Oct. 9, 1956 J. L. TEDALDI ET AL 2,765,886

SHOWCASES HAVING METAL SUPERSTRUCTURES

Filed March 2, 1953 2 Sheets-Sheet 1

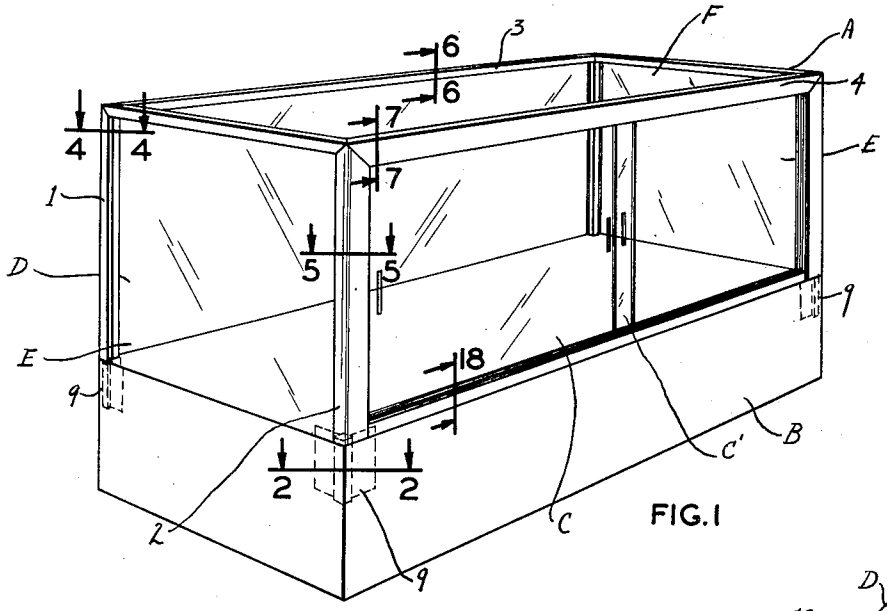


FIG. 1

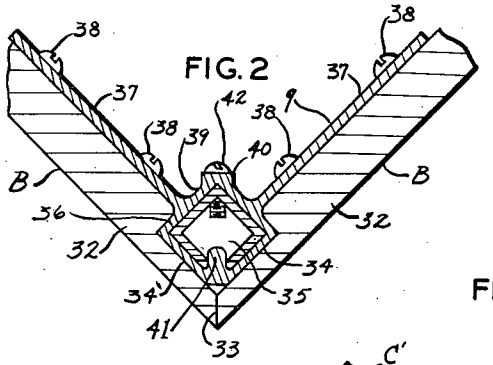


FIG. 2

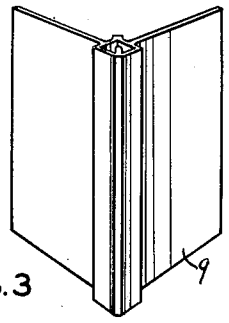


FIG. 3

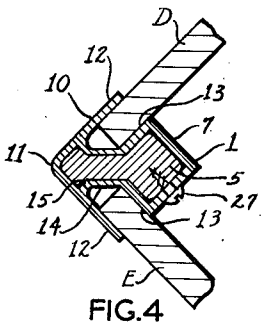


FIG. 4

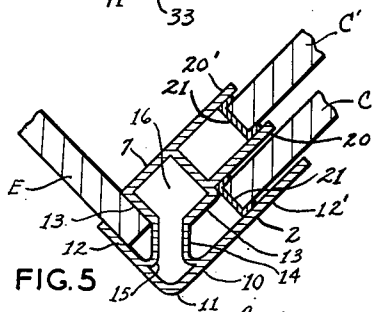


FIG. 5

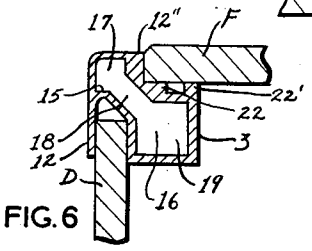


FIG. 6

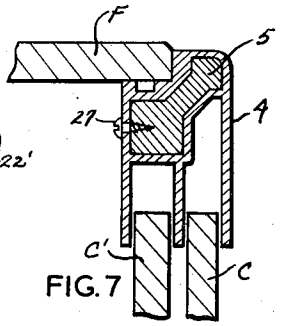


FIG. 7

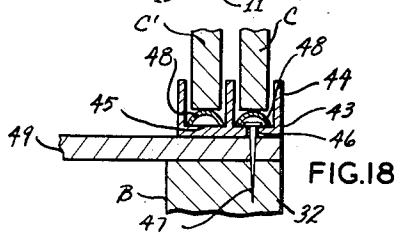


FIG. 18

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SHOWCASES HAVING METAL SUPERSTRUCTURES

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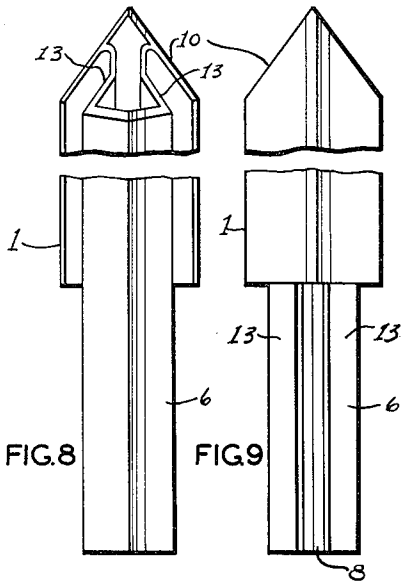


FIG.8

FIG.9

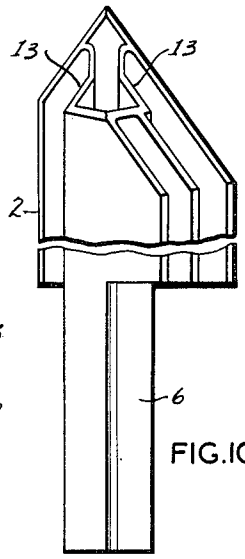


FIG.10

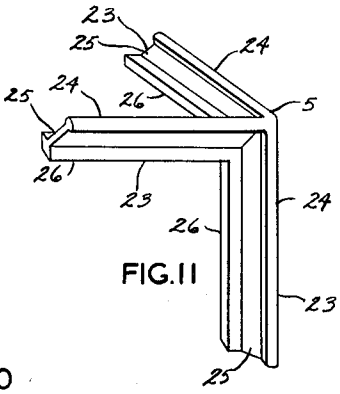


FIG.11

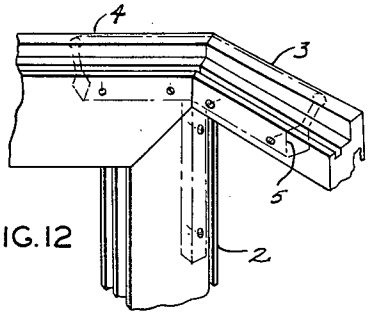


FIG.12

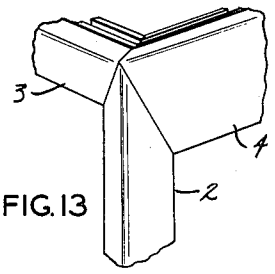


FIG.13

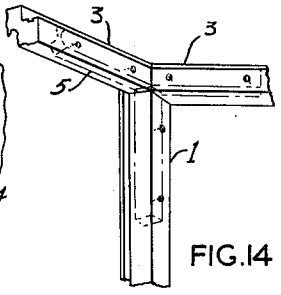


FIG.14

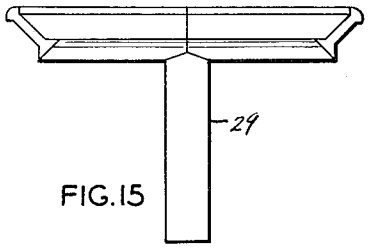


FIG.15

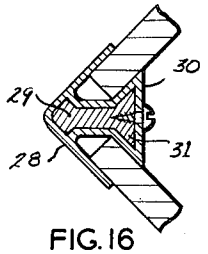


FIG.16

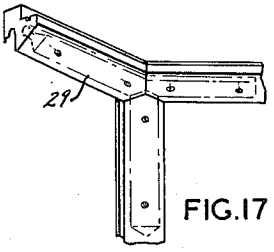


FIG.17

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SHOWCASES HAVING METAL SUPERSTRUCTURES

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Application March 2, 1953, Serial No. 339,718

7 Claims. (Cl. 189—78)

This invention relates to display cases having a superstructure frame, and has particular application to rectangular glass display cases or "showcases," widely used as counters in retail stores, with plate glass fronts, sides, and top.

Showcases used as counters in retail stores must present smoothly-finished surfaces, pleasing to the customers' eye and offering no danger of catching onto and tearing the customers' clothing. They must be strong enough to support the weight of a customer or customers leaning upon them, and of objects which may be piled thereon; and rugged enough to be moved by lifting at their corners or by pushing along the top edges. While metal showcase superstructures are desirable, they have heretofore been expensive to make and flimsy at their joints. Until the glass has been inserted in them to stabilize them, they have tended to bend and warp, making it necessary to ship them entirely set up and assembled. The welding of corners has restricted the construction of such superstructures to weldable materials and in many cases spoiled the finish of the materials. Joints between the superstructure and the cabinet bases have not been satisfactory from the standpoint of either rigidity or appearance.

The objects of the present invention are: To overcome all of these prior difficulties; to provide a slender, attractive metal glass holding superstructure which is strong, rugged, rigid at its joints and at its juncture to a cabinet base provided for it; to provide an easily assembled and disassembled superstructure which may be shipped in "knocked-down" form; to provide concealed internal fitting at the superstructure corners and at its juncture with the cabinet base; to achieve the foregoing objects with simplicity of construction; and to achieve the other objects which will appear from this specification.

Concerning specific structure, it is an object of this invention to utilize hollow edge members in the superstructure which have substantial integral structural portions extending inward from the corners between the adjacent edges of the glass plates there to be held; to utilize the hollow recesses for the insertion of concealed structural corners consisting of intersecting beams; and to use the portions of the vertical structural members which lie within the corners as base plug members for engaging sockets concealed within the cabinet base and having vertically aligned recesses.

The manner of achieving the foregoing objectives will be made apparent further on in this specification and by the accompanying drawings, in which:

Figure 1 is a perspective view from the side rear of a showcase embodying the present invention, the concealed corner socket angles of the showcase base being shown in phantom lines. The scale of this figure is reduced.

Figure 2 is a fragmentary sectional view taken along line 2—2 of Figure 1.

Figure 3 is a perspective view, somewhat reduced in scale, of the corner socket angle shown in Figure 2.

Figure 4 is a fragmentary sectional view taken along line 4—4 of Figure 1.

Figure 5 is a fragmentary sectional view taken along line 5—5 of Figure 1.

Figure 6 is a fragmentary sectional view taken along line 6—6 of Figure 1.

Figure 7 is a fragmentary sectional view taken along line 7—7 of Figure 1.

Figure 8 is an inside elevation of a front corner port shown in Figure 4 in section.

Figure 9 is an outside elevational view thereof.

Figure 10 is an inside elevation of a rear corner post shown in Figure 5 in section.

Figure 11 is a perspective view of a corner-joining key shown in section in Figures 4 and 7.

Figure 12 is a perspective view of an upper rear superstructure corner, viewed from the inside and above, showing a corner-joining key in phantom lines.

Figure 13 is a perspective view of an upper rear superstructure corner taken from above and outside.

Figure 14 is a perspective view, taken from inside and below, of an upper front superstructure corner, showing a corner-joining key in phantom lines.

Figure 15 is a perspective view, from the inside, of an alternate form of corner-joining key to that shown in Figure 11.

Figure 16 is a fragmentary sectional view corresponding to Figure 4 showing an alternate form of post section and a sectional view of the form of corner-joining key shown in Figure 15.

Figure 17 is a fragmentary perspective view corresponding to Figure 14 and showing such corner-joining key with the alternative forms of post and top rails.

Figure 18 is a sectional fragment taken along line 18—18 of Figure 1.

Before describing the drawings in detail, it may be noted that advances in the art of extruding metals to complex hollow sections make possible the precise registration of hollows in one section with those of another, and the securement of one extruded section within another. The possibilities presented by modern extrusions and castings are exploited in the design of the complex extruded and cast shapes utilized and illustrated here. Such shapes may be described and defined in various ways, depending upon whether one considers their external appearances, their functional analogies to more familiar members, or their inter-functioning in the present structure. Because of these several viewpoints the language used in the specification and claims to refer to a particular portion of a member is not always the same; but we have attempted to describe and claim the invention clearly from one or more of the viewpoints mentioned.

Referring now to the drawings in greater detail and by reference numerals, the present invention relates in large measure to the new type of metal edge-member for a glass-plate-holding superstructure, and the adaptation of this member to various needs such as: joint assembly of corners, securement to showcase base structure, and provision for door slides. Such a superstructure is generally designated A, its base is designated B, and the sliding rear outer and inner doors C, C'. The fixed glass plates in the superstructure front and sides are designated D and E, respectively, while the plate of glass forming the showcase top is marked F.

The metal edge-member takes on various forms and functions, as will be noted from the front post members 1 (shown in elevation in Figures 8 and 9, and in section in Figure 4 holding the front and side glass plates D and E at a 90° angle), the rear post members 2 (shown in elevation in Figures 10, and section in Figure 5 holding at one side the side glass plate E and accommodating the sliding rear doors C and C' at its other side); and the top rail member 3 and the top rear rail member 4

(illustrated in Figures 6 and 7 and permitting the removal upward of the top glass plate F). Selecting the section of the front post member 1 as typical, and referring to Figure 4, this section may be viewed as:

1. A hollow I-beam having its outer chord at the superstructure corner, its inner chord along a line bisecting the corner angle, side faces on the inner chord aligned with the inner surfaces of the glass plates, and flanges extending along the sides of its outer chord for abutting the outer surfaces of the glass plates; or

2. A pair of spaced glass-holding channels facing away from each other at a 90° angle, connected along the corner edge by a corner segment, and having the remote edges of their inner flanges connected by a structural web, thus forming a new hollow structural shape; or

3. An exterior corner angle, an interior corner post spaced sufficiently inside the angle to accommodate between them the glass plates to be held, and a pair of webs connecting the post and angle, extending adjacent to each other between the glass plates to be held and flaring out near the corner angle, to provide a hollow recess having a head portion in the bend of the angle, a neck portion between the glass plates, and a body portion within the interior corner post.

While these and other viewpoints may be of equal merit, in numbering and describing the portions of this structural shape we will generally follow the third viewpoint.

The superstructure A may then be said to consist primarily of: Eight such metal edge members, namely, two front posts 1, two rear posts 2, all having 45° miters at their upper ends in both of their corner planes, as shown in Figures 1, 8, 9 and 10; three top rail members 3, each having both ends similarly mitered, the one forming the upper front edge of the superstructure A and the other two forming its upper side edges; one top rear rail member 4 which forms its upper back edge; also, four corner-joining keys 5 shown in perspective in Figure 11, adapted to be mounted entirely within the hollows of the edge-members at their mitered corners and concealed therein as shown in phantom lines in Figures 12 and 14. By means of the keys 5, smooth, strong and perfectly aligned corner joints are formed having great structural strength, yet permitting easy assembly and disassembly of the superstructure, and the shipping of it "knocked-down" as a separate article of manufacture.

Attention is directed to the lower ends of the front post members 1 and the rear post members 2 as shown in Figures 8, 9 and 10. These lower ends are identical, and are referred to as the lower end plug portions 6. They consist only of the hollow square tubular post portions 7 of the post members 1 and 2, with all other portions, which will be described, cut away. The cutting away of these other portions leaves a slot 8 in the outer corner of the square tubular post portion, which slot extends from the bottom margin of the post upward through the entire lower end plug portion 6. The result is a lower end plug which is spaced inside of the corner of the showcase and has a keyway; it can thus be received and held securely in a vertically-extending socket such as the extruded corner sockets 9 concealed inside and joining the corners of the cabinet base B, shown in Figures 1, 2 and 3. A strong structural connection is furnished here with a minimum expense for fittings and utter ease of manufacture, assembly and disassembly.

In reading the detailed description which follows, one should bear in mind the relationship between: the hollow glass-holding I-beam edge members 1, 2, 3, and 4 having post portions inside the extruded corner of the glass; the corner-joining I-keys 5 which are concealed within the hollows of the edge members at their mitered intersections; and the extruded sockets 9 which receive the post portions that form the lower-end plugs of the vertical edge members. The invention is not limited to extrusions as edge members and sockets but no other method of manufacture is known which is so well suited for manufacturing such parts readily and inexpensively.

Referring again to Figures 4, 8 and 9, the front post members 1 each include an exterior corner angle portion 10, having a central corner segment 11 at the apex of the angle and glass holding flanges 12 (sometimes referred to herein as the "outside flanges") extending on each side of the corner segments 11 and parallel to the plane at which the glass plates are to be held.

Located within the corner so formed, and spaced inside the glass holding flanges 12 a distance slightly greater than the thickness of the glass to be held, are the hollow squarely tubular post portions 7. Their outward-presented sides 13 are substantially parallel to the outside flanges 12 and adapted to abut the inner surface of the edges of the glass plates. Between the two outward presented sides 13 and facing the inner side of the corner segment 11, the hollow post 7 has no corner. Instead, a pair of spaced structural webs 14 extend outward from between the sides 13 toward the corner segment 11, being relatively narrowly spaced and passing between the adjacent edges of the glass plate as the plates D and E in Figure 4. Because of the angle at which such plates are held, the structural webs 14 are spaced rather closely immediately adjacent the hollow post portion 7, but are spaced away from each other near the exterior corner angle portion 10 to provide the flaring web faces 15 which intersect the exterior corner angle portion 10 substantially perpendicularly.

The front post members thus have a closed hollow recess designated 16, formed during the extrusion process and extending throughout the entire length of the member, which recess has a head portion 17 lying within the bend of the corner segment 11 and between the flaring web faces 15, a neck portion 18 between the spaced structural webs 14 in their narrow spacing, and a body portion 19 lying within the hollow of the squarely tubular post portion 7. It will be noted that the general shape of the recess 16 is that of an I-beam whose minor principal axis (that is, the axis perpendicular to the major bending axis) bisects the angle of the corner. Viewed from this standpoint, the front post 1 has a hollow resembling an I-beam, having one chord within the bend of the corner, and the other chord spaced inwardly from the first along the angle bisector. The inwardly spaced chord (that is, the post portion 7) is shown as being more rigid than the corner segment 11 considered alone but the glass-holding flanges 12 add their rigidity to that of the corner segment 11 to provide a fairly well-balanced beam section, adapted to resist torque loads, as well as bending loads applied in any direction.

Considering now the rear post members 2, a comparison of Figure 5 with Figure 4 illustrates that the rear post members 2 likewise have an exterior corner angle portion designated 10 with a corner segment 11, a hollow post portion 7 which is squarely tubular in shape with outwardly-presented sides 13, and spaced structural webs 14. These webs 14 likewise have flaring web faces 15 approaching perpendicularly to the inner sides of the exterior corner angle portion 10. Each rear post member 2 also has a recess 16 which is identical in all its portions with the recess described in the front post member 1. Inasmuch as the rear post members 2 are adapted to hold a side glass plate E along the side plane of the showcase, they have a glass holding flange 12 on that side corresponding to the glass holding flange 12 on the front post member 1. However, at the rear of the showcase, the rear post members 2 are designed to accommodate the outer and inner doors C, C'. Hence, at the side of the post member 2 which is to receive these doors C, C', there is provided an elongated outside flange 12' extending along the outside rear of the showcase to a point inward of the inner margin of the hollow post portion 7. The hollow post portion 7 bears two additional spaced door flanges 20, 20', which extend parallel to the elon-

gated outside flange 12' and spaced from it and from each other a width sufficient to accommodate the metal edge channels 21 mounted on the vertical edges of the outer and inner glass doors C, C'. This spacing is somewhat greater than the spacing of the glass holding flange 12 from the outward presented sides 13 of the tubular post portion 7, and permits the doors to slide readily without excessive binding or friction.

Figures 6 and 7 show sectional views of the top rail member 3 and the top rear rail member 4, respectively. Comparison of the structural section used in the top rail members 3 with the section used for the front post members 1 reveals that the top rail members 3 are a mere modification designed to hold the top glass E slightly above the level of the edge of the top rail and to permit its removal upward vertically. For this purpose, a thickened glass-retaining edge 12'' is substituted for the outside flange 12 along the top edge, and glass-raising projections 22, 22', are provided along the upper surface of the square tubular post portion 7. Similarly, Figure 7 shows the top rear rail member 4 to be the counterpart, in section, of the rear post member 2, save for the very same changes, that is, the thickened glass-retaining portion 12'' instead of the outside flange 12, and the provision of glass-raising projections 22, 22'.

With identical recesses 16 in each of the structural sections employed for the front post members 1, the rear post members 2, the top rail members 3, and the top rear rail member 4, the mitering of the intersecting end of such members at 45° across each of the planes which make up the section angle permits the members to make perfectly mitered corners having their recesses in absolute registration at the miters. Such a corner is shown in Figure 13, illustrating the intersection of a top rail member 3 along the side of the superstructure with a rear post member 2 and the top rear rail member 4. The corner there shown is viewed from the outside. An inside view of the same corner is shown in Figure 12, which illustrates the mating of the door flanges 20, 20', on the rear post member 2, with the corresponding door flanges on the top rear rail member 4. Figures 12 and 13 illustrate also that the addition of the door flanges 20, 20', and the use of an elongated flange 12' does not prevent the perfect mitering of the corners as might be otherwise assumed.

The corner-joining keys 5, one of which is mounted concealedly within and supporting each superstructure corner, as shown in Figures 12 and 14, conform in cross section with the recess 16 in each of the post and rail members, and are sufficiently smaller than such recess to fit inside the mitered ends at the corner of the sections without severe driving. Each corner-joining key 5 has three legs 23 each perpendicular to and intersecting the other two legs. As is apparent from Figures 4 and 7, the cross sectional shape of the legs 23 corresponds closely with the section of the recess 16 in each structural member intersecting at the corner. Thus, each leg 23 has an outer chord 24 which corresponds to the head portion 17 of the recess 16, a web portion 25, corresponding neck portion 18, and an inner chord 26 corresponding to the body portion 19. The outer and inner chords 24 and 26 on each leg 23 are parallel to each other.

Although the legs 23 may be relatively short, as for example three times the spacing between the outer and inner chords 24, 26 the fit of the corner-joining key legs 23 within the recesses 16 is such as to result in the carrying across of bending moments from one of the edge members to the others. On bending of any edge-member 1, 2, 3 or 4, the inner sides of its flaring web faces 15 and the inner surfaces of the corner segments 11 together so bear against the surfaces of the outer chord 24 of the key leg 23 inserted in its end, as to make the outer chord 24 effective in bending. The use of two screws 27, both into the inner chord 26 of each leg 23, through the sides of the post portions 7 (as illustrated in Figures 12 and 14) has proved to be an entirely adequate structural connection. These figures show the sheet-metal screws 27 passing through the post portions 7 into the inner chord 26 of each leg 23, one near the end of the leg and one near the intersection of the inner chords 26. If sufficiently close tolerances between the legs 23 and the recesses 16 could be maintained to insure a tight press fit, the screws 27 might be dispensed with entirely and the corner joints still react bending and torque loads. Alternatively, the corner-joining keys might be secured permanently in place by cementing with an adhesive; all glass plates may be replaced without disassembly of the corner joints.

One of the outstanding features of the present invention is that the corner-joining keys 5 form an extremely rugged corner connection which is concealed and, for practical purposes, invisible. Thus, in Figures 12 and 14, the insides of the corners are neat and show no trace of any connection save for the screw heads. The edge-members, and particularly the top rail members 3 and front post members 1, are so trim and neat that persons examining the structure find it difficult to believe that there is any internal corner support. The size and ruggedness of the corner-joining keys exceed what would be possible in any other type of construction neat enough to have commercial acceptance.

The screws 27 are inserted through holes drilled in the inner faces of the squarely tubular hollow post portions 7 along whichever face thereof is most convenient. As shown in Figure 12, the rear post members 2 and the top rear rail members 4, may best be drilled along their forward-facing sides. In the front corners, as shown in Figure 14, there is a choice of faces which may be drilled. However, corner-joining keys drilled for certain corners are not completely interchangeable with the other corners.

For types of cases wherein no door slide is required, as for example, a museum case of shallow depth, whose top glass may be removed for changing exhibits, or the entire superstructure raised, it would be possible to use a slightly modified edge member section 28, shown in Figure 16, together with a modified corner-joining key 29, illustrated in Figure 15 and shown in phantom in Figure 17. The modified edge member section 28 substitutes a substantially triangular tubular post section 30 for the squarely tubular post section 7, and its recess 31 and the key 29 which fits therein is similarly modified. As is apparent from Figure 17, keys 29 may be drilled to a standard hole pattern and used interchangeably in any joint of a showcase made up of the modified edge member section 28. Save for its somewhat lighter construction, a superstructure made with such modified edge member section 28 and modified keys 29 will function substantially in the same manner as using the edge members and keys first described. However, the importance of providing door slides at the rear of ordinarily used showcases renders preferable the embodiment first described, for ordinary showcase purposes.

We have demonstrated that the so-called "hollow I-beam" section, which gives rigidity to the edge members and great structural strength, also makes possible perfect, easily assembled mitered corners with the aid of the internally secured corner-joining keys 5. However, the "hollow I-beam section" of the front and rear post members 1, 2, also makes possible an easy, rigid and concealed structural connection to the cabinet base B.

It is undesirable that a show case should have any screws or other connectors on the outer side thereof. Further, for neatness of design, it is desirable that when a wooden show case base is used, such as the cabinet base B, there be no external metal angles on its corners, to interrupt the smooth lines of the case. On the other hand, a strong structural connection between the metal edge members of the superstructure A and the cabinet base B is essential; for in normal handling the case will be pushed

around by force exerted to the top of the superstructure and resisted by friction at the superstructure base along the floor.

By providing a strong hollow squarely tubular post portion 7 inward of the superstructure corner, and by providing the corner sockets 9 concealed within the corners of the showcase base B in registration with the post portions 7, bending and torque loads applied to the upper part of the superstructure A are carried into and resisted by the base B without any problem of additional fittings and without any serious diminution of strength. It is true that the lower end plug portions 6 of the post members 1 and 2 are slotted, but the design of the corner sockets 9 is such as to prevent the collapsing of these lower end plug portions 6.

The corner sockets 9 will now be described in greater detail. The side boards of cabinet bases are normally held together by heavy corner glue blocks. Instead of such construction, we provide a corner cabinet base having base side boards 32 with mitered corner edge surfaces 33, each mitered edge surface 33 having a large notch adjacent the inner side of the base side boards 32 and extending into its inner surface. The said notches are designated 34. The notches adjacent each other form together a recess designated 35 of such size as to accommodate within it the outward protruding portion 36 of the corner socket 9. The socket proper is formed at the apex of a base corner angle, comprised of two heavy flanges 37 set perpendicular to each other and adapted to abut against the inner faces of the base side boards 32 of the corner, and extend a sufficient distance therefrom, say 1½ or 2 inches, for securement by two lines of screws 38. In the embodiment shown, only a portion of the socket protrudes outwardly between the flanges 37; a portion thereof protrudes inwardly also. This inward protruding portion is numbered 39 and has a flat diagonal face 40 presented toward the interior of the cabinet base for ready drilling.

The outward protruding socket portion 36 and the inward protruding socket portion 39, taken together, are generally square in outline, save for the flat diagonal face 40 protruding inwardly into the cabinet base. The inner recess of the socket 9 is generally square save for the socket tongue 41 which protrudes inward into the socket's recess from the outermost corner of the socket. Referring to Figures 2, 5, and 9, which are readily compared, it will be seen that the slot 8, formed in the lower end plug portion 6 by cutting away the structural webs 14 and the exterior corner angle portions 10, is stabilized and filled by the socket tongue 41, which prevents the collapse of the lower end plug portions 6 even under high bending and torque loads. The socket tongues 41 serve as keys and the end plug slots 8 as keyways for the structural joint thus formed, and also reduce play which might otherwise result from the manufacturing tolerances employed. In practice, no difficulty has been encountered whatsoever in obtaining an easy, sure fit; making necessary the use of only a single socket retention screw 42 through the flat diagonal face 40 on the inside of the base B and the end plug portions 6.

Referring now to Figures 1 and 18, the sliding outer and inner glass doors C, C', are supported by a door track generally designated 43, which is shown in Figure 18 as resting on the horizontal cabinet panel 49 which overlays the base side board 32 located at the rear of the cabinet base B. The door track 43 consists of a double channeled extruded shape 44 whose base webs 45 are pierced at intervals as by the aperture 46 and secured by nails 47 through such apertures 46 into the cabinet base B. After the door track 43 has been so secured, convex abrasion-resistant rail strips 48 are laid into the channel of the extruded shape 44 over the base webs 45 and covering the heads of the nails 47. The glass doors may ride with their edges on the abrasion-resistant convex strips without binding.

One important feature of the present superstructure A relates to the problem previously encountered wherever a metal superstructure is to be matched to a wooden base. Manufacturing tolerances on commercially made wooden cabinets are much greater than the tolerances for metal products; and expansion and contraction accompanying varying conditions of heat and humidity have lead some persons to the belief that the problems of alignment are too great to make such a superstructure and base combination practical. The present invention overcomes these difficulties. Although the mitered superstructure corners are rigid and their tolerances close, the lengths of the post members 1 and 2 allows flexibility for locating the lower end plug portions 6 in the corner sockets 9 even though the latter may be slightly displaced from precise alignment. We find that, if the front and side glasses D and E be cut slightly narrower in width than the dimensions would call for, there is enough play in the superstructure to accommodate it easily to the base B. The door track 43 is cut to fit each case which departs substantially from the predetermined norm.

In addition to the advantage of easy assembly and disassembly, one of the principal advantages of the present superstructure A is the ease of manufacture and finish. The post and rail members 1, 2, 3 and 4 form such perfectly mitered corners that no corner finishing is necessary; cutting the extrusions with a high-speed saw has been found to leave no burrs and to result in neat, precise corners. The outward presented surfaces of each of the members 1, 2, 3, and 4 are so similar in shape that they may be readily finished with similar equipment; for instance, abrasive and buffing wheels, lacquer spray racks, compact dip tanks, etc. The fact that the superstructure A may be shipped in "knocked-down" condition insures against damage in shipment and minimizes shipping space. The rugged construction minimizes the likelihood of glass breakage once the showcase is erected; yet the number of screws 27 in the corner-joining keys 5 and the number of socket retention screws 42 are so few that the superstructure can be removed and disassembled in whole or in part without difficulty for replacement of glass plates, or of the edge members themselves, in case of damage.

It should be understood that changes and modifications in the form, construction, arrangement and combination of the several parts of the showcase having metal superstructure may be made and substituted for those herein shown and described without departing from the nature and principle of the present invention.

We claim:

1. An extruded display case edge-member for holding glass plates at an angle to each other, integrally comprising a corner-forming member having edges adapted to engage such plates, and a hollow post integral therewith having a hollow body portion spaced inward from the apex of the corner angle and a neck portion joining the body portion to the inside of the corner angle, the sides of the body portion adjacent the neck portion being spaced inwardly from the corner edges a distance at least equal to the thickness of such glass plates and being adapted to abut the inside edges of such glass plates.

2. A display case edge-member as defined in claim 1, the neck portion thereof being a hollow extension of the hollow body portion, the said hollows being symmetrical about a line bisecting the corner angle.

3. A display case edge-member as defined in claim 2, the sides of the body portion adjacent the neck portion being flat, the hollow neck flaring widely adjacent the corner angle and there forming a hollow head portion inside the bend of the said angle, symmetrical about such line bisecting the said corner angle, its hollow being continuous with the hollows in said body and neck portions.

4. A display case edge-member as defined in claim 3, the angle at which the plates are to be held being a right angle, the body portion of said post being substantially square.

5. For use in holding the adjacent edges of two glass plates positioned at an angle to each other, an unitarily formed structural edge-member comprising integrally an outer corner segment, two channels spaced facing away from each other at the angle at which such plates are to be held, and adapted to hold the adjacent edges of such plates, each channel having an outside flange, a web, and an inside flange, the said outer corner segment connecting the juncture of the outside flange and channel web of one of said channels with the juncture of the outside flange and channel web of the other said channel, and a closing web portion connecting the remote edges of said inside flanges with each other and defining therewith a hollow edge-reinforcing post.

6. An extruded structural edge member as defined in claim 5, the cross-section thereof enclosing a hollow bounded by the inside flange of one of the said channels, its web, the said outside corner segment, the web of the other channel, its inside flange, and the said closing web portion.

7. For use in holding the adjacent edges of two plates positioned at an angle to each other and to provide protection for such edges, an extruded structural edge-member comprising an integral hollow I-beam having an outer chord at the apex of such corner, flanges projecting from and linearly along the side margins of the outer chord at substantially the same angle at which such plates are to be held, an inner chord spaced inwardly from the

outer chord along a center line bisecting such angle, and two webs connecting the said chords and enclosing with them the hollow in the beam, the beam being widened adjacent the inner chord in the provision of side faces thereon spaced inwardly adjacent the projecting flanges, whereby the edge of such plate may be engaged and held in place on either side of said beam between the side face of the inner chord and the corresponding flange on the outer chord.

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