CARD HOLDER AND DISPENSER

Inventors: Florian B. Cerney; Tina M. Cerney, both of 1405 1/4 North Havenhurst Drive, Los Angeles, Calif. 90046

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Primary Examiner—Francis K. Zugel
Attorney—Harris, Kiech, Russell & Kern

ABSTRACT

A device for holding and dispensing playing cards one at a time and providing ready access to the top card of the stack, which includes a container having a base, four walls, and an open top; a movable platform for supporting the card stack which is mounted within the container; biasing means urging the movable platform and the cards stacked thereon in an upward direction whereby the top card will be in proper position relative to the top open; and means for restricting and guiding the vertical movement of the movable platform within the container.

2 Claims, 5 Drawing Figures
The present invention relates to a card holder and dispenser and because the invention has been embodied in and is particularly applicable to a device for storing and for providing easy access to a top card of a stack of playing cards, it will be considered in such connection herein for the purposes of illustration.

One embodiment of the present invention comprises a container with a base, four walls, and an open top; a card support platform movable disposed in the card container; biasing means disposed in the container for urging the card support platform and cards stacked thereon upwardly toward the open top; and means for restricting and guiding the vertical movement of the card support platform.

It is an object of this invention to provide a novel card holder and dispenser which will store a large number of cards and yet will provide excellent access to the top card of a card stack disposed in the card holder and dispenser, and which affords an excellent view of the top of the stack.

It is a further object of the present invention, to provide a card holder and dispenser which is relatively simple in construction and operation and which will be inexpensive to manufacture. The present invention can be made of inexpensive materials that are commercially available, such as, for example, metal, plastic, hard rubbers, wood, and the like.

Another object of the present invention is to provide a card holder and dispenser which can store a large number of cards such as, for example, a hundred cards or more, and yet which provides access to only one card, the top card.

A further object of the present invention is to provide a card holder and dispenser that is easily disassembled and reassembled for purposes of repair and preventive maintenance.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a card holder and dispenser which embodies the subject invention;
FIG. 2 is a sectional view taken along line 2-2 of FIG. 1;
FIG. 3 is a horizontal sectional view taken along line 3-3 of FIG. 2;
FIG. 4 is an enlarged, fragmentary sectional view similar to the right-hand portion of FIG. 2 but showing the card support platform in the depressed position supporting a card stack; and

FIG. 5 is an enlarged fragmentary sectional view showing a modified construction of the base assembly.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In the drawing, the numeral 10 designates an open top card holder and dispenser constructed in accordance with the teaching of the present invention, which comprises a card container 12 having a base 14 with a floor 15, four walls 16, the walls each having vertical guide slots 17, and an open top 18; a card support platform 20, having an upper horizontal surface and a lower surface, said platform 20 being movably disposed in the card container 12 for vertical movement therein; a plurality of guide pins 26 removably mounted to the card support platform 20 and extending laterally therefrom to the vertical guide slots 17 to guide and restrict the vertical movement of the card support platform; and biasing means to urge the platform 20 upwardly, such as a plurality of helical compression springs 28 disposed vertically along their longitudinal axes in the card container 12, the lower ends 32 of the springs 28 being removably supported on the floor 15 by spring retaining means 33 and the upper ends 34 of the springs 28 being removably engaged with the lower surface 24 of the card support platform 20 by spring mounting means.

Each of the walls 16 has an upper portion 38, a lower portion 40, an inner edge 48 between the two portions, the lower portion 40 extending upwardly and perpendicularly from the base 14 in a vertical direction, the upper portion 38 extending upwardly from the lower portion 40 and inclining outwardly away from the vertical the upper portion 40 terminating at the upper edge 42 of the wall 16. The inner surface of the upper portion 38 of the wall 16, which inclines at an acute angle away from the vertical, and the inner surface of the lower portion 40 of the wall 16, which is flat or planar and substantially vertical, intersect at the inner edge 48 of the wall 16. The outward inclination of the top portion 38 of the wall 16 affords an excellent view of the top card 50 of a card stack 36 which is supported by the card support platform 20. The outward inclination of the top portion 38 also affords excellent access to the top card 50.

The vertical guide slots 17 commence below the outer edges 42 of the walls 16 and terminate above the base 14. The vertical guide slots 17 have upper regions commencing at their upper edges and lower regions terminating at their lower edges. The guide pins 26 slidably engage the vertical guide slots 17. In the preferred embodiment of the present invention, each wall 16 will have one vertical guide slot 17, the slots 17 being of substantially equal height and being located in the same relative positions in the walls 16.

The guide pins 26 are removably mounted to the card support platform 20 by mounting means which comprise a plurality of mounting posts 54 extending downwardly from the lower surface 24 of the card support platform 20 proximate to the outer periphery or edges 56 of the card support platform 20; each of the mounting posts 54 has a horizontal passageway adapted to receive a guide pin 26. A central post 58 extends downwardly from the center portion of the lower surface 24 of the card support platform 20; the center post 58 has a plurality of horizontal passageways adapted to receive the ends of the guide pins 26. The guide pins 26 extend beyond the outer edges 56 of the card support platform 20 to slidably engage their associate vertical guide slot 17. Each guide pin 26 is disposed in a horizontal passageway of a mounting post 54 and one end of each guide pin 26 is disposed in one of the horizontal passageways of the center post 58.

In a modification of the present invention, the card support platform 20 has two guide pins 26, one guide pin crossing the full length of the card support platform 20 disposed in and through the horizontal passageways of opposing mounting posts 54 and disposed in and through one of the horizontal passageways in the center post 58, the ends of the guide pin 26 slidably engaging the vertical guide slots 17 of opposing walls 16. The other guide pin 26 is positioned at right angles to the first guide pin 26 above or below it, crossing the full width of the card support platform 20. This second guide pin 26 is disposed in and through the horizontal passageways of opposing mounting posts 54 and through a horizontal passageway in the center post 58; the ends 52 of the second guide pin 26 slidably engage the vertical guide slots 17 of opposing walls 16. In this modification of the device, because the two guide pins 26 are on different horizontal levels, the vertical guide slots of one pair of opposing walls is positioned higher or lower than the vertical guide slots 17 of the other pair of opposing walls 16 depending upon the relative vertical positions of the guide pins in order that the guide pins will simultaneously engage the upper or lower ends of the vertical guide slots 17 when the card support platform 20 is either displaced fully downwardly or urged fully upwardly.

The assembly of the vertical guide slots 17 of the walls 16 and the guide pins 26 of the card support platform 20 is an important feature in the present invention because this assembly restricts the vertical movement of the card support platform in the card container 12. By this assembly the vertical downward movement of the card support platform 20 is restricted in order that the helical compression springs 28 will not be compressed beyond a predetermined limit wherein they will be overstressed and permanently damaged. Similarly, the assembly prevents the card support platform 20 from being urged out of the card container 12 through the open top 18 by the force of the compression springs when the card support platform 20 is not supporting a card stack 36.
The card support platform 20 is urged upwardly toward its open top 18 by the plurality of helical compression springs 28. The helical compression springs are balanced and have sufficient force to urge the card support platform 20 and the card stack 36 thereon to a position relative to the open top 18 wherein the top card 50 of the stack 36 can be easily seen and picked up. In a preferred embodiment of the present invention, the helical compression springs 28 have sufficient force to urge the card support platform 20 and the card stack 36 thereon upwardly to a position wherein the top card 50 is from about 1 in to about 100 mils above the inner edges 48 of the walls 16. The lower ends 32 of the helical compression springs 28 are removably engaged with the lower surface 24 of the card support platform 20 by spring mounting means which comprise a plurality of generally cylindrical lugs 60 extending downwardly from the lower surface 24 of the card support platform 20. The cylindrical lugs 60 are adapted to receive the upper ends 34 of the helical compression springs 28. The diameter of each of the cylindrical lugs 60 is slightly larger than the inner diameter of the upper ends 34 of the helical compression springs 28. Accordingly, the upper ends 34 fit snugly around and over the lugs 60. The helical compression springs 28 are removably engaged with the card support platform 20 by pushing the upper ends 34 over the lugs 60. In a similar manner the lower ends 32 of the helical compression springs 28 are removably supported on the floor 15 of the base 14 by spring retaining means which comprise a plurality of generally cylindrical lugs 62 extending upwardly from the floor 15 of the base 14. The cylindrical lugs 62 are adapted to receive the lower ends 32 of the helical compression springs 28. The diameters of the cylindrical lugs 62 are slightly larger than the inner diameters of the lower ends 32 of the springs 28. Accordingly, the lower ends 32 of the springs 28 fit snugly around and over the lugs 62. The lower ends 32 are removably supported on the cylindrical lugs 62 in substantially the same way the upper ends 34 of the helical compression springs 28 are removably engaged on the cylindrical lugs 60.

In a modification of the present invention, the spring-retaining means comprise a plurality of circular wells 64 (FIG. 5) extending into the floor 15 of the base 14; the wells 64 are adapted to receive the lower ends 32 of the helical compression springs 28. The walls of the wells 64 incline inwardly and downwardly to circular horizontal base sections 65. The base sections 65 have diameters equal to the outer diameters of the lower ends 32 of the springs 28. The lower ends 32 remain in the wells 64 by virtue of the fact that the helical compression springs 28 are compressed when the card support platform 20 is mounted in the card container 12.

In the preferred embodiment of the present invention the walls 16 of the card container 12 have two thicknesses; the wall thickness at the outer edges 47 of the vertical guide slots 17 in their lower region is a major thickness and the wall thickness at the outer edges 47 of the vertical guide slots 17 in their lower region is a minor thickness. The guide pins 26 slidably engage the vertical guide slots 17 and extend laterally from the card support platform 20 and into the vertical guide slots 17. The ends or tips 52 of the guide pins 26 are flush with the outer edges 45 of the vertical guide slots 17 in their upper regions. When the card support platform is displaced downwardly so that the guide pins 26 are in the lower regions of the vertical guide slots 17, the ends 52 extend outwardly beyond the plane of the vertical guide slots 17. This type of wall construction affords excellent access to the ends 52 of the guide pins 26 when the card support platform 20 is displaced fully downwardly, and it provides protection for the ends 52 when the platform 20 is displaced only partially downward. This type of wall construction also adds to the strength of the container, said strength being increased by the rigidity and it reinforces the sides of the vertical guide slots 17.

The novel construction of the present device described herein provides for easy assembly and disassembly of the device. The guide pins 26 are removably mounted to the card support platform 20 by mounting means described herein. The guide pins 26 are removed by pulling them completely through their associate vertical guide slots 17 which is easily accomplished when the card support platform 20 is displaced fully downwardly. With the guide pins 26 removed from the vertical guide slots 17, the vertical motion of the card support platform 20 is no longer restricted and the biasing means will urge the platform upwardly above the open top 18 where the platform 20 can be grasped by an operator to reach between the card support platform 20 and the upper edges 42 of the walls 16 to remove the upper ends 34 from the springs 28 from the spring mounting means. Once the card support platform 20 is freed from the springs 28, it can be put aside and the lower ends 32 of the springs 28 can be dismounted from the spring-retaining means.

Although exemplary embodiments of the invention have been disclosed herein for purposes of illustration, it will be understood that various changes, modifications and substitutions may be incorporated in such embodiments without departing from the spirit of the invention as described and defined in the claims which follow.

We claim:

1. A card holder and dispenser comprising, in combination: an open top card container having four vertical walls and a floor, each of the walls containing a vertical guide slot; a card support platform positioned in said container for vertical movement therein, having a plurality of guide pins each of which extends laterally therefrom and slidably engages on of said slots to guide and restrict the vertical movement of said platform, the guide pins being removably mounted on said platform by means which include a plurality of mounting posts extending downwardly from the upper surface of said platform, each of said posts containing a horizontal passageway for receiving one of said pins, and a center post extending downwardly from the center of the lower surface of said platform, said post containing a plurality of horizontal passageways each of which receives one end of a pin, each pin extending through a passageway of one of said posts, with one end thereof received in said post and the other end thereof extending through one of said slots, said pin and slot arrangement limiting the vertical movement of said platform in said container relative to said floor and guiding relative movement therebetween, and biasing means in said container between said floor and said platform, urging said platform upwardly toward the open top of the container.

2. In a card holder and dispenser, the combination of: an open top card container, having four vertical walls and a floor, each of said walls having a vertical slot therein, the wall at the outer edges of each of the slots being thickened throughout a major portion of the length of each of said slots; a card support platform positioned in said container for vertical movement therein; a plurality of guide pins mounted on said platform and extending laterally therefrom, the outer end of each of said pins extending through one of said slots to a position substantially flush with the outer surface of the thickened portion of the wall of said slot but projecting beyond said wall at its unthickened portion adjacent said slot to provide ready access to the end of the pin when said pin is in registry with said unthickened portion of the wall; and biasing means in the container between said floor and said platform and urging said platform upwardly toward the open end of said container.

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