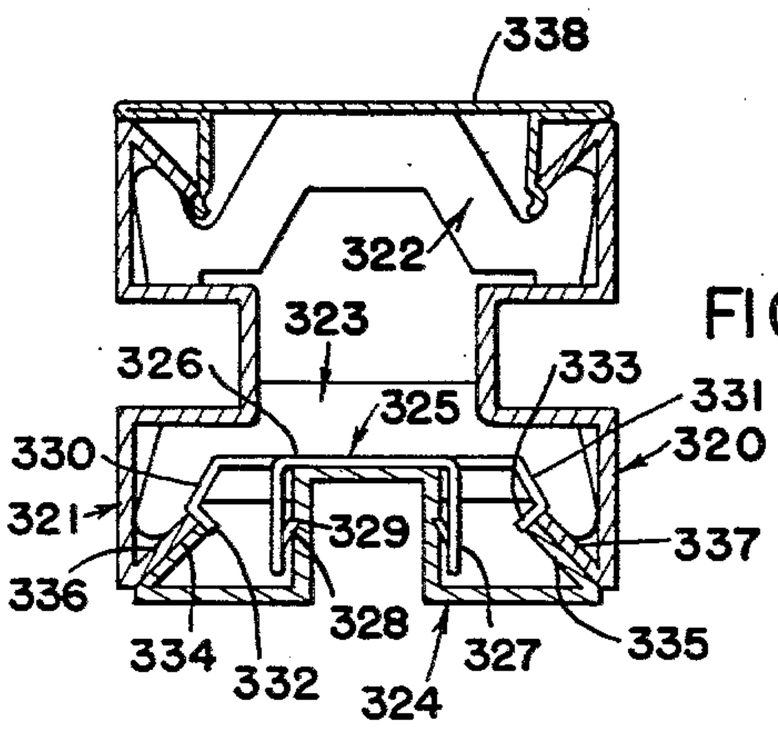


FIG. 33

FIG. 37

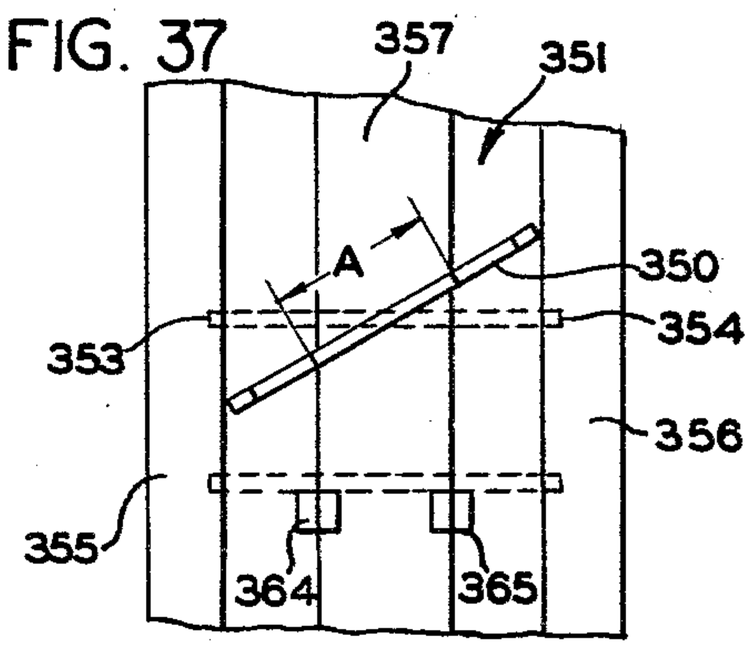


FIG. 35

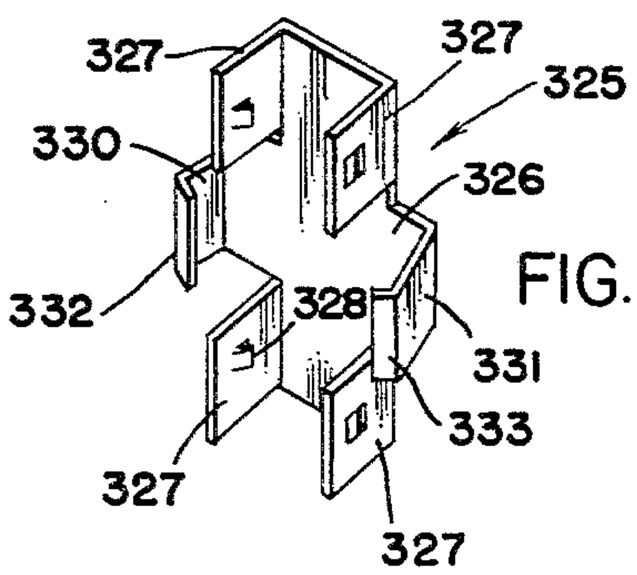
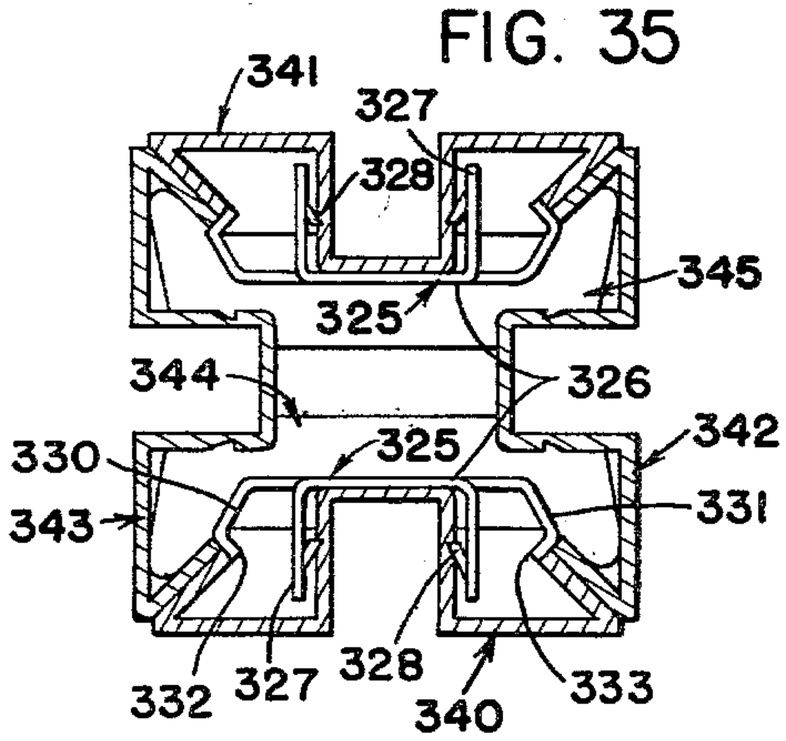


FIG. 34



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PARTITION CONSTRUCTION AND ASSEMBLY

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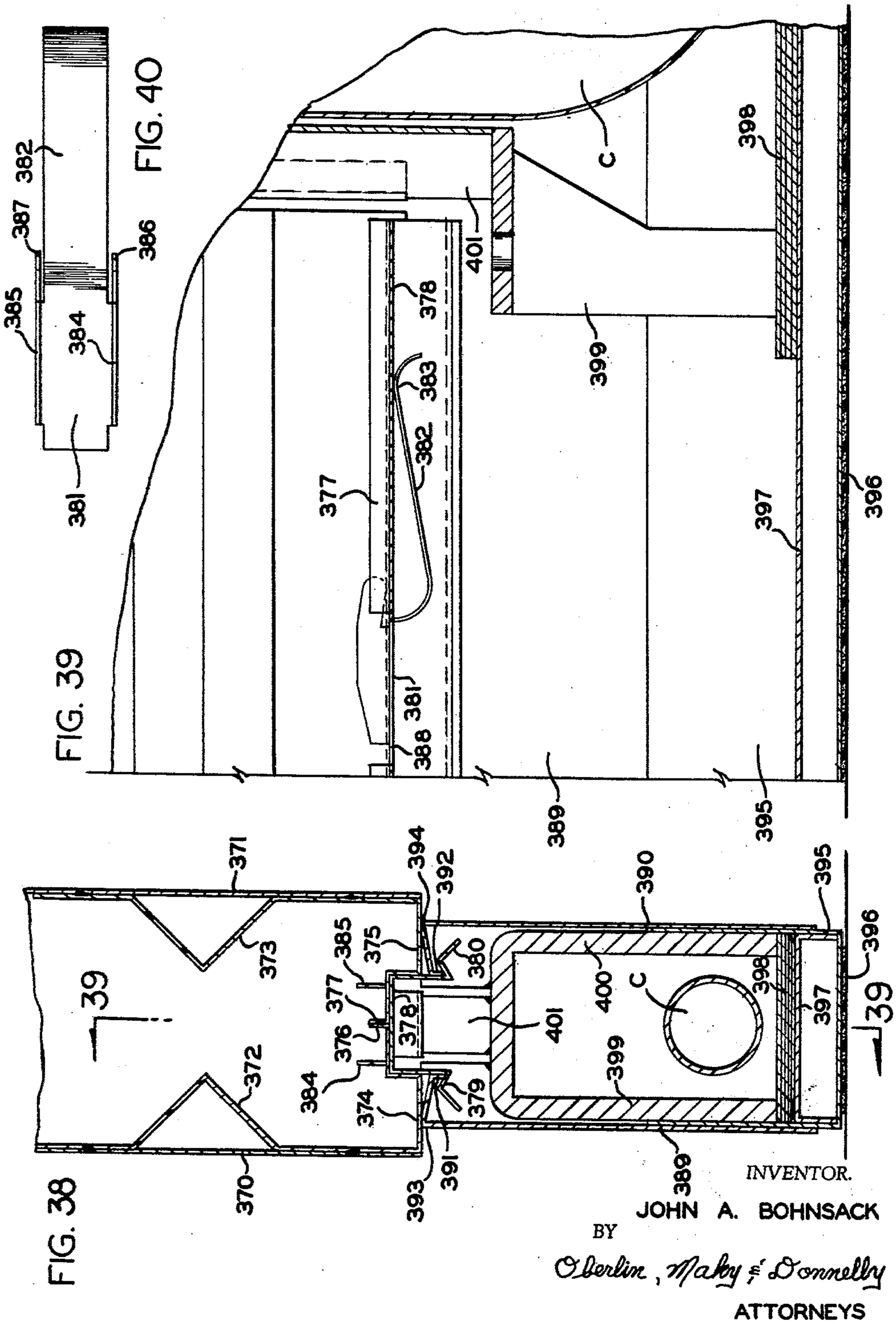

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PARTITION CONSTRUCTION AND ASSEMBLY

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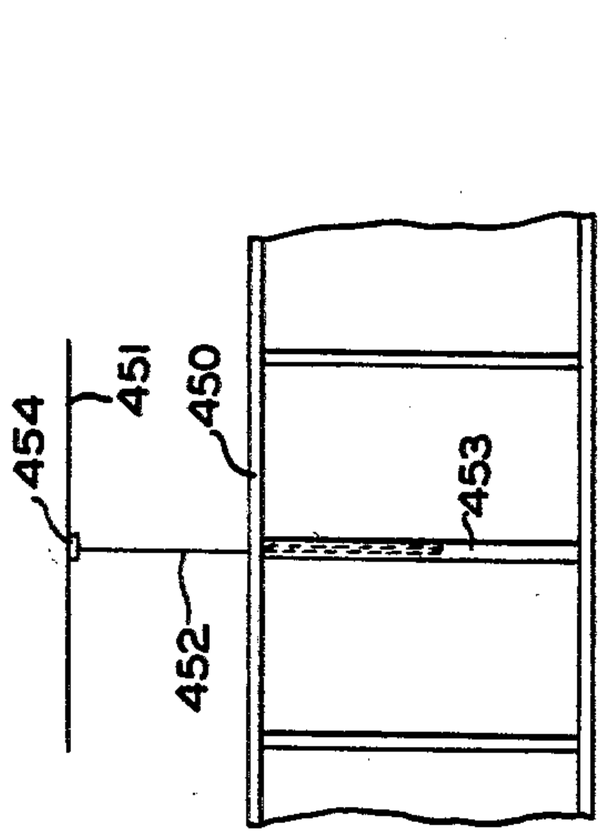

FIG. 43

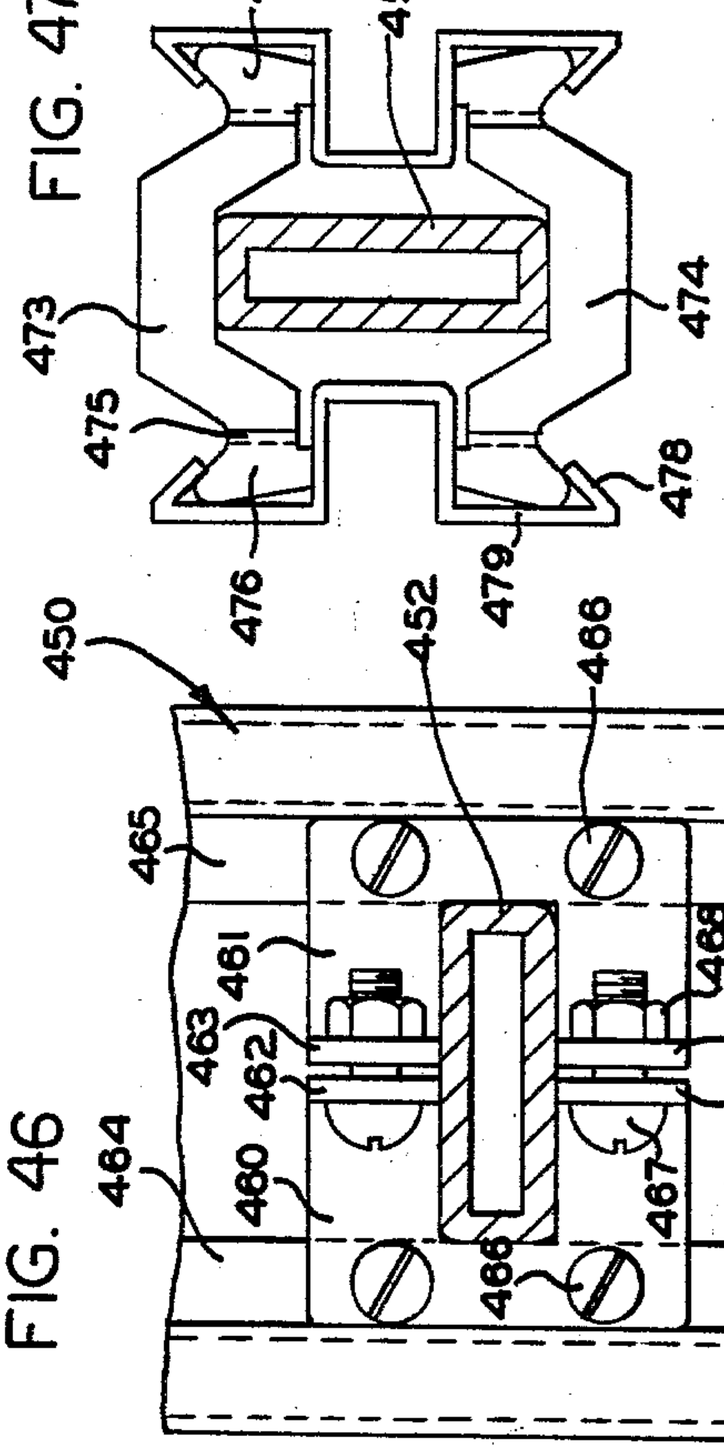

FIG. 47

FIG. 46

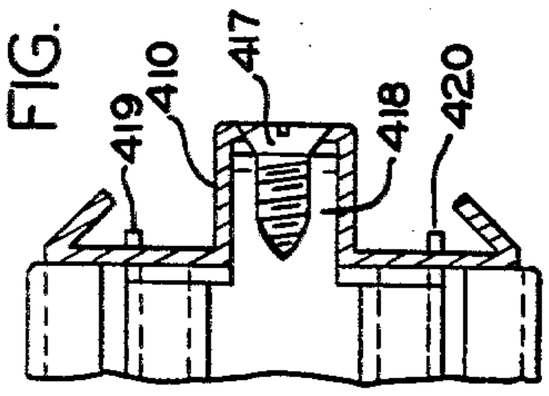

FIG. 42

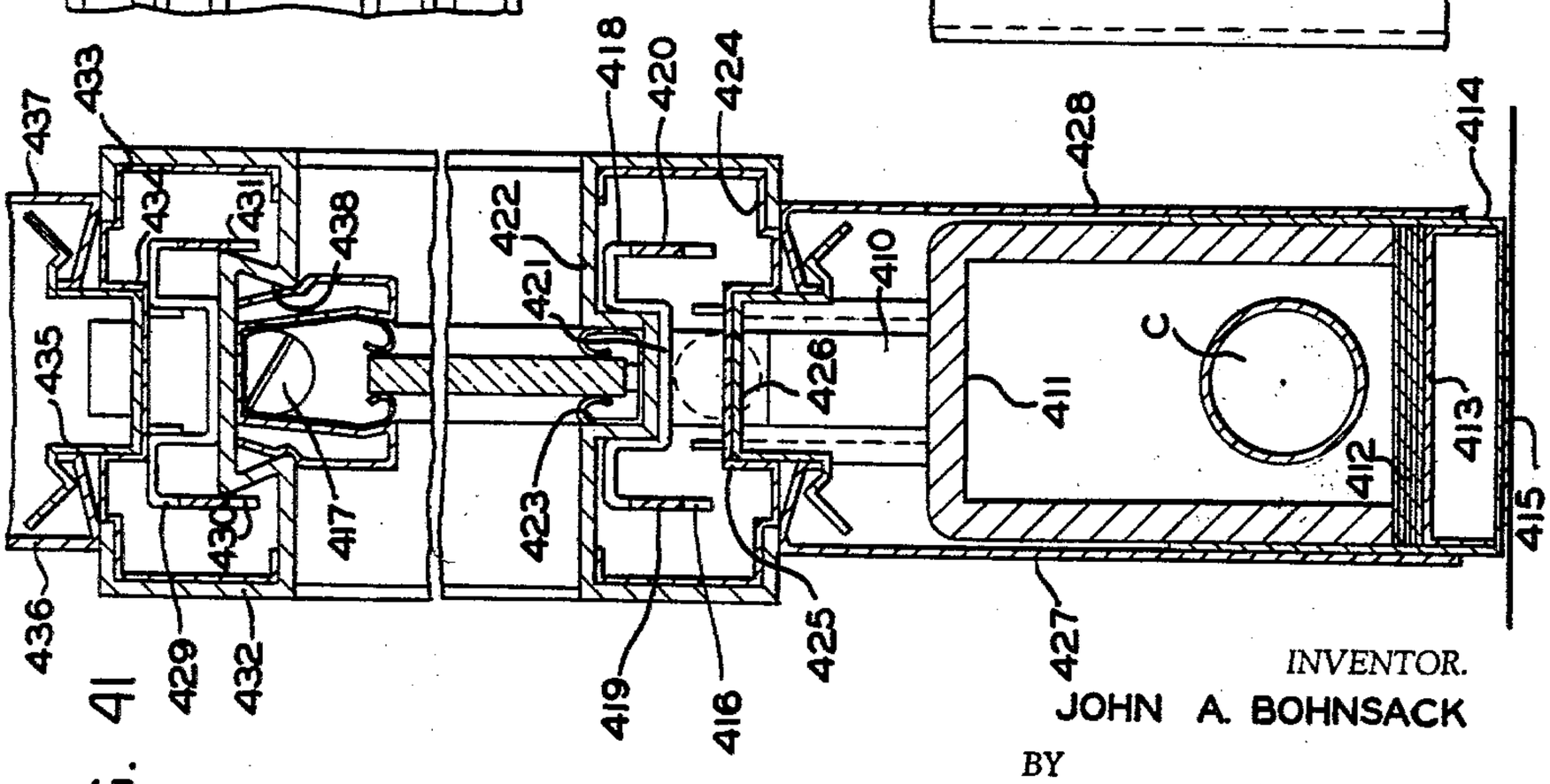

FIG. 41

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PARTITION CONSTRUCTION AND ASSEMBLY

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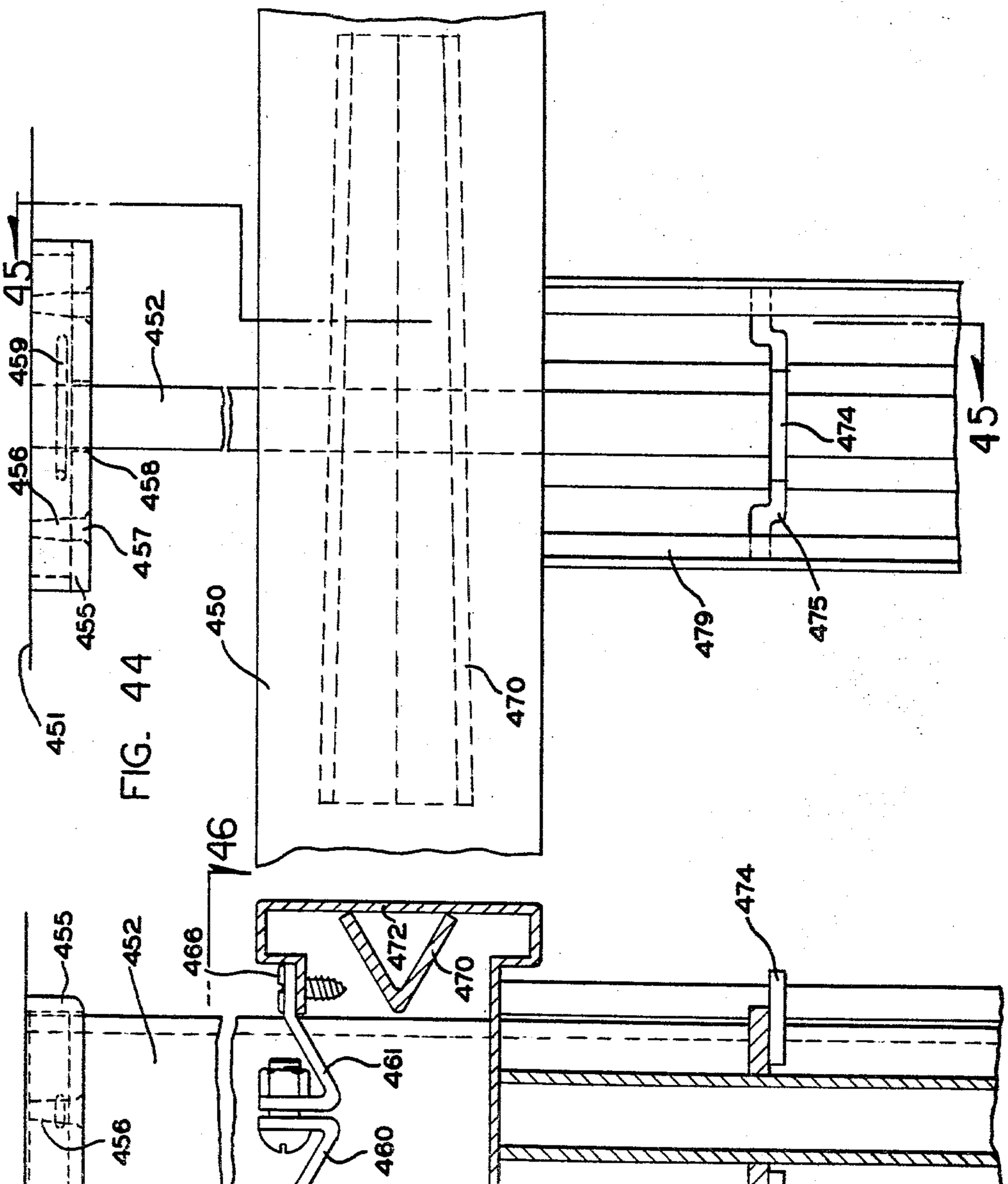

FIG. 44

FIG. 45

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BY

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ATTORNEYS

United States Patent Office

3,180,457
Patented Apr. 27, 1965

3,180,457

PARTITION CONSTRUCTION AND ASSEMBLY

John A. Bohnsack, Shaker Heights, Ohio, assignor to The E. F. Hauserman Company, Cleveland, Ohio, a corporation of Ohio

Filed Dec. 3, 1959, Ser. No. 856,979
2 Claims. (Cl. 189—34)

This invention relates, as indicated, to a partition construction and assembly and more particularly to a flush partition construction that may readily be assembled and disassembled.

It is of prime importance in the construction of movable interior partitions to provide partition sections that will be simple of construction employing as few parts as possible which are easy to manufacture, erect and disassemble. Moreover, the requirements for flexible modular interior constructions as viewed from an appearance or architectural point of view insist that posts for the panels including both glass and wall sections, do not have excessively overlapping or protruding parts which present an irregular appearance to the face of the partition wall. Such "flush" construction using thin wall or glass sections, thereby requiring less useable floor space, is the type of partition in greatest demand because of its "clean" appearance. An example of such flush partition construction may be seen in my copending application, Serial No. 798,491, filed March 10, 1959, entitled "Movable Partition Construction," now Patent No. 3,120,031, patented February 4, 1964.

Due to unevenness of the masonry floors, walls and ceilings in most buildings, it is extremely difficult to assemble or insert a partition wall construction in which all of the joints will appear as lines and not be spaced to present uneven gaps or unsightly overlapped portions. Moreover, it is extremely difficult to make tight joints to produce a strong and rigid interior partition system. Accordingly without compensating features, unevenness in the building construction will mar the clean appearance of an interior partition system.

Because of the thinness of the partition sections, it has generally been impossible to provide these partitions with accessible wiring permitting any sort of flexibility in the electrical outlets or switch arrangements for subsequent variations in uses within the layout. Since the prime reason for employing movable interior walls is complete flexibility in the use of a given floor area, it is extremely important that electrical flexibility also be made available. Heretofore conduit wiring could only be provided in the heavier or paneled office type of partition sections and only generally inaccessible wiring could be provided in the more narrow flush partition. Such inaccessible wiring provides almost no flexibility and any change in the wiring size or electrical layout generally necessitated the complete disassembly of the partition to remove, replace or rearrange such wiring. Moreover, stringent fire and electrical building codes often require such metallic conduit or heavy-duty wiring and for this reason, have made the more generally acceptable flush partitions unavailable for use in many locales.

The reason that conduit wiring has not been generally provided in the flush type of partition is that the panel sections are connected together in an end post construction by locking key members which hold the panel together as well as serving to space the panels properly apart. There simply has not been sufficient room between panel sections for the interlocking key members and the electrical conduits. As a result, the post closure or appearance cap generally has to protrude outwardly to accommodate such conduit and this immediately destroys the flush appearance of the partition assembly. Moreover, the floor and ceiling channels or cornice members which accommodate

the horizontal conduits have to be so connected to the vertical post constructions as to allow a rather large radius of curvature for such conduit to accommodate the change in the conduit from a horizontal to a vertical position. Such interconnections between the post constructions and the horizontal members must be such that the partition will retain its overall flush appearance to be commercially acceptable and yet electrically functional.

It is accordingly a principal object of this invention to provide a partition construction and assembly having a neat appearance and yet providing complete electrical flexibility.

It is a further principal object of my invention to provide a neat appearing partition construction which may include both horizontal and vertical accessible passageways for wiring.

It is a still further principal object of my invention to provide a partition system that will readily accommodate itself to unevenness in the construction of the building in which it is placed to present a clean flush appearance even though the building walls and floors, for example, are not rectilinear.

It is another object of my invention to provide a partition construction and assembly that will require relatively few easily manufactured parts.

It is yet another object of my invention to provide such an assembly that can readily be assembled and disassembled.

Other objects and advantages of the present invention will become apparent as the following description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawings setting forth in detail certain illustrative embodiments of the invention, these being indicative, however, of but a few of the various ways in which the principle of the invention may be employed.

In said annexed drawings:

FIG. 1 is a fragmentary elevation of an interior partition lay out employing my movable assembly;

FIG. 2 is a fragmentary horizontal section of an end filler for use with my partition assembly;

FIG. 3 is a perspective view showing in more detail the end filler clip used with the construction shown in FIG. 2;

FIG. 4 is a vertical section taken substantially on the line 4—4 of FIG. 2;

FIG. 5 is a fragmentary perspective view of a connection between the panel plates and panel verticals that may be employed with my partition assembly;

FIG. 6 is a fragmentary horizontal section of the connection shown in FIG. 5;

FIG. 7 is a fragmentary perspective view similar to that of FIG. 5 illustrating an alternative form of connection;

FIG. 8 is a fragmentary horizontal section of the connection construction shown in FIG. 7;

FIG. 9 is a fragmentary perspective view of a two-way or right-angled post construction that may be used in my partition assembly;

FIG. 10 is a fragmentary horizontal section of the post construction shown in FIG. 9;

FIG. 11 is a fragmentary perspective view of a one-way or end-to-end post construction that may be used in my partition assembly;

FIG. 12 is a fragmentary horizontal section of the post construction shown in FIG. 11;

FIG. 13 is a fragmentary horizontal section similar to that of FIG. 12 illustrating an exemplary three-way post construction;

FIG. 14 is a similar view illustrating a four-way post construction;

FIG. 15 is a fragmentary perspective view of my post construction within the base assembly with the panel verticals greatly foreshortened and parts removed for clarity of illustration;

FIG. 16 is a fragmentary vertical section of one form of my base assembly;

FIG. 17 is a fragmentary vertical section taken substantially on the line 17—17 of FIG. 16;

FIG. 18 is a fragmentary perspective view of an extension assembly for my post construction illustrating such extension engaged within a ceiling channel;

FIG. 19 is a fragmentary horizontal section of the assembly shown in FIG. 18;

FIG. 20 is a fragmentary perspective view of the special clips retaining the cornice on top of my partition assembly;

FIG. 21 is a fragmentary top plan view of my post and cornice connection;

FIGS. 22 through 24 are diagrammatic views illustrating the manner in which my cornice hold-down clips may be engaged with my panel verticals;

FIG. 25 is a fragmentary vertical section of my cornice splice construction;

FIG. 26 is a side elevation of such cornice splice illustrating the manner in which the cornice members are held together at the cornice joint;

FIG. 27 is a top plan view illustrating the tie bars employed with my cornice splice;

FIG. 28 is a fragmentary vertical section taken substantially on the line 28—28 of FIG. 27;

FIG. 29 is a fragmentary vertical section of the top of my partition assembly illustrating the manner in which it is joined to a ceiling channel member;

FIG. 30 is a fragmentary perspective view of the base of my partition wall assembly with the top and sides cut away for clarity of illustration showing the electrical conduit and outlets that may be employed therein;

FIG. 31 is an exploded horizontal sectional view illustrating the manner in which clips may be employed to form three and four-way post constructions;

FIGS. 32 and 33 are similar horizontal sectional views illustrating the employment of an alternative form of clip for forming three-way post constructions;

FIG. 34 is a perspective view of the clip employed in the construction shown in FIGS. 32 and 33;

FIG. 35 is a horizontal section illustrating the clip of FIG. 34 utilized to form a four-way post construction;

FIG. 36 is a horizontal section illustrating my finished end construction and more particularly the unique key employed therewith;

FIG. 37 is a fragmentary view illustrating the manner in which the key shown in FIG. 36 is inserted on the panel vertical;

FIG. 38 is a fragmentary vertical section of a further form of my base assembly;

FIG. 39 is a fragmentary vertical section taken substantially on the line 39—39 of FIG. 38;

FIG. 40 is a top plan view of the special spring clip employed with my base construction illustrated in FIGS. 38 and 39;

FIG. 41 is a fragmentary vertical section of a full light glass panel that may be employed with my invention;

FIG. 42 is a fragmentary horizontal section illustrating the manner in which the horizontal support shown in FIG. 41 is secured to the panel vertical;

FIG. 43 is a fragmentary elevation of my panel wall employing a thru-post;

FIG. 44 is a fragmentary enlarged detailed elevation of the post construction shown in FIG. 43;

FIG. 45 is a fragmentary vertical section taken substantially on the line 45—45 of FIG. 44;

FIG. 46 is a fragmentary horizontal section taken substantially on the line 46—46 of FIG. 45; and

FIG. 47 is a fragmentary horizontal section illustrating

the manner in which the thru-post is secured between my post keys.

Referring now to the drawings and more particularly to FIG. 1, there is illustrated a particular partition elevation which may, for example, include an end filler 1 extending between the wall 2 and an initial post construction 3. The end filler is a panel section extending between a floor channel 4 and a ceiling channel or cornice 5. The panel sections may include doors as shown at 6, windows or merely panel wall sections as shown at 7. An example of the manner in which a door may be employed in my partition assembly may be seen in my copending application, Serial No. 840,747 filed September 17, 1959 entitled "Door Construction." The construction of the posts 3 are similar in nature to the post constructions shown in my aforementioned copending application and employ a panel vertical of the general sectional configuration more clearly shown at 8 in FIG. 2. The panel verticals are slightly narrower than the panel walls shown at 9. The vertical edges of these verticals 8 are rebent at an angle of 45° to form side return flanges as shown at 10 and 11 and the central portion of the vertical includes a vertically extending channel 12. In this manner, these panel verticals may be employed to construct one-way, two-way, three-way or four-way post constructions with the vertical edges 10 and 11 forming perfect miter joints with cooperating panel verticals on adjoining panel sections.

The panel itself is composed of two side panel plates 13 and 14 of a preferably thin gauge metallic construction having rebent ends 15 and 16 fitting within the enlarged channel 12 of my panel vertical. The plates 13 and 14 may suitably be reinforced by spaced rib constructions and the area 17 therebetween may enclose a conventional insulating material e.g., rock wool, foamed plastic, fibrous plastic or glass, etc., whereby the panel section will meet the various requirements of the quite stringent fire codes that generally prevail in most American cities today. The manner in which the plates are secured to the panel vertical will hereinafter more fully be discussed.

Since for a particular partition construction application, the interior dimensions of a floor area generally do not permit the use of an even number of standard panel sections, an end filler section must be employed to fill in the leftover space. This is, of course, generally the space between the wall and an adjoining post construction.

Referring now to FIGS. 2, 3 and 4, I have illustrated a wall channel 20 which may be affixed to such wall by nails, screws or the like, such channel having rebent vertical edge portions 21 and 22. These are formed by folding the sheet material of the channel member back upon itself to produce a vertically extending channel recess. The bottom 23 of the channel may be spaced from the wall 2 and filled with such aforementioned insulating material whereby the entire wall structure will be fireproof.

As shown more clearly in FIG. 4, the bottom wall or web 23 has tabs 25 and 26 punched therefrom to extend generally parallel to the portions 21 and 22. If desired embossment ribs of the configuration shown at 27 in FIG. 4 may be provided to reinforce and rigidify the wall 23.

The tabs 25 and 26 resiliently bearing against the rebent portions 21 and 22 cooperate to provide retainer pockets for the plates 28 and 29 of my end filler panel. Such plates have rebent portions 30 and 31 terminating in resilient latch portions 32 and 33 adapted to be snapped over the angled rebent flanges 10 and 11 of the panel vertical. The tips of the vertical edge rebent portions 30 and 31 fit between the vertical edge of the panel vertical and the plates of the panel section 9 forming in this manner flush extensions of the plates 13 and 14.

In order firmly to retain the latches 32 and 33 in their secured latched position, I provide a spring retaining clip having a channel-shape body 34 closely conforming to the channel 8 of the panel vertical, the configuration of which

is more clearly shown in FIG. 3. This clip may be made from spring steel, for example, and has two central wing portions 35 and 36 which bear against the latch portions 32 and 33 of the extension plates 28 and 29. The sides of the body are formed with punched out tangs or latches 37 which snap into grooves 38 formed in the sides of the channel. It can now be seen that I have provided an end filler plate which may readily be assembled to fill out the odd length of my partition wall. The tabs 25 and 26 will act as spring retainers for the plates 28 and 29 and the latches 32 and 33 may readily be secured between the outer wing portions 35 and 36 of the spring clip and the ends of the rebent flanges 10 and 11. Again, suitable insulation material may readily be employed between the plates 28 and 29.

Now referring to the manner in which the panel plates may be secured to the panel verticals, reference may be had to the alternative embodiments shown in FIGS. 5 through 8, inclusive. Referring first to FIGS. 5 and 6, it may be seen that the plates 13 and 14 having their rebent edges 15 and 16 secured within the channel 12 may be provided with vertically extending cutout openings 40 and 41 in the end faces 42 and 43 thereof. These cutouts are of the general configuration shown in FIG. 5 and have an enlarged central portion to facilitate the insertion therethrough of hooks 44 and 45. These hooks are formed from the panel vertical 12 and have rebent tips as shown in FIG. 5. The interior of the walls 42 and 43 are provided with slight ridges or detents 46 adjacent the vertical ends of the elongated openings 40 and 41. It can now be seen that the panel vertical may firmly be secured to the plates 13 and 14 simply by positioning the rebent edges thereof in the channel 12, inserting the hooks 44 and 45 through the openings 40 and 41 and sliding the panel vertical upwardly until the rebent tips of the hooks 44 and 45 latch over the ridges 46. A typical panel vertical may be provided with, for example, seven mating hooks and openings firmly to secure the panels thereto. As is obvious, the symmetrical configuration of the openings and ridges permits either the plate 13 or 14 or the vertical 8 to be inverted and yet still easily assembled.

Referring to FIGS. 7 and 8, I illustrate an alternate form of connection for the panel vertical and panel plates. The channel 12 of the panel vertical may be provided with spaced apertures for the insertion therethrough of screws 47. These screws threadedly engage inner verticals or members 48 of a configuration more clearly shown in FIG. 8. These inner verticals are provided with central channels having inclined sides as more clearly shown at 49. In this manner, the inner vertical will firmly wedge the rebent portions of the plates 13 and 14 within the channel 12 thus firmly securing the plates to the vertical 8. A suitable number of vertically spaced fastening elements 47 may be provided firmly to secure the panel vertical to the panel plates.

Referring now to FIGS. 9 and 10, I illustrate a two-way post construction for my partition assembly. Such post construction may comprise panel plates 50 and 51 secured to the panel vertical 52 in either manner just described. The rebent edge portion 53 of the panel vertical 52 is positioned face-to-face with a rebent flange edge portion 54 of a further panel vertical 55 having plates 56 and 57 secured thereto in a similar manner. Accordingly, the position of the two panels forms a perfect right angled joint with the rebent edge portions of the panel verticals forming a perfect miter joint at the intersecting corner, the relative narrowness of the panel verticals permitting the plates 51 and 57 to join in a visible line contact at 58 to present a clean and flush appearing interior joint. In order properly to secure the panel verticals together and properly to space them in the required relationship, I provide a two-way post key 59 of the configuration more clearly seen in FIG. 10.

The post key 59 comprises a main body portion 60 having edge portions 61 and 62 of the configuration shown

snugly to fit within the rebent edge flange portions 63 and 64 of the panel verticals 52 and 55. These portions 61 and 62 closely fit around the enlarged central channels in each panel vertical. Extending from the main body 60 of the key 59, I provide an arm 65 having two extending finger or prong portions 66 and 67 adapted to enclose and hold together the mating rebent flange portions 53 and 54 of the panel verticals. As shown in FIG. 9, the edges 53 and 54 of the respective panel verticals may be inwardly indented as at 68 to hold the key 59 at its proper vertical position with respect to the panel verticals. Barbs or tangs 69 may also be punched from the sides of the central channel portions of the panel verticals further to support the keys in the proper position. An angled post cap 70 is provided having the rebent edges 71 and 72 terminating in the rebent latch edges 73 and 74 whereby such post cap may be secured to the post construction to present a flush trim strip to obtain a pleasing appearance for the entire post construction, it being noted, that only three lines will appear in my post construction.

Referring now to the one-way post construction shown in FIGS. 11 and 12, it will be seen that I employ panel plates 80 and 81 secured to panel vertical 82 in the heretofore described manner joined in in-line relation to a panel formed of plates 83 and 84 similarly joined to panel vertical 85. In order to form my one-way post construction, I employ two post keys 86 and 87 having an identical configuration. For example, key 87 has an offset central portion 88 and terminates in opposite enlarged hook-like portions 89 and 90 fitting between the enlarged central channels and the respective vertical rebent flanges of each panel vertical. The enlarged ends 89 and 90 fit behind the rebent flanges firmly to secure the panel verticals against relative movement. Since the ends of these keys abut the panel verticals, they are firmly spaced in the proper position. Two keys provide the necessary stability to produce a completely stable and rigid one-way partition post construction.

It can now be seen that the panel verticals which have my specially shaped keys interconnecting them will be firmly held to prevent slipping and resultant misalignment of the various panel units. These keys may be vertically spaced a distance of, for example, eighteen inches and will keep the verticals positively aligned so that they will correctly engage the post cap. Thus the post cap will provide a continuous engagement for the full height of the partition to provide a uniform, good, sound and light seal and further to allow application and removal of the post cap without distortion. Accordingly, the precise alignment of the verticals provided by the keys facilitates the use of my unique post caps.

The offset bodies of the post keys provide a central inwardly directed concave edge portion 91 on each key which terminates in recesses 93 and 94 adjacent the enlarged central channels on each respective panel vertical. The purposes of these recesses will hereinafter be more fully described.

As shown more clearly in FIG. 11, the rebent flange portions 95 and 96 of the opposed panel verticals are inwardly bent as shown at 97 to maintain the keys in their proper position. Further, post caps 98 and 99 are provided in a manner similar to the cap 70 for the one-way post construction to provide the trim strip necessary for a neat flush post construction. It can readily be seen that such post construction may easily be assembled by the proper positioning of the keys with relation to the panel verticals firmly to secure the panel sections together in the desired position. The post caps may then readily be snapped on the opposed rebent edge flanges of the panel verticals to complete the post construction to provide the desired flush neat appearance, such caps being merely latched or snapped into position. It can be seen that both my one-way and two-way post constructions provide a central enlarged open area through

which may be run metallic conduits C for electrical installations as shown in phantom lines in a manner hereinafter more clearly described. The conduits C may provide wiring for outlets O as shown in post cap 98 in FIG. 11. These outlets may be light switches, telephone jacks or conventional plug receptacles, for example.

In order to form a three-way post construction or a joint for three panel sections, a construction as that illustrated in FIG. 13 may be employed. In this case, a panel 100 utilizing panel plates 101 and 102 may have secured to the vertical end thereof a panel vertical 103 in either of the aforementioned manners. A panel vertical 104 and a similar panel vertical 105 are mitered therewith to form the three-way construction shown. The panel verticals 104 and 105 are shown employed with glazing panels utilizing glass panes 106 and 107 with resilient metallic glazing strips 108 and 109 as shown in my copending application, Serial No. 811,094 filed May 5, 1959 entitled "Glazing Assembly," now Patent No. 3,081,504, patented March 19, 1963. It will, of course, be understood that all of the panel verticals shown can employ glazing panels in all of the various constructions shown. Thus a minimum size square post may be formed with all of the verticals accommodating glass panes. Fitted within the 45° rebent vertical flange portions of the panel verticals 104 and 105 is my one-way key 110. This key is identical in form to the keys 86 and 87 used in my one-way post construction and may be held against vertical displacement by the inwardly bent portions on the rebent edges on the panel vertical, and the tangs or latches punched out from the sides of the central channel.

However, on the opposite side of my post construction, in order to accommodate the inwardly directed channel 112 of the third panel member, I prefer to employ a key 113 of the configuration shown. This key includes tip portions 114 and 115 fitting behind the rebent vertical flange portions of the panel verticals 104 and 105. The central portion of the key includes a narrow bridge portion to accommodate the depth of the channel 112. A post cap 116 which may also include an outlet may be employed to close the open side of the post construction to produce a finished neat appearance to the joint. It is noted that these combinations of keys may be employed with keys of the configuration shown in FIGS. 9 and 10 firmly to hold the panel vertical 103 against the rebent edge portions of the opposed panel verticals 104 and 105. Special clips hereinafter more fully described may also be employed to lock or latch the verticals together.

The four-way post construction shown in FIG. 14 utilizes keys 120 and 121 which are identical in configuration and may be the same as keys 113 in FIG. 13. These keys employ the more narrow center portion to accommodate the channels in the opposed panel verticals 122 and 123. Again, the rebent edge portions of the panel verticals may be inwardly bent and tabs punched from the channel walls to secure the keys in their proper position. The keys illustrated may, of course, cooperate with keys arranged between the panel verticals 122 and 123 positioned below or above the keys 121 and 120 so that alternate keys would firmly secure together opposite panel verticals. However, I prefer the use of special clips hereinafter more fully described.

Referring now to FIGS. 15, 16, 17 and 30, I illustrate a typical base assembly for my post construction. The panel verticals 130 and 131 are formed so that the enlarged central channels 132 and 133 extend slightly below the remaining portion of the panel verticals. These channels are in turn welded to specially formed stilts 134 and 135 of the configuration more clearly shown in FIG. 15. The stilt 134 has two spaced legs 136 and 137 as does the stilt 135. These legs support the top shelf of the stilt to which the panel vertical is welded. In effect, the stilts constitute an integral extension or spaced feet for the panel verticals. The stilts are secured within a floor channel 138 of the configuration more clearly shown in FIGS. 15 and 16. The floor channel has an inverted channel 139 on the top of which are placed shims 140. The number and thickness of the shims will, of course, determine the proper vertical position of the panel verticals. If desired, a resilient plastic material, such as a strip of foamed polyurethane, may be employed as a footing or seal beneath the floor channel to compensate for unevenness in the floor itself or for that matter, the floor channel itself may be made of such plastic. The use of shims readily makes the partition sections adaptable to variations in the evenness of the floors and walls in which they are placed. The basic function of the two-spaced legs 136 and 137 of my stilt is (1) to position the vertical and support the same to prevent lateral movement; (2) to provide the necessary clear space to run the conduit C horizontally within the base assembly; and (3) to permit removal of a panel unit without disturbing the conduit C and, of course, to permit the reinstallation of the panel again without disturbing the wiring. Thus with the stilt straddling the horizontal run of the wiring, the panels may be inserted and removed without disturbing such wiring.

Referring now to FIG. 16, I illustrate the manner in which the joint between the panel section and the floor channel is completed. The panel section includes two plates 141 and 142. The plate 141 has secured thereto a reinforcing rib 143 abutting reinforcing rib 144 on the plate 142. These ribs may be spot welded to the panel plates and, as will be seen, each rib terminates in horizontally rebent portions 145 and 146 adjacent the lower edge of the panel plate. These rebent portions 145 and 146 form seats for an outer retainer member 147. This member may extend the length of the panel plate and has side wall portions 148 and 149 overlapping the panel plate and ribs to form a rigid lower wall construction with the panel plate. The central portion of the retainer 147 is downwardly offset as shown at 150 and has a downwardly opening channel 151 therein. As shown more clearly in FIG. 17, the top of this downwardly opening groove or channel is formed with openings 152 and 153 for a purpose hereinafter more fully described. It will be understood that these pairs of openings may be spaced along the entire bottom edge of the panel plate. This channel 151 cooperates with an inner retainer member 154. The sectional configuration of this inner retainer member is shown in FIG. 16 and is longitudinally coextensive with the outer retainer member 147. The inner retainer member 154 is essentially a channel-shape member having rebent edge portions 155 and 156 of the configuration shown in FIG. 16. The top portion of the downwardly opening channel member 154, as shown in FIG. 17, is formed with openings 157 and 158 juxtaposed to the openings 152 and 153 in the channel 151 of the base outer retainer. As seen in FIG. 17, the juxtaposed pairs of openings constitute a receptacle for the insertion of a spring clip 159, the ends of which bear against the bottom of member 154 as shown at 160 and 161 and the center of which bears against the top of member 147 as shown at 162. In this manner, the clip will exert an upward pressure at 160 and 161 to maintain the inner retainer member within the channel of the outer retainer member 147.

On each side of the floor channel 138, I provide recessed base wall plates 165 and 166. Each of these base plates has the top edge thereof rebent as shown at 167 and 168. The base plates continue from this upper rebent edge to form horizontal shelves 169 and 170 terminating in downwardly directed flanges 171 and 172. As can be seen, these downwardly directed flanges 171 and 172 fit within the rebent latch portions 155 and 156 of the inner retainer member 154. The spring 159, exerting an upward pressure at the points 160 and 161, will cause the base inner retainer to be forced upwardly in turn to

exert an upward pressure at the points 173 and 174 to exert an upward pressure on the downwardly directed flanges 171 and 172. In this manner, the base plates will not only be held in their latched position within the rebent portions 153 and 156 of the inner retainer member, but they will also be subjected to an upward force as the result of spring 159 exerting an upward pressure on the inner retainer. As can be seen, the base plates 165 and 166 may slide upwardly with respect to the floor channel 138 and my unique spring latching arrangement automatically compensates for variations in the floor and floor channel secured thereto to maintain the base plates 165 and 166 with their top rebent edges 167 and 168 against the bottom horizontal edges 145 and 146 of the panel plate reinforcing ribs and to keep the plates against the sides of channel 138.

As seen in FIG. 17, my stilt arrangement permits a conduit C to be directed from a horizontal position within the floor channel 138 to a vertical position within a post construction formed by two panel verticals 130 and 131. The panel verticals will be properly held together by the key members illustrated in FIGS. 11 and 12, the enlarged central opening between the keys readily accommodating the vertically extending conduit C. (Note FIG. 30.) Not only will my partition construction shown readily accommodate such wiring, but it also is readily conducive to a neat appearing juncture between the panel plates and the floor channel. As can be seen, the stilts 134 and 135 merely constitute spaced feet for the panel verticals to avoid the wire conduit in the floor channel. The offset configuration of the feet also accommodates the radius of curvature in the conduit as it moves from a horizontal to a vertical direction. Moreover, as shown in FIG. 17, the recessed lower portions 175 and 176 of the stilts have a sufficient spread to clear a floor channel normal to the floor channel 138 at three- and four-way post constructions.

Referring now to FIGS. 18 and 19, I illustrate a top post extension that may be employed in my partition post construction firmly to secure the partitions within a ceiling channel 180. This channel may be secured to the ceiling as by screws or other fastening means in a manner similar to the manner in which the floor channel is secured to the floor. The ceiling channel is of a similar configuration to the floor channel 138 and includes a central channel 181, the bottom of which is spaced from the ceiling. In order to secure a panel wall within the ceiling channel to keep it aligned therewith, I utilize a vertical extension 182. The extension 182 is of channel form as may more clearly be seen in FIG. 19 and is of such configuration as to fit closely about the exterior of the enlarged central channel 183 in a panel vertical 184. As noted in a one-way post construction, the keys 86 and 87 are provided with the recessed portions 93 and 94. (Note FIG. 12.) The recess within the keys, as can now be seen, readily permits the insertion of the vertical extension 182 about the channel portion 183 of the panel vertical 184. In order to maintain the vertical extension against the central panel of the vertical, I provide an extension spring clip 185 of general channel shape conforming to the channel form of the extension 182. The ends of the body of the clip are provided with rebent latch members 186 which snap over the edges of the extension 182. Simultaneously, central reentrant portions 187 snap within the groove 187*a* formed in the sides of the channel portion 183 of the panel vertical. The vertical extension 182 upwardly terminates in two leg portions 188 and 189 secured about the central channel 181 in the ceiling channel. An opening 190 is provided in such vertical extension for the insertion therethrough of a conduit for wiring. The joint between the upper edge of the panel plate and the ceiling channel may be closed in a manner similar to the joint between the lower edge of the panel and the floor channel as hereinafter described.

If desired, however, a cornice member may be employed between the top of the partition wall and the ceiling. FIGS. 20 and 21 illustrate a manner in which the cornice channel member may be retained on the top of the partition wall. A cornice 200 of the configuration shown in FIG. 20 is provided with an opening 201, a portion of which is shown in FIG. 20, positioned above my one-way post construction. This opening is provided with four keyhole necked recesses 202 at each corner thereof. In order to hold the cornice on the top of the partition wall, I employ a cornice holddown clip 203 of the configuration more clearly seen in FIG. 20. This clip includes a horizontal bridge top portion 204 of a width slightly larger than the width of the keyhole 202. Depending from the top bridge is the hook-like body 205 terminating in upturned tip 206. The hold-down clip is made from a spring steel and the legs have initially the configuration shown in FIG. 22 being rebent at 207 and terminating in a curved latching portion 208. Punched from the webs 209 of the panel vertical, I provide cornice holddown clip retainers 210. These retainers are symmetrical with both the top and bottom having stepped latching portions 211 and 212, the profile of which is more clearly shown in FIGS. 22, 23 and 24. As can be seen, the clip may readily be secured to the panel verticals by snapping the same into position with a common tool, such as a screw driver S. The screw driver is initially placed in the position shown in FIG. 22 beneath the latching portion 211 and rotated in a clockwise direction to extend the tip 206 to position it beneath the lowermost latching portion 212. Continued clockwise rotation of the screw driver readily removes the same and leaves the clip in the latched position shown in FIG. 24. In this manner, the clip will exert a continuing downward pressure on the cornice 200 to maintain it against the top edge of the partition wall. Suitable extensions such as mineral board or steel plates may be employed between the seats 213 and 214 on the top of the cornice and the sides of a ceiling channel completely to close the top of my partition wall. Once the extensions or filler are installed, the space from the cornice to the ceiling is closed off making it impossible to gain access to the top opening of the cornice. Accordingly, the only way a connection can be made is from the underside of the cornice and for this reason I employ my special hold-down clip.

Referring now to FIGS. 25, 26, 27 and 28, I illustrate a cornice splice which may be utilized to draw the abutting cornice members closely together to form a tight joint. The cornice 220 abuts cornice 221 to form a cornice joint 222. In order properly to align the cornice members 221 and 220, I provide bottom and top cornice splicing members 223 and 224 respectively. These members may preferably be made of relatively heavy gauge steel and are of the sectional configuration shown in FIGS. 25 and 28. These members extend within the cornice for a considerable length on each side of the joint. As an example, the cornice splice members may extend from 10" to 11" within a 2¼" high cornice, the total length of such splice members being approximately 22". Both splice members are of the general rebent U-shape configuration shown and the top splice member is provided with threaded openings 225 for the insertion therethrough of set screws 226. These set screws engage the center portions of the opposite bottom splice member 223. It can now be seen that the set screws will be effective to force apart the opposed central portions of the splices 223 and 224. This will cause the cornice splice to expand and exert outward forces against the interior of the cornice member. The directions of these forces are illustrated by the arrows in FIG. 25. The cornice splice members may be provided throughout the length thereof with as many as four such set screws which will firmly hold the splice members in their expanded positions. Such expansion of the splice mem-

bers will serve to align the opposed cornice members to form a perfectly aligned joint 222.

In order longitudinally to position the cornice members in the desired location, I provide near the ends thereof, tie bars 227 and 228 for the cornice members 220 and 221 respectively. As shown in FIG. 28, the tie bars are welded to the top recessed shoulders 229 and 230 of the cornice members. Each tie bar includes cross-bridge members 231 and 232 having apertures 233 therein.

To draw the cornice members together to make a tight and flush joint 222, the hook bolts 235 may be employed through the interior bridge members and hooked through aperture 238 in the top cornice splice member. It can thus be seen that through the use of the tie bars, splice members and hook bolts, the cornice members may be drawn together and placed under tension forming a more rigid form of partition construction. The tie bars ars formed in the symmetrical shape shown to facilitate assembly with the cornice member properly to form the cornice joint. If desired, further tie bars may be employed with apertures 236 and 237 further to rigidify the cornice joint.

Referring now to FIG. 29, I illustrate the manner in which the joint between the panel section and the ceiling channel is completed. The ceiling channel may be employed in addition to or instead of the cornice member as illustrated in FIG. 20. The panel section includes two panel plates 250 and 251 which have respectively secured thereto reinforcing ribs 252 and 253. These ribs abut as shown at 254 and may be spot welded to the respective panel plates, each rib terminating in horizontally rebent portions 255 and 256 adjacent the top edge of the panel plates. The ribs also include rebent seat portions 257 and 258, the space between the rebent portions 255 and 257 on the rib 252 and the rebent portions 256 and 258 on the rib 253 forming retaining seats for the side wall portions 259 and 260 of outer retaining member 261. This retaining member 261 may extend the length of the panel plate and the walls 259 and 260 thereof form a rigid upper wall reinforcement for the panel plate. The central portion of the member 260 is formed with an upwardly opening channel 262 in which are spaced openings identical in form to the openings in member 147 illustrated in FIG. 17. Seated within the channel 261 is a latch retaining member 263 which may be longitudinally coextensive with such channel 262. The member 263 has rebent latch edge portions 264 and 265 of the configuration shown. The bottom 266 of the member 263 is formed with openings identical in form and opposed to the openings in channel 262. The juxtaposed openings in the members 261 and 263 are in effect receptacles for the insertion of a spring clip 267 resiliently to hold the member 263 within the channel 262. The configuration of this spring is identical in form to the spring clip 259 illustrated in FIGS. 16 and 17. Side cover extension plates 268 and 269 are formed with rebent lower edges 270 and 271 respectively terminating in rebent latch portions 272 and 273. The rebent portions 270 and 271 face side walls 274 and 275 of the member 261 which are spaced apart substantially the same distance as walls 276 and 277 of ceiling channel 180. Accordingly, the plates 268 and 269 need only be snapped into place with the latching portions 272 and 273 releasably engaged beneath the rebent latch portions 264 and 265 of the member 263. The ceiling channel may be fastened directly to the ceiling as by screws, for example, and may include a resilient seat or seal to accommodate variations in the evenness of the ceiling. The ceiling channel itself may be made of steel or a relatively flexible plastic material to follow the ceiling line. The ceiling channel is formed with the upwardly opening channel 181 which may be filled with a foamed plastic material or other suitable insulating material e.g. rockwool, to provide the proper sound and light seal. Upon comparison of this figure with FIG. 16, it will be realized that the joint between the panel section and the ceiling channel is essentially identical in form to the joint between the panel section and the floor channel.

FIG. 30 is a fragmentary perspective view illustrating the just described joint connection employed in the panel section floor channel joint as it would appear in the completed partition unit. Panel plates 280 and 281 together with panel vertical 282 form one panel wall section which may have the aforementioned suitable insulation material 283 therein. Another panel wall section joined thereto includes panel plates 284 and 285 joined to panel vertical 286. These panel verticals are welded to stilts 287 and 288 positioned on shims 289. Key members as that shown at 290 are employed firmly to lock the panel verticals in their proper relative positions. As shown, the panel plate sections include ribs 291 and 292 seating therein channel member 293 with retaining member 294 therein held by the aforedescribed spring clips. Side cover base plates 295 and 296 are latched within the retaining member 294 to cover the distance between the base and the floor channel 297. These plates may extend the length of the partition wall to form a neat and flush, slightly recessed, baseboard for the partition system. An outlet or receptacle 298 may readily be positioned in the side cover plates which are electrically connected to the wire conduit C extending through stilts 287 and upwardly through the post construction to an outlet as that illustrated in FIG. 11. These outlets can be formed in the post caps 299 which are snapped in place on the panel verticals.

FIG. 31 is an exploded view illustrating the manner in which a four-way post construction can be achieved utilizing special spring clips to lock the various members in place. The four-way post construction includes opposite panel verticals 300 and 301 having rebent edge flanges 302 and enlarged central channels 303. These panel verticals are secured together by keys 304 and 305 of the configuration shown. These keys include tip hook-like projections 306 which lock behind the rebent flanges firmly to space and lock together the panel verticals 300 and 301. These keys include offset central portions 307 having cutout portions 308 therein. These cutout portions accommodate the inwardly extending channel portions of panel verticals 309 and 310. These panel verticals are identical in form to the panel verticals 300 and 301. Each of the panel verticals shown includes vertically extending grooves 311 in the sides of the central channel portions 303.

Accordingly, it will be seen that the keys 304 and 305 will hold the verticals 300 and 301 properly together. However, a further retaining means is required to hold the verticals 309 and 310 in the proper mating nested relation to the verticals 300 and 301 in order to form the proper miter joints to maintain the rebent edge flanges in proper abutting position. For this purpose, I provide a special spring clip 312 which includes a central body portion 313 having reinforcing embossment 314 therein. From the body extend the legs 315 which closely conform to the outside of the central channel of the panel vertical. Barbs or tangs 316 are punched inwardly from the legs 315 in such a manner that they will snap within the grooves 311 in the outside walls of the channel of the panel vertical, it being understood that the clip is made from a resilient metallic material and that the legs 315 will spread slightly outwardly such that the clip need only be pushed onto the channel portion until the barbs snap within the grooves. The barbs are of such a configuration that the clip can easily be assembled on the panel vertical and yet once in place, the clip cannot easily be removed. Extending from the body 313 in a direction opposite to the legs 315 are legs 317 having outwardly punched barbs 318. The legs 317 are spaced apart a distance such that the outside thereof will be in contact with the outside bottom portions of the enlarged channels in verticals 300 and 301. After the clip is inserted on the vertical 310 in the manner shown, the vertical need only be placed in the nested position and the resiliency in the legs 317 will permit the barbs

318 to ride over the channels 303 such that the barbs will snap or lock behind the far edge of such channels. The panel vertical 309 is illustrated in its assembled position having the clip 319 snapped or locked in its assembled position. It can readily be seen that the clip members may easily be assembled on the panel verticals and that such may be employed readily to assemble and lock together the elements of my post construction. With the aid of a screw driver, pliers or similar tool, the clips can readily be disassembled due to the inherent resiliency of the material employed in the clips. In this manner, the legs 317 need only be squeezed together to release the panel vertical 310.

FIGS. 32, 33, 34 and 35 illustrate a three and four-way post construction and an alternative form of clip that may be employed firmly to secure the panel verticals together. Referring first to FIG. 32, I have illustrated a three-way post construction employing panel verticals 320 and 321 held together by keys 322 and 323. The key member 322 is of the bowed configuration permitting the utilization of a conduit within the post construction. Both of these key members employ the hook-like tip portions which engage behind the rebent edge flanges of the panel vertical firmly to hold the verticals 320 and 321 in their proper spaced position. To secure the third panel vertical 324 in place, I employ the special clip 325 illustrated in more detail in FIG. 34.

Referring now to such FIG. 34, it will be seen that the clip comprises a central body portion 326, the opposite end portions of which have legs 327 extending therefrom. These legs have the inwardly punched barbs 328 which are similar in form to the barbs 316 of the clip 312. Thus the legs 327 together with the extremities of the body portion 326 form spaced U-shaped retaining clips which may readily be snapped over the central channel of the panel verticals with the barbs resiliently engaging within grooves 329 on the outside of such central channels. The central portion of the body of the clip has two outwardly extending wings 330 and 331 having respective rebent edges 332 and 333. These edges are positioned such that they will abut the edges of the rebent flanges 334 and 335 of the panel vertical to which the clip is attached. It can readily be seen that the rebent portions present a latching edge extending beyond such rebent flanges and, with special reference to FIG. 33, it will be seen that the resiliency of the wing portions permits the rebent edges 332 and 333 to latch behind the edges of the rebent flanges 336 and 337 of the opposed verticals 320 and 321 when the panel section of vertical 324 is shoved into nested position. In this manner, the rebent edges will closely abut the juxtaposed edges of the mating rebent flanges of the mitered panel verticals to retain the same in the position shown in FIG. 33. In the three-way post construction shown in FIGS. 32 and 33, a post cap 338 is employed to close the fourth side of the post construction.

With reference to FIG. 35, it will be seen that a four-way post construction may readily be assembled using such clips to hold the panel verticals 340 and 341 in the position shown while the panel verticals 342 and 343 are locked together by the use of the key members 344 and 345, these keys being of the same configuration as key 323 in FIG. 32. It is noted that the clips employed are of such configuration that they will not in the least interfere with any wire conduits employed in my post constructions.

Referring now to the finished end construction shown in FIGS. 36 and 37, it will be seen that a special key 350 is employed with a panel vertical 351 to support and rigidify post cap 352 thus forming my finished end construction. The key 350 has protections 353 and 354 which closely fit behind the return flanges 355 and 356 of the panel vertical 351. In order to clear the enlarged central channel 357 of the panel vertical, the key is recessed as shown at 358 sufficiently to provide a considerable lateral clearance between the sides of the channel 357 and the key.

The outer end of the key 350 is formed with two lateral projections 359 and 360 behind which fit the ends of a reinforcing channel member 361. This channel member provides a support for the end post cap 352 which is of the general U-shape shown. This cap is provided with the rebent latch portions 362 and 363 to facilitate the latching thereof to the return flanges 355 and 356 of the panel vertical.

The width of the recess 358 shown as A in FIG. 37 readily permits the key 350 to be tilted to the initial position shown. In this position, the projections 353 and 354 will clear the return flanges 355 and 356 thus permitting the key to be positioned with the recess 358 fully enclosing the channel 357. When in this position, the key is then straightened to the horizontal position, wherein the projections 353 and 354 will closely fit or wedge behind the return flanges. The twisting of the key to the horizontal position locks the clip in place and it may be driven downwardly to seat on tangs or projections 364 and 365 struck from the central channel 357. In this position, the key will be firmly secured to the panel vertical in a horizontal position. If desired, a recess 366 may be formed in the key to accommodate a thru-post construction later to be described.

With reference now to FIGS. 38, 39 and 40, I have illustrated a modified form of my base assembly. The side panel plates 370 and 371 of the panel wall are provided with reinforcing ribs 372 and 373. Such ribs have inwardly directed flange portions 374 and 375, with the bottom edges of the plates 370 and 371 terminating at such flanges. These flange portions are rebent to form a downwardly opening central channel therebetween and terminate in upwardly directed flanges 376 and 377. These upwardly directed flange portions may be secured directly together as by welding to form the bottom of the panel wall section.

The downwardly opening channel formed by the flange portions 374 and 375 encloses a longitudinally extending latch member 378 which is of the channel form shown and has the leg portions thereof rebent to form continuous horizontal latches as shown at 379 and 380. In order to retain the channel shaped latching member 378 within the channel formed by the flanges 374 and 375, I employ the special spring clip illustrated more clearly in FIGS. 39 and 40. This clip is provided with a body 381 having a resilient tongue 382 projecting therefrom. This tongue bears against the latch member 378 as shown at 383 to hold it within the channel. In order to retain the latch in position, two upstanding ears 384 and 385 are provided having projections 386 and 387 which overlie the top surface of the respective flange portions 374 and 375. The latch member 378 as well as the flange portions are provided with juxtaposed apertures 388 to permit the insertion of the clip so that the projections 386 and 387 as well as the tip of the spring tongue 382 will properly bear against and hold the respective parts to position resiliently the latch member 378 within the downwardly opening channel.

Baseboard plates 389 and 390 are provided having rebent top flanges terminating in edge portions 391 and 392 which are latched behind the rebent latch portions 379 and 380 respectively of the longitudinally extending latch member 378. The resilient mounting of the latching member 378 will thus tend to pull upwardly the portions 391 and 392 of the baseboard plates to pivot them about their points of contact 393 and 394 to swing them inwardly against the base or floor channel 395. Accordingly, the upward pressure on the upper ends of the baseboard plates will tend to keep the floor edges thereof firmly against the floor channel 395 even when there are certain variations in the floor level. Thus a continuous contact or grip will be obtained between the baseboard and the floor channel throughout the length of the panel.

In order further to compensate for unevenness in the floor and to provide a complete light and sound seal, I

provide a strip 396 of a compressible foamed elastomer, as for example, foamed polyurethane. This strip may be initially 1" thick and will compress 60 to 70 percent to close the cells and pores therein. When used beneath the partition, the strip will compress to approximately 1/64 of an inch as shown. This strip acts as a gasket and can be placed all around the partition against the walls and ceiling as well as the floor. Such a construction has been found much more effective than merely filling the partition with insulating material.

In the construction shown in FIGS. 38 and 39, a channel 397 is inserted within the floor channel 395 and shims 398 are employed to level the legs 399 and 400 of the stilt to which the panel vertical 401 is welded. It will now be seen that my stilt and base assembly construction shown in FIGS. 38 and 39 also provides the three basic functions of the spaced legs similarly to the embodiment shown in FIGS. 16 and 17. Accordingly, the entire panel may be removed without disturbing the conduit running within the floor channel 395. Of course, the panel may also be reinserted with the legs 399 and 400 merely straddling such conduit.

Referring now to FIGS. 41 and 42, I have illustrated the details of construction for a full, light glass panel that may be employed with my partition system. The same construction is employed utilizing a panel post formed by securing a vertical 410 to the stilt 411 which is leveled and shimmed at 412 on inverted channel 413. This channel member is placed within the floor channel 414 which in turn is placed upon the compressed ceiling strip or gasket 415.

A horizontal support member 416 is firmly secured to the panel vertical by screws 417. These screws pass through the central channel of the panel vertical and extend through down-turn flanges on central tabs 418 of such horizontal member. In addition, tabs 419 and 420 extend through the face of the panel vertical further to locate properly the horizontal member in its aligned position. This horizontal member includes a central channel 421 which seats the sill member 422 having a similar central channel 423 therein. Closely fitting within such sill member is a further thinner gauge horizontal member 424 having a downwardly opening central channel 425 therein. This channel is provided with apertures aligned with similar apertures in the base retaining clip or latch member 426 such that clips of the configuration shown in FIG. 40 may resiliently hold such retaining clip or latch member within the downwardly opening channel. Baseboards 427 and 428 are held by such base retaining clip in an identical manner as that illustrated in FIG. 38.

Similarly secured to the panel verticals at the top of my glass pane, I provide a further horizontal member 429 which is essentially identical in form to the horizontal 416. This horizontal member is similarly secured to the vertical by screws 417 and the tabs 419 and 420. The downwardly projecting sides 430 and 431 of such horizontal member provide a retainer enclosure for heavier gauge horizontal member 432 which is held in place by the insert 433. This insert has an upwardly opening central channel 434 therein in which a retainer clip or latch member 435 is resiliently secured by clips identical in form to the clips shown in FIG. 40. Thus filler plates 436 and 437 are held against a ceiling channel in an identical manner that the plates 427 and 428 are held against the floor channel. It can readily be seen that the base assembly is essentially identical to the ceiling assembly in that the latch members and filler plates are the same and the clips resiliently holding such latch members in the horizontally extending channels are also identical.

The member 432 forms a downwardly opening dovetail channel 438 which cooperates with the enlarged central channels in each of the side panel verticals as well as the bottom channel 423 to firmly enclose the glass pane within my panel. The metallic glazing assembly shown in my aforementioned "Glazing Assembly" application, Serial No. 811,094, now Patent No. 3,081,504, patented March 19, 1963, will preferably be employed to insert the glass pane within the construction illustrated.

It will accordingly be seen that the one-, two-, three- and four-way post constructions may all employ glass panes therein. Thus with the construction shown in FIGS. 12, 13 or 14 and and 41 and 42, it is possible to provide a square post for glass panels and still maintain the neat overall flush appearance of the partition system.

Referring now to FIGS. 43 through 47 inclusive, I have illustrated a thru-post construction for use with my partition system. Referring especially to FIG. 43, it will be seen that the partition wall terminates in a cornice 450 spaced a considerable distance from the ceiling 451. In order to support and rigidify the wall of my partition system, I employ a thru-post 452 extending from within my post construction 453 to the ceiling 451. The post may firmly be clamped within the post construction 453 as hereinafter more clearly shown and will be securely fastened to the ceiling as shown at 454.

The post itself may be in the form of a rectangular tubular member as shown more clearly in FIGS. 46 and 47 and may be, for example, 8 feet in length. A cap or bracket 455 may be secured directly to the ceiling 451 as by nails, screws or other suitable fastening means 456 positioned through apertures 457. The member 455 is provided with a central aperture 458 through which the post 452 extends. A cotter pin 459 may be employed extending through the post 452 firmly to secure the post within the member 455 and thus to the ceiling 451.

Referring now to FIGS. 45 and 46, it will be seen that the cornice connection to the thru-post comprises two U-shaped clamping members 460 and 461 having upturned end flanges 462 and 463 on each leg thereof in facing relationship. The U-shaped clamping members closely embrace the thru-post 452 and are firmly secured to the recessed shelves or seats 464 and 465 on each side of the cornice member by screws 466. Each of the upturned flanges 462 and 463 is provided with an aperture to permit the employment of bolts 467 and nuts 468 which are used to draw the clamping members 460 and 461 tightly together firmly to clamp the post 452 with respect to the cornice member 450. Further to clamp and rigidify the post and cornice connection, I provide two V-shaped wedge members 469 and 470 which may be driven between the side walls 471 and 472 of the cornice and the ends of the thru-post. It can now be seen that the thru-post will be firmly clamped and held within the cornice member.

Within the post itself, my specially formed keys 473 and 474 will further clamp and rigidly hold the thru-post with respect to the panel verticals. These special keys are offset vertically at the ends thereof approximately 1/8 of an inch as shown at 475. (Note especially FIG. 44.) This offset not only reinforces the key but also permits the insertion of the key at the thru-post. It can be seen that this offset permits the positioning of the end projections of such keys 476 and 477 to be inserted behind the rebent flanges 478 of the respective verticals 479. The key is then twisted and wedged firmly to lock and clamp the thru-post with respect to such spaced panel verticals. Here the special keys not only uniformly align and space the panel verticals, but also firmly lock and clamp the thru-post therebetween. With the keys locking the thru-post within the post construction and the U-shape clamping members 460 and 461 firmly holding the thru-post within the cornice, it can readily be seen that the thru-post will rigidly and firmly be secured within my partition system.

These thru-posts assure lateral stability of all the partition runs and may, if desired, extend through the ceiling to more rigid structures above. Since many ceilings are hung and consequently not sufficiently stable, it may be desired to project the post 452 through such hung ceiling

rigidly to secure the same to building structure thereabove.

In order properly to insulate my partition system against the transmission of sound, in addition to the perimeter seal and the insulation in the panel walls themselves, I may provide insulation also in the cornice or ceiling trim, the partition base, top filler and even in the post construction itself. Thus even with the flush neat construction illustrated, maximum sound control may readily be obtained.

In the manufacture and assembly of my partition system, all exposed steel will preferably be full-pickled, cold-rolled, furniture stock steel. The panel units and posts illustrated are preferably only 2¼ inches thick and thoroughly insulated with rock wool. The verticals illustrated can be 14 gauge rolled steel and the panel plates 20 gauge roller-leveled steel with horizontal reinforcements, such as ribs 12" apart welded on the back face of the panel on 3" centers. Even in glazed partitions, the mullion width will not exceed the 2¼".

The post keys are preferably 10 gauge steel and the post caps 20 gauge rolled steel to provide a continuous engagement for the full height of the partition. The base may be 18 gauge steel 3¾" high with a ¼" recess behind the panel face and continuous without plinths and, of course, adjustable to floor variations. It is, of course, possible that the base may extend beyond the face of the panel if such wider base is desired.

The cornice is preferably 14 gauge rolled steel 2¼" high and the cornice splice members will preferably be 10 gauge steel at least 20" long.

The panel plates may be provided with various paint finishes, or real wood veneers or even textured vinyls to give the panel surfaces a variety of colors and textures.

The electrical apparatus for my partition system may be placed within the base or the post caps, such apparatus including a variety of switches and outlets. The electrical wiring may, for example, be ⅞" O.D. Greenfield wiring or B-X cable. This wiring, of course, is completely accessible, the removal of the spring latched post caps, base or filler plates being all that is required.

It can now be seen that I have provided a partition construction and assembly that will readily accommodate such accessible wiring and yet present an overall neat and flush appearance. Moreover, my unique post construction utilizing my specially formed keys and clips readily accommodates such wiring as well as vertical reinforcing extensions. My unique construction, of course, contributes markedly to the ease with which my system may be assembled and disassembled. Further, my unique bottom and top assemblies will readily conform to unevenness in the walls and yet maintain an extremely neat and rigid assembly. Thus my partition system meets both the aesthetic and structural requirements of modern interior layouts.

Other modes of applying the principle of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims or the equivalent of such be employed.

I claim:

1. A partition assembly for interior partitions and the like comprising panel sections interconnected to form partition walls, said panel sections including spaced panel plates having panel verticals secured to the ends thereof, said panel verticals having central deep U-shape channel portions and rebent vertical edge portions, key means positioned between said rebent edge portions and said channel portions holding said panel verticals in predetermined spaced relationship to lock said panel sections together, said key means having bowed central portions to accommodate conduits and the like positioned within said partition between said panel verticals, means on said panel verticals to retain said key means in place, stilt means secured to the bottoms of said panel verticals fitting within a U-shape floor channel, said stilt means having recessed lower portions spacing the feet of said stilt means farther apart than said panel verticals to accommodate such conduit and the like extending from said floor channel upwardly between said panel verticals, post caps flush with said panel plates continuously vertically resiliently engaged with said rebent edge portions of said respective panel verticals closing the space between said panel sections, a post extension secured to one of said panel verticals and extending upwardly and secured within a ceiling channel, means on said post extension to accommodate a conduit passing through said ceiling channel, means releasably securing said post extension to said panel vertical, lower rib means spacing said panel plates apart, said rib means terminating in inwardly extending horizontal flanges at the lower edges of said panel plates, lower horizontal members seated on said flanges and having downwardly opening longitudinally extending channels therein, downwardly opening U-shape clip means within the channels of said horizontal members, spring means resiliently holding said clip means therein, and side base plate means resiliently engageable with said clip means to provide an extension between the lower edge of said plates to said floor channel means.

2. A partition assembly for interior partitions and the like comprising panel sections interconnected to form partition walls, said panel sections including spaced panel plates having panel verticals secured to the ends thereof, said panel verticals having central deep U-shape channel portions and rebent vertical edge portions, key means positioned between said rebent edge portions and said channel portions holding said panel verticals in predetermined spaced relationship to lock said panel sections together, said key means having bowed central portions to accommodate conduits and the like positioned within said partition between said panel verticals, means on said panel verticals to retain said key means in place, stilt means secured to the bottoms of said panel verticals fitting within a U-shape floor channel, said stilt means having recessed lower portions spacing the feet of said stilt means farther apart than said panel verticals to accommodate such conduit and the like extending from said floor channel upwardly between said panel verticals, post caps flush with said panel plates continuously vertically resiliently engaged with said rebent edge portions of said respective panel verticals closing the space between said panel sections, a post extension secured to one of said panel verticals and extending upwardly and secured within a ceiling channel, means on said post extension to accommodate a conduit passing through said ceiling channel, and means releasably securing said post extension to said panel vertical, upper rib means spacing said panel plates apart, said rib means terminating in inwardly extending flanges adjacent the top edges of said panel plates, upper horizontal members supported within said panels by said rib means, said upper horizontal members having longitudinally extending upwardly opening channels therein, clip means within the channels of said horizontal members, spring means resiliently holding said clip means therein, plate means resiliently held by said clip means extending between said flanges and said ceiling channel to close the space therebetween.

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