DISPLAY ASSEMBLY AND ELEMENT THEREFOR

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ABSTRACT

This invention is addressed to a display assembly and display elements therefor wherein a plurality of display elements defining recesses and slot means on opposing faces of the base portions thereof are stacked one on top of another to define a space receiving an item to be displayed which can be secured by a locking means adapted to maintain the display items in a stacked relationship.

26 Claims, 12 Drawing Figures
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DISPLAY ASSEMBLY AND ELEMENT THEREFOR

This invention relates to display devices, and more particularly to point-of-purchase display devices which are secure from pilferage or theft.

In the display and marketing of relatively small items, including, for example, tape recording cassettes and the like, prospective purchasers frequently seek to examine closely the merchandise in order to satisfy themselves that the merchandise meets their requirements. However, trays or the like containing such merchandise, while permitting close inspection and easy handling of the items, frequently result in theft and pilferage of the items by reason of the fact that the items can easily be concealed on the person.

Theft of such merchandise can be prevented by simply placing the items in a locked container, such as a locked display case. However, the solution to the problem is not always satisfactory because of the desire on the part of the purchaser to closely inspect the item.

Various point-of-purchase display devices are known to the art in which merchandise can be secured. However, such devices are frequently quite large and/ or complex, and cannot be individually varied in size to meet individual needs.

It is accordingly an object of the present invention to provide a display device which overcomes the foregoing disadvantages.

It is another object of the invention to provide a display device in which merchandise is secure from theft and which permits close visual inspection of the merchandise therein.

It is a further object of the invention to provide a display device in which use is made of a plurality of individual display elements to form a display assembly of the desired size and which requires a minimum of floor and/or counter space, and it is a related object of the invention to provide a display element for use in forming such assemblies.

These and other objects and advantages of the invention will appear hereinafter, and, for purposes of illustration, but not of limitation, an embodiment of the invention is shown in the accompanying drawings in which:

FIG. 1 is a view in elevation of a display device embodying the concepts of the present invention;

FIG. 2 is a side view of the assembly illustrated in FIG. 1;

FIG. 3 is a top view of the assembly illustrated in FIG. 1;

FIG. 4 is a perspective view of a display element of the type used in the display assembly illustrated in FIGS. 1 to 3;

FIG. 5 is a perspective view of the display element shown in FIG. 4 showing the base thereof;

FIG. 6 is a detailed sectional view of a portion of a display assembly of the type illustrated in FIGS. 1 to 3;

FIG. 7 is a sectional view taken along the line 7—7 of FIG. 6;

FIG. 8 is a sectional view taken along the line 8—8 of FIG. 6;

FIG. 9 is a sectional view taken along the line 9—9 in FIG. 6;

FIG. 10 is a sectional view taken along the line 10—10 in FIG. 6;

FIG. 11 is a perspective view of an item of merchandise suitable for use with the display assembly of the invention; and

FIG. 12 is a view of a base element which can be used in accordance with the concepts of the invention.

The concept of the present invention reside in a display assembly formed of a plurality of inverted T-shaped display elements which are stacked one on the other whereby the bases of the T-shaped elements are in a substantially parallel spaced relation. The upper and lower faces of the bases of the elements are provided with partitions defining recess means which serve to secure merchandise in the space between the element bases where the display elements are in a stacked relationship.

Thus, locking means can be provided to maintain the individual display elements of the display assembly in a stacked relation whereby the merchandise can be secured in the spaces between the bases of the elements while permitting close visual inspection of the merchandise. By reason of the stacking relationship of the display elements, the device of the present invention requires the use of a minimum of floor and/or counter space.

Referring now to the drawings, there is shown in FIG. 1 a display assembly embodying the concepts of the present invention. As shown, the assembly includes a plurality of stacked interfit display elements 10, 12 and 14, 110, 112 and 114, and 210, 220 and 240. As illustrated in this figure, the display assembly comprises three stacks of display elements. However, it will be understood by those skilled in the art that one or more stacks may be employed, depending upon the number of items to be employed. In addition, any number of display elements can be employed in forming each individual stack of the assembly.

The stacks of display elements are supported by means of rod members 16, 160 and 260 extending through the display elements which are mounted in a base 18 by suitable means, such as by set screws 20 as shown in FIG. 1. In the embodiment illustrated in this figure each stack also includes a base element 22, described more fully hereinafter, which enables the display elements to be rotated about support rod member 16.

Each display element in a stack has a generally inverted T-shaped configuration formed by a body portion 24 and a base portion 26. The upper end of body portion 24 is provided with a projection or portion of reduced cross section 28 which is adapted to be received into a corresponding recess in the center of the base portion 26 (not illustrated in this figure) in an interfitting relation. Each face of the base portion 26 of the display elements is provided with recess means adapted to receive one end of the items to be displayed 30 which are positioned in the spaces between the base portions 26 of the display elements when the latter are in a stacked relation.

Once the merchandise has been placed in position in the recess means of adjacent display elements, the portion 28 of the body of the display element is fitted into the corresponding recess in the base of the next adjacent display element above. The body of the display element is dimensioned such that the item to be displayed 30 cannot be removed from the recess means of the adjacent interfit display elements without displacing the upper display element upwardly and axially along the support rod member 16 out of the described interfitting relation. Thus, the display elements forming a stack or stacks of the display assembly are maintained in an interfitting relationship to secure the merchandise therebetween by suitable locking means 32 which serves to prevent axial movement of the display elements 10, 12 and 14 relative to each other and relative to rod member 16.

Any of a variety of locking means can be used in accordance with the practice of the invention. For example, as shown in FIG. 1, locking means 32 can be a bar having openings through which rod member 16, 160, 260, etc. may pass and which can be secured to the bar by means of lock screws 34. However, if desired, locking means 32 can be secured by means of a key-actuated locking mechanism.

Side and top views of the display assembly are illustrated in FIGS. 2 and 3. As can best be seen in these figures, the individual stacks of display elements, 10, 12 and 14, are rotatable about rod member 16 as indicated in FIG. 3 by means of designations 14', 140' and 240'. Thus, both sides of each stack of the display assembly can be easily inspected.

An individual display element which can be used to form the display assembly described with reference to FIGS. 1 to 3 is shown in detail in FIGS. 4 and 5 of the drawings. As shown the projection 28 of body 24 is preferably provided with a polygonal cross section, such as a rectangular cross section, which is adapted to be interfit in a corresponding recess 38 formed in the underside of the base portion 26 of an upper adjacent display element. The upper surface of projection 28 is provided with a central opening 42 through which rod member 16 may extend. Otherwise, the body 24 of the display element is preferably hollow, although use can be made of a display element in which the body portion is solid, but is pro-
vided with a central passage through which support rod 16 may extend when the display element is embodied in a display assembly of the type described.

When the display element is assembled into an interfitting relationship with another element, the depth of penetration of projection 28 of the one element into the recess 38 of the upper adjacent element can be controlled in a variety of ways. As shown in FIGS. 4 and 5, the inner surfaces of recess 38 can be provided with a plurality of rib elements 44 which about a shoulder 36 at the base of projection 28. Alternatively, recess 38 or shoulder 36 can be dimensioned such that the edges 46 of recess 38 abut shoulder 36 to limit the depth of penetration of projection 28 into recess 38.

As will be apparent to those skilled in the art, where projection 28 is formed with a polygonal cross section as described which is adapted to fit into a corresponding recess 38, the individual display elements in interfitting relation are incapable of being independently rotated about rod member 16 in relation to the other display elements in the same stack. However, if it is desired that the individual display elements forming a stack be independently rotatable, their projection 28, and the corresponding recess 38 can be formed with a circular cross section.

The base 26 of the display element of the invention is formed of upper faces 40 and 41 on either side of the body portion 24 and corresponding lower faces 48 and 50 on either side of the recess 38 on the underside of the upper faces. In accordance with the concepts of the invention, either the upper faces or the lower faces are each formed with at least one partitioned recess adapted to receive one end of the item 30 to be displayed, while the corresponding other face is provided with a partitioned slot portion.

As shown in FIG. 4, the upper faces 40 and 41 are each provided with a series of partitions 52, 54 and 56 and 58, 60 and 62, respectively, which serve to divide each face into two recesses have a cross section corresponding to the cross section of the items to be displayed 30 whereby the recesses on each upper face of the base portion 26 is adapted to receive a lower portion of the item to be displayed.

As shown in FIG. 5, the lower faces 48 and 50 of the base portion 26 is provided with partitions 72, 74, 76 and 78 which define two slots 80 and 82, and 84 and 86 on each side of the central recess 38 on faces 48 and 50, respectively. Slots 80, 82, 84 and 86 have cross sections corresponding to the cross sections of the recess formed on the opposite face, that is recesses 64, 66, 68 and 70, and are adapted to receive an upper portion of the item to be displayed 30 when the display element is in a stacked interfitting relationship with at least one other display element.

While the display element of the invention has been described above with each face being partitioned into two recesses or slots, it will be appreciated that the center partition dividing a recess or slot from the adjacent or slot on the same face can be omitted whereby each face is formed into a single recess or slot. This latter arrangement is particularly desirable when use is made of the assembly of the invention for the display of items in which both sides of the items should be made visible. In addition, use can be made of a display element formed with recesses and slots whose cross section is other than rectangular as illustrated in the drawing, such as square, triangular, circular as well as any other of a variety of geometric shapes which correspond to the cross sectional configuration of the item of merchandise to be displayed.

The interfitting of a pair of stack display elements 10 and 12 of the type illustrated in FIGS. 4 and 5 is shown in detail in FIGS. 6 to 10 of the drawings. In these figures, the display assembly is illustrated as containing two rectangular shaped merchandise items 30 having the configuration shown in FIG. 11.

As can be seen from these figures, projection 28 of display element 10 is interfitting into the corresponding central recess 38 in the base portion of display element 12. The depth of penetration of projection 28 into recess 38 is controlled whereby ribs 44 on the internal surfaces of the hollow body portion 24 of element 12 abut the shoulder 36 at the base of projection 28. The lower face 48 of the base portion of element 12 is thus maintained in a spaced parallel relationship with the upper face 40 of the base portion of element 10. These opposing faces are spaced by distance sufficient to permit the merchandise item 30 to be inserted therebetween, with the lower portion thereof being positioned in recess 64 defined by the base portion of element 10 and the upper portion being positioned in slot 80 defined by the base portion of element 12 on the underside thereof (FIG. 6). Thus, the elements are dimensioned such that the merchandise item 30 is secured between the opposing faces of elements 10 and 12 and cannot be removed unless the elements 10 and 12 are displaced relative to each other axially with respect to the rod member 16 extending centrally through the stacked assembly by a distance about equal to the depth of the recess 40. In this way, securing of merchandise is effected by locking elements 10 and 12 together to prevent axial displacement.

As is best shown in FIG. 8 of the drawing, both merchandise items 30 are aligned in a substantially parallel side-by-side relation whereby one side of each item is visible for display purposes. Thus, the upper portion of items 30 are position in slots 80 and 82 while the corresponding lower portions are secured in corresponding recesses 64 and 66, respectively.

FIGS. 6 to 8 also illustrate the details of base element 22, which is also shown in FIG. 12, and which can be used, if desired, in accordance with the assembly of the invention. As shown, this element includes a base plate 89 having a hollow projection 88 fixed thereto which has a cross sectional shape corresponding to the cross sectional shape of the central recess 38 of the display element and an opening 90 through the base plate 89 through which a rod member 16 may extend in forming a display assembly according to this invention. As is shown in FIGS. 6 to 8, the projection 88 can be interfitting into central recess 38 of the lower most display element 10 to raise the stack off base 18 to permit free rotational movement of the stack relative to base 18.

It will be apparent from the foregoing that I have provided a new and improved display element which can be used in forming a display assembly of any desired size, in which repeated use is made of a single type of display element and which serves to secure the merchandise from theft. The display element of the invention can be formed of any of a variety of materials, including plastics, sheet metal and the like, and can be used in a simple and efficient manner.

It will be understood that various changes and modifications can be made in the details of construction, assembly and use without departing from the spirit of the invention, especially as defined in the following claims.

I claim:

1. An inverted T-shaped display element suitable for use in a stacked display assembly comprising a body portion, said body portion terminating upwardly in a projection having a reduced cross section, and a base portion having upper and lower faces, said base portion defining a central recess on the undersurface thereof adapted to receive in interfitting relation the projection of another display element, and defining on one of the upper or lower faces recesses adapted to receive a portion of an item to be displayed and said base portions defining slots adapted to receive another portion of an item to be displayed on the other of said upper or lower faces, with the element being dimensioned such that an item to be displayed is adapted to be received in a space defined between the upper and lower faces of a pair of the elements in a stacked interfitting relation whereby the recess on one of the upper or lower faces of the element prevents removal of the item to be displayed from the space when the elements are interfitting.

2. An element as defined in claim 1 wherein the cross section of said projection corresponds to a transverse section of said central recess whereby the projection of one element is adapted to be interfitting in the central recess of another element.
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3. An element as defined in claim 2 wherein said projection and said central recess having corresponding polygonal cross sections.

4. An element as defined in claim 1 wherein said body portion is hollow.

5. An element as defined in claim 1 wherein the base of said projection on said body portion is formed with a shoulder.

6. An element as defined in claim 5 wherein the central recess includes means to abut said shoulder when said element is stacked to limit the penetration of said projection into said central recess.

7. An element as defined in claim 6 wherein said means includes a plurality of ribs formed on the internal surface of said central recess which abut the shoulder of an adjacent element when the element is in a stacked position.

8. An element as defined in claim 1 wherein the recesses and slots formed on the upper and lower faces of said base portion are formed by partition means fixed on the faces.

9. An element as defined in claim 1 wherein the body portion has two upper faces on either side of said body portion and two lower faces on either side of said central recess.

10. An element as defined in claim 9 wherein the body portion defines at least one recess on each upper face and at least one slot on the lower face.

11. An element as defined in claim 10 wherein each recess on the upper face corresponds to each slot on the lower face.

12. A display assembly comprising at least one stack of a plurality of inverted T-shaped display elements, each of said elements comprising a body portion terminating at one end in a projection having a reduced cross section and a base portion having upper and lower faces, said base portion defining a central recess on the underside, which receives the projection of an adjacent lower element, and defining on one of the upper or lower faces, recesses adapted to receive a portion of an item to be displayed and on the other of the upper or lower faces, slots adapted to receive another portion of an item to be displayed, said projection of each of said elements being interfitted into the central recess of the adjacent element in said stack whereby the opposing faces of adjacent elements define a space dimensioned to secure the item to be displayed in said recesses and slots therebetween, and means maintaining said elements in a stacked, interfitted relationship.

13. A display assembly as defined in claim 12 which includes a rod member extending through said stack.

14. A display assembly as defined in claim 13 wherein said means includes locking means on said rod member.

15. A display assembly as defined in claim 12 wherein the cross section of said projection corresponds to the cross section of said central recess to prevent rotation of one of said elements relative to said stack.

16. A display assembly as defined in claim 15 wherein the cross section of said projection corresponds to the cross section of said central recess whereby the projection of one element is adapted to be interfitted in the central recess of another element.

17. A display assembly as defined in claim 12 wherein said body portion is hollow.

18. A display assembly as defined in claim 12 wherein the base of said projection on said body portion is formed with a shoulder.

19. A display assembly as defined in claim 18 wherein the central recess includes means abutting said shoulder of an adjacent lower element in said stack to maintain the opposing faces in a spaced relation.

20. A display assembly as defined in claim 19 wherein said means includes a plurality of ribs formed on the internal surface of said central recess which abut the shoulder of an adjacent element.

21. A display assembly as defined in claim 12 wherein the recesses and slots formed on the upper and lower faces of said base portion are formed by partition means fixed on the faces.

22. A display assembly as defined in claim 12 wherein the body portion has two upper faces on either side of said body portion and two lower faces on either side of said central recess.

23. A display assembly as defined in claim 22 wherein the body portion defines at least one recess on each upper face and at least one slot on the lower face.

24. A display assembly as defined in claim 23 wherein each recess on the upper face corresponds to each slot on the lower face.

25. A display assembly as defined in claim 13 which includes a base member supporting said rod member, and a top member locked to said bar to prevent axial displacement of said elements relative to each other.

26. A display assembly as defined in claim 25 which includes a base member having a projection fitted in the central recess of the lowermost element to permit rotation of said stack relative to said rod member.

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