

United States Patent

[11] 3,586,284

[72] Inventor **Elmer L. Riebold**
1020 Harrison Street, Park Ridge, Ill.
60068
[21] Appl. No. **16,426**
[22] Filed **Mar. 4, 1970**
[45] Patented **June 22, 1971**

1,145,521 7/1915 Stock 16/158
1,354,390 9/1920 Gilmore 24/263 UX
3,235,093 2/1966 Eisbart et al. 211/47

FOREIGN PATENTS

846,442 8/1952 Germany 248/226

Primary Examiner—J. Franklin Foss

Attorney—Ernest S. Kettelson

[54] **MERCHANDISE DISPLAY UNIT**
5 Claims, 15 Drawing Figs.

[52] U.S. Cl. 248/316R,
211/99, 248/226 A

[51] Int. Cl. A47F 5/00

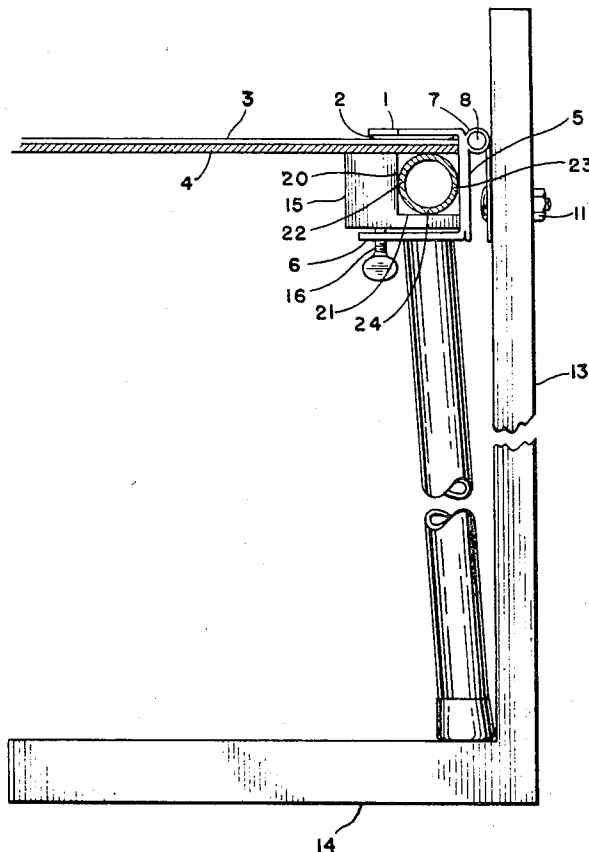
[50] Field of Search 248/226,
226 A, 226 B, 316, 316 A, 316 B; 211/47, 48, 99,
170, 169; 24/263, 263.3; 16/129, 158

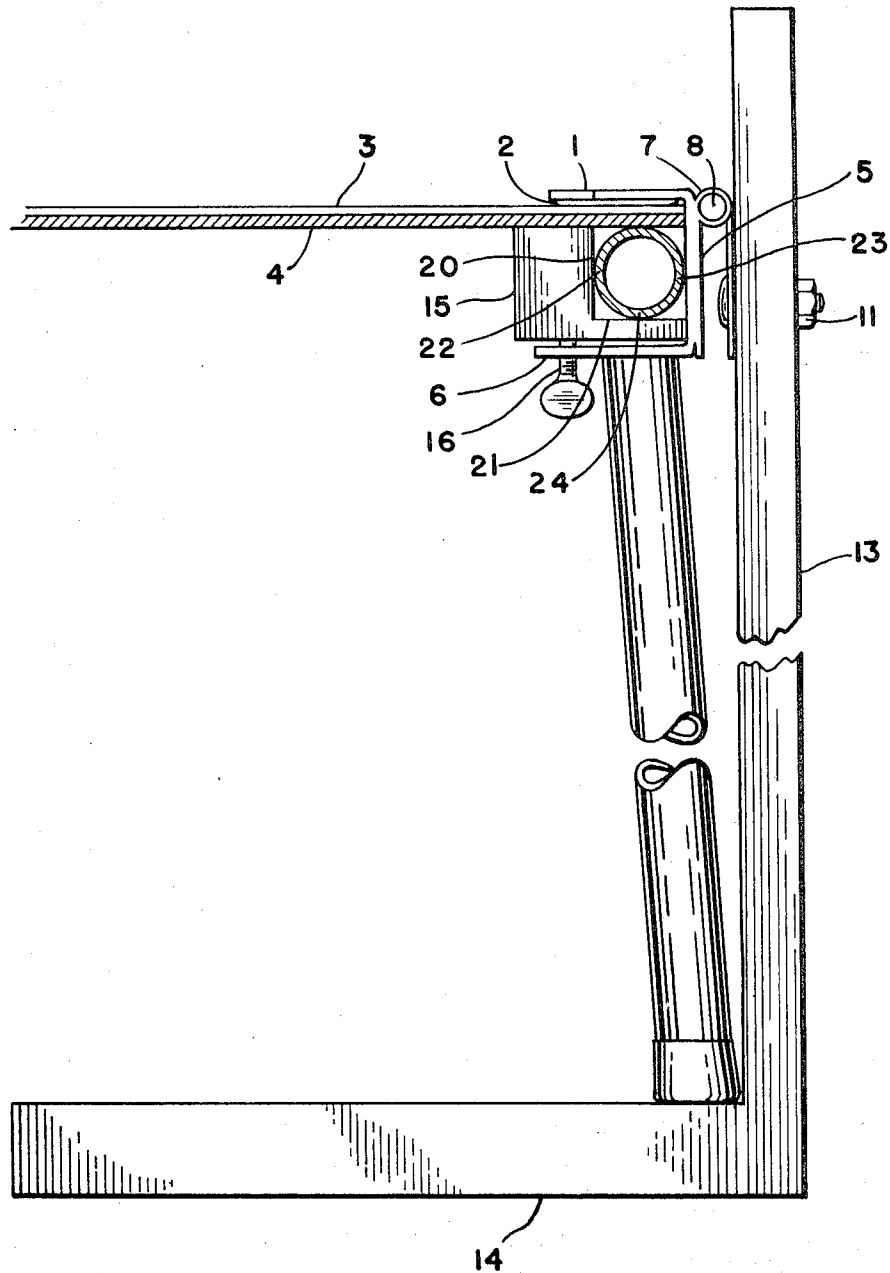
References Cited

UNITED STATES PATENTS

857,169 6/1907 Halladay 248/226

ABSTRACT: A merchandise display unit including a clamp for holding the rearward edge of an article such as a card table, the clamp being on a hinge fastened to a supporting member, whereby the forward edge of the table may be raised to display the underside, to illustrate how to fold the legs, and other features of the particular article of merchandise displayed, the rearward edge of the article being securely held by the clamp hinged to the supporting member to permit hinged upward and downward movement of the merchandise being displayed.

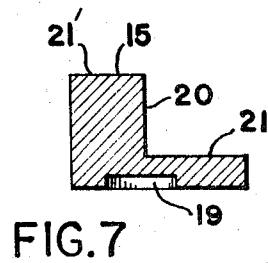
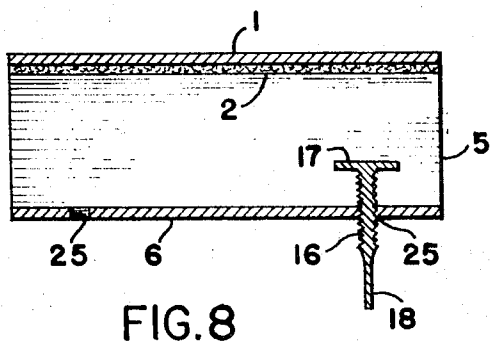
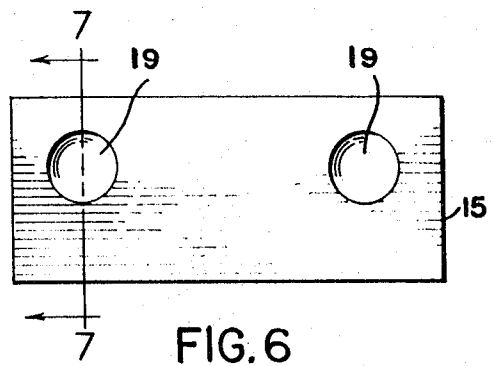
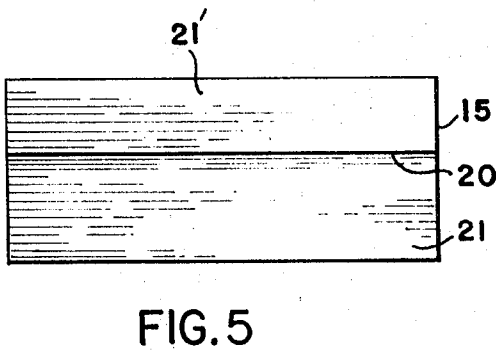
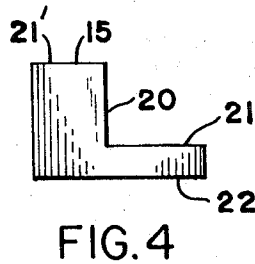
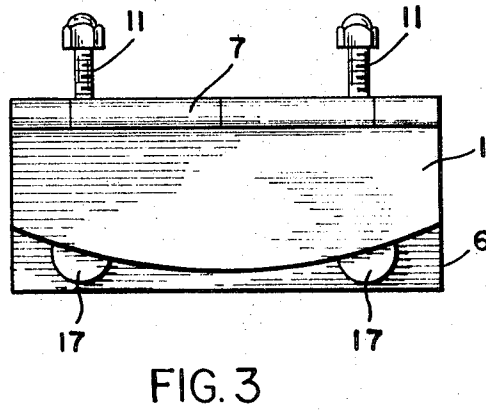
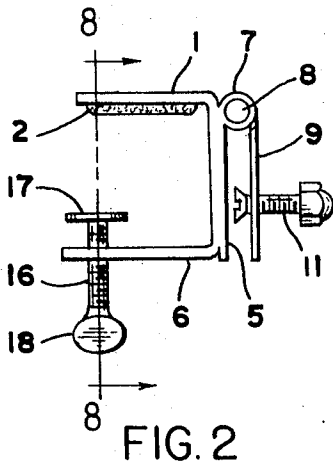




INVENTOR

ELMER L. REIBOLD

BY *Ernest S. Kettelson*
ATT'Y



INVENTOR
ELMER L. REIBOLD
BY *Ernest S. Kettelson*
ATT'Y

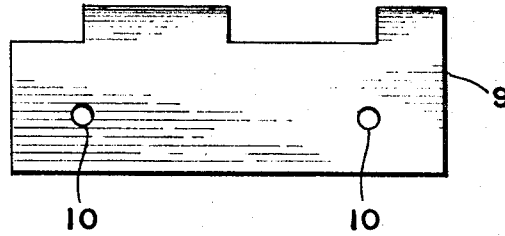


FIG. 9

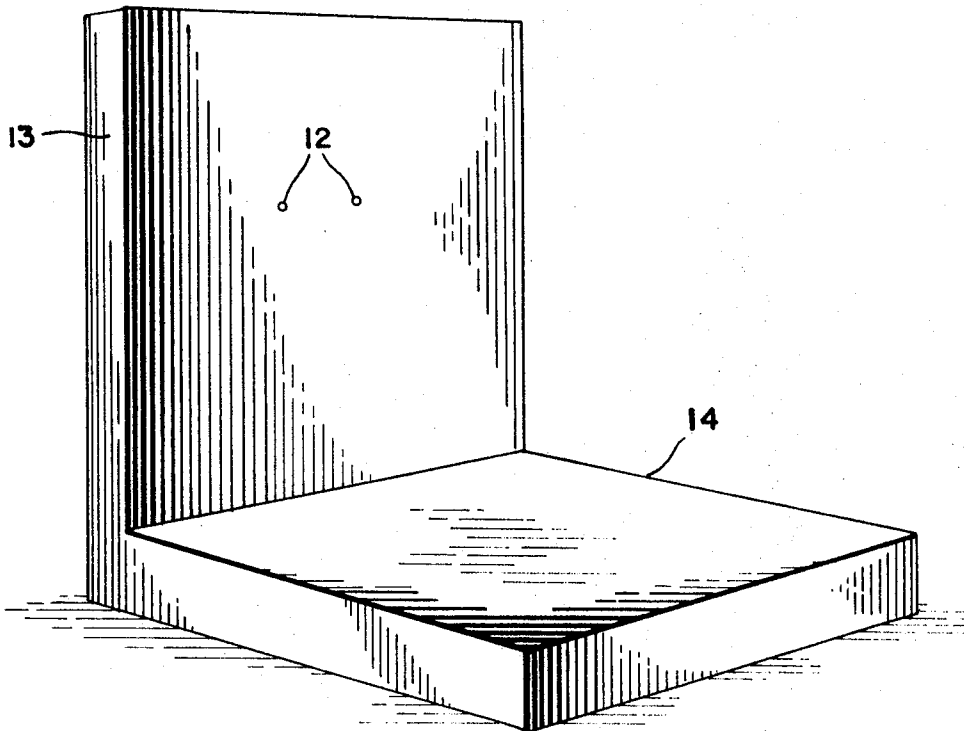


FIG. 10

INVENTOR
ELMER L. REIBOLD

BY *Ernest S. Kettelson*
ATT'Y.

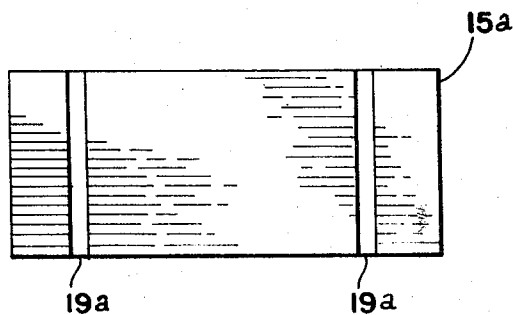


FIG. 11

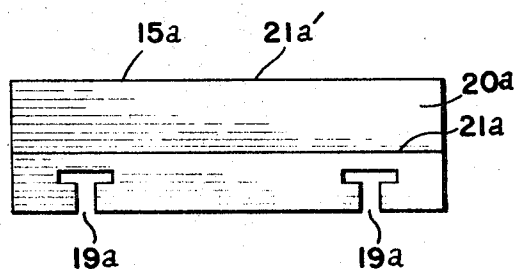


FIG. 12

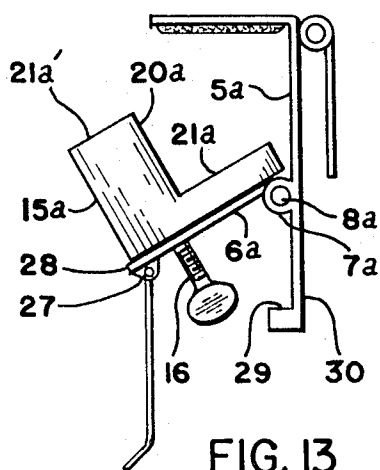


FIG. 13

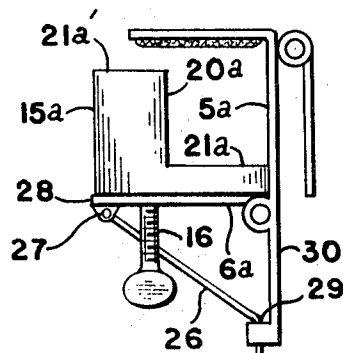


FIG. 14

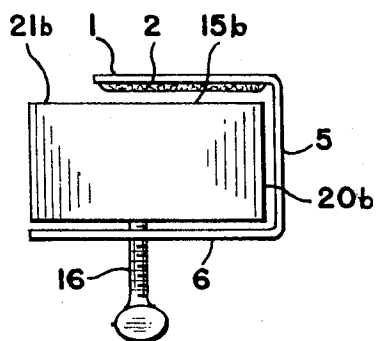


FIG. 15

INVENTOR
ELMER L. REIBOLD

BY *Ernest S. Kettelson*
ATT'Y

MERCHANDISE DISPLAY UNIT

BACKGROUND OF THE INVENTION

This invention relates to a merchandise display unit, including clamp means for holding the rearward edge of an article of merchandise, and hinge means joining said clamp means to a supporting member such as the upright wall of a store fixture. The article of merchandise may then be moved on the hinge which is preferably horizontal to permit upward and downward hinged movement of the merchandise. This invention is particularly useful for displaying merchandise such as card tables to prospective customers. Prior to this invention, a salesman would have to lift the entire card table in his hands to show customers the underside and would have a difficult time trying to illustrate how the legs of the card table may be folded and the unfolded back to upright position. If an edge of the table were left to rest on the floor while demonstrating these features to the customers, the edge would soon become worn and the table unusable for sale. It also would become unsightly for further display purposes. By clamping near the edge of the article such as a card table horizontally hinged to a support member, it becomes very simple for a salesman to raise the forward edge to display the underside, how the legs are folded and unfolded, and other features of the merchandise being shown and demonstrated to customers, and without causing any damage to the article being displayed.

SUMMARY OF THE INVENTION

A merchandise display unit which includes clamp means for holding the rearward edge of an article of merchandise, and hinge means joining said clamp means to a supporting member such as the upright wall of a store fixture to permit upward and downward hinged movement of said article of merchandise.

It is an object of this invention to provide clamp means hinged to a supporting member to enable easy and convenient display of an article of merchandise held within said clamp means.

It is a further object of this invention to provide clamp means hinged to a supporting member to enable upward and downward hinged movement of an article of merchandise held within said clamp means.

It is a further object of this invention to provide clamp means which are adjustable to clamp and hold the edges of various articles of merchandise having edges of different dimensions and configuration.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side elevation view of the merchandise display unit of this invention, showing part of a card table partially in section clamped therein, and showing the unit fastened to an upright support member of a store fixture.

FIG. 2 is a side elevation view of this invention with the clamp block removed.

FIG. 3 is a plan view of this invention with the clamp block removed.

FIG. 4 is a side elevation view of one form of clamp block used in this invention.

FIG. 5 is a top plan view of the clamp block shown in FIG. 4.

FIG. 6 is a bottom plan view of the clamp block shown in FIG. 4.

FIG. 7 is a sectional view of the clamp block taken on line 7-7 of FIG. 6.

FIG. 8 is a sectional view taken on line 8-8 of FIG. 2.

FIG. 9 is an elevation view from the rear showing the hinge plate of this invention.

FIG. 10 is a perspective view of a store fixture with which this invention may be used.

FIG. 11 is a bottom plan view of a modified form of clamp block for use in this invention.

FIG. 12 is a front elevation view of the clamp block shown in FIG. 11.

FIG. 13 is a side elevation view of a modified form of this invention.

FIG. 14 is a side elevation view of the modification shown in FIG. 13 but with the lower hinged plate in position for clamping.

FIG. 15 is a side elevation view of a further modification of a clamp block which may be used in this invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to the drawings in detail, the clamp means of this invention includes a top plate 1, the underside of which has soft material coating 2 such as felt to prevent scratching or other damage to the top surface 3 of an article of merchandise such as a card table 4, partially shown in section in FIG. 1, held within said clamp means. The top plate 1 extends outwardly perpendicular to an integral with rear plate 5. Bottom plate 6 also extends outwardly perpendicular to and integral with rear plate 5 as shown in the embodiment of this invention illustrated best in FIGS. 1 and 2, so that top plate 1 and bottom plate 6 extend outwardly in substantially parallel spaced apart relation.

A hinge 7 is affixed along the upper edge of rear plate 5, said hinge including the pivot pin 8 and hinge plate 9. Hinge plate 9 includes two holes 10 through which fastening bolts 11 are inserted to pass also through corresponding holes 12 in an upright support member 13 of a store fixture 14. Alternatively the hinge plate 9 could be secured to a wall by means of screws, or "molly bolts" or other well-known means. Hinge plate 9 is secured to the support member or wall in such a way that it extends downward from the pivot pin 8 and faces the rear plate 5 when the latter is in normal resting position.

A clamp block 15 is provided for insertion between top plate 1 and bottom plate 6. The clamp block 15 may be of any configuration and dimension desired to correspond with the edge of various articles of merchandise to be secured by said clamp block 15 when it is forced upward and rearward to hold said edge tightly between the clamp block 15, the top plate 1 and the rear plate 5. The height of the clamp block 15 must be somewhat less than the distance between top plate 1 and bottom plate 6 to permit insertion therebetween as well as some adjustment therebetween and to allow insertion of an article of merchandise between the clamp block 15 and top plate 1.

The clamp block 15 is held in clamping engagement by setscrews 16 threaded through internally threaded holes 25 in bottom plate 6. The setscrews 16 may have flat bearing plates 17 at the top and hand grasp means 18 at the bottom to permit turning by hand. The clamp block 15 may include on its underside countersunk indentations 19 corresponding to the flat bearing plates 17 of the setscrews 16 to permit insertion of said bearing plates 17 into said countersunk indentations 19 when the setscrews are tightened for proper placement of said clamp block 15 to achieve the clamping engagement desired with the edge of whatever article of merchandise is to be clamped within the merchandise display unit of this invention. The location of the countersunk indentations 19 is a matter of choice depending on the type of article to be clamped within the display unit, the only requirement being that these countersunk indentations 19 are located at the point on the underside of clamp block 15 which will bring it into secure clamping engagement with the edge of the article of merchandise to hold it securely within the display unit of this invention when the setscrews 16 are tightened and their flat bearing plates 17 are securely seated within said countersunk indentations.

The clamp block 15 may be of L-shaped design as shown in FIGS. 4, 5, 6 and 7, and include a vertical abutment wall 20 and horizontal abutment walls 21 and 21'. The horizontal portion 22 of the L-shaped clamp block is inserted first along the upper surface of bottom plate 6 until it reaches rear plate 5 or until the countersunk indentations 19 on the underside of the clamp block 15 are in alignment with the flat bearing plates 17 of the setscrews 16 for insertion therein when tightened. The location of the countersunk indentations 19 of the clamp

block 15 of L-shaped design is chosen so when in alignment with the flat bearing plates 17 of setscrews 16 for tightening, the vertical abutment wall 20 abuts securely against the inner downward extending portion 22 of the edge of an article of merchandise such as a card table 4 to be clamped within the display unit of this invention, and the outer downward extending portion 23 of the edge of the card table 4 is forced securely against rear plate 5, as illustrated in FIG. 1. The setscrews 16 are tightened forcing bearing plates 17 into the countersunk indentations 19 and further forcing the clamp block 15 upward from bottom plate 6 until horizontal abutment wall 21 abuts securely against the bottom portion 24 of the edge of card table 4, and horizontal abutment wall 21' abuts securely against the underside of the surface portion of the card table, forcing the top surface 3 of said card table 4 upward for secure engagement against the felt or other soft material coating 2 bonded to the underside of top plate 1. The edge of the card table 4 is thus securely clamped within the display unit of this invention. The hinge plate 9 of said display unit having been previously mounted to an upright support member 13 in the manner described above, the card table 4 having its rearward edge securely clamped within the display unit of this invention, may now be moved upward in rotation around the hinge 7 for display of the underside of the table, to illustrate how the legs of the table may be folded and unfolded, and other features of the article of merchandise. The hinge plate 9 should be mounted on upright support member 13 at the location where top plate 1 is substantially horizontal when the clamped card table 4 with its legs unfolded and extended are resting evenly on the floor or other base surface. It would be possible however to mount the hinge plate 9 at a higher point on the upright support member 13, so the legs (if any) of an article of merchandise clamped in the display device of this invention are above the floor. The rear plate 5 will abut against hinge plate 9 as top plate 1 moves downward to approximately the horizontal.

A modified clamp block 15a is shown in FIGS. 11 and 12. Instead of countersunk indentations 19, clamp block 15a includes T channels 19a running longitudinally with the legs of the T-opening on the underside and ends of clamp block 15a, and the crosses of the T-opening at each end of the clamp block 15a. The T-channel in other words may run the entire length of clamp block 15a. The legs of the T-channels are wide enough to receive setscrews 16, and the crosses of the T-channels are wide enough to receive the flat bearing plates 17 of said setscrews. The clamp block 15a is mounted on said flat bearing plates 17 by positioning the crosses of the T-opening in an edge of clamp block 15a adjacent the flat bearing plates 17 which are then slidably received within said T-channels as the clamp block 15a is moved into position. This modified clamp block 15a permits forward and backward movement to adjust the vertical abutment wall 20a with respect to its spaced-apart distance from rear plate 5, so as to receive edges of differing thicknesses of various articles to be clamped within the display unit of this invention. The horizontal abutment wall 21a and 21a' is moved upward from bottom plate 6 by tightening the setscrews 16 in the same manner as described above with respect to clamp block 15.

A modified form of the invention is shown in FIGS. 13 and 14, wherein bottom plate 6a is hinged rather than integrally formed with rear plate 5 in the previously described embodiment. The edge of bottom plate 6a which adjoins rear plate 5a of this modified form shown in FIGS. 13 and 14 includes a hinge 7a with pivot pin 8a extending through the hinge bore to hold said plates together. In this embodiment, the clamp block such as the modified form 15a as shown in FIGS. 11 and 12 can be left permanently mounted on bottom plate 6a. The setscrews 16a threaded through bottom plate 6a can be turned so their bearing plates 17a move toward bottom plate 6a, said bearing plates 17a being within the cross openings of the T-channels in modified clamp block 15a, thus forcing clamp block 15a securely against bottom plate 6a to hold it thereon. Other well-known means can be selected to mount a clamp

block permanently (or for only occasional removal) on bottom plate 6a, and do so in such a way that it may be adjusted backward and forward as well as upward and downward with respect to bottom plate 6a.

By having bottom plate 6a hingedly attached to rear plate 5a, it is not necessary to remove the clamp block from the display device of this invention in order to clamp or unclamp the edge of an article of merchandise for display. The hinged bottom plate 6a need merely be allowed to drop from its horizontal engagement position to a vertical position whereby the attached clamp block 15a also falls away from its engaged position, thus enabling removal of a previously clamped article of merchandise. In order to insert and clamp an article of merchandise in this modified form of the invention, the process is merely reversed. Bottom plate 6a with clamp block 15a is raised from the unengaged vertical position to the engaged horizontal position. The clamp block 15a is then adjusted forwardly and rearwardly as previously described until vertical abutment wall 20a engages a downward extending portion of an edge of an article of merchandise, and is then adjusted upwardly also as previously described by turning setscrews 16a to force horizontal abutment wall 21a upward away from bottom plate 6a into clamping engagement with an underside portion of an edge of said article of merchandise.

Bottom plate 6a is held perpendicular to rear plate 5a by means of a diagonal brace 26, pivotally attached at one end 27 near the outward edge 28 and on the underside of bottom plate 6a. The other end 28 of said diagonal brace 26 is removably insertable into a receiving pocket 29 mounted on a downward extension 30 of rear plate 5a. The location of pocket 29 is such that when the diagonal brace 26 is inserted therein bottom plate 6a is held substantially perpendicular to rear plate 5a. Other known means of holding hinged bottom plate 6a perpendicular to rear plate 5a could of course be employed for this purpose.

A further modified clamp block 15b is illustrated in FIG. 15 consisting essentially of a square or rectangular block rather than of L-shaped design. In clamp block 15b the vertical abutment wall 20b faces rear plate 5 when clamp block 15b is inserted between top plate 1 and bottom plate 6. The horizontal abutment wall 21b in this modified clamp block 15b is the wall facing top plate 1 when clamp block 15b is inserted as aforesaid in the device. In other respects, clamp block 15b may include countersunk indentations or a T-channel as in the previously described clamp blocks 15 and 15a, and may be adjusted in like manner by means of setscrews 16 threaded through bottom plate 6 having flat bearing plates 17 to bear against the portion of clamp block 15b which is closest to bottom plate 6. This modification of clamp block 15b is most useful for articles of merchandise which either (1) have a very thin downwardly extending portion at their edge so the clamp block 15b may be pushed almost entirely up to rear plate 5 in order to clampingly engage said thin downwardly extending portion between vertical abutment wall 20b and rear plate 5; or (2) which have no downwardly extending portion at their edge whereupon clamp block 15b would be pushed entirely up against rear plate 5 and clamp block 15b then moved by means of said setscrews 16 and bearing plates 17 towards top plate 1 until horizontal abutment wall 21b securely engages and clamps the surface edge of an article of merchandise between abutment wall 21b and the felt or other soft material coating 2 bonded to the underside of top plate 1.

The top plate, rear plate, bottom plate, hinge and hinge plate are preferably made of metal for greater strength, particularly for use with heavier types of merchandise. However, for display of lighter types of merchandise these parts may be made of suitable plastics such as styrene. The clamp block is preferably made of wood but could likewise be made of metal or plastics such as styrene. If made of metal, the abutment walls which come in contact with articles of merchandise clamped in the display device of this invention should preferably be coated or bonded with a soft material such as felt to prevent scratch markings. Such soft-material coatings

5

may also be bonded to the respective abutment walls even though the clamp blocks are made of wood.

The particular forms of the invention described herein and illustrated in the accompanying drawings are preferred embodiments, and various changes in the size, shape, materials and arrangement of parts may be made without departing from the spirit of the invention or the scope of the attached claims.

Having thus set forth my invention, what I claim is:

1. A merchandise display unit, comprising clamp means for clamping the edge of an article of merchandise for display, said clamp means including a first plate, a second plate extending outwardly from said first plate normal thereto, a third plate extending outwardly from said first plate normal thereto and in spaced-apart substantially parallel relation to said second plate, a clamp block adapted for placement between said second and third plates, a recess in said clamp block, said recess being positioned in said clamp block for mounting thereof a fixed distance with respect to said first plate to clamp and hold therebetween a downwardly extending portion of an edge of an article of merchandise, holding means including adjustable means to narrow the space between said clamp block and one of said second and third plates to clamp and hold the surface portion of an edge of said article of merchandise between said clamp block and one of said second and third plates, and hinge means associated with said clamp means for mounting on a support member to enable hinged movement of said article of merchandise for illustrating and demonstrating parts thereof.

2. A merchandise display unit as set forth in claim 1, wherein said recess in said clamp block is a countersunk cavity positioned a predetermined fixed distance from said first plate for clamping association therewith when said clamp block is mounted for engagement with said holding means, and wherein said holding means includes a receivable member of peripheral configuration conforming to that of said countersunk cavity for snug reception therein to hold said clamp block against movement toward and away from said first plate.

3. A merchandise display unit as set forth in claim 1, wherein said clamp block is of L-shaped configuration having a horizontal leg and a vertical leg, the front end of said horizontal leg being in close proximity to said first plate when

6

mounted for clamping engagement, a first clamping surface provided by the top face of said horizontal leg for bearing against the bottom of said downwardly extending portion of an edge of an article of merchandise, a second clamping surface provided by the front face of said vertical leg for bearing against the adjacent side of said downwardly extending portion of an edge of an article of merchandise, and a third clamping surface provided by the top face of said vertical leg for bearing against the adjacent side of the surface portion of an edge of said article of merchandise.

4. A merchandise display unit as set forth in claim 1, wherein said recess in said clamp block is a longitudinal slot extending normal to said first plate when said clamp block is mounted for clamping engagement, and wherein said holding means includes a receivable member for reception in said longitudinal slot to permit slidable movement of said clamp block toward and away from said first plate, said receivable member being associated with said adjustable means to vary the space between said clamp block and said second and third plates, said clamp block thus being movable in longitudinal and latitudinal directions for clamping association with said first plate and with one of said second and third plates.

5. A merchandise display unit comprising clamp means for clamping an edge of an article of merchandise for display, said clamp means including a first plate, a second plate extending outwardly from said first plate normal thereto, a third plate hingedly associated with said first plate at a position spaced apart from said second plate and adapted to permit hinged movement of said third plate between a position where it is in substantially parallel relation to said second plate and a position away from said second plate until it is substantially normal to said second plate, a clamp block adjustably mounted on said third plate, detachable means to hold said hinged third plate in fixed substantially parallel relation with said second plate bringing said adjustably mounted clamp block on said hinged third plate into close proximity to said second plate, and adjustable holding means to position and hold said clamp block in a desired fixed position with relation to said first, second and third plates to clamp and hold between said plates and said clamp block an edge portion of an article of merchandise.

45

50

55

60

65

70

75