Oct. 31, 1967 H. S. DUDOFF 3,349,532

PARTITION-FORMING ASSEMBLIES AND COMPONENTS

Original Filed Jan. 19, 1961

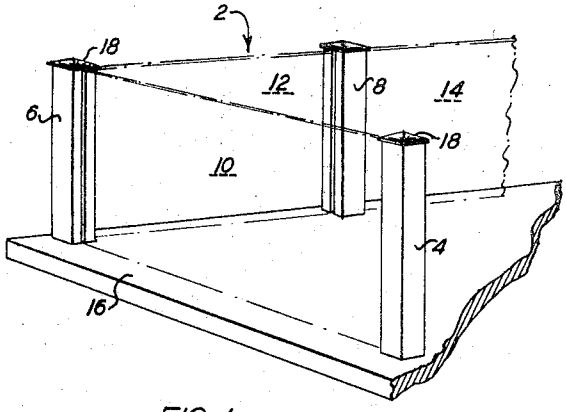


FIG. 1

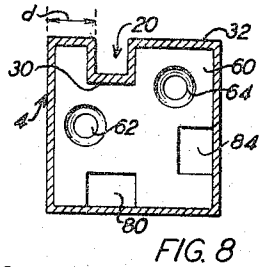


FIG. 8

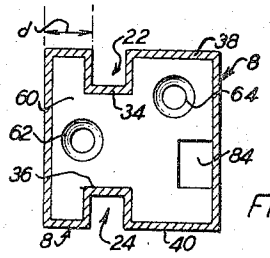


FIG. 9

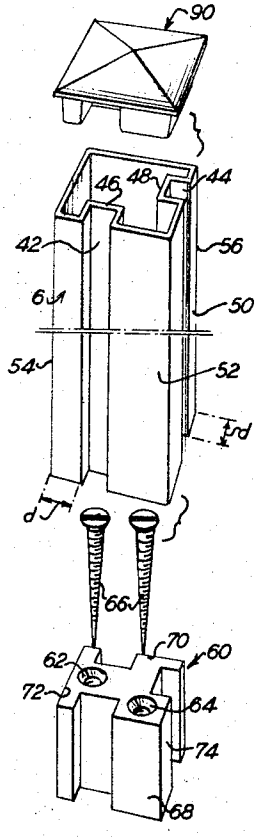


FIG. 2

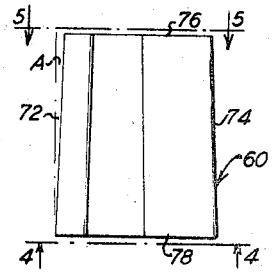


FIG. 3

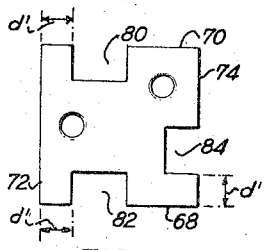


FIG. 4

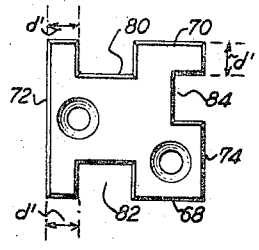


FIG. 5

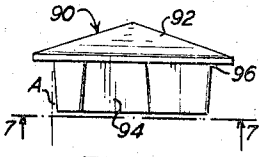


FIG. 6

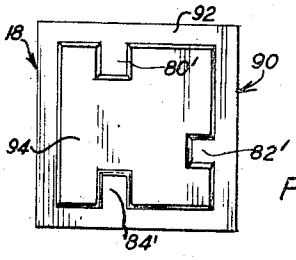


FIG. 7

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PARTITION-FORMING ASSEMBLIES AND COMPONENTS

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Original application Jan. 19, 1961, Ser. No. 83,739, now Patent No. 3,256,659, dated June 21, 1966. Divided and this application Aug. 3, 1965, Ser. No. 485,667
1 Claim. (Cl. 52—301)

This application is a division of my co-pending application Ser. No. 83,739, filed Jan. 19, 1961 now U.S. Patent No. 3,256,659.

This invention relates to assemblies which are particularly useful in the formation of partitions, and to components of such assemblies.

Various types of partition-forming components and/or assemblies have been heretofore suggested for use in separating different areas into rooms (wall partitions), for partially separating a room into joining sections (room dividers), and for defining business areas on opposite sides of a desk (counter-top partitions). The latter two types of partitions are generally formed by a plurality of panels in position between partition posts, and the present invention relates particularly to partitions formed in this manner.

Usually, when partitions are formed by using a plurality of panels, and a plurality of partition posts to secure the panels in place, some base member is provided for supporting the bottom of each post, and the post is either formed with an integral cap, or some decorative cap is provided for attachment therewith. To ensure proper support in the structures heretofore available, the base members were provided with laterally-projecting base flanges, or similar attaching components, whereby screws could be passed through the flange or other component and into the surface to which the base members, and thereby the posts, were to be attached.

As will be appreciated by those of ordinary skill in the art, each of the posts, if hollow and formed as an extrusion, takes a different shape depending on the location in which it is used. For example, the posts used at the end of a partition are extruded with a recess defined by an inwardly-extending outwardly-opening channel in one face thereof adapted to receive the ends of a panel, the posts used between partitions extending in end-to-end alignment are provided with two recesses defined by such channels in opposed faces thereof, and the posts used at corners of the partition where the panels coupled with the post extend at right angles to one another are provided with recesses defined by such channels in adjacent faces thereof extending at right angles to one another. If the posts are extruded, as suggested, then the same are hollow, and the configuration of the interior of each post, as well as the exterior configuration, depends on the location at which it is to be placed.

Thus, when the prior art constructions were used, separate base members having particular configurations were provided for each different type of post. Moreover, as suggested above, such base members had laterally-projecting flanges through which screws were passed for attaching the base member to the support surface, and in addition set screws were incorporated at the bottom of the posts for "locking" the posts on the base members. A separate cap was provided for each type post member because of the differing internal configurations of each type post, and in order to secure the caps in place set screws were threaded in the top of each post. Accordingly, the prior art presented three primary problems: (1) The problem of separating the right base members and right cap members for the particular type of post being used

at a given location; (2) the problem of providing set screws in some inexpensive manner so that such screws did not detract from the appearance of the post; and (3) the problem of providing an attractive base flange and screws therefor. The latter two of these problems are without solution as long as set screws and base flanges are used, because set screws are inherently unattractive if efficient, and base flange screws are not only inherently unattractive, but serve as dirt collectors.

The present invention has as its primary object the provision of a new type partition assembly which is not subject to any of the foregoing problems. More specifically, a primary object of the present invention is to provide a partition assembly incorporating (1) a base member which can be used with any of the different types of posts required at different locations, (2) a cap member which can be used with any of the different types of posts provided at different locations, (3) a post construction which does not have at its base any laterally-projecting flange, or similar attaching means, with screws passing therethrough which are visible once the construction is in place, and (4) a post construction free of set screws.

Still further, more specific, and yet important, objects of the present invention are: (a) to provide an assembly for vertically supporting a plurality of panels with respect to a horizontal surface, which assembly conforms with the preceding objects, and provides for the utilization of extruded lengths having differing internal and external contours depending on the location at which the length is to be used; (b) to provide such an assembly which incorporates base members which can be readily and easily attached to any surface whether wood, marble, or vitreous material, and in addition which incorporates base members that are completely invisible to the viewer once the assembly is in place; (c) to provide an assembly conforming with all of the preceding objects wherein the base members can be used with any of the extrusion lengths required regardless of the interior or exterior configuration thereof; (d) to provide such an assembly including cap members which serve to decorate the tops of any of the extruded lengths and which can be used interchangeably with any of the extruded lengths regardless of their internal configuration; and (3) to provide an assembly conforming with each and every one of the preceding objects and incorporating base members which can be easily and inexpensively manufactured, cap members which can be easily and inexpensively manufactured, and extrusion lengths which can be easily and inexpensively manufactured.

The invention lies in the construction, and combination of the various components of the assembly and will be more readily understood after reading the following detailed description of the illustrative and preferred embodiments of the invention. Such embodiments are presented in the annexed drawings, wherein:

FIGURE 1 is a fragmental perspective view showing a counter having vertically-supported thereon a partition assembly constructed in accordance with the present invention;

FIGURE 2 is an exploded view of the corner post and cooperating components shown in the assembly of FIGURE 1;

FIGURE 3 is a side view of a base member constructed in accordance with the present invention;

FIGURE 4 is a plan view of the base member shown in FIGURE 3, FIGURE 4 having been taken on the line 4—4 of FIGURE 3 and showing the bottom of the base member;

FIGURE 5 is a plan view of the top of the base member shown in FIGURE 3, FIGURE 5 having been taken on the line 5—5 of FIGURE 3 and showing the top of such base member;

FIGURE 6 is a side view of a cap or closure member provided by the present invention;

FIGURE 7 is a plan view taken on the line 7—7 of FIGURE 6 showing the closure member as the same would appear from the bottom thereof;

FIGURE 8 is a cross-sectional view of an end post and base member provided by the present invention and showing the manner in which the two components cooperate;

FIGURE 9 is a cross-sectional view similar to FIGURE 8, FIGURE 9 presenting the manner in which an intermediate post cooperates with the base member in accordance with the present invention.

In FIGURE 1, the overall assembly shown is generally designated by the numeral **2**. Such assembly includes an end post **4**, a corner post **6**, and an intermediate post **8**, which serve to support the panels **10**, **12**, and **14** vertically with respect to a counter **16**. Each of the posts **4**, **6** and **8** are provided with a cap member **18**, which, as explained in more detail hereinbelow, is of the same construction for each of the posts.

All of the posts are hollow extrusions, the post **6** appearing in perspective as shown in FIGURE 2, and the posts **4** and **8** appearing in cross-section as shown in FIGURES 8 and 9, respectively. As known to those of ordinary skill in the art, aluminum extrusions taking the shape shown may be provided in any desired length and cut to the desired size, as needed. The configuration of the particular extrusion mounted at a given spot on a counter, or other supporting surface, depends upon the manner in which the same is to be utilized for support of a panel.

The post **4** which serves as an end post only supports one edge of a panel, such as that designated by numeral **10**. Accordingly, the end post **4** or other end posts utilized according to the present invention have one outwardly-opening panel-receiving longitudinal recess thereon, such as that designated by the numeral **20** (FIGURE 8). This recess is defined by an inwardly-extending channel **30** on one side wall, namely, wall **32**, of the post **4**. The recess **20** is spaced a predetermined distance, designated in the drawing by the letter *d*, from one longitudinal edge of the side wall **32**.

The post **8** which serves as an intermediate post as shown, and other intermediate posts used in the invention assembly, have two outwardly-opening panel-receiving longitudinal recesses **22** and **24** which are defined by aligned inwardly-extending channels **34** and **36** on the opposed side walls **38** and **40** of the post. The panel-receiving recesses **22** and **24** are spaced from the longitudinal edges of the side walls **38** and **40** by at least substantially the same predetermined distance *d*, referred to in connection with the post **4**.

The corner post **6** supports panels at right angles to one another, and thus this post, and other corner posts used in the assembly of the invention, are provided with two outwardly-opening panel-receiving longitudinal recesses **42** and **44** defined by two inwardly-extending channels **46** and **48** in the adjacent side walls **50** and **52** of the post. The panel-receiving recesses **42** and **44** are spaced from the remote longitudinal edges **54** and **56** of the adjacent side walls **50** and **52** by the same predetermined distance *d* as that referred to with respect to the post **4** and shown in FIGURE 8, and with respect to the post **8** and shown in FIGURE 9.

All of the posts **4**, **6** and **8**, as suggested above, are hollow, and the contour of the inside of such posts corresponds with the outer contour of the posts—the thickness of the side walls of the posts being substantially the same at any point. It should thus be apparent that the interior of an end post is defined by four walls, one of which has a channel "indentation" therein. The intermediate posts, similarly, are defined by four side walls, two of which have "indentations" therein, and the corner posts are defined by four side walls, two of which in adjacent relationship have "indentations" therein. In accordance with the present invention, all of the posts are square, or at least substantially square, in cross-section.

In order to support all of the posts in the desired position, a base member such as that designated by the numeral **60** is provided. Each of the base members is adapted to be fixed to a horizontal surface to support a post vertically with respect thereto. For this purpose, bores **62** and **64** extend through the body of the base member, and screws such as those designated by the numeral **66** are passed through the bores and tightened into the surface on which the base member is to be attached.

As pointed out at the outset of this specification, one of the features of the present invention is to provide a single type of base member which can be used with all of the posts, regardless of their external or internal configuration, i.e. regardless of whether or not they are a corner post, and end post, or an intermediate post. Accordingly, each of the base members comprises a support block dimensioned to frictionally engage the inside of any of the posts. Each base member has two pairs of opposed side walls. The walls of the first pair of opposed side walls are designated in the drawings by the numerals **68** and **70**, and the second pair of walls consists of those designated by the numerals **72** and **74**. As shown in FIGURE 3, the side walls of each pair gradually taper outwardly with respect to one another from the top end **76** of the support block or base member **60** toward the bottom end **78** thereof. The base members are preferably precision die-castings having an angle of taper A which is but a few degrees.

As shown in FIGURES 4 and 5 one pair of side walls of each base member, namely walls **68** and **70**, have oppositely opening channel recesses **80** and **82** therein. These channel recesses are adapted to receive the channels **44**, or **45**, or **30** or **34**, or **36**, depending on the post to be supported. The recesses **80** and **82** extend for the length of the support block.

One side wall of the other pair of side walls of the base member, namely wall **74**, is provided with a channel recess **84** therein adapted to receive any channel of the posts just as the recesses **80** and **82** are adapted to receive the channels of the posts. The recess **84** extends for the length of the support block also. The recesses in the one pair of side walls **68** and **70** are spaced from the other side wall **72** of the other pair of side walls referred to above, by a predetermined distance *d'*, and the recess **84** in the side wall **74** is spaced by substantially the same predetermined distance *d'* from one of the side walls **68** or **70** (the side wall **68**, as presented in the drawings).

The base member **60** is positioned as shown in FIGURE 2 for securing a corner post in place, and is positioned as shown in FIGURE 8 for securing an end post in place, and is positioned as shown in FIGURE 9 for securing an intermediate post in place. When positioned as shown in FIGURE 2, the recess **80** does not cooperate with a channel on the post, and is merely unfilled. Similarly, when positioned to support the corner post **4**, the recesses **80** and **84** are unfilled, and when positioned to support the intermediate post as shown in FIGURE 9, the recess **84** remains unfilled.

Since the posts are all generally square in cross-section, since the side walls of all of the posts are the same, since the channels in each of the posts are positioned at least substantially an equal distance from one longitudinal edge of the posts, and since the base members **60** are generally square in cross-section and adapted to fit within the posts, any base member may be used with any post. Thus, when it is desired to secure a plurality of posts in position, the base members are first secured in place, and thereafter any post can be supported thereon.

As pointed out above, each of the base members has side walls which taper outwardly with respect to an opposed side wall. The bottom of each of the base mem-

bers has a size whereby it tightly frictionally receives any of the posts, and the top of each of the base members allows the post to slip easily thereover. Accordingly, once the base members are secured in place by means of the screws **66**, the posts are placed over the base member, and then forced down on the base member under pressure. In this manner, the posts are frictionally and tightly supported in a given position, and there is no need for using set screws to hold the posts in place on the base members. Moreover, the base members fit entirely within the posts, and thus the screws holding the base members in place are not visible, and in fact the base members are not visible once a post has been secured thereon.

The cap members which have been designated by the numeral **18** (FIGURES 1, 6 and 7) comprise a crown portion **92** which is preferably at least somewhat decorative. As shown, the crown portion comprises an equilateral pyramid. Depending from the crown portion of each of the cap members **90** is a connecting member **94**. This connecting member has the same cross-sectional configuration, as the base member **60**. However, it is only about one-third or one-fourth as deep as the base member, preferably, and the opposed walls of the connecting member taper inwardly with respect to one another from their connection with the crown portion **92**. The angle of taper of the side walls of the connecting member **94** is substantially the same as the angle of taper of the side walls of the base member. The cap member has three recesses **80'**, **82'** and **84'**, which are positioned in exactly the same manner as the recesses **80**, **82** and **84** of the base member, and for this reason repetition of such positioning is believed unnecessary. The cap members, like the base members, can be used with any of the posts by virtue of the recessed construction described in detail hereinabove.

The cap members, in accordance with the preferred embodiment of the invention, incorporate a crown portion **92** with a flanged edge **96** that projects over the ends of any of the posts when the caps are applied thereto. In this manner, the raw edge of any of the posts caused by sawing the same to the desired length, is covered.

One of the important aspects of the present invention not discussed in detail hereinabove, is the provision of a base member which has a depth between one and two times its width in any direction. Preferably, the depth of the base member is approximately two times its width. With this construction, the base member is of such height and shape as to anchor any given post securely in place, and at the same time, each base member is short enough so as to eliminate any "fulcrum" activity. More specifically, the base member is sufficiently short to prevent any rocking about its attachment with the supporting surface, and any rocking of a post about the base member itself.

After considering the foregoing detailed description of the preferred embodiments of the invention, it should be apparent that the invention provides both a cap and base member which are devised so as to be used interchangeably with either an intermediate post, and end post, or a corner post, and a cap member and base member which are so designed as to not require, either at the top of any post, or at the bottom of any post, any set screws. Thus, the finished construction, when provided with panels in place as shown in FIGURE 1, does not incorporate any unsightly screws which are visible. Moreover, as explained, with the construction provided, the posts are maintained securely in place, and no flanges are existent at the base of the posts. The base member **60** and the cap coupling **94** are tapered whereby they broaden at bottom of base member and top of cap coupling member, respectively, to provide a "press" fit securely anchoring post to base member and cap to post with no unsightly set screws shown.

Although no particular mention has been made hereinabove of the particular materials to be used, preferably the posts are formed of extruded aluminum which is either satin-finished, provided with an anodized brass finish, or provided with a lacquer finish. The base members are preferably made of lead alloy or some other suitable precision die-casting material, and the cap members are made of a similar material, but in addition are chrome or nickel-plated so as to prevent tarnish and appear attractive.

The recesses and channels provided on each of the posts are preferably of the order of ¼-inch in width of opening, so as to accommodate ¼-inch or 7/32-inch thick panels. Moreover, although all of the recesses can take particular configurations as desired, preferred embodiments of the invention provide for making all of the channels right-angle channels, i.e., making each of the channels so that it has a base wall with side walls projecting upwardly from either side of the base wall at right angles thereto.

While the invention has been described in some detail hereinabove in connection with the preferred and illustrative embodiments thereof presented in the annexed drawings, certain modifications of the invention may become readily apparent to those of ordinary skill in the art after reading the foregoing description.

Accordingly, what is claimed is:

In combination with a post, a cap means attachable for closing the upper end of a hollow partition supporting post, said post having two pairs of opposed upstanding body walls joined together at vertically extending corners, said post body walls having outwardly opening channel means formed therewithin with said channel means being spaced a predetermined distance from said corners, said cap means comprising a crown means and a connecting member depending from said crown means, said connecting member being formed by first, second, third and fourth interconnected side walls of a size and shape disposed interiorly within said post with each of said side walls in frictional engagement with a corresponding adjacent wall of said post; said crown means extending beyond said connecting member with the underside of said crown means forming a flat flange engaged with the top of the post and extending therebeyond lying in a plane at right angles to said side walls when said cap means is attached thereto; each of said side walls gradually tapering downwardly and inwardly from said crown means; said first and second side walls being in opposed disposition to each other and said third and fourth side walls being in similar opposed disposition, said third and fourth side walls extending between and interconnecting said first and second side walls; said first and second side walls having channel recesses formed therein to permit reception of the inwardly extending body wall portions forming said post channel means; said first and second side wall channel recesses each being spaced from said third side wall by substantially said predetermined distance; said fourth side wall having a channel recess formed therein with said channel recess being spaced away from said first side wall substantially by said predetermined distance said channel means of said post being complementary to said cap wall means whereby said combination may be used at a corner or between aligned partitions.

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