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(54) **PROTECTIVE COVER**

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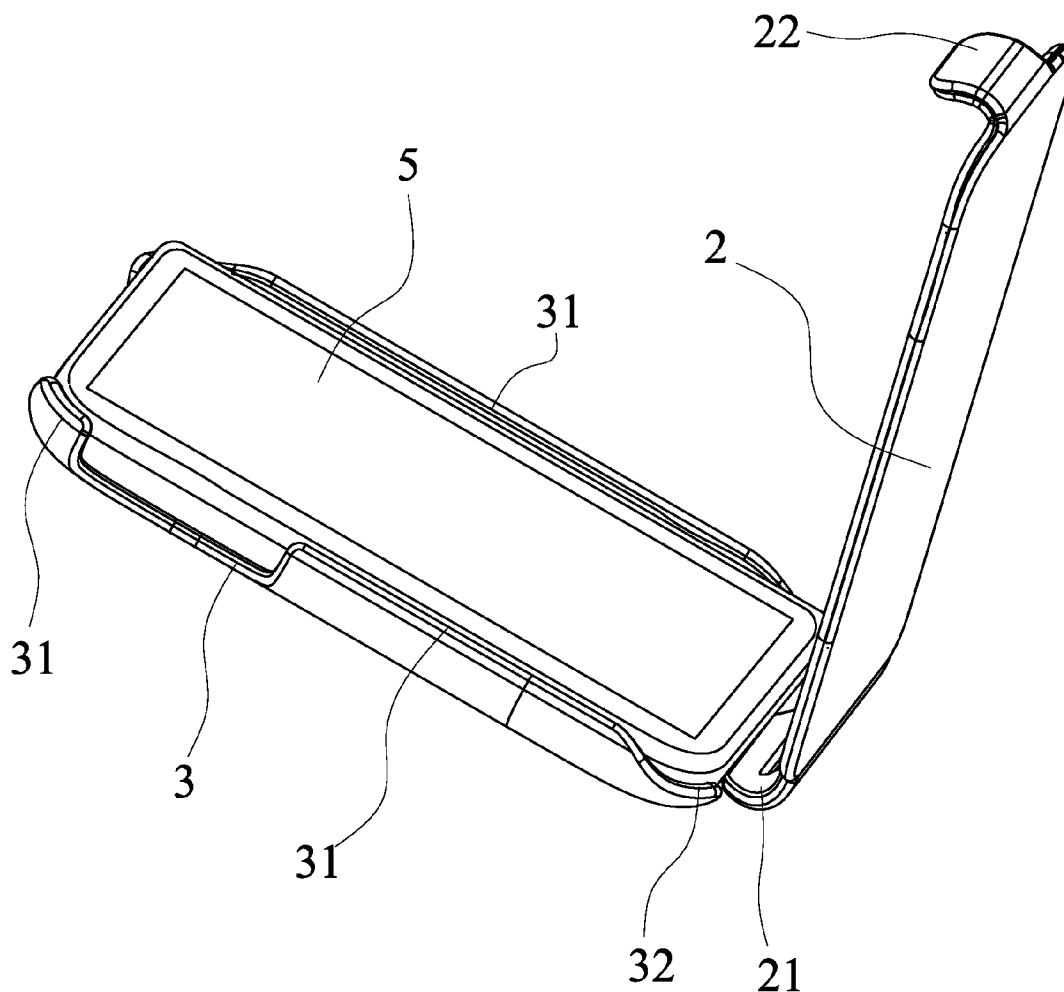
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(57) **ABSTRACT**

A protective cover is provided, including a cover base and a protective lid. The protective lid and the cover base form a housing space to accommodate the electronic device. The electronic device is held and fastened to the cover base. The cover base and the protective lid are engaged by at least a buckle element. The buckle element can be repeatedly used to plug or unplug so that the protective lid and the cover base and be engaged or disengaged for different purposes. The electronic device can be fastened by cover base and covered underneath the protective lid to avoid direct abrasion or impact. The protective lid can be disengaged from the cover base to facilitate convenient use. In addition, the back of the cover base can be coupled to a support plate to allow the standing of the protective cover in horizontal or vertical modes.



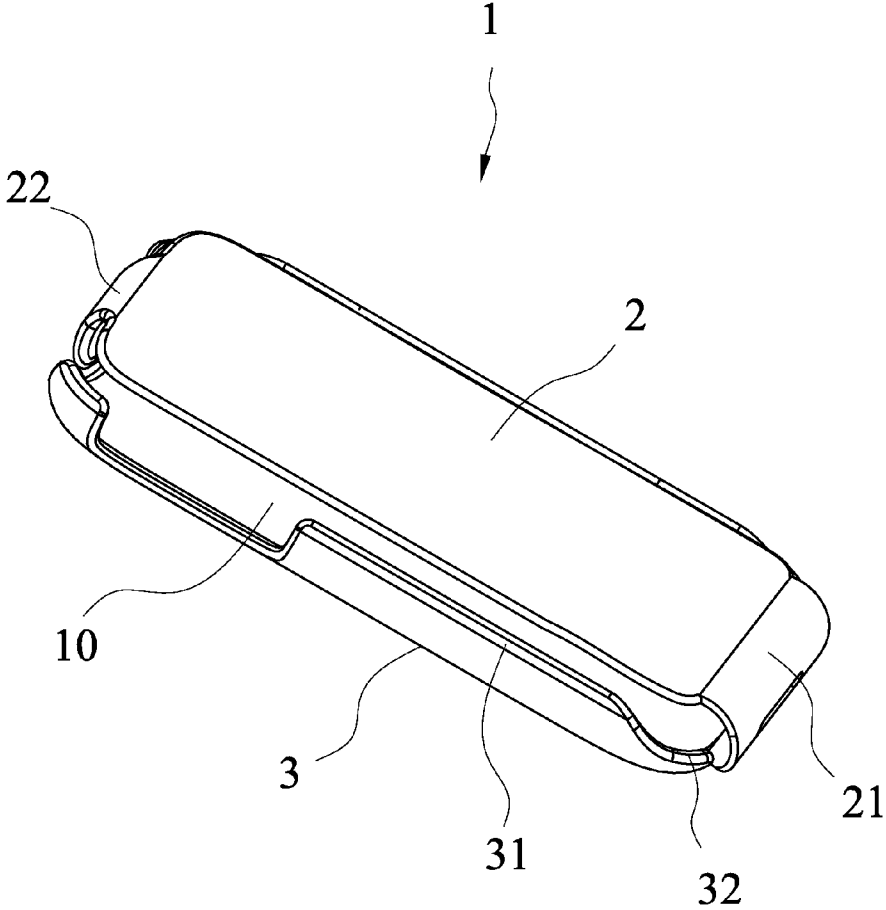


FIG. 1

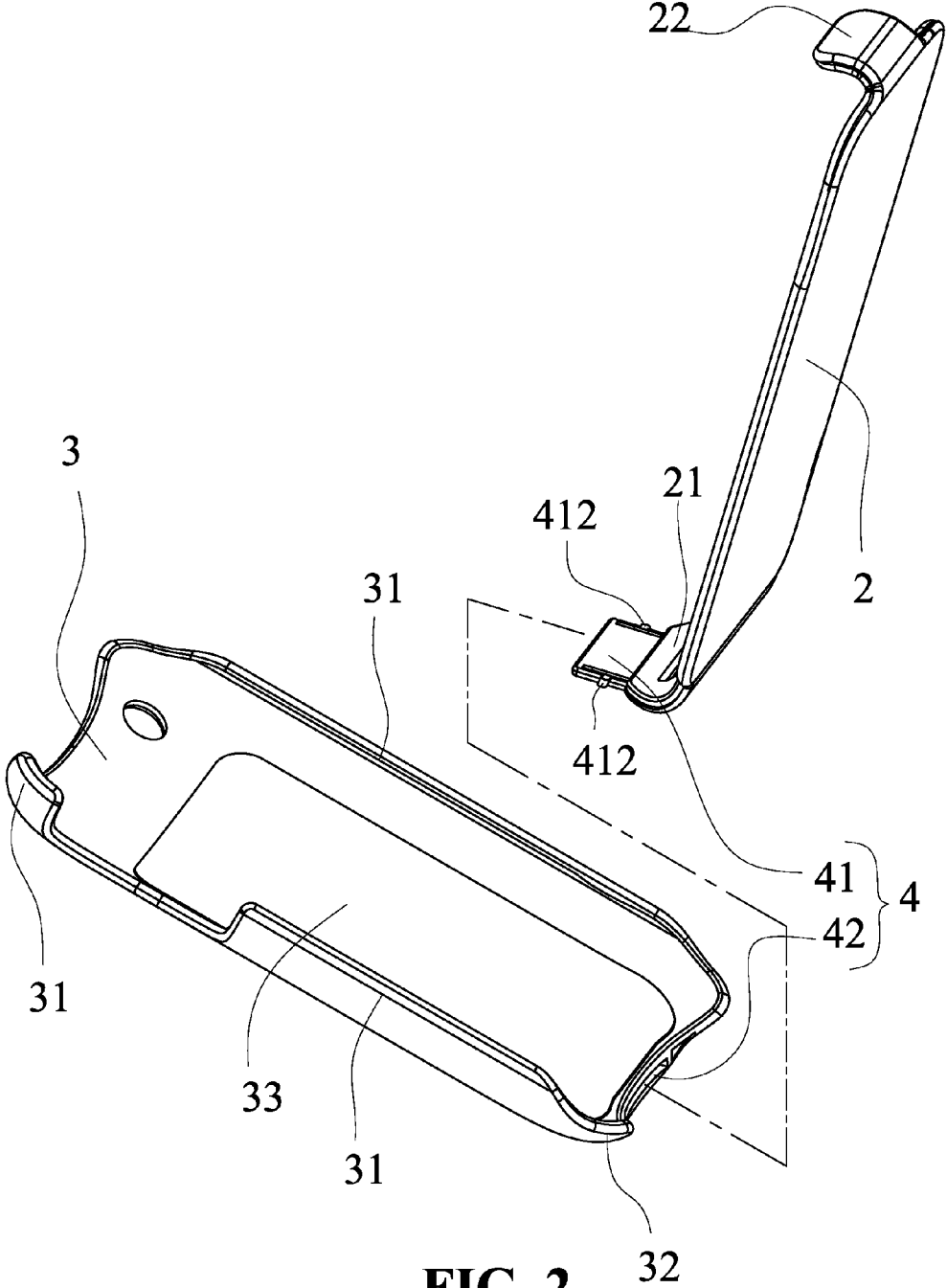


FIG. 2

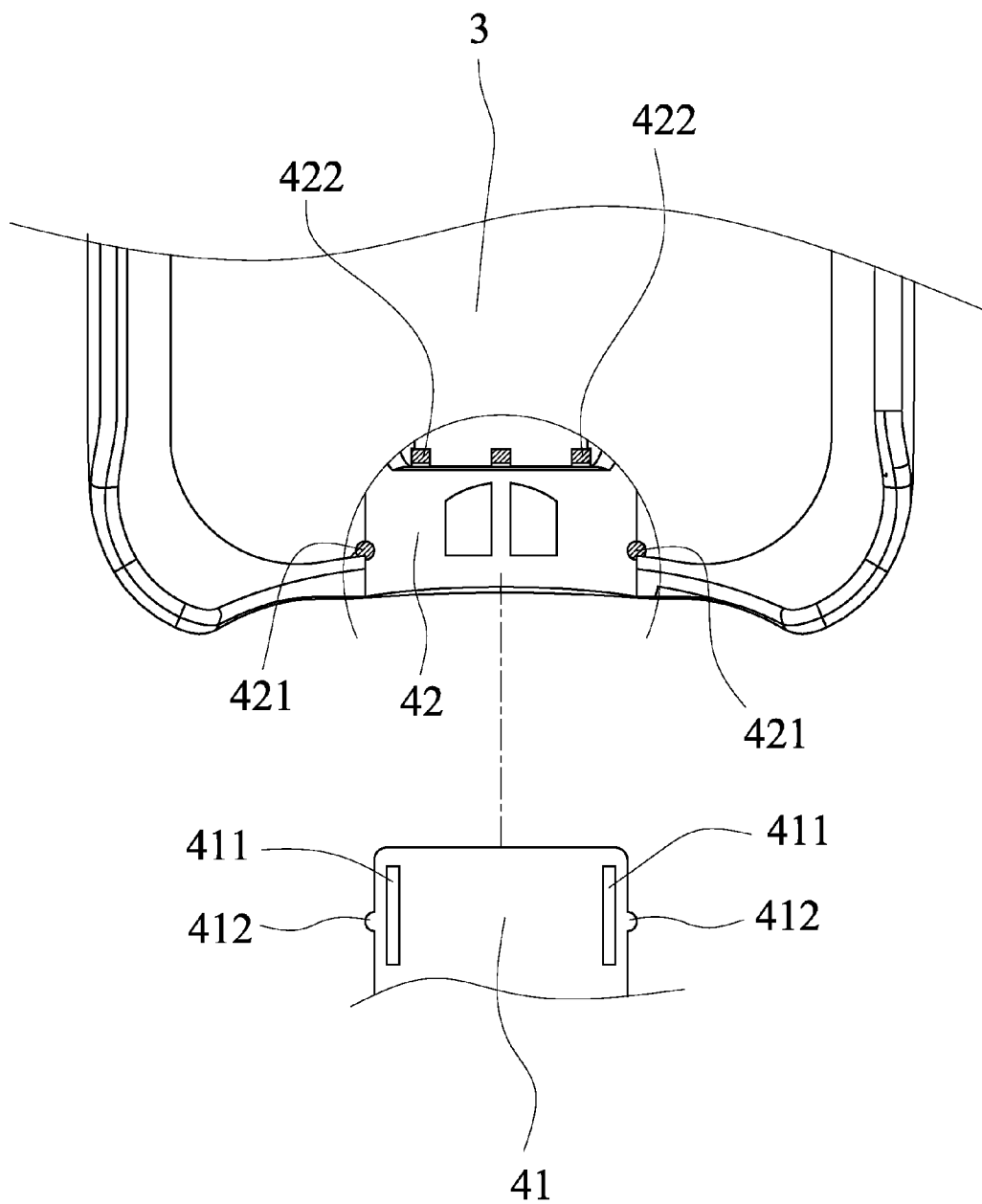


FIG. 3

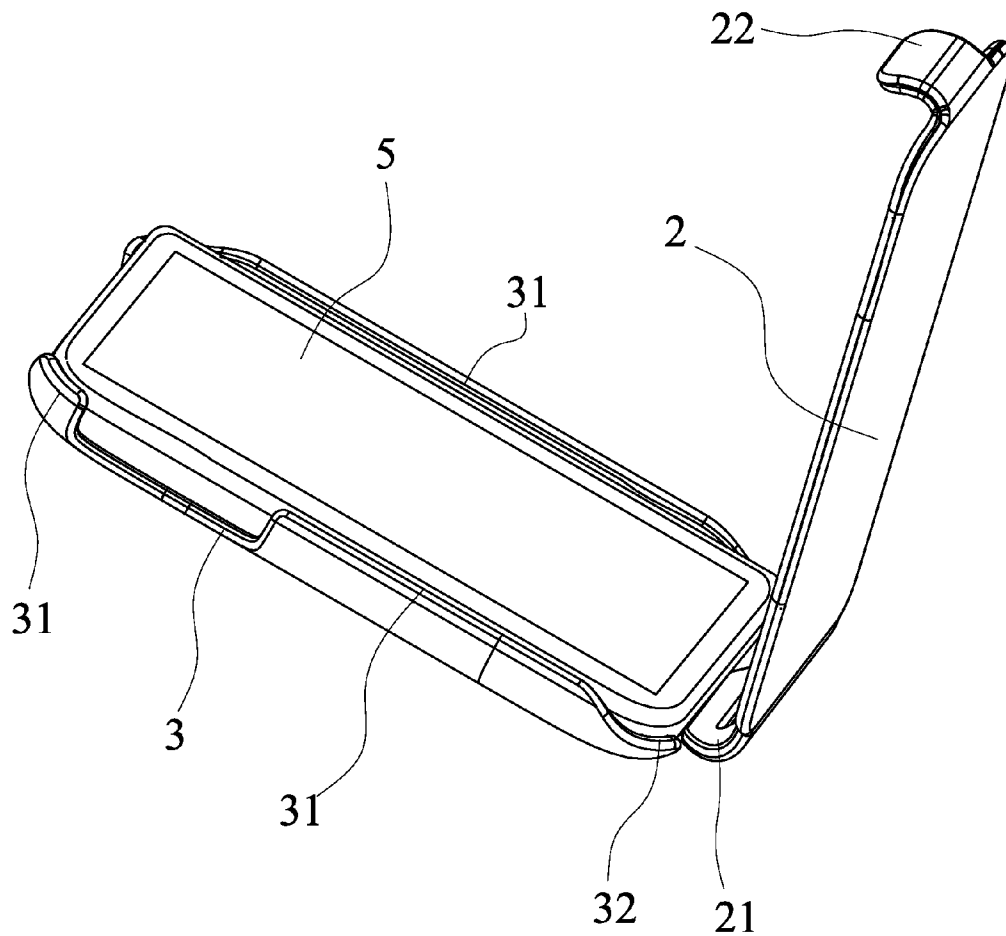


FIG. 4

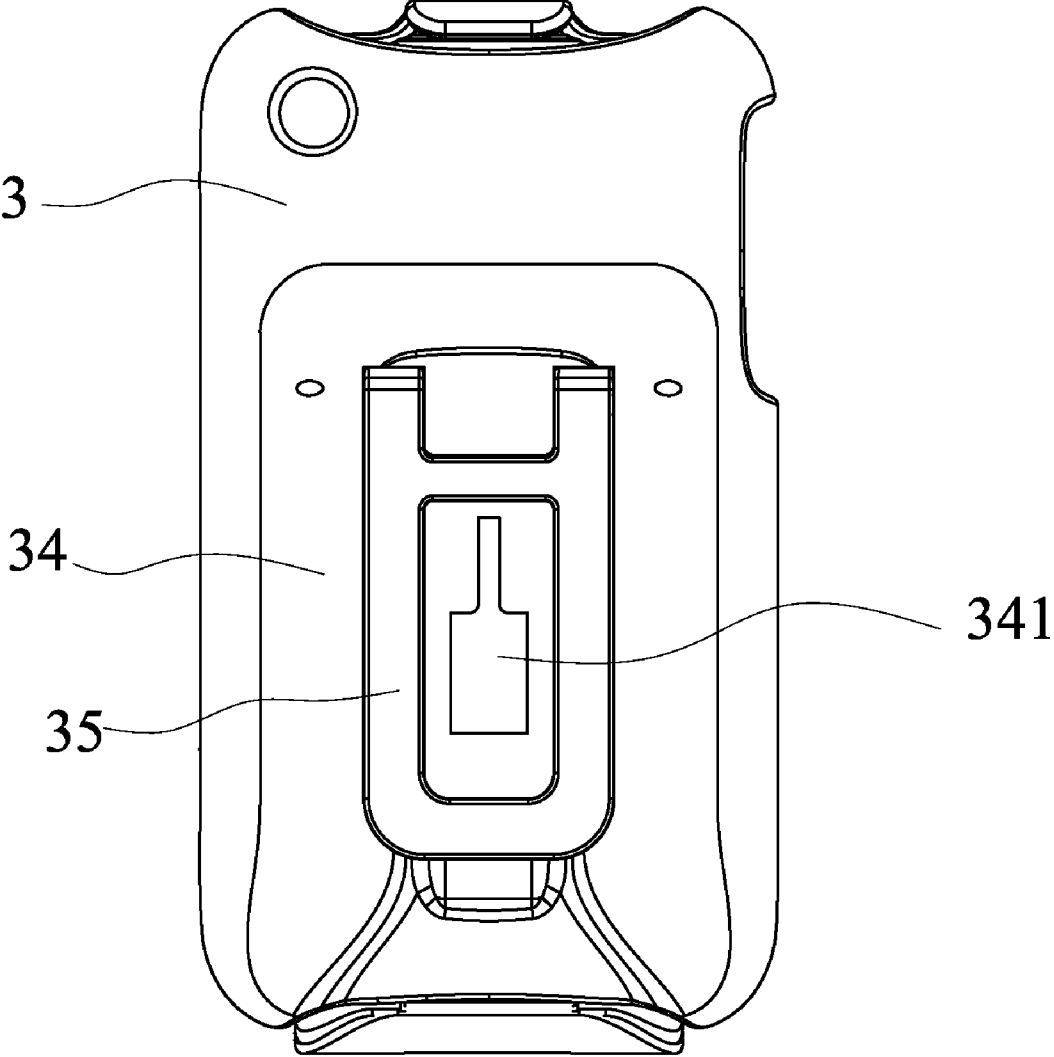


FIG. 5

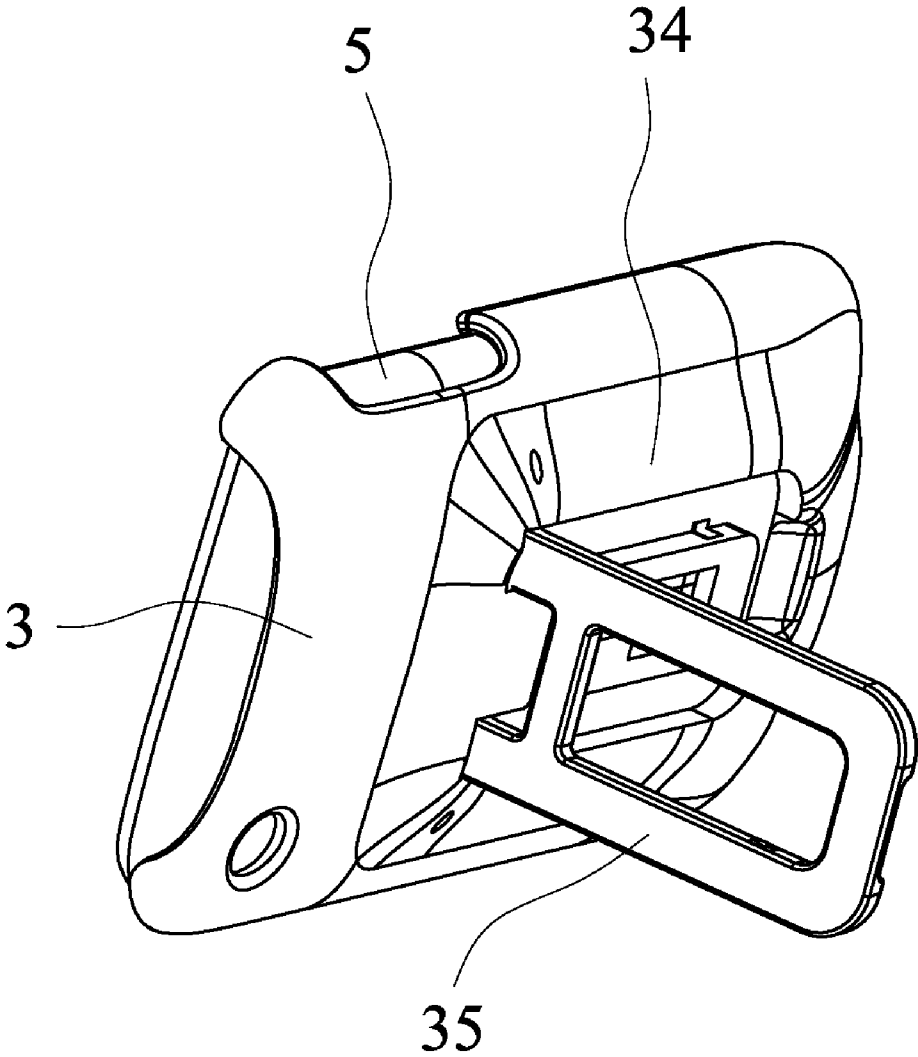


FIG. 6

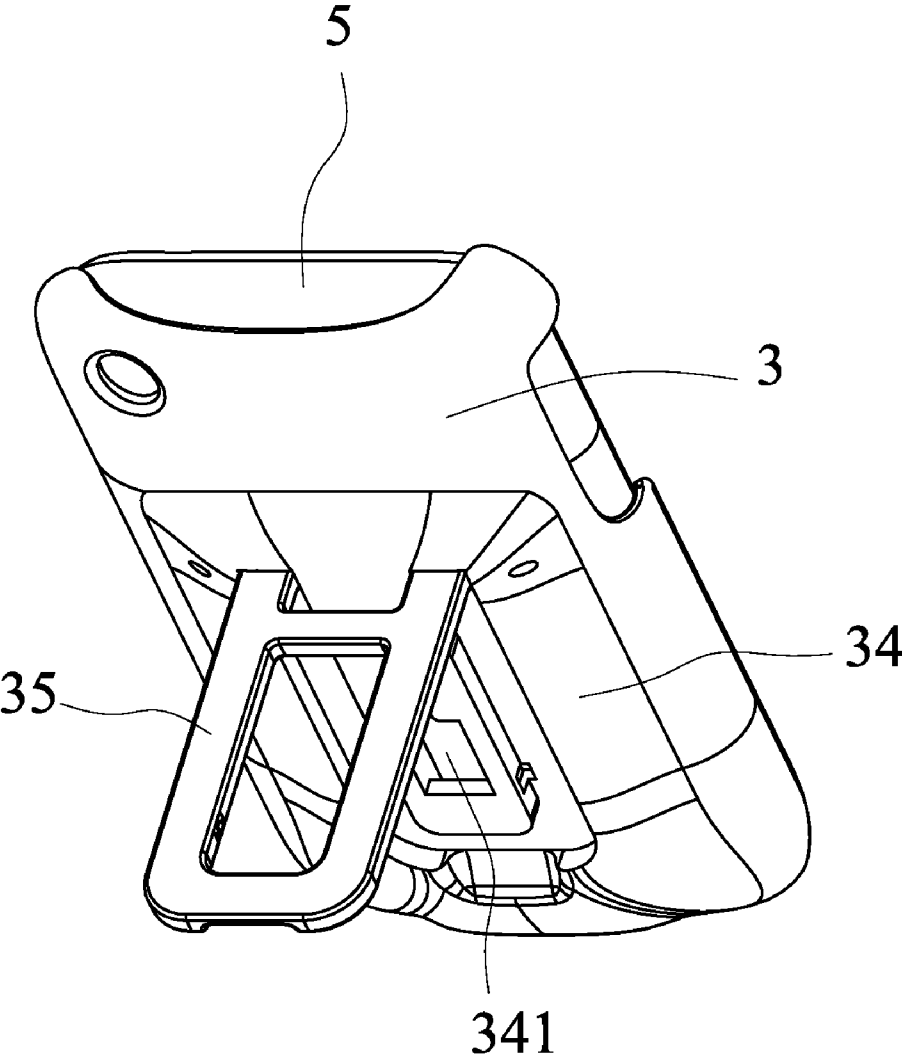


FIG. 7

PROTECTIVE COVER

FIELD OF THE INVENTION

[0001] The present invention generally relates to a protective cover, and more specifically to a protective cover to insulate portable electronic device for protection as well as stay easy to use.

BACKGROUND OF THE INVENTION

[0002] Many electronic devices, such as, smart phones, have large display for various applications so as to provide more functions, such as, personal multimedia player, GPS, e-book or e-dictionary, in addition to conventional telephony communication. While multi-function feature provides convenience and has advantage, the price of the electronic device is also rising so that the users are usually more caution in protecting the high-priced electronic device, and more willing to invest in protective peripherals.

[0003] The currently available protective covers can be categorized into two types. The first type is the simple cover, such as, a simple-shaped silicon-made cover. When in use, the electronic device is sheathed inside the silicon cover with the display exposed. This type of protective cover is inexpensive, but does not provide sufficient protection to the display from damage caused by scratching. The second type is the two-piece protective cover, including a bottom base and an upper cover. The bottom base is for installing the smart phone and the upper cover is attached and inseparable from the bottom base. The upper cover can provide protection to the display; however, when the smart phone is in horizontal use mode, the upper cover will be obstructive because the upper cover extends beyond the side of the bottom base.

SUMMARY OF THE INVENTION

[0004] The primary object of the present invention is to provide a protective cover that provides both protection and convenient usage. The protective cover includes a protective lid and a cover base. The protective lid can be engaged to or disengaged from the cover base. When protective lid is engaged to cover base, the formed protective cover can effectively shield and protect the electronic device from damage caused by abrasion or impact. When the protective lid is disengaged from the cover base, only the cover base is used to accommodate and protect the electronic device so that the electronic device can be conveniently used in either vertical or horizontal modes.

[0005] Another object of the present invention is to provide a protective cover allowing the electronic device to stand in either vertical or horizontal modes. As the large-displayed electronic device can be used as a multimedia player after downloading the multimedia, the protective cover of the present invention can assist the electronic device to stand in vertical or horizontal modes to further facilitate convenient viewing.

[0006] Yet another object of the present invention is to provide a protective cover to work with other auxiliary support device so that protective-covered electronic device can be fastened to the support device for use in vehicle.

[0007] To achieve the above objects, the present invention provides a protective cover, including a cover base and a protective lid. The protective lid and the cover base form a housing space to accommodate the electronic device. The electronic device is held and fastened to the cover base. The

cover base and the protective lid are engaged by at least a buckle element. The buckle element includes a plug connected by a soft element to the side of the protective lid and a socket formed at the corresponding location on the side of the cover base. The plug on the protective lid can be repeatedly used to plug into the socket on the cover base so that the protective lid and the cover base and be engaged or disengaged for different purposes.

[0008] In addition, the back surface of the cover base can be coupled to a support plate. The support plate can be flipped up to form an angle with the back of cover base. The support plate allows the electronic device housed inside the protective cover to stand in vertical or horizontal modes.

[0009] The foregoing and other objects, features, aspects and advantages of the present invention will become better understood from a careful reading of a detailed description provided herein below with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The present invention can be understood in more detail by reading the subsequent detailed description in conjunction with the examples and references made to the accompanying drawings, wherein:

[0011] FIG. 1 shows a schematic view of the present invention;

[0012] FIG. 2 shows a schematic view of the protection lid disengaged from the cover base according to the present invention;

[0013] FIG. 3 shows a schematic view of the buckle element according to the present invention;

[0014] FIG. 4 shows a schematic view of the present invention in actual application;

[0015] FIG. 5 shows a schematic view of the back of the cover base of the present invention;

[0016] FIG. 6 shows a schematic view of the present invention in use (I); and

[0017] FIG. 7 shows a schematic view of the present invention in use (II).

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0018] As shown in FIG. 1 and FIG. 2, protective cover 1 of the present invention includes a protective lid 2 and a cover base 3 forming a housing space 10. Cover base 3 holds and fastens a portable electronic device housing space 10. Protective lid 2 and cover base 3 are engaged by at least a buckle element 4. Buckle element 4 includes a plug 41 and a socket 42. Plug 41 is connected to the end of a soft element 21 extending from a side of protective lid 2, and socket 42 is located corresponding to plug 41 on the side of cover base 3. Plug 41 of buckle element 4 can repeatedly plug into and unplug from socket 42 so that protective lid 2 and cover base can engage or disengage.

[0019] The following describes the elements of the protective cover of the present invention in details. Protective lid has a shape of a plate, with main body made of hard plastic material. The inner and outer surfaces can be covered with genuine leather, artificial leather or other textile to protect the electronic device on contact. Soft element 21 extends from the side of protective lid 2 is made of soft rubber or leather, and is bendable at will. When protective lid and cover base engage, soft element 21 allows protective lid 2 to be flipped

open. The other side of protective lid 2 forms a hold element 22. Hold element 22 has bended shape, is slightly resilient and rigid and is located at the opposite side of soft element 2.

[0020] Cover base 3 is a rectangular shallow plate, made of plastic with proper hardness via inject molding. Base cover 3 forms at least two clap elements 31 and at least a stop wall 32. Clap elements 31 are slightly bended inwards and are distributed around the circumference of cover base 3. Clap elements 31 can form the entire side or the high part on the side to stay clear of the holes, sockets and buttons on the side of the portable electronic device. Stop wall 32 is located on at least one part of cover base 3 and is slightly bended. Stop wall 32 has a bended height slightly lower than clap element 31 to prevent portable electronic device from sliding out. Clap elements 31 and stop wall 32 are preferably distributed on different sides of the circumference of cover base 3. The inner wall surface of cover base 3 is layered as an inner pad layer 33, made of leather, artificial leather, soft rubber pad, foam or textiles to protect portable electronic device on contact.

[0021] As shown in FIG. 2 and FIG. 3, buckle element 4 includes a plug 41 and a socket 42. Plug 41 has a flat shape, and has a long groove 411 close to both sides so as to form a resilient protruding block 412 on both side of plug 41. Socket 42 forms on the side of cover base 3. The inner shape of socket 42 is shaped by a plurality of protruding rods 421, 422 located at different positions to match the external shape of plug 41 so that plug 41 can be repeatedly plug into and unplug from socket 42. When plug 41 is plugged into socket 42, protruding rods 421 grips the side of resilient protruding block 412 so that the engagement of plug 41 and socket 42 is properly firm.

[0022] FIG. 4 shows a schematic view of the present invention in actual application. A portable electronic device 5 is a smart phone installed inside cover base 3, with clap elements 31 clapping on both sides of portable electronic device 5 to fasten. At this point, protective lid 2 is engaged to cover base 3 and soft element 21 allows protective lid 2 to flip open to facilitate convenient use of the device. The user may decide to disengage protective lid 2 from cover base 3 for convenient use of the device in horizontal mode. When protective lid 2 covers the top surface of electronic device 5, hold element 22 can hook and hold the side of electronic device 5 so that the inner wall of protective cover 2 can press tight on electronic device 5. In this manner, electronic device 5 is completely surrounded by cover base 3 and protective lid 2 to prevent from direct abrasion or impact.

[0023] In addition, to enhance the convenience of use of the present invention, as shown in FIGS. 5-7, the back surface of cover base 3 forms a fix element 34 coupled to a support plate 34. Support plate 35 has a shape of a rectangular frame, and can be folded to attach to the surface of fix element 34. When flipped upward, support plate 35 form an angle with the back of cover base 3. The central region of fix element 34 forms a connection groove 341, shaped to match the connection head of an apparatus support device used in a vehicle so that the present invention can also be used with an apparatus support device for vehicle.

[0024] FIG. 6 and FIG. 7 show schematic views of the present invention in actual applications. Electronic device 5 is fastened to cover base 3, and support plate 35 is flipped from the back of cover base 3 to form an angle. In this manner, cover base 3 can stand in portrait (vertical) or landscape (horizontal) direction so that when the user removes protective lid 2, the user can use the electronic device as a multimedia player on a flat surface.

[0025] Although the present invention has been described with reference to the preferred embodiments, it will be understood that the invention is not limited to the details described thereof. Various substitutions and modifications have been suggested in the foregoing description, and others will occur to those of ordinary skill in the art.

[0026] Therefore, all such substitutions and modifications are intended to be embraced within the scope of the invention as defined in the appended claims.

What is claimed is:

1. A protective cover, comprising a cover base and a protective lid, said cover base and said protective lid forming a housing space, said cover base holding and fastening a portable electronic device inside said housing space, said cover base and said protective lid being engaged by at least a buckle element, said buckle element comprising a plug connected to an end of a soft element from a side of said protective lid and a socket formed at location corresponding to said plug on a side of said cover base, said plug of said buckle element able to repeatedly plug into and unplug from said socket so that said protective lid and cover base able to engaged or disengaged for different use purposes.

2. The protective cover as claimed in claim 1, wherein said plug has a groove close to both sides to form a resilient protruding block on both sides, inner shape of said socket matches said plug so that said plug and repeatedly plug into and unplug from said socket.

3. The protective cover as claimed in claim 1, wherein said cover base comprises at least two clap elements, said clap elements are bended and distributed surrounding circumference of said cover base.

4. The protective cover as claimed in claim 3, wherein said cover base comprises at least a stop wall, located at least one place of circumference of said cover base, said stop wall and said clap elements are preferably not located on the same side of said cover base.

5. The protective cover as claimed in claim 1, wherein said protective lid comprises a hold element on a side, located opposite to said buckle element of said protective lid.

6. The protective cover as claimed in claim 1, wherein back surface of said cover base is coupled to a support plate, when flipped, said support plate forms an angle with said back of said cover base so that said cover base can stand in either horizontal mode or horizontal mode.

7. A protective cover, comprising a cover base and a protective lid, said cover base and said protective lid forming a housing space, said cover base holding and fastening a portable electronic device inside said housing space, said cover base and said protective lid being engaged by at least a buckle element, said buckle element able to repeatedly plug and unplug so that said protective lid and cover base able to engaged or disengaged for different use purposes, back surface of said cover base being coupled to a support plate, said support plate forming an angle with said back surface of said cover base when flipped so that said cover base able to stand in either horizontal or vertical modes.

8. The protective cover as claimed in claim 7, wherein said support plate is coupled to a fix element, said fix element comprises a connection groove, shaped to match a connection head of an apparatus support device used in vehicle.

9. The protective cover as claimed in claim 7, wherein said buckle element comprises a plug connected to an end of a soft element from a side of said protective lid and a socket formed

at location corresponding to said plug on a side of said cover base, said plug can repeatedly plug into or unplug from said socket.

10. The protective cover as claimed in claim 7, wherein said cover base comprises at least two clap elements, said clap elements are bended and distributed surrounding circumference of said cover base.

11. The protective cover as claimed in claim 10, wherein said cover base comprises at least a stop wall, located at least

one place of circumference of said cover base, said stop wall and said clap elements are preferably not located on the same side of said cover base.

12. The protective cover as claimed in claim 7, wherein said protective lid comprises a hold element on a side, located opposite to said buckle element of said protective lid.

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