ARTICLE-STORING BELT BUCKLE

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ABSTRACT

An article-storing belt buckle includes a base having a top to which a cover is fit. A chute is formed in the belt buckle and an article receiving chamber is formed in the chute. An article to be stored is deposited in the chute and is moved along the chute into the article receiving chamber to be retained therein, or the article is forcibly moved out of the article receiving chamber for detaching from the belt buckle.
ARTICLE-STORING BELT BUCKLE

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates generally to an article-storing belt buckle, and particularly to a belt buckle forming therein a chute that incorporates an article receiving chamber, for receiving and moving an article along the chute to get into or remove out of the article receiving chamber.

DESCRIPTION OF THE PRIOR ART

[0002] Circular flat objects, such as coins, are commonly used in daily living in various situations. For example, in a shopping mall, a shopping cart can be separated from a train of interlocked carts by inserting a coin, or a coin may sometimes be used as tool to replace a screwdriver or serve as a mark to identify the location of a golf ball in a green. Taking the shopping cart as an example, some of the shopping malls provide the consumers with coin-like objects for operating the shopping carts or other purposes. However, the consumers must carry such objects themselves. In addition, some shopping malls provide the consumers with a chain that retains the coin-like objects to avoid undesired loss of the objects. However, such a chain, together with the coin-like objects retained therein, is of a bulky size for consumers to carry, especially when a clip is carried in a pocket. Apparently, although one problem is solved, yet a new problem occurs. On the other hand, using a coin as ball location identification, the coin is always taken from the pocket of a golf player, or a clip that holds a mark thereon in a releasable manner is attached to for example a visor of a hat of the golf player. To use such a mark, the clip is first removed from the hat, and then the mark is released from the clip to be positioned behind the ball for identifying the location of the ball. After the golf player puts the ball, the mark must be picked up and attached to the clip and then the clip is set on the hat again. This is a tedious process. Further, to clean the hat, the clip must be removed first and then put back on the hat again before the next golf game is played. Apparently, this is inconvenient. In addition, certain memory chips are used for gate access of for example secured buildings and such memory chips are formed as a circular flat object, which must be carried by for example a resident or an authorized person for entering the building.

SUMMARY OF THE INVENTION

[0003] All these apparently point to a common problem of how to provide a measure for storing a circular flat object in order to realize easy and convenient carrying such an object.

[0004] Thus, the present invention aims to solve the above discussed problem.

[0005] An objective of the present invention is to provide an article-storing belt buckle, in which an article receiving chamber is defined for receiving and retaining, in a removable manner, a circular flat article in such a way to allow easy removal of the article for use.

[0006] In accordance with an embodiment of the present invention, an article-storing belt buckle comprises a base and a cover. The cover is fit over and coupled to a top of the base. The base and the cover form slots that correspond to each other but have different widths. The slots, after the cover fit to the base, form a chute that, when viewed in a side elevation, has a configuration of reduced top and expanded bottom. The slot of the base forms an expanded article receiving chamber and a side-opening clip is received and fixed in the article receiving chamber, whereby an article is allowed to deposit into and move along the chute to get into the article receiving chamber and retained by the clip or to remove out of the article receiving chamber.

[0007] In accordance with another embodiment of the present invention, an article-storing belt buckle comprises a base and a cover. The cover is fit over and coupled to a top of the base. The base and the cover form slots that correspond to each other but have different widths. The slots, after the cover fit to the base, form a chute that, when viewed in a side elevation, has a configuration of reduced top and expanded bottom. The slot of the base forms an expanded article receiving chamber. Two resilient clipping plates are received in and fixed to opposite sides of the article receiving chamber, whereby an article is allowed to deposit into and move along the chute to engage the clipping plates. Once engaging the clipping plates, the article expand an opening defined between the clipping plates to allow the article to get into the article receiving chamber and retained by the clipping plates. When the article is subjected to force moving it outward, the article expands the opening of the clipping plates again to disengage from the confinement of the clipping plates, thereby achieving easy deposition and removal of the article.

[0008] The foregoing objective and summary provide only a brief introduction to the present invention. To fully appreciate these and other objects of the present invention as well as the invention itself, all of which will become apparent to those skilled in the art, the following detailed description of the invention and the claims should be read in conjunction with the accompanying drawings. Throughout the specification and drawings identical reference numerals refer to identical or similar parts.

[0009] Many other advantages and features of the present invention will become manifest to those versed in the art upon making reference to the detailed description and the accompanying sheets of drawings in which a preferred structural embodiment incorporating the principles of the present invention is shown by way of illustrative example.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a perspective view showing a belt buckle constructed in accordance with a preferred embodiment the present invention.

[0011] FIG. 2 is an exploded view of FIG. 1.

[0012] FIGS. 3 and 4 are schematic plain views illustrating the use of the belt buckle in storing an article.

[0013] FIG. 5 is an exploded view of a belt buckle constructed in accordance with another embodiment of the present invention.

[0014] FIG. 6 is a perspective view showing a belt buckle constructed in accordance with a further embodiment the present invention.

[0015] FIG. 7 is an exploded view of FIG. 6.

[0016] FIG. 8 is a top plan view of FIG. 6.

[0017] FIGS. 9 and 10 are schematic plain views illustrating the use of the belt buckle in storing an article.

[0018] FIG. 11 is an exploded view of a belt buckle constructed in accordance with yet a further embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] The following descriptions are exemplary embodiments only, and are not intended to limit the scope, applica-
bility or configuration of the invention in any way. Rather, the following description provides a convenient illustration for implementing exemplary embodiments of the invention. Various changes to the described embodiments may be made in the function and arrangement of the elements described without departing from the scope of the invention as set forth in the appended claims.

[0020] With reference to the drawings and in particular to FIGS. 1 and 2, a belt buckle constructed in accordance with the present invention comprises a base 1 and a cover 2. The cover 2 is fit to a top side of the base 1 for covering and fixing thereto. The base 1 forms in the top thereof a lower slot 11 that has an opening defined in an end face of the base 1 and has a configuration that is expanded at an outer portion where the opening is formed. converges inwardly, and has a reduced inner end section, at which a circular article receiving chamber 12, which is expanded as compared to the reduced inner end section, is formed in the top of the base 1. A clip 13 having a side opening that has an opening size smaller than a nominal planar size of the clip 13 is received and fixed in the article receiving chamber 12 with opposite end tips of the clip 13 that defines the side opening extending from the article receiving chamber 12 into the lower slot 11. The cover 2 forms an upper slot 21 that has a configuration having an expanded outer end portion, converging inwardly, and forming a reduced inner end portion. The upper slot 21 corresponds to and mates the lower slot 11 of the base 1, and the upper slot 21 has a width less than that of the lower slot 11 of the base 1. When the cover 2 is fit to the top of the base 1, the lower and upper slots 11, 21 together define a chute 14 that has an end opening, constituted by the opening of the lower slot 11 defined in the end face of the base 1 and, preferably, an end opening of the upper slot 21 defined in the expanded outer end portion, for receiving an article 3 that is a flat circular body having an outside diameter slightly smaller than an inside diameter of the article receiving chamber 12, which in the embodiment illustrated, is circular. In a practical application, the base 1 and the cover 2 can be integrated as a unitary body.

[0021] Referring to FIGS. 3 and 4, the outside diameter of the article 3 is far less than the end opening of the chute 14, whereby the article 3 can be easily deposited into the end opening of the chute 14 to further slide inward along the chute 14. A user may use a finger to push the article 3 inward, along the chute 14, toward the article receiving chamber 12 and once reaching the article receiving chamber 12 and engaging the clip 13, the article 3 expands the side opening of the clip 13 to fit into the article receiving chamber 12. After the article 3 gets into the article receiving chamber 12, the side opening of the clip 13, due to no longer expanded by the article 3, springs back to the original, reduced condition, whereby the clip 13 secures the article 3 in the article receiving chamber 12. To remove the article 3, the user puts a finger on the article 3 and applies a force to drive the article 3 in a direction toward the chute 14, whereby the article 3 expands the side opening of the clip 13 by its outside diameter to allow the article 3 to slide out of the article receiving chamber 12 and into the chute 14 for further moving toward and getting off the end opening of the chute 14, thereby detached from the belt buckle.

[0022] Referring to FIG. 5, in a practical application, a magnetic element 15, such as a regular magnet, is selectively set in the article receiving chamber 12, preferably at a central portion of the article receiving chamber 12. When the article to be stored in the belt buckle is made of a ferrous material, or has a bottom comprising a ferrous part or a magnet, moving the article 3 along the chute 14 into the article receiving chamber 12 allows the article 3 to be subjected to a magnetic force induced by the magnetic element 15, whereby the article 3 is more securely retained in the article receiving chamber 12.

[0023] FIGS. 6 and 7 illustrate a belt buckle in accordance with a different embodiment of the present invention. Said different embodiment of the belt buckle is comprised of a base 4 and a a cover 5. The cover 5 is fit to a top side of the base 4 for covering and fixing thereto. The base 4 forms in the top thereof a lower slot 41 that, in the instant embodiment, forms an opening in each of opposite end faces of the base 4 and converges inward to an intermediate portion at which an article receiving chamber 42 is formed in the top of the base 4. Two clipping plates 6 that have corresponding configurations are respectively set at opposite sides of the article receiving chamber 42. In the instant embodiment, the clipping plates 6 arefixed by fitting, but can also be fixed by screws or rivets. The two clipping plates 6 togerher form a configuration having an expanded central portion and two reduced opposite end portions communicating the segments of the lower slot 41 on opposite sides of the article receiving chamber 42. The cover 5 forms an upper slot 51 that has a configuration having expanded opposite ends and converging toward an intermediate portion, where a circular chamber is defined, corresponding to the article receiving chamber 42 but having a smaller cross-sectional dimension (or diameter) than the article receiving chamber 42. An article 3 to be received in the belt buckle is a flat circular body having an outside diameter slightly greater than openings defined in the reduced end portions of the configuration of the two clipping plates 6.

[0024] Referring to FIG. 8, when the cover 5 is fit to the top of the base 5, the lower and upper slots 41, 51 together define a chute 7, which, when viewed in a side elevation, has a configuration of narrow top and wide bottom, whereby when the article 3 is stored in the article receiving chamber 42, the article 3 is confined by the cover 5 and is prevented from separation from the belt buckle. As shown, the chute 7 has opposite end openings, respectively constituted by the openings of the lower slot 41 defined in the end faces of the base 4 and, preferably, end openings of the upper slot 51 defined in the expanded opposite end portions of the cover 5. To use the article 3, as shown in FIGS. 9 and 10, the article 3 is deposited into one of the end openings of the chute 7 and is further moved along the chute 7 toward the article receiving chamber 42. Once reaching the article receiving chamber 42, the article 3 expands the outside diameter of the article receiving chamber 42 without being subjected to an external force. To remove the article 3 out of the article receiving chamber 42, a user puts a finger on the article 3 and applies a force to drive the article 3 in a direction toward either opening of the clipping plates 6 thereby expanding the opening again to allow the article 3 to disengage from the confinement of the clipping plates 6.

[0025] Further, as shown in FIG. 11, a magnetic element 43, such as a regular magnet, is selectively set in the article
receiving chamber 42, preferably at a central portion of the article receiving chamber 42. When the article 3 to be stored in the belt buckle is made of a ferrous material, or has a bottom comprising a ferrous part or a magnet, moving the article 3 into the article receiving chamber 42 allows the article 3 to be subjected to a magnetic force induced by the magnetic element 43, whereby the article 3 is more securely retained in the article receiving chamber 42.

[0026] The above discussed two embodiments illustrate a belt buckle that features an additional function of receiving and retaining an article and such an article can be a circular flat body that can be for example a memory chip, a coin for operating a shopping cart in a shopping mall, or a mark used in golf green to mark the location of a golf ball. This is of an easy use and eliminates the problem of leaving such an article or tool behind.

[0027] While certain novel features of this invention have been shown and described and are pointed out in the annexed claim, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

I claim:

1. An article-storing belt buckle comprising a base and a cover, wherein the cover is fit over and coupled to a top of the base, the base forming a lower slot in the top thereof, the lower slot forming an opening at an end face of the base and having an inner end section forming an expanded article receiving chamber, a side-opening clip being received and fixed in the article receiving chamber, and wherein the cover forming an upper slot corresponding to and mating the lower slot of the base to form a chute that is adapted to receive and guide an article to be stored along the chute to the article receiving chamber to be secured by the clip or adapted to guide removal of a stored article out of the article receiving chamber.

2. The article-storing belt buckle according to claim 1 further comprising a magnetic element set in the article receiving chamber.

3. An article-storing belt buckle comprising a base and a cover, wherein the cover is fit over and coupled to a top of the base, the base forming a lower slot in the top thereof, the lower slot forming an opening at an end face of the base and forming an article receiving chamber, two resilient clipping plates being received in and fixed to opposite sides of the article receiving chamber, the two clipping plates together forming a configuration having an expanded central portion and two reduced opposite end portions, and wherein the cover forming an upper slot, which has a configuration having expanded opposite ends and converging toward an intermediate portion, the upper slot corresponding to and mating the lower slot of the base to form a chute that is adapted to receive and guide an article to be stored along the chute to the article receiving chamber to be secured by the clipping plates and adapted to guide removal of a stored article out of the article receiving chamber.

4. The article-storing belt buckle according to claim 3 further comprising a magnetic element set in the article receiving chamber.

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