United States Patent [19]

Barrett

[11] **3,848,844**

[45] **Nov. 19, 1974**

[54] **ADJUSTABLE DISPLAY SHELF APPARATUS**

[75] Inventor: **Robert R. Barrett,** Houston, Tex.

[73] Assignee: **Visual Designs Mfg. Co.,** Houston, Tex.

[22] Filed: **Apr. 6, 1973**

[21] Appl. No.: **348,481**

[52] **U.S. Cl.** **248/245,** 108/106, 211/134

[51] **Int. Cl.** **A47b 47/00,** A47g 29/02

[58] **Field of Search** 248/245, 244, 243, 246, 248/247, 248, 235; 108/106, 152, 107, 108, 109; 211/134, 148

[56] **References Cited**

UNITED STATES PATENTS

191,058	5/1877	Johnson	248/245
1,824,243	9/1931	Thies	248/244 X
2,534,952	12/1950	Comer	248/243
2,640,674	6/1953	Gerlach	248/354 R
3,351,313	11/1967	Guillon	248/246
3,513,606	5/1970	Jones	248/245 X

FOREIGN PATENTS OR APPLICATIONS

749,531	7/1933	France	248/246
569,458	7/1958	Belgium	211/148

Primary Examiner—J. Franklin Foss

[57] **ABSTRACT**

Adjustable display shelf apparatus including vertical support elements defining at least one external groove opening into an enlarged lengthwise undercut slot for receiving a mating portion of a projecting shelf support bracket. The projecting shelf support bracket may be formed with slots along one edge that define an edge configuration conforming to the configuration of the undercut slot thereby allowing the shelf support bracket to be adjustably supported within the undercut slot. The shelf support brackets may be infinitely adjustable relative to the vertical support elements and may be secured in any desired position relative to the support elements by friction inducing shelf bracket restraint elements.

8 Claims, 10 Drawing Figures

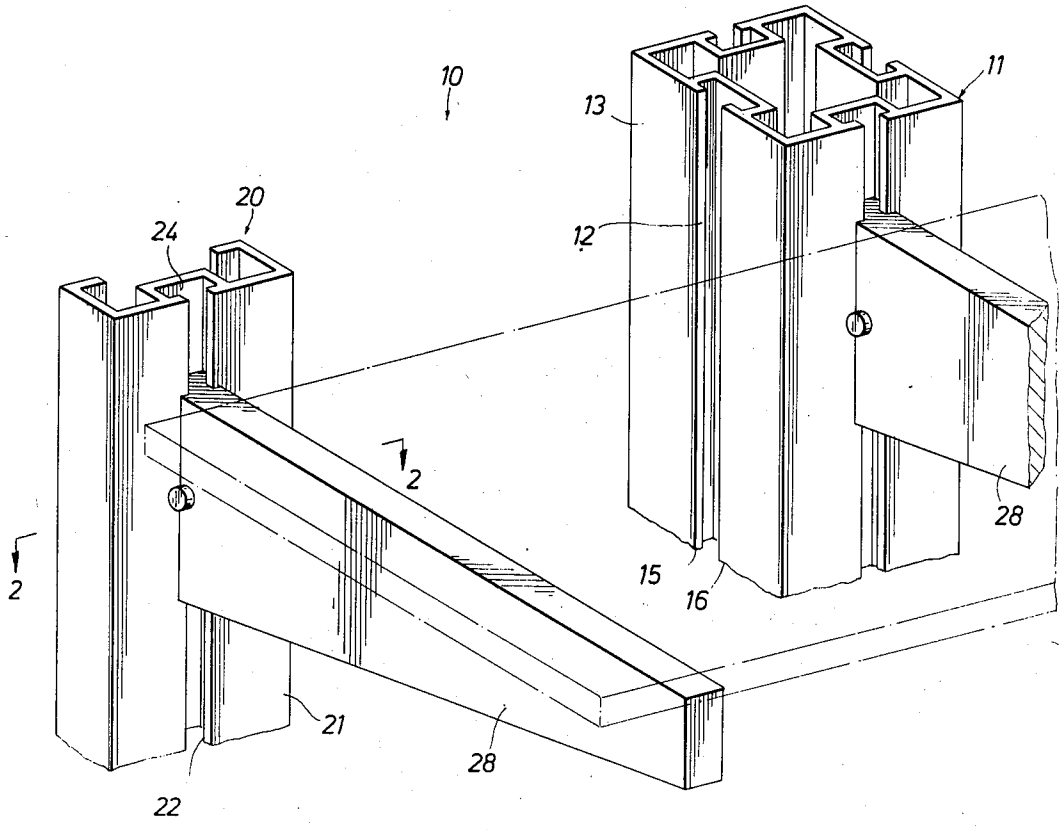
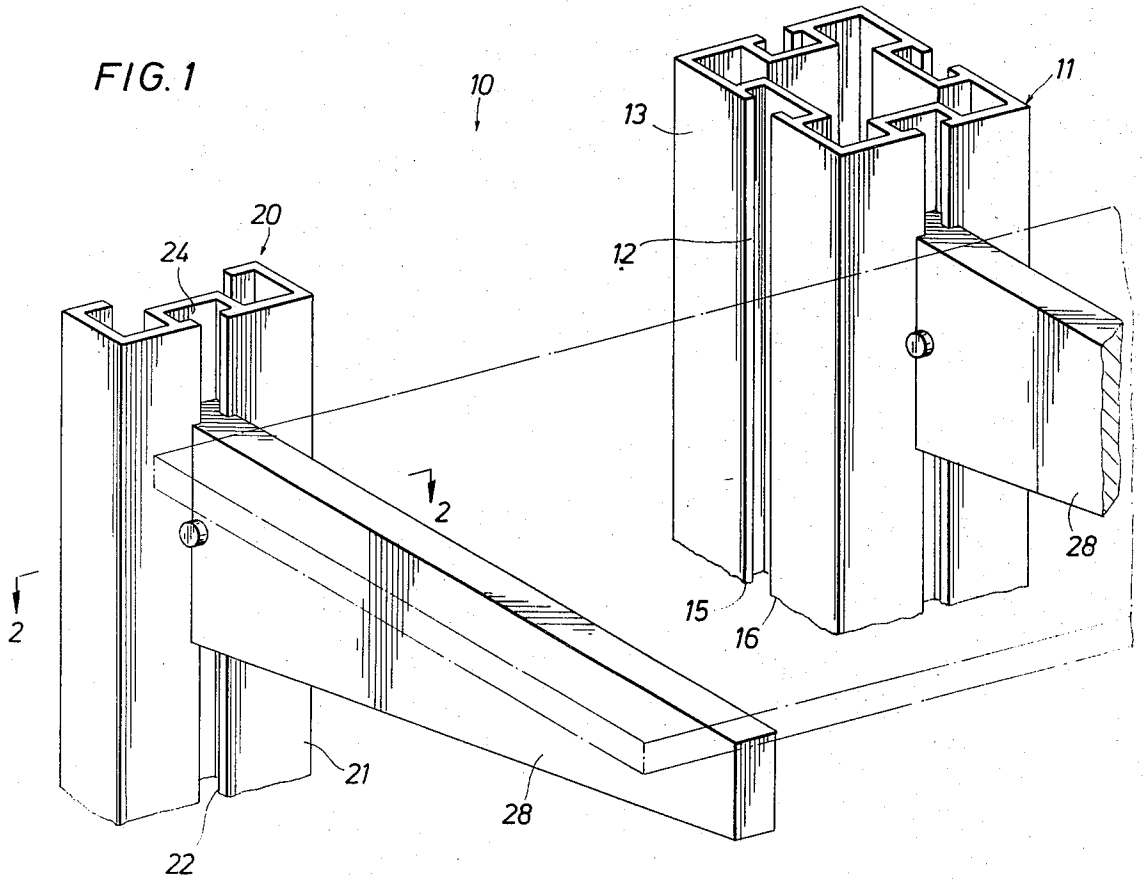


FIG. 1



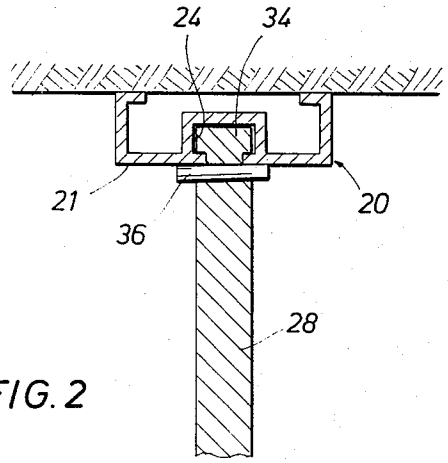


FIG. 2

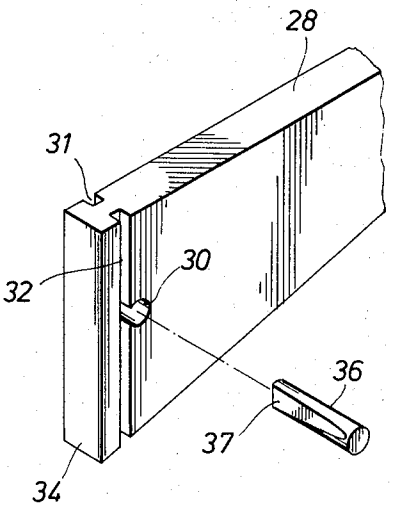


FIG. 3

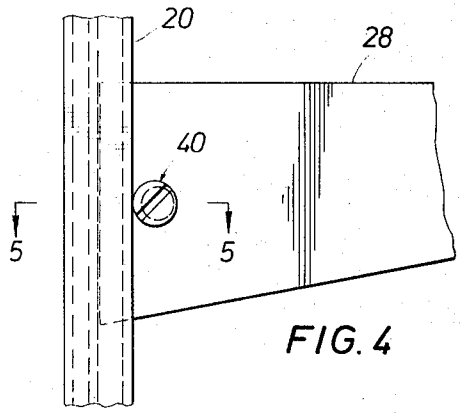


FIG. 4

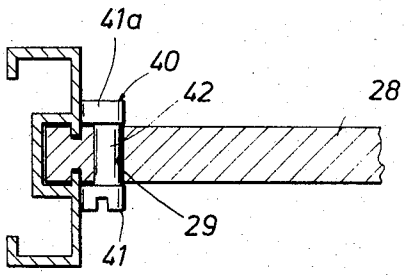


FIG. 5

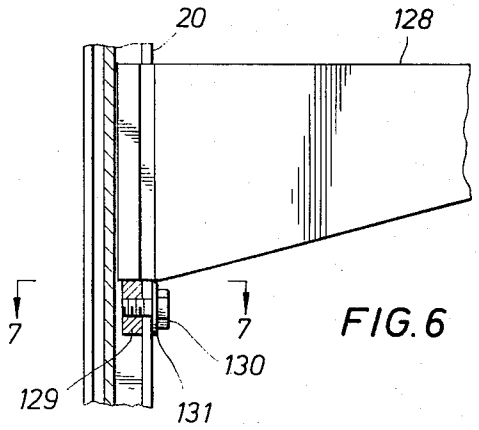


FIG. 6

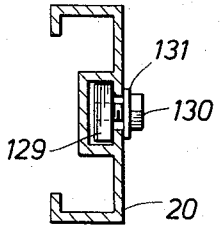


FIG. 7

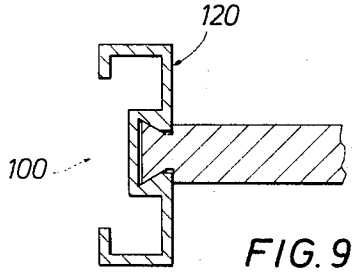


FIG. 9

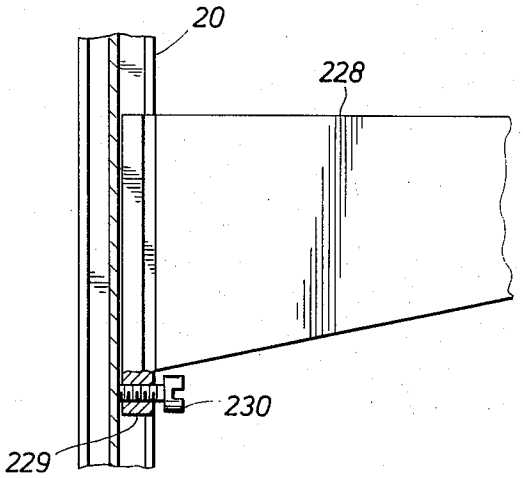


FIG. 8

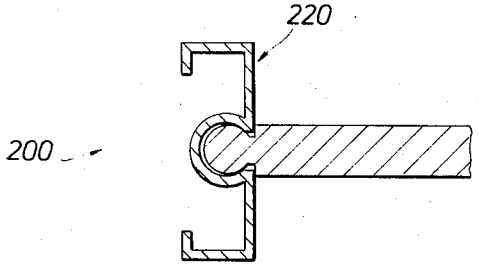


FIG. 10

ADJUSTABLE DISPLAY SHELF APPARATUS

FIELD OF THE INVENTION

This invention is directed generally to display shelf apparatus, such as might be employed in commercial establishments such as gift shops, book stores, and any other commercial establishments having the necessity of displaying merchandise for purchase by consumers. The invention also relates generally to shelves such as book shelves and cabinetry shelves that may be employed in private residences and the like. More specifically, the invention is directed to the provision of shelf apparatus incorporating easily and infinitely adjustable mechanisms, thereby providing display shelves that may be quickly and simply adjusted to suit any desirable need.

RELATED APPLICATIONS

Applicant has one presently pending application bearing Ser. No. 80,679, filed Oct. 14, 1970 now abandoned, entitled "Display Container."

BACKGROUND OF THE INVENTION

It has long been necessary to provide display shelves in commercial establishments and in residential dwellings for the purpose of displaying or storing merchandise or displaying objects such as books, figurines and many other items suitable for display. Regardless whether the shelves are employed for storage or for displaying fanciful or utilitarian items, and regardless whether the shelves are employed in a commercial establishment or are utilized in residential dwellings, it frequently becomes desirable to adjust the shelves to render the shelving more adaptable to particular articles or materials to be displayed or stored.

Many different types of shelf adjusting devices have been employed in the past, but for the most part, it is typical for adjustment slots to be provided in the shelf bracket support elements of the shelving apparatus and for shelf brackets to be provided with projections or other connecting features that facilitate incremental positioning of the shelves. In this connection reference may be had to U.S. Pat. Nos. 3,039,727 Engel et al; 3,273,847 Berman; and 3,613,900 Chiu. In some cases infinitely adjustable shelving has also been provided, such as shown by U.S. Pat. Nos. 439,636 Buck and 3,203,375 Schroeder. A modular approach has been contemplated in the past for adjustable shelving apparatus, but generally the techniques employed in the past have been generally found deficient as far as infinite adjustability is concerned.

It is a primary object of the present application, therefore, to provide novel display or storage shelf apparatus having adjustable shelves that effectively allow the shelves to be simply and easily adjusted in any suitable manner.

It is another important object of the present invention to provide novel display or storage shelf apparatus wherein vertical support devices may be utilized that facilitate support of any suitable number of shelves as desired and also facilitate positioning of shelving as high as deemed appropriate.

Another object of the present invention contemplates the provision of novel display or storage shelf apparatus incorporating friction lock mechanisms that facilitate simple and efficient locking of shelf support brackets in any desirable position relative to the vertical shelf supports.

It is also an object of the present invention to provide novel display or storage shelf apparatus that effectively allows provision of display shelving of any suitable design and facilities a modular approach to the provision of shelving for display purposes.

SUMMARY OF THE INVENTION

One suitable embodiment of the present invention may incorporate vertical support elements that are provided with at least one and perhaps a plurality of elongated undercut grooves, depending upon whether the vertical supports are provided to support more than one shelf or whether the supports are provided in such a manner as to facilitate assembly of shelving of various modular design. The vertical support elements may be extruded members, if desired.

Shelf support brackets may be provided for assembly with the vertical supports in such manner as to support shelving elements in generally horizontal manner and to facilitate infinite adjustment of the horizontal shelves. Each of the support brackets may be provided with a supporting edge configuration, generally corresponding to the configuration of the undercut slot, thereby allowing the support bracket to be freely movable within the elongated slots for adjustment of the position of the shelves. For the purpose of locking the shelf bracket and the shelves in any suitable position, locking devices may be employed to establish frictional locking engagement between the shelf bracket and the vertical support element. The locking devices may conveniently take the form of pins received within openings defined in the shelf bracket and having elongated cam surfaces defined on the pins, which cam surfaces engage the vertical support element to establish frictional engagement therewith. Depending upon the weight of the articles that are to be supported by the shelves and the manner in which the shelving is to be utilized, the frictional locking merchanisms may conveniently take the form of rotary cam elements, bolt energized frictional elements, etc. The undercut slots of the vertical support elements and the corresponding supporting edges of the shelf brackets may take any suitable undercut form within the spirit and scope of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

So that the manner in which the above recited features, advantages and objects of the present invention, as well as others, which will become apparent, are attained and can be understood in detail, more particular description of the invention, briefly summarized above, may be had by reference to the preferred embodiments thereof illustrated in the appended drawings, which drawings form a part of this specification.

It is to be noted, however, that the appended drawings illustrate only typical embodiments of the invention and are, therefore, not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments.

IN THE DRAWINGS:

FIG. 1 is a perspective view of a shelf assembly utilizing vertical support elements and shelf support brackets constructed in accordance with the present invention and illustrating the manner in which the shelf sup-

port brackets are assembled in relation to the vertical support elements and are utilized to support an article display or storage shelf.

FIG. 2 is a sectional view taken along the line 2—2 of FIG. 1 and illustrating in further detail the relationship between the frictional locking means, the vertical support element and the shelf support bracket.

FIG. 3 is a fragmentary perspective view of a shelf bracket illustrating the relationship of the shelf bracket and a frictional locking pin of the nature identified in FIGS. 1 and 2.

FIG. 4 is a fragmentary side elevational view of a vertical support and shelf support bracket, illustrating employment of a frictional locking means representing a modified embodiment of the present invention.

FIG. 5 is a sectional view taken along line 5—5 in FIG. 4, illustrating further details of the construction of the locking element of FIG. 4 and also showing the relationship between the locking element, the vertical support and the shelf support bracket.

FIG. 6 is a fragmentary side elevational view of a vertical support and shelf support bracket assembly being retained in assembly by a frictional locking element comprising a further modified embodiment of the present invention.

FIG. 7 is a sectional view taken along line 7—7 in FIG. 6, illustrating further details of the construction of the locking assembly of FIG. 6.

FIG. 8 is a fragmentary side elevational view of a vertical support and shelf support bracket assembly including a bracket locking construction representing a even further modified embodiment of the present invention.

FIG. 9 is an alternative sectional view similar to FIG. 2, showing modified support element structure and correspondingly modified shelf support bracket edge structure.

FIG. 10 is a sectional view similar to the views of FIGS. 2 and 9, illustrating a support element and shelf support bracket representing an even further modified embodiment of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Attention is first directed to FIG. 1 where the full assembly is indicated by the numeral 10. The full assembly is formed of various components as will be individually described and cooperation of the components with one another will be set forth showing the fabrication of a display shelf or book shelf which will be understood through the use of the invention. Attention is first directed to the upright member 11 shown in FIG. 1. The upright member may be of generally rectangular configuration if desired although it may also take any other convenient external configuration. The upright member is shown to be provided with four parallel and perpendicular side walls which are preferably of the same length. The means 11 will be described as the vertical support, though it need not be positioned only in the vertical direction, it being obvious that the vertical support 11 may be positioned at any suitable angle as desired. In the customary use of the invention, it is typically vertical. The vertical support 11 may be symmetrical about its four faces although symmetry is not necessary. Each face may duplicate the other faces in the preferred embodiment.

Reference numeral 12 identifies a groove or slot formed in one face 13 of the support 11. The slot 12 may extend the full length of the face 13 and may be centered between the two outer edges of the surface 13, if desired, although such positioning is not mandatory. The slot 12 has a predetermined width along its length which width is not critical, but can be, by way of example, something in the order of one-quarter inch, or greater. The width of the slot, in large part, depends on the strength of the material forming the bracket to be described hereinafter.

The slot 12 is immediately adjacent to a recessed and enlarged elongated chamber indicated by the numeral 14, which chamber may be defined by three walls comprising a part of the wall structure of the upright member. The chamber 14 may be coterminous with the slot 12 and is wider than the slot 12. The face 13 is undercut, so to speak, by the provision of a relatively narrow slot and a wider slot or chamber 14 immediately beyond the slot that define a pair of opposed flanges facing shoulders 15 and 16 which extend over the chamber 14 and define the slot 12.

The construction of the vertical support member 11 may be symmetrical on all four faces although symmetry not required. Although not mandatory, it may be desirable from an esthetic point of view, and from convenience in manufacturing that each face of the upright support be of similar configuration.

A vertical member 20 is shown in FIG. 1 that may have some degree of similarity as compared to the upright element 11. The vertical member 20 may have a similar front face 21 and a similar or identical groove 22 as compared to the structure of the upright element 12 and may have a back chamber 24 adjacent to the groove and coterminous therewith. The basic difference in the vertical member 20 as compared to vertical member 11 is that it is not symmetrical on all four faces, and is abbreviated. It is only provided with one vertical groove 22, and not one on each face. The vertical member 20 is adapted to be secured to a supportive wall or other structural member if desired. By way of contrast, the vertical member 11 is typically available as a free standing unit which can be attractively viewed from all four sides and which is also functionally arranged to engage a support bracket on all four sides. The members 11 and 20 are similar except that the vertical member 11 is adapted for application in a free standing situation, while the member 20 can be joined to a wall or can be combined with other structure for use as a free standing support. Both members 11 and 20, in free standing situations, require other support legs so that a minimum of three or more legs, or points of stability are employed with reference to the supporting floor.

The member 20 is abbreviated in structure, and will be discussed with respect to FIG. 2, it being kept in mind that the manner in which the support bracket is connected with the vertical member is the same for either member. A description of the manner of joining the bracket to the member 20 will likewise apply to the member 11.

Attention is next directed to FIGS. 2 and 3 of the drawings wherein a blade-like bracket is identified by reference numeral 28. The bracket is adapted to extend outwardly from the vertical supports and to provide a supporting function for a display shelf. The bracket may be formed with a pair of grooves at 31 and 32 which, as shown in FIG. 3, are preferably identical, and are formed on opposite faces of the bracket. The

grooves 31 and 32 may be of the same depth and are disposed in generally parallel relation and may be spaced from a common edge 34 by an equal distance. The grooves 31 and 32 are preferably just slightly larger than the width of the projecting flanges or shoulders 15 and 16 shown in FIG. 1 in order to provide a freely slidable relationship between the support bracket and the upright support. The supporting face of the vertical support member 20, like the support member 11, may be formed with a pair of shoulders or opposed flanges which define the slot or groove in the vertical member. The shoulders 15 and 16 may be approximately one-fourth to one-eight inch in thickness and the grooves 31 and 32 of the shelf support bracket may be in the order of 1/64th inch larger in width to accommodate the shoulders.

The width of the face 34 of the blade or bracket member 28 is sufficient to be received within the chamber 24 which is immediately to the rear of the face 21 of the vertical member 20. The sectional view of FIG. 2 illustrates the support face portion of the blade 28 extending into the chamber and substantially corresponding to the size and configuration of the chamber with slight clearance between the support face and the walls defining the chamber so the shelf bracket will be capable of rather free sliding movement.

It will be desirable to provide the support bracket/vertical support assembly with releasable locking means to insure adjustment of the brackets and shelves relative to the vertical supports. According to the present invention such locking means may conveniently take the form illustrated in FIGS. 2 and 3 where the shelf brackets 28 may be provided with a transverse aperture 30. Reference numeral 36 identifies a pin which is tapered by the inclusion of a flat 37 on one side. The pin 36 may be made of round stock but is tapered by forming the flat cam surface thereon.

In the use of the invention illustrated in FIGS. 1, 2 and 3 the blade or support bracket 28 is joined to the upright member 11 or 20 with the face portion of the bracket 28 being disposed within the appropriate elongated chamber. The upper support surface of the bracket will extend in generally perpendicular relation with the upright element. The dimensions of the blade and the vertical supports will vary in accordance with the intended use of the present invention. For example, the bracket might be in the order of one to two feet in length and the vertical face 34 of the bracket may be in the order of two to eight inches in height depending upon the strength requirements of the shelving. The vertical support member might range to full ceiling height for a given point of installation. Presuming that it is very long, the bracket 28 may be placed in the slot and is moved along the vertical support member until the bracket has been properly positioned. Once the bracket is located, the pin 36 is inserted into the opening 30 and is driven toward the smaller end of the tapered face 37 thereby causing the cam surface 37 to react against the face 21 of the vertical support and develop sufficient frictional contact to pinch or wedge thereagainst, thereby securing the bracket in position against the vertical support member. After this has been accomplished, the bracket will no longer be free to slide relative to the vertical supports. As viewed in sectional view of FIG. 2, it will be observed that the insertion of the pin 36 pulls the bracket outwardly or in a direction away from the slot and tends to pinch the shoulders 15 and 16 disposed therebetween. The pinching movement develops frictional contact on both surfaces of the shoulders which frictional contact is sufficient to stop sliding movement of the blade or bracket. The brackets will thus be firmly fixed to the vertical supports until the pins 36 are subsequently moved to release the frictional engagement.

As viewed in FIG. 1, the vertical members 11 and 20 are utilized in the same manner for securing the blade in question. Both blades shown in FIG. 1 are attached in the same manner even though the upright supports are of different configuration. This permits the blades to be vertically positioned whereby a shelf to be supported on the blades can be vertically positioned as desired. The blades can be used to support a shelf, perhaps a transparent shelf, a closed box, book cabinet, loud speaker, or any of numerous other devices to be supported for display or storage purposes.

Attention is next directed to FIGS. 4 and 5 of the drawings which depicts an alternative embodiment for fixing the shelf support brackets with respect to vertical support elements. In FIG. 4, the number 20 again indicates the vertical support while reference numeral 28 identifies the blade or bracket. An aperture 29 may be formed in the blade or bracket in generally transverse relation to the slot in the vertical support. As shown in FIG. 5, an eccentric bolt mechanism may be provided at 40 which may include a pair of cam heads 41 and 41a, the head 41 having a slot formed therein to receive a screw driver or other suitable implement. The heads 41 and 41a may be disposed in eccentric relation with a shaft portion 42 that is rotatably received within the aperture 29 of bracket 28. The two heads may join to the shaft 42 by integral fabrication or by separate fabrication and ultrasonic welding or epoxy resin binders. The entire eccentric mechanism may take any other suitable form achieving eccentric camming actuation of elements for the purpose of establishing frictional engagement between cam elements and the vertical supports of a display shelf assembly.

The blade may be inserted into the vertical support member 20 with the eccentric cam heads rotated away from the front face of the vertical support 20. The cam heads then may be rotated by screw driver manipulation to position the eccentric sides away from the vertical support 20. When the blade 28 is at the desired vertical position with respect to the support 20, the screw driver may be inserted into the slot in cam head 41 and rotated, thereby bringing the eccentric heads carried on the bolt mechanism 40 into contact with the vertical member thereby wedging the bolt against the face of the vertical support and drawing the blade toward the bolt mechanism. This achieves sufficient frictional engagement between the eccentric heads and the vertical support to frictionally secure the support bracket against movement relative to the vertical support 20. Once frictional engagement has been achieved, it can be released by using a screw driver to rotate the eccentric bolt mechanism 40 in such direction that the cam heads move out of frictional engagement with the vertical support.

Attention is next directed to FIGS. 6 and 7 which show further alternative embodiments. In FIG. 6, the blade, indicated by the numeral 128, is similar in most respects to the blade 28 shown in FIG. 4, except that the aperture is omitted and a downwardly extending tab 129 is attached to or formed integrally with the

blade. The tab **129** extends from the lower portion of the blade **128** and is received within the chamber behind the opposed flanges or shoulders defining the elongated slot in the vertical support member **20.** The projecting tab **129** may be provided with a threaded opening that is exposed thorugh the slot. The tapped opening may be exposed for receiving a threaded locking member therein.

The numberal **130** identifies a bolt or other suitable locking element that may be threaded into the projecting tab **129.** A flat washer **131** may be placed beneath the head of the locking element to spread the loading on the opposed shoulders. The bolt may be tightened to develop a force of sufficient magnitude to develop a pinching or friction inducing action between the head of the bolt and the tab **129** attached to the lower portions of the projecting blade or bracket **128.** The friction inducing action is perhaps better shown in the sectional view of FIG. **7.** The bolt **130** causes the washer **131** and tab **129** to pinch the shoulders **15** and **16** with sufficient force to develop sufficient frictional engagement to fix the blade in position relative to the vertical support.

Attention is next directed to FIG. **8** of the drawings which shows a slightly further modified version from that shown in FIG. **6.** In FIG. **8,** the blade is indicated by the numeral **228** and has a projecting tab **229.** The tab is somewhat thicker than the tab **129** shown in FIG. **6** and it may be tapped with a threaded opening to receive a bolt **230.** The bolt **230** may extend through the tab **229** and may bear against the back wall of the recess or chamber **24** (see FIG. **1**). The bolt **230** is urged into contact with the back wall by its threaded relation with the tab **229** thus forcing the lower portions of the blade **228** forwardly as viewed in FIG. **8** thereby developing frictional engagement with the opposed shoulders or flanges defining the groove. This feature locks the blade or mounting bracket **228** in position with respect to the upright member **20** therefore preventing subsequent movement of the bracket and holding the shelf support assembly in fixed position.

The embodiment of FIG. **8,** as well as the other embodiments shown at FIGS. **4** and **6,** are utilized in the same manner as the structure shown in FIG. **1.** It is believed that detailed examples of use for each is not required.

Attention is next directed to FIGS. **9** and **10** of the drawings. In FIG. **9,** an embodiment indicated at **100** utilizes an interfitting triangular groove and bracket structures while the embodiment of FIG. **10** at **200** is yet different. In FIG. **9,** the drawings reveal a bracket face of generally triangular cross section which is provided on one edge of the bracket. The triangular cross section still provides a substantial amount of surface facing against and contacting the opposed shoulders **15** and **16.** The vertical member is provided with a groove of generally triangular corresponding cross section to accommodate the triangular face portion of the bracket.

The embodiment illustrated generally at **200** in FIG. **10** is useful with a vertical support member such as that shown at **220.** The vertical support member **220** is modified. The blade is shown to have an appended elongated bead that may be of circular cross section or of elliptical cross section as desired. The vertical support member **220** may be correspondingly constructed to accommodate the particular cross sectional configuration of FIG. **10.** The embodiments of FIGS. **9** and **10** can be employed as desired in lieu of the embodiment of the vertical members shown in FIG. **1.**

Several significant features of the present invention should next be considered. The vertical support member **11** can be manufactured as a single piece, but it is considered less expensive and easier to fabricate by using a single die which extrudes one-half of the structure. Thereafter, two halves may be joined together by means of a suitable adhesive, by ultrasonic welding or by any other suitable means of connection to form the entirety of the structure. It can be divided along a center line.

The present invention should be next considered in use and operation. The vertical support may be formed in the manner mentioned above in the preferred use and implementation of the present invention. A full four-sided, vertical support member may be formed as shown in FIG. **1** at **11.** This structure may be of square, rectangular or rounded configuration, depending upon the design characteristics that are desired. The vertical support member may provide a readily useable free standing structure and may enable the assembly of a free standing display shelf unit. By way of contrast, the vertical support member **20** can be exactly one-half of the apparatus shown at **11** in FIG. **1,** or can be further abreviated as shown in sectional view in FIG. **2.** For an economy of fabrication cost, however, the vertical support member **20** may be one-half of the support member **11,** and hence, will include one-half of the grooves or chambers indicated at **14** in FIG. **1.**

The vertical support members may be positioned as desired and the horizontallly extending support brackets may be installed by engaging them at the end of the support members and moving them fairly free of friction along the slot. They are moved along the slot **12** with a face portion thereof disposed within the chamber or recessed portion beneath the slot indicated by the numerals **14** and **24.** The brackets may be moved to the desired position and then may be secured in position by tapered locking pins **36.** The pins may be driven to wedge and lock the brackets in position. Once further vertical movement of the support brackets is prevented, the shelf or other suitable structure may be placed upon the locked support brackets. As desired, the vertical support members can be located free standing, away from any walls, or can be attached or joined to walls or supportive structure as desired. The apparatus permits the installation of a free standing center of the room device, or a wall mounted structure. The apparatus of the present invention is readily adapted for either purpose.

The other embodiments shown in the drawings can be utilized in the illustrated manner. The pin **36** shown in FIG. **3** can be deleted and the eccentric mechanism shown in FIGS. **4** and **5** can be substituted therefor. The blade may be modified in the manner shown in FIGS. **6** and **8** depending on the circumstances of use and installation.

While many objects and advantages of the present invention will become readily apparent from a consideration of the foregoing written specification, the scope of the invention is determined by the claims which are appended hereto.

I claim:

1. A display unit comprising:

vertical support means having opposed spaced shoulder means defining an elongated groove therebetween and having elongated chamber means formed therein and being disposed behind said opposed shoulder means, said vertical support means defining first generally planar friction surface means;

support bracket means having a support portion for supporting objects thereon, said support bracket means having a face portion of a configuration generally corresponding to the cross-sectional configuration of said elongated groove and said elongated chamber, said face portion of said bracket means being disposed within said elongated chamber means and extending through said elongated groove and being movable along said groove and chamber, said face portion defining second generally planar friction surface means, said support bracket means having a transverse latch aperture formed therein, at least a portion of said aperture intersecting the plane of said first friction surface means; and

latch pin means being disposed within said transverse aperture of said bracket means and having cam surface means defined thereon, said latch pin means being movable relative to said bracket means between a locked position where said cam surface means engages said vertical support means and urges said first and second friction surface means into friction locked engagement and a released position where said cam surface means is retracted to a position releasing said frictional engagement between said first and second friction surfaces.

2. A display unit as recited in claim **1**, wherein:

said support bracket means has a latch aperture formed therein; and

said latch means comprises an elongated pin element having a generally planar cam surface formed thereon and being disposed in angular relation to the longitudinal axis of said pin, said cam surface being disposed in engagement with said first friction surface of said vertical support means.

3. A display unit as recited in claim **1**, wherein:

said latch aperture being formed in substantially normal relation to said support bracket means; and

said latch means comprises an elongated friction latching pin being rotatably received within said latch aperture, said elongated pin having rotary cam surface means formed thereon and being disposed in eccentric relation to said pin, said cam surface means, upon rotation of said pin being movable into or away from camming engagement with said first friction surface of said verticle support means.

4. A display unit as recited in claim **3**, wherein:

said cam surface means comprises circular elements disposed at each extremity of said pin in eccentric relation to the axis of said pin.

5. A display unit as recited in claim **4**, wherein:

one of said circular elements having drive means formed thereon and being engaged by a drive element to achieve rotation of said pin.

6. A display unit as recited in claim **1**, wherein:

said face portion of said bracket means has opposed elongated guide grooves formed therein defining third friction surface means, said opposed grooves receiving said opposed shoulders of said verticle support element and said third friction surface means engaging said second friction surface means.

7. A display unit as recited in claim **1**, wherein:

said support element has a plurality of grooves and chambers extending along the length thereof and receiving a plurality of said bracket means in locking relation therewith.

8. A display unit as recited in claim **1**, wherein:

said support member includes a back wall and facing side walls defining said chamber and said bracket supports the facing portion thereof within said chamber short of contact with said back wall and said side walls of said chamber.

* * * * *