DISPLAY DEVICE WITH ROTATING SUPPORT

Inventor: Zachary Uidl, Country Club Hills, IL (US)

Correspondence Address: VEDDER PRICE KAUFMAN & KAMMHIOLZ 222 N. LASALLE STREET CHICAGO, IL 60601

Appl. No.: 11/532,954

Filed: Sep. 19, 2006

Publication Classification

Int. Cl.
B65D 7/00 (2006.01)

U.S. Cl. 206/232

ABSTRACT

The present invention generally relates to an aesthetically pleasing display device equipped with a rotating support for a prized item, and more specifically, to a display device with a transparent or semitransparent dome, where the prized item is placed on slowly moving protective cushioning material for displaying successively all views of the prized item and any autograph(s) or marking(s) placed thereupon such as sports memorabilia, an autographed baseball, a helmet, jewelry, or any other prized personal item.
PLACING DISPLAY DEVICE IN VIEW

REMOVING DOME TEMPORARILY

PLACING PRIZED ITEM ON SUPPORT

REPLACING DOME OVER PRIZED ITEM

ACTIVATING MOTOR TO INITIATE MOVEMENT

FIG. 6
DISPLAY DEVICE WITH ROTATING SUPPORT

FIELD OF THE INVENTION

[0001] The present invention generally relates to a display device with rotating support for a prized item, and more specifically, to a display device with a transparent dome and a rotating support for displaying all views of a prized item such as sports memorabilia, an autographed baseball, a helmet, jewelry, or other prized personal item.

BACKGROUND OF THE INVENTION

[0002] The use of devices to display and protect prized possessions, prized items, collectibles, and other valuable memorabilia from environmental hazards is well known. It has become customary in team sports for players to sign accessories and apparel, cards, magazines, and balls to memorialize an important sporting event. Fans are encouraged to ask their favorite players for autographs on team-sponsored gear, such as a jersey or a ball, to promote sales and enhance the sports experience. Balls are given to the crowd during regular games as a result of off-field throws, promotions, or when a player is moved by a fan. A prized collectible in the field of baseball or other team sports is an original ball, autographed by a specific player when possible, used in actual play to achieve a specific record or even to commemorate a landmark event. On Dec. 19, 2003, Grant DePorter, manager of a sports bar in Chicago, bought for $106,600 the foul ball that fans believe cost the Chicago Cubs a qualification to the 2003 World Series and displayed it temporarily in a glass vault before it was destroyed. As another example, a fan caught the baseball hit by Mark McGwire for his 70th homerun and in 1999 resold it for over $3 million to a Canadian comic book tycoon who now displays the ball in a private collection. More typical memorabilia may include a ball purchased by a parent and signed by a player at the request of a son or daughter during a memorable Saturday afternoon sporting event with the family.

[0003] These prized items require uniquely designed display devices able to protect the prized item, displaying all views the item in a unique way to emphasize the signature(s) and/or mark(s) on the item while maintaining the item in original condition. The importance of these prized items to an owner provides an impetus for improvement of known display devices for the art. What is known in the art is the use of a thin, transparent, skin-like casing where non-transparent areas on the skin form a sport-related symbol that is shown by transparency over the prized item. What is also known is the use of a stylized base or pedestal with sports-related references to commemorate the event. Other known devices include a fixation means on a transparent skin design to attach and secure the memorabilia at a precise location. Another known type of permanent fixation and theft protection device includes a domed glass secured to a hand-rotated base. Skin-like casings hold the prized item and contact the item. With the passage of time and the associated handling and low level vibrations, small amounts of wear and tear can appear on the item. Skin-like casings also do not allow for gentle movement or rotation of the item in a 360 degree orientation within a protective area to display a signature(s) or marking(s) on the item or create a vitiated environment around the prized item where humidity can be trapped and ultimately damage the prized item. Theft control devices used by store owners to display items for sale are aesthetically displeasing, create vitiated air pockets around the memorabilia, and require manual operation to display the entirety of the prized item. Theft protection devices contact the prized item and may also rub off surfaces of the item over time. All the above drawbacks are compounded when a signature on the prized item is in soluble ink, or when the item is stored in a humid environment.

[0004] What is needed is a device that minimizes long-term degradation of a prized item and any signature(s) or markings(s) apposed thereupon, allows for handling by an owner, and displays the entire surface of the prized item. What is also needed is a device designed to counteract low-level ground vibrations associated with long term storage of a prized item and limit the chances of contact of the prized item with the device. Finally, what is needed is a device able to limit the creation of vitiated air and humid air around the prized item.

SUMMARY

[0005] The present invention generally relates to an aesthetically pleasing display device equipped with a rotating support for a prized item, and more specifically, to a display device with a transparent or semitransparent dome, where the prized item is placed on slowly moving protective cushioning material for displaying all views of the prized item and any autograph(s) or marking(s) placed thereupon. The prized item may be sports memorabilia, an autographed baseball, a helmet, jewelry, or any other prized personal item. The dome fixation allows for air flow between a stable environment and the surroundings of the prized item, providing protection from extreme conditions. A groove on the top surface of a base ensures that the protective dome does not move slowly or touch the prized item when placed in contact with low frequency and low-intensity vibrations. The device is also aesthetically pleasing, does not appear to be a theft prevention system, and is equipped with a hidden rotational device in contact with the base.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The features of the present disclosure are believed to be novel and are set forth with particularity in the appended claims. The disclosure may best be understood by reference to the following description taken in conjunction with the accompanying drawings. The figures that employ like reference numerals identify like elements.

[0007] FIG. 1 is an exploded view of the display device displaying a baseball as an example of a possible prized item according to an embodiment of the present disclosure.

[0008] FIG. 2 is a perspective view of the display device of FIG. 1 according to an embodiment of the present disclosure.

[0009] FIG. 3 is a sectional side view of the display device of FIG. 1 according to an embodiment of the present disclosure.

[0010] FIG. 4 is a detail perspective view of a support for aligning a prized item within a dome.

[0011] FIG. 5A is a perspective view of the display device displaying a basketball as an example of a prized item according to another embodiment of the present disclosure.
FIG. 5B is a perspective view of the display device displaying a football as an example of a prized item according to another embodiment of the present disclosure.

FIG. 6 is a flow chart that schematically illustrates the steps of the method for displaying a prized item.

DETAILED DESCRIPTION

In the following detailed description, reference is made to the accompanying drawings that show, by way of illustration, several embodiments of the disclosure, each centered around an improved display device with a rotating support for an article of sports memorabilia. These embodiments are described with sufficient detail to enable one skilled in the art to practice the disclosure. It is understood that the various embodiments of the disclosure, although different, are not necessarily exclusive and can be combined differently because they show novel features. For example, a particular feature, structure, material composition, or quantity described in connection with one embodiment may be implemented in other embodiments without departing from the spirit and scope of the disclosure. In addition, it is understood that the arrangement of individual elements and components within each disclosed embodiment may be modified without departing from the spirit and scope of the disclosure. Therefore, the following detailed description is not to be taken in a limiting sense.

FIG. 1 is an exploded view of the display device 100 displaying a baseball, as one example of a prized item 1 according to an embodiment of the present disclosure. The display device 100 includes a dome 4 made of a bottom lip 5, a side wall 6, and a top wall 7 having a hemispherical configuration. In one preferred embodiment, the dome 4 is made of glass. The use of any transparent or semitransparent material with sufficient rigidity to maintain a dome structure over the prized item is contemplated. In another preferred embodiment shown in FIG. 2, the dome is made of a cylindrical portion 6 and a hemispherical portion 7 designed to show the prized item at a constant distance from the baseball. The device 100 also includes a base 15 made of a top surface 18 and having a groove 17 defined on the top surface 18 to engage the bottom lip 5 of the dome 4. The engagement of the dome 4 with the base 15 in one preferred embodiment is shown in FIG. 3. FIG. 3 shows a flat bottom lip 5 engaged in a flat groove 17. Returning to FIG. 1, the base 15 also includes a middle opening 19 shown as a circular opening where a rotatable shaft 29 is inserted. The base further comprises a socle 20 made in a preferred embodiment of wood, plastic, glass, metal, or any other material of sufficient strength to serve as a base 15 for the device and hold the weight of the prized item 1. The socle 20 also includes a first power input 23 and an opening for a control device 21. In one preferred embodiment, the inside portion of the base 15 is hollowed out to leave room for an electrical motor 25 fixed to a bottom surface of the surface 18 by two fixation supports 27 connected to a power supply (not shown) using connectors 26. In another embodiment, a variable contactor 21 is electrically coupled to a connector 26 to control the intensity of the current to the electrical motor 25 and control the speed of rotation of the rotatable shaft 29 via the electrical motor 25. In a preferred embodiment, the motor 25 is a synchronous motor with low rotational speed and is equipped with a switch and an AC/DC adaptor (shown in part as 22). In another embodiment (not shown), another power supply, such as batteries or a mechanical cranking device, may be used. In one embodiment, the groove 17 is placed at a distance from the external surface of the base 15 to create an outer plateau 16. While a plateau 16 is shown, it is understood by one of ordinary skill that what is contemplated is the placement of a groove 17 at any desired location on the surface 18 of the base 15 to hold the dome 4. What is also contemplated is the placement of the groove 17 on the outer periphery of the base 15 and the use of a bottom lip 5 of a different geometry.

The device 100 also includes a support 8 movably disposed on the top surface 18, the support 8 configured to hold and align a prized item 1 relative to the dome 4. FIG. 3 illustrates a possible embodiment of the support 8. The support 8, as shown, supports a baseball and has a regular angle of curvature on the top surface 9 with a thin layer of soft protective material 12. The support 8 also includes an opening 14 for placing a rotatable shaft 29 of the electrical motor 25. It is understood by one of ordinary skill in the art that the geometry of the rotatable shaft 29 is such that rotational movements of the shaft 29 are transferred to the support 8 by either a geometry that allows block rotational movements between the shaft 29 and the opening 14, or the use of adhesive or other type of fixation device such as, but not limited to, a nail, a bolt, or a clip. What is also contemplated is the use of any device to fix the support 8 to the shaft 29. The device also further includes a motor 25 connected to the base with a rotatable shaft 29 coupled to the support 8 such that, upon activation of the motor 25, the shaft rotates the support 8 and the prized item 1 thereon. While a concave configuration of the top surface 9 is shown, the use of any surface geometry that allows for the depositing and holding of a prized item is contemplated. FIGS. 5A and 5B illustrate two different embodiments where the support 8 has a different top surface 9 adapted to hold a basketball 2 or a football 3. The dome 4 geometry is accordingly shown in different associated configurations.

One function of the device is to hold and display the prized item 1 for extended periods of time. Since the dome 4 is not attached to the base by a visible theft protection device 15, or such a device is placed indirectly, the ensemble (device 100 with prized item 1, 2, or 3) is subject to environmental conditions, small repetitive shocks in proximity of the device, or even low-level vibrations caused by the electrical motor 25 or other vibrations coming from the table, shelf, or surface (not shown) upon which the device 100 is placed for display. In addition, sports memorabilia such as a baseball or other spherical objects are intrinsically vulnerable to movement when given low repetitive forces, and if these items are not held securely, they may slowly move until they contact a confinement structure such as the dome 4. The dome 4, if not fixed to the top surface 18 of the base 15 or placed in a groove 17, may slowly migrate to the side of the top surface 18 until it becomes unstable and touches the prized item 1. A device able to control low-intensity lateral movements of the dome 4 and the prized item 1 by placing upon the base 15 a lateral holder in the form of a groove 17 and a support 8 able to retain laterally the prized item placed upon it is contemplated. The term “groove” in the context of this application includes, in addition to the generally accepted definition of “groove,” any offset surface variation made on the top surface 18, or an element placed upon the top surface 18, including an exclusion that allows for the bottom lip 5 to be stabilized upon the top surface 18 either laterally or vertically.
FIG. 4 is a detail perspective view of the a support 8 for aligning a prized item within a dome 4 according to a first embodiment. A layer of protective material 12 is used to center and maintain the prized item 1, 2, 3 on the support 8. The protective material 12 may be of any material designed to avoid permanent chemical and/or physical interaction with the prized item 1, 2, 3. In one embodiment, the protective material 12 is made of a layer of nylon [check with inventor]. The protective material 12 acts as a soft surface for contact with the prized item 1, 2, 3.

FIG. 6 is a flow chart that schematically illustrates the steps of the method for displaying a prized item 1. The method includes the steps of placing a display device 100 described herein in view of a person 101, removing the dome temporarily 102, placing the prized item on the support 103, replacing the dome over the prized item 104, and activating the motor 105 in order to initiate the movement of the shaft.

The invention is not limited to the particular details of the device or method depicted and described herein, and other modifications and applications may be contemplated. Further changes may be made in the above-described method and device without departing from the true spirit of the scope of the invention herein disclosed. It is intended, therefore, that the subject matter in the above description should be interpreted as illustrative, not in a limiting sense.

What is claimed is:

1. A display device comprising:
   a dome including a bottom lip;
   a base including top surface having a groove defined therein configured to engage the bottom lip;
   a support movably disposed on the top surface, the support configured to align a prized item relative to the dome; and
   a motor connected to the base,
   wherein the motor comprises a rotatable shaft coupled to the support such that upon activation of the motor, the shaft rotates the support and prized item thereon.

2. The display device of claim 1, wherein the support comprises a hole for fixation to the shaft.

3. The display device of claim 1, wherein the dome comprises a cylindrical portion and a hemispherical portion.

4. The display device of claim 1, wherein the dome is made of glass.

5. The display device of claim 1, wherein the base is hollow and made of wood and includes an opening.

6. The display device of claim 1, wherein the motor is a synchronous motor with low rotational speed.

9. The display device of claim 8, wherein the rotational speed is less than one rotation per minute.

10. The display device of claim 1, wherein the motor is equipped with a switch and an AC/DC adaptor.

11. The display device of claim 1, wherein the prized item is an article of sports memorabilia.

12. The display device of claim 1, wherein the sports memorabilia is an autographed baseball.

13. A method for displaying a prized item, the method comprising the steps of:
   placing a display device in view of a person, the display device comprising:
   a dome including a bottom lip;
   a base including top surface having a groove defined therein configured to engage the bottom lip;
   a support movably disposed on the top surface, the support configured to align a prized item relative to the dome; and
   a motor connected to the base,
   wherein the motor comprises a rotatable shaft coupled to the support such that upon activation of the motor, the shaft rotates the support and prized item thereon.

14. The method of claim 13, wherein the support comprises a soft surface for contact with the prized item.

15. The method of claim 13, wherein the dome is made of glass.

16. The method of claim 13, wherein the motor is a synchronous motor with low rotational speed.

17. The method of claim 13, wherein the motor is equipped with a switch and an AC/DC adaptor.

18. The method of claim 13, wherein the prized item is an article of sports memorabilia.

19. The method of claim 18, wherein the sports memorabilia is an autographed baseball.

20. A baseball display device comprising:
   a glass dome including a bottom edge, a cylindrical section, and a spherical section;
   a hollow base including a top surface having a groove defined thereon, the groove configured to engage the bottom edge;
   a support movably disposed on the top surface, the support configured to align a baseball relative to the dome; and
   a motor connected to the hollow base,
   wherein the motor comprises a rotatable shaft coupled to the support such that upon activating the motor the shaft rotates the support and prized item thereon.

* * * * *