

[54] **DISPLAY DEVICE**

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 312/216

[51] **Int. Cl.**..... **A47f 5/12, E05b 73/00**

[58] **Field of Search**..... **211/168, 169, 4,**  
**211/7; 40/104.17, 104.2, 102, 72, 1; 312/216,**  
**123, 120, 117, 118, 136, 287, 283, 218, 217,**  
**197, 9**

[56]

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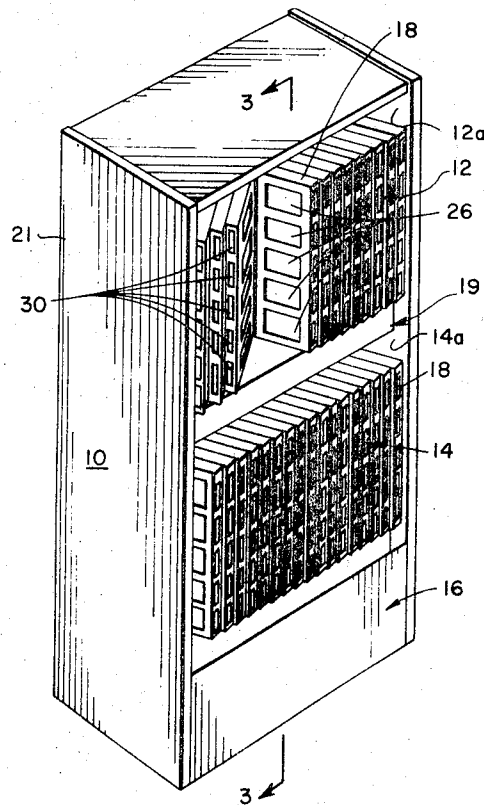
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[57]

**ABSTRACT**

A display device for displaying merchandise such as a selection of prerecorded tape cartridges and cassettes, having a housing with a plurality of vertically pivotal holders in which tape cassettes, cartridges and similar merchandise can be displayed so that the information printed in the exterior of the merchandise can be viewed by the customers through openings provided in the holder. These holders are so designed that the merchandise can be placed in or removed from the holders by authorized personnel through the rear or interior of the housing, yet customers are prevented from removing the merchandise from the holders from the exterior or front of the housing.

**14 Claims, 5 Drawing Figures**



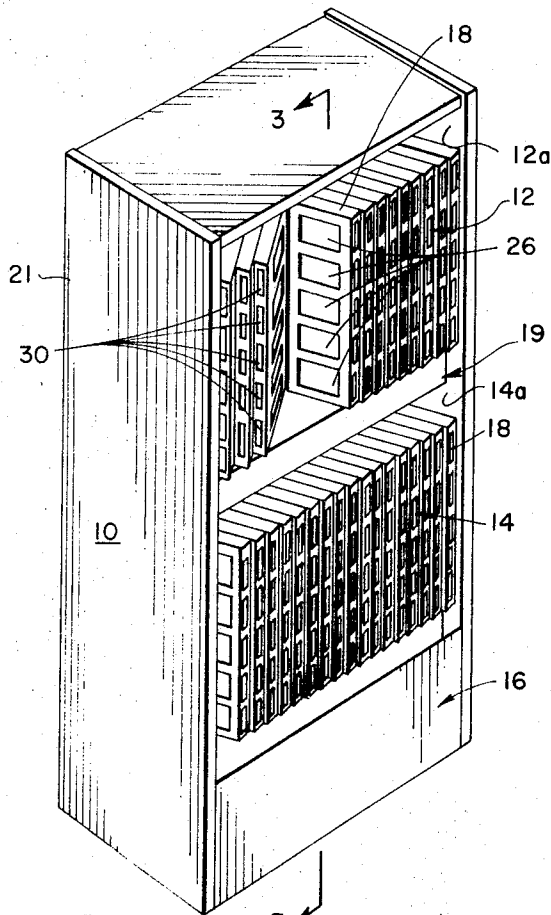


FIG. 1

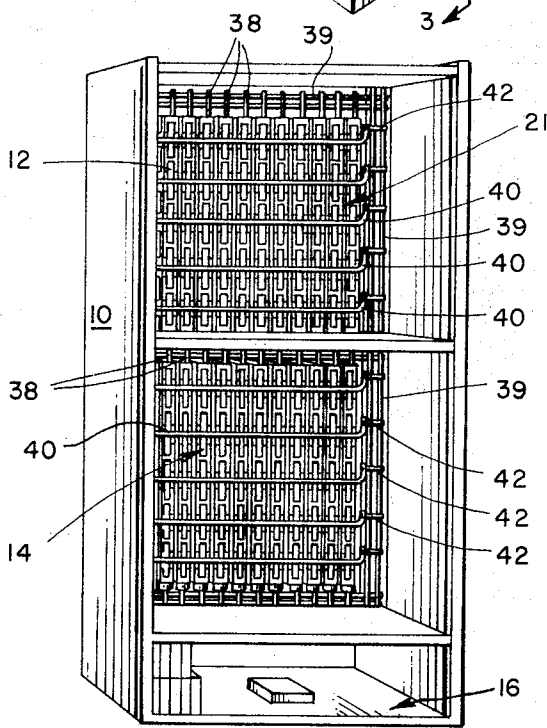


FIG. 2

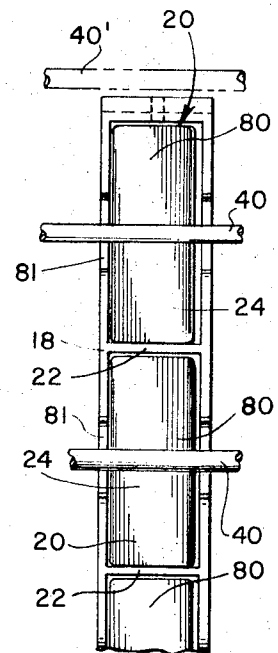


FIG. 5

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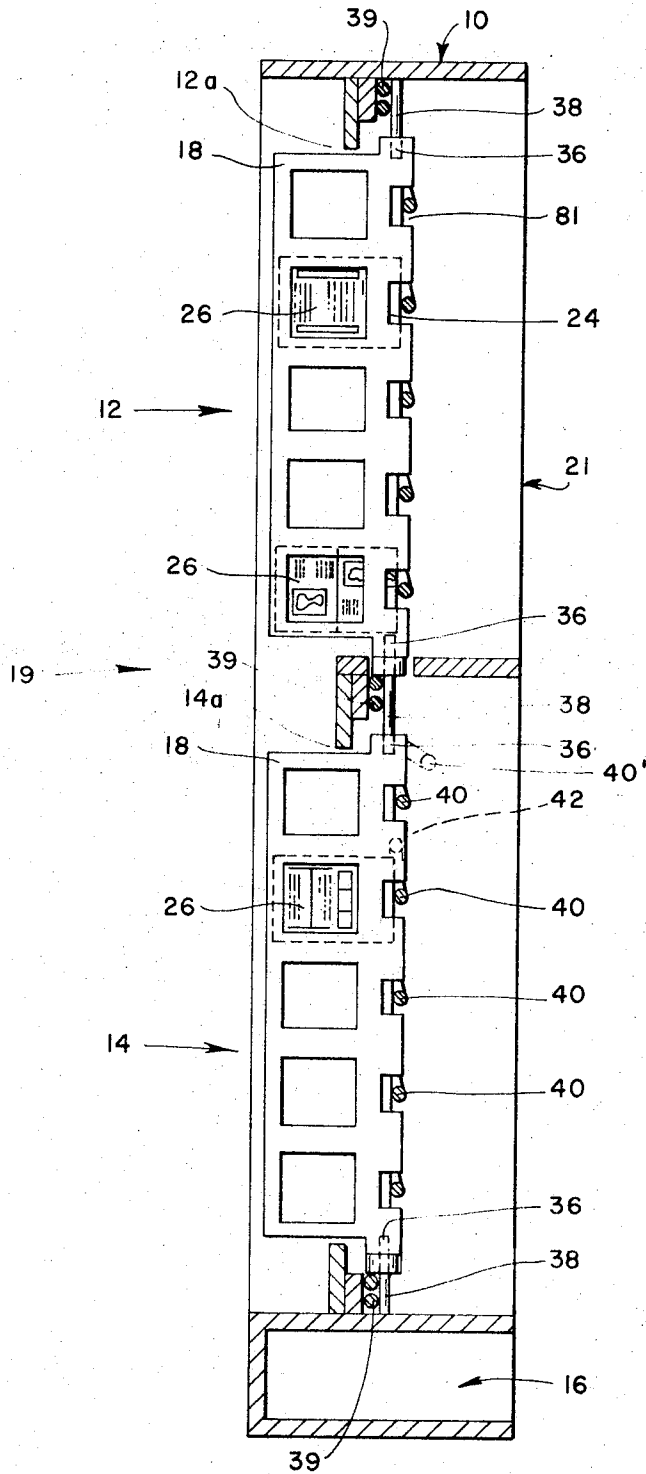


FIG. 3

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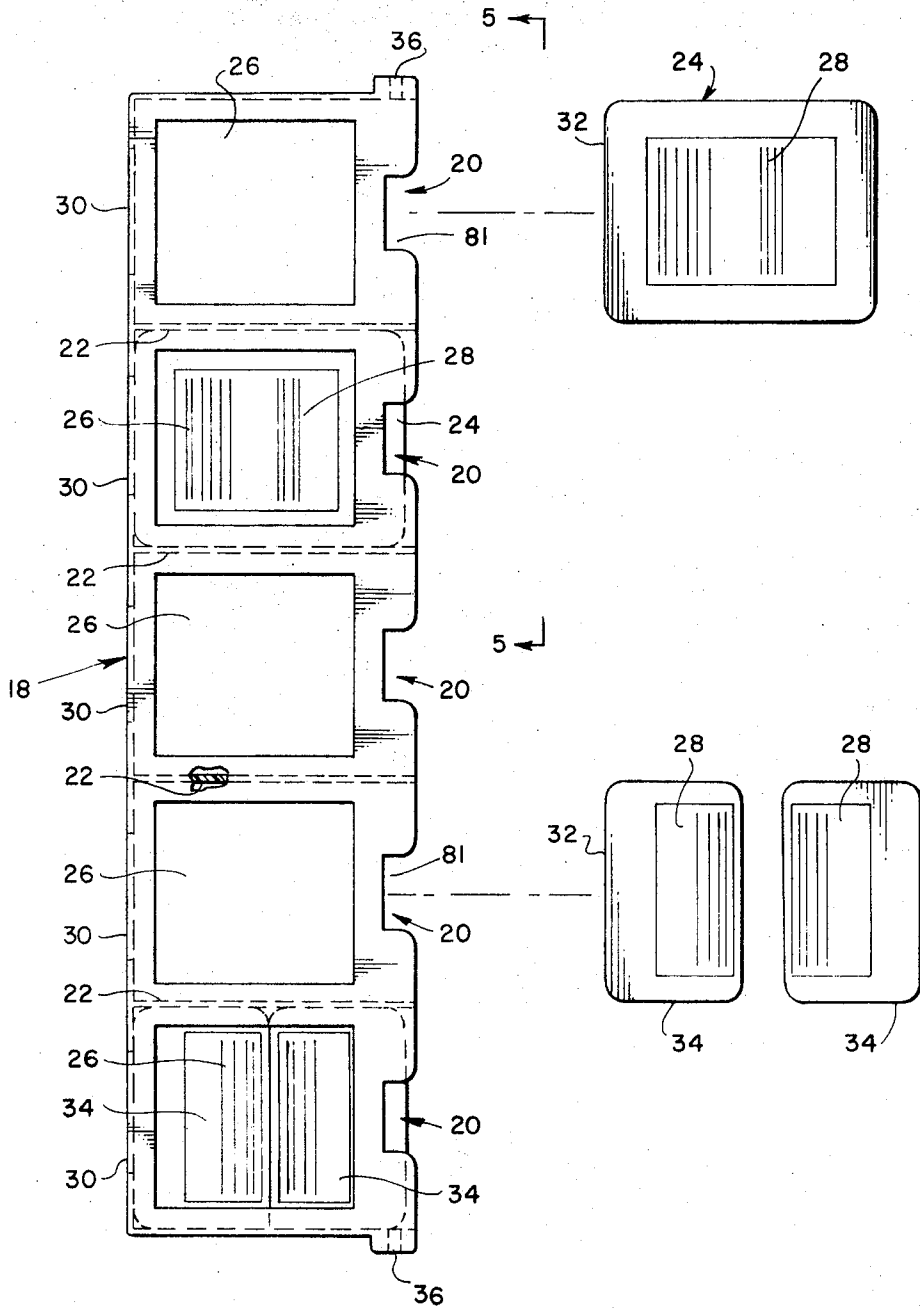


FIG. 4

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DISPLAY DEVICE

BACKGROUND AND SUMMARY OF THE  
INVENTION

The present invention relates to display devices and the like for displaying and holding merchandise, and more particularly to a display device which displays and holds recorded tape cartridges and cassettes so that they may be viewed and examined by customers while unauthorized removal of the merchandise from the display is prevented.

Those concerned with the retail marketing of merchandise which is small and easy to conceal have long been concerned with the problem of shoplifting of the merchandise. This problem is especially present in the retail sales of recorded tape cartridges and cassettes because of their small size and relatively high value, and the necessity that this merchandise be so displayed to enable the customer to view and examine the information printed on the exterior of the cartridges or cassettes pertaining to the selections which are recorded thereon. To meet this display requirement, it has been a common practice to place cartridges and cassettes in unattended display racks for the purpose of providing an adequate supply and selection of the merchandise which may be readily examined by the customers. These unattended display racks thus serve as an open invitation to the shoplifter to pilfer their contents.

It is therefore desirable to provide a display device for merchandise, particularly tape cartridges and cassettes, which will allow the consumer to readily view the item, yet prevents pilferage and other unauthorized removal of the merchandise. It is also desirable that the display device be so designed that loading and unloading of the merchandise by authorized personnel is quick and easy, thus minimizing the labor involved therein.

It is therefore an object of the present invention to provide an improved display device wherein merchandise can be viewed and examined yet cannot be removed by the customer without the assistance of authorized store personnel.

Another object of the present invention is to provide an improved display device for tape cartridges and cassettes.

A further object of the present invention is to provide a display device which permits visual inspection of tape cartridges and cassettes contained therein.

Still another object of the present invention is to provide a display device which is simple and quick to load and unload by authorized personnel.

Still another object of the present invention is to provide a display device which is simple and inexpensive to manufacture and utilize.

Still a further object is to provide a display device which occupies a minimum amount of floor space.

Other objects and many of the attendant advantages of the invention will be readily appreciated by those of ordinary skill in the art as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, in which:

FIG. 1 is a front perspective view of a preferred embodiment of the display device of the present invention;

FIG. 2 is a rear perspective view of the apparatus shown in FIG. 1;

FIG. 3 shows a section of the device taken on line

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3-3 of FIG. 1 looking in the direction of the arrows;

FIG. 4 is an enlarged detail side elevation view of an embodiment of the holder utilized with the display device of the present invention; and

FIG. 5 is a rear view of the holder illustrated in FIG. 4 shown installed in the display device.

DESCRIPTION

Referring now to the drawings, wherein like reference characters designate like or corresponding parts throughout the several views, there is shown in FIG. 1, 2 and 3 a display device 10 which can be utilized for displaying and holding merchandise and is shown in the present embodiment as holding a plurality of recorded tape cartridges and cassettes.

The terms "tape cartridges" and "cassettes" are used herein in a generic sense and are not intended as a geometrical limitation on the shape of the merchandise, which can be stored and displayed in the display device 10 as described in accordance with the present invention.

The display device 10 is shown for purposes of illustration as having a parallelepiped shape and being divided into three separate vertical sections; an upper and middle section 12 and 14, respectively, comprising the display portion with a lower section 16 providing a storage portion. It is believed apparent that the display device 10 could be constructed in shapes other than the shape utilized for purposes of illustration without departing from the spirit and scope of the invention as described herein. It is also believed apparent that since the upper and middle portions 12 and 14 respectively are substantially identical in structure and shape, that a display device could be constructed with more or less display portions being utilized as required by each particular application.

The upper and middle portions 12 and 14 each have a plurality of holders 18 mounted in openings 12a and 14a respectively. These openings extend completely through the device 10 and are provided with means to mount the holders to pivot on a vertical axis as will be hereinafter described. In the present embodiment, these holders are designed to display tape cartridges and cassettes, while preventing removal of the cartridges and cassettes from the front side 19 of the display device 10. The holders are also designed, as will be hereinafter described in detail, to allow easy access to the cartridges and cassettes from the rear side 21 as illustrated in FIG. 2. This easy removal allows the cartridges and cassettes to be placed in the display device 10 by a store clerk or other employee and thereafter left unattended in the display device with the customer only having access to the front side 19 as shown in FIG. 1, thus preventing unauthorized removal of the cartridges and cassettes.

The lower storage section 16 can be seen in FIG. 2 as providing an area in which tapes and cartridges or other merchandise can be temporarily stored when the holders 18 in sections 12 and 14 are filled. This lower storage section 16 is designed in such a manner that the cartridges and cassettes can only be removed from this portion from the rear side 21. It is also anticipated that a door or other suitable closure could be placed across the storage portion 16 with a suitable lock.

Turning in particular to FIGS. 2-5, the construction of the holders 18 and their mounting and assembly in the display device 10 will be described in detail. The

holders 18 could be constructed from wood, metal, or as is described in the present embodiment, molded or otherwise formed from a plastic material. Each holder 18 is divided into five separate compartments 20 by a plurality of transverse walls 22, each compartment 20 having a rear opening 80 and being of a size to respectively receive a tape cartridge 24 or a pair of cassettes 34 (as shown in FIG. 4). Each compartment 20 is provided with two side viewing windows 26 and a front end viewing window 30 (FIG. 1) through which the information printed on the sides 28 and end 32 of the tape cartridge or cassette can be viewed from the front 19 of the display device 10. These viewing windows 26 and 30 allow the customer to examine the merchandise from the front side 19 of the display device 10 and read the pertinent information thereon. Although these viewing windows 26 and 30 allow the customer to examine the exterior of the cartridge, they are of such a size that the cartridge 24 or cassette 34 cannot be removed from the holders 18 through said openings, thus preventing unauthorized removal from the front of the display device 10. Each of the rear openings 80 of the compartments 20 is provided with notches 81 which allow for ease in grasping the cartridges and cassettes located in the compartments. It is envisioned that the holders themselves could be entirely molded from transparent material, thus providing the necessary viewing function without the need for separate windows therein, or one or more of the windows 26 and 30 may be covered with transparent material to prevent removal of smaller articles therethrough.

By constructing the holders 18 in this manner, both cassettes and tape cartridges can be easily and conveniently displayed therein. It should be apparent, at this point, that other types of merchandise could be displayed in the display device 10 in accordance with the principles of the present invention, by simply changing the size and shape of the holders 18 and the compartments 20 so that the merchandise may be easily stored therein. It is also obvious to one of ordinary skill in the art that the compartments 20 could be readily designed for displaying magnetic tapes which are not of the cassette or cartridge type by simply changing the size of the compartments 20.

Each of the holders 18 is disposed with respect to the housing of the display device 10 so as to be respectively pivotally mounted within the openings 12a and 14a passing through the housing. To effect this mounting, each of the holders is provided with a bore 36 at both ends thereof of a size to receive a pair of vertically extending shafts 38 secured to the housing of the device 10. These shafts 38, which are provided as aligned pairs corresponding in number to the number of holders 18, can be individually attached to the framework of the housing of the display device 10, or as illustrated in the drawings, formed as a portion of a rigid framework 39 which is preformed and attached to the display device 10. As illustrated, the framework 39 and shafts 38 are welded together in a fixture which prealigns each of the shafts 38 in accordance with the desirable spacing. Alternatively, it is envisioned that the shafts or extensions 38 could be integrally molded or affixed to the holders 18 and be received in corresponding bores in the horizontally extending portions defining the openings 12a and 14a in the housing of the display device 10 itself.

As a particular feature, retaining means can be provided in the rear portion of the display device to pre-

vent the cartridges and cassettes from being accidentally or intentionally displaced from their respective compartments 20 in the holder 18. Accordingly, and with reference to FIGS. 2, 3 and 5, a plurality of horizontal bars 40 which swing about pivots 42 located at both ends thereof, and rotate between a first position (shown in solid lines in FIGS. 3 and 5) over the opening 80 to retain the cassettes and tape cartridges within their respective compartments 20, to a position 40' (shown in phantom lines) which allows the cassettes and cartridges to be removed from their respective compartments through the openings 80. This configuration gives the added advantage of providing a force, due to the resiliency and swinging motion of the bars 40, which urges the merchandise forward in the compartments 20 of the holder 18. Additionally, if desired, the bars 40 can be locked in place to prevent unauthorized removal of the merchandise from the rear of the display device 10.

It is anticipated that other means may be provided for retaining the cartridges and cassettes within their respective compartments. For example, an integrally molded or raised portion can be provided at the rear of each compartment 20, or a door can be disposed at the rear of the holders 18 to close off the openings 20a, thereby to retain the respective cartridge or cassette within its compartment.

It is also envisioned that the rear of the display device 10 could have an access door with an appropriate security device, such as a lock to prevent access to and removal of the merchandise from the rear of the display case by unauthorized personnel. This type of display case would be especially appropriate in those installations wherein access to the rear of the display case by unauthorized personnel could not be conveniently prevented. It is also envisioned that the display device 10 could be made in the form of a vertical wall rather than a cabinet.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings to one of ordinary skill in the art. It is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described, in that only some embodiments of the invention have been disclosed.

What is claimed and desired to be secured by United States Letters Patent is:

1. A display case for displaying a plurality of articles comprising in combination:

a housing having a passageway extending entirely from one side of said housing to the other side of said housing wherein the interior of said passageway is accessible from both sides thereof; and pivotal holder means mounted in said passageway for holding and displaying at least one of said articles; means on said holder for preventing removal of said articles from said holder means from said one side and means on said holder for allowing insertion and removal of said articles from said holder from said other side; said housing being completely open and devoid of closure means on said one side, whereby said holder is readily accessible from said one side to permit pivotal manipulation thereof.

2. A display case for displaying a plurality of articles as defined in claim 1 wherein said housing additionally comprises means for preventing unauthorized access

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and removal of said articles from said other side of said housing.

3. A display case for displaying a plurality of articles as defined in claim 1 wherein said holder means is pivotal about a vertical axis.

4. A display case for displaying a plurality of articles as defined in claim 1 wherein said articles are generally parallelepiped in shape and said holder means has viewing means for exposing at least a portion of said articles to view from said one side of said housing.

5. A display case for displaying a plurality of articles as defined in claim 4 wherein said articles are magnetic tape cartridges and said viewing means allows at least three sides of said cartridges to be viewed from said one side of said housing.

6. A display case for displaying a plurality of articles as defined in claim 4 wherein said articles are magnetic tape cartridges and cassettes.

7. A display case for displaying a plurality of articles as defined in claim 1 which additionally comprises means for preventing accidental dislodgment of said articles from said holder means from said other side of said housing.

8. A display case for displaying a plurality of articles as defined in claim 7 wherein said means for preventing dislodgment of said articles comprises a retaining rod means which moves into and out of a position adjacent said holder.

9. A display case for displaying a plurality of parallelepiped shaped magnetic tape cartridges and cassettes comprising in combination:

a housing having an opening extending therethrough from one side of said housing to the other side of said housing;

means to prevent unauthorized access to the other side of said housing; and

the improvement which comprises holder means pivotal about a vertical axis mounted in said opening for holding and displaying a plurality of said articles; means for preventing removal of said articles from said holder means from said one side of said housing, and means for allowing insertion and removal of said articles from said holder from said other side of said housing, said holder means having viewing means for viewing a plurality of sides of said tape cartridges and cassettes from said one side of said housing.

10. A holder for supporting and displaying a plurality of tape cartridges and cassettes comprising:

an elongated body molded from plastic material;

a plurality of compartment means in said body of a size and shape to removably receive said tape cartridges and cassettes therein, each of said compartments having viewing means through which three sides of said cartridge carried in said compartments are exposed to view, said viewing means preventing removal of said cartridges and cassettes there-through, each of said compartment means having an opening on one side for allowing insertion of said cartridges and cassettes, said openings having portions for allowing engagement and removal of the cartridges and cassettes from said compartments; and

socket portions formed in the ends of said elongated body.

11. A display case for displaying a plurality of articles comprising in combination:

a housing having an passageway extending entirely from one side of said housing to the other side of said housing; wherein the interior of said passageway is accessible from both sides thereof;

a plurality of holder means mounted in said passageway for holding and displaying a plurality of said articles, means on said holder for preventing removal of said articles from said holder means from said one side of said housing and means on said holder for allowing insertion and removal of said articles from said holder from said other side of said housing, said housing being completely open and devoid of closure means on said one side, whereby said holder is readily accessible from said one side to permit rotatable manipulation thereof, said holder means being mounted to rotate about spaced parallel vertical axes.

12. A display case for displaying a plurality of articles as defined in claim 11 additionally comprising means for preventing unauthorized access to said other side of said housing.

13. A display case for displaying a plurality of articles as defined in claim 11 wherein said articles are generally parallelepiped in shape and said holder means has viewing means for viewing a portion of said articles from said one side of said housing.

14. A display case for displaying a plurality of articles as defined in claim 13 wherein said articles are magnetic tape cartridges and said viewing means allows at least three sides of said cartridges to be viewed from said one side of said housing.

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