Dec. 16, 1969 H. A. MURRAY 3,483,742

COLLAPSIBLE CARD DISPLAY DEVICE

Filed Jan. 2, 1968 2 Sheets-Sheet 1

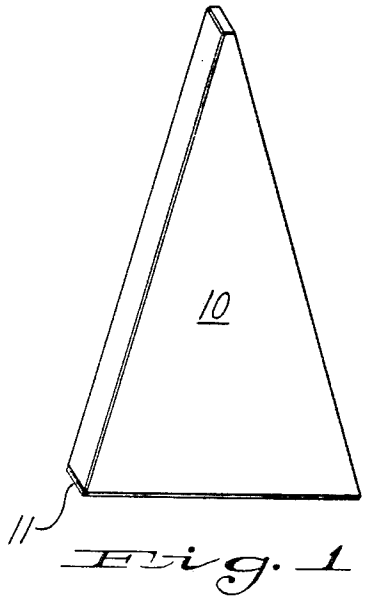

Fig. 1

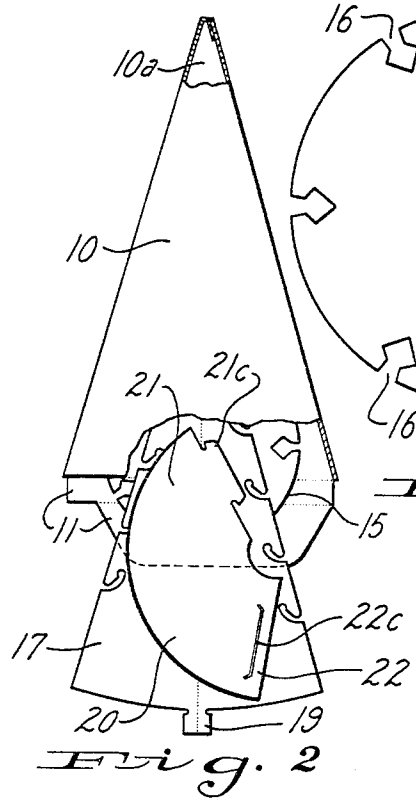

Fig. 2

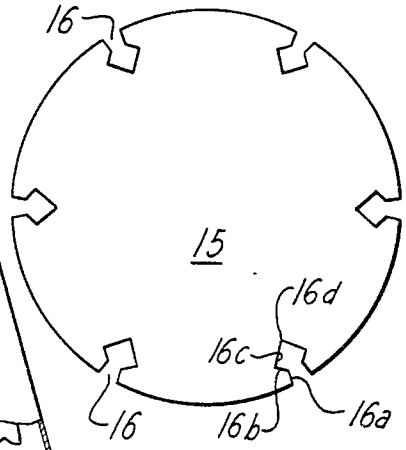

Fig. 3

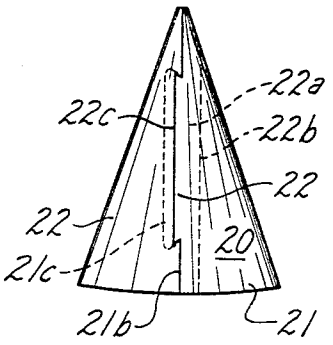

Fig. 5

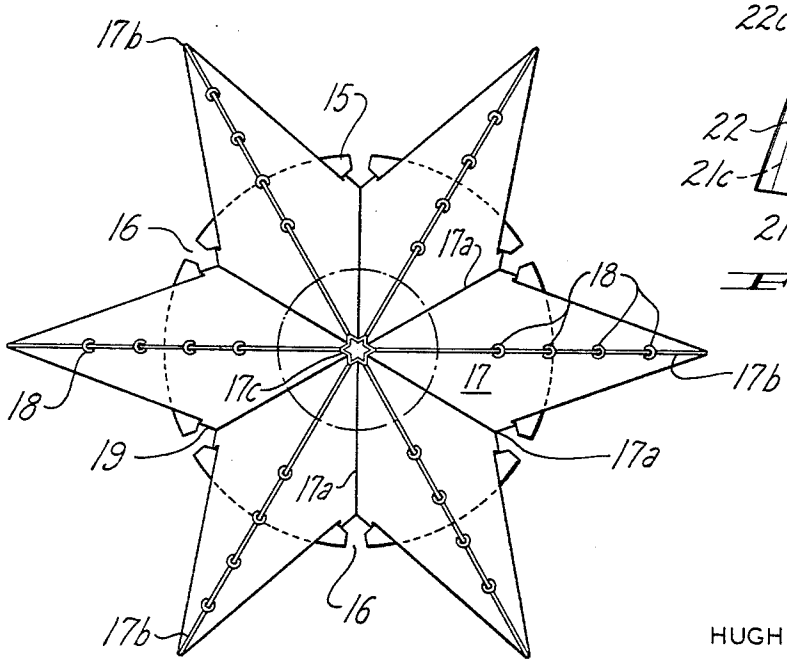

Fig. 4

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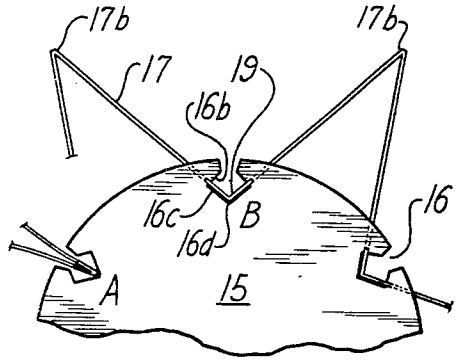

Fig. 7

Fig. 6

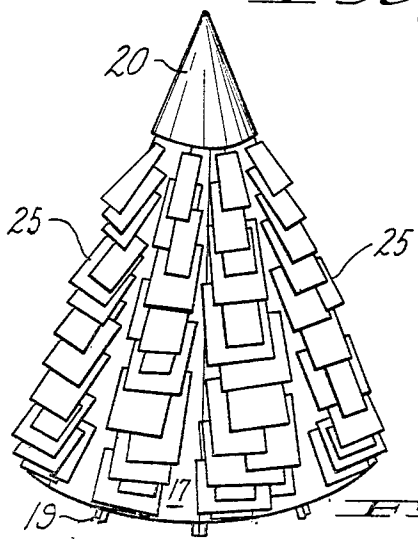

Fig. 8

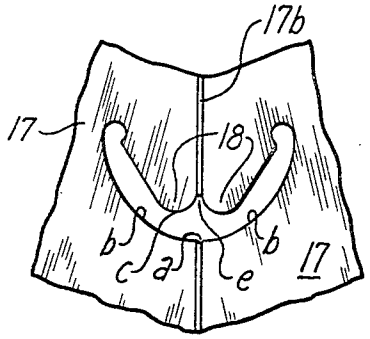

Fig. 6A

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COLLAPSIBLE CARD DISPLAY DEVICE

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U.S. 40—124.4 13 Claims

ABSTRACT OF THE DISCLOSURE

A greeting card tree display device having parts to be assembled is constructed from a suitable material such as cardboard. The parts are stored and shipped in a flat disassembled relation within a protective envelope or box; they are constructed for quick and easy assembly by the purchaser to provide an upright coniferous type of tree which has a main body or upright display part provided with peripherally alternative valley and ridge angular fold joints extending vertically from adjacent its base to its top or apex to, for example, provide an upwardly-converging hexagonal shape. The ridge folds are provided with vertically spaced slot tabs along their lengths that are especially constructed to receive cards, such as greeting cards, therein in a securely held or clamped, downwardly-projecting relation to, in effect, provide flaps for the tree. The tree is also shown as having an interlatching disc-like base part which supports the vertical main body part in an expanded relation, and which utilizes downwardly-extending fold legs to support the tree in its upright position. A third piece or part in the shape of a flat segment or sector of a circle, when folded, provides a top cone or cap to fit over the apex of the main body part of the display device.

This invention relates to an upright display device for removably-receiving and securely holding cards and the like and particularly, to a greeting card tree that may be used during the holiday season for displaying cards in a downward-projecting and securely-supported relation.

There has been a need for a pleasing type of appropriate simulated tree assemblage which may serve as a holiday decoration, but will also serve the practical purpose of storing and displaying greeting cards. The tree-like device should be capable of being packaged in a collapsed, relatively flat relation and, at the same time, be capable of assembly into a sturdy, balanced and non-tipping construction. Aside from a practical method of supporting and holding the tree body in a stable upright position, a problem was encountered in providing slot tabs in the body which would securely retain the cards in a displayed relationship and, at the same time, permit them to be easily manually inserted and removed.

It has thus been an object of my invention to devise a new and improved display device or construction, such as an artificial Xmas or coniferous tree, that will meet the various factors involved and solve problems heretofore encountered.

Another object of my invention has been to devise a card holding slot tab in an outwardly projecting or ridge fold joint of an upright display device which will permit easy manual insertion and removal of a card or a group of cards and which will, at the same time, in absence of such manual operation, securely retain cards in position along edge portions thereof and prevent their falling out.

A further object of the invention has been to provide a packaged artificial coniferous tree construction which may be easily assembled and disassembled and which, in an assembled relation, will be stable and capable of supporting a large number of greeting cards in an appropriate and pleasingly displayed relation thereon.

These and other objects of the invention will appear to those skilled in the art from the illustrated embodiment and the claims.

In the drawings, FIG. 1 is an isometric top view showing a display device constructed in accordance with the invention in a flat, packaged relation.

FIG. 2 is a top plan view on the scale of FIG. 1 and partially in section, illustrating a step in removing or inserting a group of parts of the display device in a flattened relation and with respect to their shipping or storing box or container.

FIG. 3 is an enlarged plan view illustrating a bottom or base, disc-like part of the assembly.

FIG. 4 is a top plan view on the scale of FIG. 3 showing a main body part of the assembly in an expanded and mounted relation with respect to the bottom or base part of FIG. 3.

FIG. 5 is a vertical view in elevation on the scale of FIGS. 3 and 4 showing a third or cone-shaped cap or upper end part of the display construction or device as formed by interlatching adjacent vertical edges of the flat segment shown in FIG. 2.

FIG. 6 is a side view in elevation on the scale of FIGS. 3 to 5, inclusive, showing the construction as fully assembled and having one of its slot tabs supporting a pair of cards therein.

FIG. 6A is an enlarged fragmental view along the line 6A—6A of FIG. 6 showing details of the construction of the slot tabs.

FIG. 7 is a fragmental bottom plan view on the scale of FIGS. 3 to 6, showing how the body part is inserted and latched with respect to the base or bottom part.

And, FIG. 8 is a reduced view in vertical elevation showing a complete tree-like display device as assembled and used to carry or support a large number of greeting cards.

Referring to FIGURES 1 and 2 of the drawings, **10** is a triangularly-shaped packing, storage and shipping container or box for the parts of the display device. For introducing and removing the parts when they are in a collapsed or flattened shape, an open base end of the container **10** is provided with an end flap **11** that is adapted to be folded therein to close it off. The container or box **10**, as shown in FIGURE 2, defines a hollow chamber or compartment **10***a* within which flat base or bottom part **15** of disc-like shape, body part **17** and cap or upper end part **20** are adapted to be slid in and out in a flat relationship. When the parts are to be assembled, they are withdrawn, as shown in FIGURE 2, from the end of the container **10** after its flap **11** has been pulled outwardly.

The body part **17** that, in its flattened condition is of a triangular-like shape with three flat layers or plys (when provided, as shown with six ridge and six valley folds), may then be expanded outwardly into the general cone-like hollow shape shown in FIGURE 4 and held in an upside-down relation. At this time, the base part **15** may be mounted in position, as shown particularly in FIGURES 4, 6 and 7. This is done by first inserting support legs **19** within an associated latching slot portion **16** of the base part **15**. Each leg **19** has a pair of side or flap portions and extends downwardly from an associated inner, root or valley fold **17***a* of the main body part **17**.

As shown particularly in FIGURE 3, the base part **15** has a group of peripherally-open and spaced-apart latching slot portions **16** which correspond in number to the number of inner, root or valley folds **17***a* of the body **17**. Each latching slot portion **16** has a pair of spaced-

apart slightly inwardly-converging and outwardly-open opposed entry edges **16***a*, and opposed, inner, angular-shaped edges **16***b* and **16***c* which form an inner triangular shape having a connecting apex **16***d*. Since each leg or foot **19** is an extension of a valley fold **17***a* of the body part **17**, it is of angular shape when expanded and may be inserted, as at position A of FIGURE 7, within a corresponding slot portion **16** while in a folded relation. As indicated at B of the same figure, each leg **19** is then expanded or folded outwardly in an angular relation to closely-interlatch within the associated latching slot portion **16** in engagement wtih the angle-shaped edges **16***b* and **16***c* and the apex **16***d*.

It is thus seen that the two parts **15** and **17** are securely locked together in an assembled relation by reason of the angle shape or fold of the legs **19** and complementary angular shape of the slotted latching portions **16**. The expanded relation of each leg **19**, as indicated at position B in FIGURE 7, represents the assembled relationship between the parts **15** and **17** of FIGURES 4 and 6. The folded or angular shape of the legs **19** give them rigidity and strength in extending below the base part **15** to support the tree-like display assembly and particularly, in their locked relationship within complementary edges of the slot portions **16** of the bottom part **15**.

Cone-shaped cap or upper end part **20** is cut out, as shown in FIGURE 2, as a segment or sector of a circle. As shown in FIGURE 5, it is then folded in the shape of a cone to provide a fitting that may, as shown in FIGURES 6 and 8, be placed over the upwardly-converging top or apex portion of the body part **17**. Referring particularly to FIGURES 2 and 5, the cap part **20** has two opposed flaps **21** and **22**. The flap **21** has a tongue-like latching tab **21***c* that is adapted to enter and flexibly-latch within a slit or slotted portion **22***c* of the opposed flap **22**. FIGURE 5 illustrates the assembled relation wherein the tongue or tab **21***c* extends inwardly within the cone, an edge of the slotted portion **22***c* is exposed, edge **21***b* of the flap **21** is partially exposed up to the point of engagement of the tab **21***c* within the slotted portion **22***c*, and edge **22***b* of the flap **22** is within the assembled cone shape.

An important phase of the invention, in addition to the provision of a secure and stable assembly as accomplished by parts **15** and **17**, rests in the construction of latching slot tabs **18** which are formed or provided in a spaced relation along and are open to outer, tooth or ridge fold joint portions **17***b* of the body part **17**. As shown particularly in FIGURES 6 and 6A, each slot tab **18** is defined by a slot construction having a bottom entry edge *a* that defines an open entry slot or mouth with a top entry edge *e* and that extends from the front edge of the associated fold joint **17***b*. Each of a pair of concave bottom edges *b* extends from the edge *a*, along an associated one of a pair of opposed side or flap portions of the fold joint, and terminates in an inner apex from which one of a pair of convex top edges *c* extends forwardly. Each of the top edges *c* terminates forwardly in one of a pair of pivot shoulders *d* adjacent and connected to the top entry edge *e*.

It will thus appear that the slot construction of each slot tab **18** provides an open entry mouth through which a greeting card **25** may be introduced and removed. As shown particularly in FIGURE 6, the card **25** of a group thereof is secured in position by three-way supporting contacts represented by entry edge *a*, an intermediate point *b'* on the concave bottom edge *b*, and shoulder *d*. This amounts to a five point contact, taking into consideration the fact that *b'* and *d* are located on a pair of spaced-apart opposed side or flap portions that define an angle from the front connecting edge of fold joint **17***b*. The shoulder *d* of each opposed side portion is of rounded shape and restricts the opening adjacent the entry mouth of the slot tab **18**.

It thus appears that the support of a card or cards **25** is accomplished by a three point pivotal support as to one side portion of the pair that define each fold joint **17***b*, and by a five point contact from the standpoint of both side portions of the same pair. It will be seen that the amount of downward projection of the shoulders *d* will govern the angle at which a card **25** is supported to slope downwardly from the vertical or upright body part **17**. The weight of the card **25** serves to cooperate with the portions *a*, *b'* and *d* to securely retain it in position within slot tab **18** until it is manually lifted upwardly at its front end, at which time it can be easily pulled out from the slot tab **18**. In inserting the edge portion of a card **25** it, of course, will be tilted upwardly and then manually tilted downwardly. The construction of the tab **18** is such that the downwardly tilted card **25** uses gravity to further the holding or latching operation and thus, resists removal through the agency of its forwardly-balanced weight.

Although the body part **17** may be made with any suitable number of inner or valley fold joints **17***a* and outer or ridge fold joints **17***b*, the illustrated embodiment is shown provided with six, as a suitable representative number. Six angle-shaped feet **19** represent extensions of the valley folds **17***a* and provide a balanced support for the tree assembly. Further, as shown in FIGURE 6, the latching slot tabs **18** along one ridge fold **17***b* may have a different vertical positioning than or staggered relation with those along adjacent or next succeeding ridge folds. This minimizes any interference between cards as mounted in the respective folds. The upward convergence of the body **17** which may be ornamented or colored to represent a coniferous tree, also facilitates the mounting or receiving of smaller cards **25** adjacent the upper end thereof and larger size cards adjacent the lower or bottom end thereof.

Although an embodiment of the invention has been shown and described, it will be apparent to those skilled in the art that various modifications, additions and subtractions may be made and that the latching slot tab construction may be used in various fields for holding cards and the like in a manually removable but secure, downwardly-suspended relation, all without departing from the spirit and scope of the invention as indicated by the claims.

I claim:

1. An upright display device for removably receiving and supporting a card to project downwardly therefrom which comprises, an upright body having a pair of outwardly and vertically projecting side portions in a spaced and outwardly connected relation to define a fold joint; at least one slot tab in said fold joint defined by opposed and similar slots in said side portions and providing an open card entry mouth immediately at the fold joint, each side portion having an upwardly-concave bottom edge in alignment with the bottom edge of the other side portion, and a downwardly-convex top edge in alignment with the top edge of the other side portion and connected to the upper end of the concave edge of its own side portion; each said convex edge having an opening-restricting rounded shoulder adjacent said entry mouth and open in a widened relation into said mouth; a front fold joint edge of said concave edges, an intermediate edge portion of each of said concave bottom edges, and said shoulder defining opposed grip contacts for a card inserted edgewise into the slots of said fold joint.

2. A display device for removably receiving and supporting cards to project downwardly therefrom that utilizes separate parts for assembly into an upright construction comprising, a body part for upright mounting having a plurality of peripherally spaced-apart and longitudinally extending folds, said folds defining alternate valley and ridge fold joints that enable said body part to be folded into a flat shape for packing and to be expanded into a hollow upwardly-converging cone shape, a base part of

flat disc-like shape having a group of latching slot portions in a spaced relation about its periphery, a group of peripherally spaced-apart legs projecting from a bottom end of said body part and adapted to removably latch-engage within said latching slot portions of said base part and extend below said base part to maintain said body in an expanded shape and to position said body part in an upright assembled relation with said base part, and longitudinally spaced-apart slot tabs along said ridge fold joints adapted to receive and removably-hold cards therein when said body and base parts are in an assembled relation with each other.

3. A display device as defined in claim 2 wherein said legs extend from and correspond in a number to said valley fold joints.

4. A display device as defined in claim 3 wherein each of said legs has a pair of portions that are foldable inwardly into a flat relation with each other for inserting them within an associated latching slot portion and that are foldable outwardly into an expanded angular relation with each other to latch-engage within the associated latching slot portion.

5. A display device as defined in claim 2 wherein slot tabs along one of said ridge fold joints has a staggered relation with respect to slot tabs along next adjacent ridge fold joints.

6. A display device as defined in claim 2 wherein, a third part in the shape of a sector of a circle is provided and has a pair of flaps for cooperating with each other to fold it into a cone-shape, one of said flaps has a projecting latching tab and the other of said flaps has a slot therein to receive and latch-engage with said tab to hold said third part in a cone-shaped assembled relation, whereby it may be placed on a top end of said body part when said part is assembled with respect to said base part.

7. An upright display device as defined in claim 2 wherein said body part has six valley fold joints and six ridge fold joints and is foldable in the form of three layers into a triangular-like flat shape and is expandable outwardly into a coniferous tree-like shape.

8. A display device as defined in claim 2 wherein, each of said latching slot portions of said base part has a pair of opposed entry edges open to and extending with a slight convergence inwardly from the outer peripheral edge of said base part, each of said latching slot portions has two pairs of opposed angular-shaped edges that meet at an apex within said base part and that extend from said pair of entry edges, and an associated leg is adapted to fit within and engage said pairs of angular-shaped edges beyond said pair of entry edges.

9. A display device as defined in claim 2 wherein each of said slot tabs is defined by a slot construction having opposed top and bottom entry edges extending from a front edge of the associated fold joint, having a pair of concave bottom edges extending from said bottom entry edge along a pair of opposed side portions of the fold joint and terminating in an inner apex, and having an opposed pair of convex top edges extending along said pair of opposed side portions from said apex and terminating in a pair of shoulders adjacent said top entry edge.

10. A display device as defined in claim 9 wherein said slot construction of each of said slot tabs defines a three-point pivot support for an edge portion of a card inserted therein as represented by said shoulders, said bottom entry edge, and an intermediate portion of said convex edges.

11. A display device as defined in claim 8 wherein each of said slot tabs is defined by a slot construction having an entry portion extending from a front edge of the associated fold joint, having concave bottom edge portions extending from said entry portion and terminating in an apex, and having convex top edge portions extending from said apex and terminating in shoulder portions adjacent said entry portion.

12. An upright tree-like display device marketing assembly comprising, a triangular-shaped hollow box having a flap-closed-off open end base portion to receive flat-positioned tree parts therein, a triangularly-shaped body part of coniferous tree-like shape when expanded, said body part having a group of longitudinally-extending peripherally-spaced-apart inner and outer folds enabling it to be expanded into a cone-shaped upwardly-converging tree-like shape and to be collapsed into a flat three-ply shape for insertion into said hollow box, said body part having a series of longitudinally spaced-apart slot tabs along each of its said outer folds for receiving edge portions of greeting cards therein for suspension therefrom, each of said slot tabs having means providing at least three spaced-apart point contacts with the edge portion of an associated card to securely retain the card in position there-within to project downwardly therefrom, a plurality of legs projecting downwardly from said inner folds, each of said legs having a pair of side portions adapted to be folded flat upon each other and to be folded outwardly into an angular relation with each other, a relatively flat bottom base part having a group of peripherally-spaced-apart angular-shaped latching slots therein to receive said legs when said side portions are in a substantially flat relation and to latch engage therewith when said side portions are folded outwardly into an angular relation for holding said body part in its expanded shape, and said legs when mounted within said latching slots extending below said base part to provide supporting legs for the assembly.

13. A display marketing assembly as defined in claim 11 wherein, a top end part of circular sector shape is also adapted to be inserted within said box and has a pair of latching slide flaps for assembling it in a cone-shaped hollow assembly to fit on the upper end portion of said body part when it is in its expanded shape.

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