An electronic device case is described. The case includes a shell portion being sized and shaped for at least partially encasing a portable electronic device, and a bottle opener positioned within at least a portion of the shell. The shell includes a length suitable for providing leverage when applying a force to remove a bottle cap from a bottle when the bottle opener engages the bottle cap.
PORTABLE ELECTRONIC DEVICE CASE WITH INTEGRATED BOTTLE OPENER

FIELD OF THE INVENTION

[0001] The present invention relates to cases for portable electronic devices, and more particularly to cases including a mechanism for removing a bottle cap from a sealed bottle.

BACKGROUND OF THE INVENTION

[0002] For many individuals who drink beverages contained in sealed bottles, and particularly those individuals whose tastes lead them primarily to beverage brands that exclusively use sealed bottles, they have found it is useful to continuously carry a bottle opener with them.

[0003] To address this situation, bottle openers have been designed for hanging on key rings, or in other cases, they have been designed for holding in the pocket of clothing. In either case, the bottle opener remains a separate and stand-alone device, and consequently the individual must carry the additional item with them at all times.

[0004] One solution to this dilemma would be to integrate the bottle opener into another item which the individual is already carrying around with them, such as a cell phone. For example, U.S. Patent No. 7,494,239 describes a multifunctional attachment that includes a bottle opener and a light source. While this attachment links the bottle opener to a cell phone, there is no true integration, as the bottle opener is an attachment still remains a separate, and bulky, item.

[0005] In another example, U.S. Patent Publication No. 2006/0146483 attempts to integrate the bottle opener with the battery door cover of the cell phone, where the aperture of the bottle opener doubles for an audio passage to a speaker port. While this design actually integrates the bottle opener within the battery door cover, it is structurally impractical, as the force required to open a sealed bottle will undoubtedly destroy the weak hinging/attachment mechanism used to attach the battery door to the cell phone housing. This design is further flawed, in that you are directly introducing a liquid or vapor spray to the battery and electronics associated with the battery or speaker port. For this reason, integrating a bottle opener directly into any portion of the cell phone housing creates more problems than any benefit.

[0006] Therefore, there is a long felt need in the art for a bottle opener integrated within an item regularly carried by an individual. The present invention satisfies this need.

SUMMARY OF THE INVENTION

[0007] An electronic device case is described. The case includes a shell portion being sized and shaped for at least partially encasing a portable electronic device, and a bottle opener positioned within at least a portion of the shell.

[0008] In one embodiment, the electronic device case is suitable for encasing a cell phone, a smart phone, a cordless phone, a personal digital assistant, a portable computing device, a portable television, an internet or network device, a camera, a recorder, a music player, or a device having a functional combination of any such electronic devices.

[0009] The shell and the bottle opener portions of the case are made of a substantially rigid material, such as a metal, an alloy, a plastic, a polymer, a carbon fiber, or leather. In another embodiment, the shell and bottle opener portions are formed or molded as a single component.

[0010] In another embodiment, the bottle opener portion is adjustably positioned within the shell. In another embodiment, the bottle opener portion is hingedly attached to the shell. In yet another embodiment, the bottle opener portion is retractive.

[0011] In another embodiment, the bottle opener portion at least partially protrudes beyond a planar surface of the shell. In another embodiment, the bottle opener portion is substantially flush with the planar surface of a planar surface of the shell.

[0012] In yet another embodiment, the shell portion includes a length suitable for providing leverage when applying a force to remove a bottle cap from a bottle when the bottle opener engages the bottle cap. In another embodiment, the bottle opener portion includes a first lip and a second lip, where the first lip is suitable for positioning underneath an extended edge of a bottle cap, and the second lip acts as a fulcrum when applying a force to remove the bottle cap from a bottle when the bottle opener engages the bottle cap.

BRIEF DESCRIPTION OF THE FIGURES

[0013] Understanding of the present invention will be facilitated by consideration of the following detailed description of the embodiments of the present invention taken in conjunction with the accompanying drawings, in which like numerals refer to like parts and in which:

[0014] FIG. 1 depicts a front view of an electronic device case, according to an aspect of the present invention;

[0015] FIG. 2 depicts a perspective front view of the electronic device case of FIG. 1; and

[0016] FIG. 3 depicts a perspective back view of the electronic device case of FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] It is to be understood that the figures and descriptions of the present invention have been simplified to illustrate elements that are relevant for a clear understanding of the present invention, while eliminating, for the purpose of clarity, many other elements found in typical electronic device cases and bottle opening mechanisms. Those of ordinary skill in the art will recognize that other elements and/or steps are desirable and/or required in implementing the present invention. However, because such elements and steps are well known in the art, and because they do not facilitate a better understanding of the present invention, a discussion of such elements and steps is not provided herein. The disclosure herein is directed to all such variations and modifications to such elements and methods known to those skilled in the art. Furthermore, the embodiments identified and illustrated herein are for exemplary purposes only, and are not meant to be exclusive or limited in their description of the present invention.

[0018] While most people tend to view handheld phones and their accessories only as electronic tools, there are structural aspects of such components, particularly the protective case of an electronic device, that have not yet been exploited. The present invention provides a portable electronic device case with a bottle opener integrated therein. The device case provides a sturdy platform and leverage for handling the applied force required to remove a bottle cap or lid portion, without jeopardizing the electronic device itself via the liquid
in the bottle to be opened, or a vapor spray or splash that can potentially emit from the bottle upon opening.

[0019] As contemplated herein, an electronic device may include any device having an electrical component, such as, without limitation, cell phones, smart phones, cordless phones, personal digital assistants, portable computing devices, portable televisions, internet or network devices, cameras, players, music players, and any combinations thereof as would be understood by those skilled in the art.

[0020] FIGS. 1-3 illustrate an exemplary embodiment of an electronic device as case suitable for a cellular phone or smart phone. Electronic device case 10 may include a shell 15 that is generally sized and shaped to engage and at least partially encase a smart phone. As contemplated herein, electronic device case 10 may include any existing feature already found in such device cases, including button or switch apertures, clips, guiding rails, attachment and detachment mechanisms, etc., as would be understood by those skilled in the art. It should be appreciated that the particular dimensions and style of case 10 may change, or be custom designed for, any particular brand of smart phone, or for that matter, any electronic device as described herein.

[0021] Additionally, electronic device case 10 may include a bottle opener 20 integrated and fitted within a suitable location of shell 15. Such a location may include any portion of the front of case 10, as shown in FIGS. 1-3, or it may be located on the side walls, top or bottom of case 10, provided the location permits enough surface area and leverage to engage and remove a bottle cap or lid. In the embodiment of FIGS. 1-3, bottle opener 20 includes a lower edge or lip 30 for contacting the bottle cap edge, and an upper edge or lip 40 for acting as a fulcrum and establishing a leverage point against the bottle cap, such that the bottle cap is removed when an upward force is applied. The length of shell 15 may serve as a lever in applying the upward force. In other embodiments, either one or both of edges 30 and 40 may include a raised or extended portion, a protruding portion, a curved portion, or any combination thereof, such that the raised, protruding and/or curved edge creates a better contact surface and/or leverage for bottle cap removal. Of course, depending on the configuration of the bottle opener portion of case 10 relative to the bottle cap, edges 30 or 40 are functionally interchangeable. In other words, bottle opener 20 may remove a bottle cap regardless of the orientation of case 10 relative to the bottle cap. In other embodiments, bottle opener 20 may include a single point or multi-point “hook” or “tooth” portion instead of edge 30, where the hook or tooth engages the underside edge of the bottle cap.

[0022] As illustrated in FIGS. 1-3, bottle opener 20 may be flush with the front of shell 15. Alternatively, bottle opener 20 may at least partially protrude beyond the planar surface of shell 15. In yet other embodiments, bottle opener 20 may include adjustable and lockable positions, such that bottle opener 20 may include a recessed position, a flush position, and one or more protruding positions relative to the planar surface of shell 15. Mechanisms for creating such a position and temporarily lockable positions are known in the art and contemplated for such purposes and combinations with the present invention. In other embodiments, bottle opener 20 may be hinged, attached, or retractably attached to shell 15, such that bottle opener 20 may be swung or extended to a functional position relative to shell 15. In such embodiments, shell 15 may include a recessed portion, so that hinged attached bottle opener 20 may be fully or at least partially embedded within shell 15 when not in use.

[0023] Bottle opener 20 may initially be constructed as a separate component from electronic device case 10, where bottle opener 20 is permanently attached, with an adhesive or other attachment mechanism, to shell 15 during assembly. Alternatively, bottle opener 20 may be a continuous and/or seamless portion of shell 15. In other words, electronic device case 10 may be manufactured or molded as a single unit having a bottle opener portion 20, or each component is manufactured separately and assembled together to form the final product.

[0024] Both shell 15 and bottle opener 20 may be constructed out of any material having enough rigidity to withstand the force required for opening a bottle. Such materials may be, by non-limiting example, a metal or metal alloy, a plastic or other polymer, a carbon fiber, a sturdy leather, or any combinations thereof. In some embodiments, shell 15 and bottle opener 20 may be constructed from the same material, while in other embodiments, shell 15 and bottle opener 20 may be constructed from different materials. Construction of each component may be accomplished through the use of one or more molds, or any other manufacturing process as would be understood by those skilled in the art.

[0025] The disclosures of each and every patent, patent application, and publication cited herein are hereby incorporated herein by reference in their entirety.

[0026] While this invention has been disclosed with reference to specific embodiments, it is apparent that other embodiments and variations of this invention may be devised by others skilled in the art without departing from the true spirit and scope of the invention. The appended claims are intended to be construed to include all such embodiments and equivalent variations.

1. An electronic device case, comprising:
   a shell portion being sized and shaped for at least partially encasing a portable electronic device; and
   a bottle opener positioned within at least a portion of the shell.

2. The electronic device case of claim 1, wherein the electronic device is selected from the group consisting of a cell phone, a smart phone, a cordless phone, a personal digital assistant, a portable computing device, a portable television, an internet or network device, a camera, a recorder, a music player, and a device having a functional combination of any such electronic device.

3. The electronic device case of claim 1, wherein the shell is made of a substantially rigid material.

4. The electronic device case of claim 3, wherein the substantially rigid material is selected from the group consisting of a metal, an alloy, a plastic, a polymer, a carbon fiber, and leather.

5. The electronic device case of claim 1, wherein the bottle opener is made of a substantially rigid material.

6. The electronic device case of claim 5, wherein the substantially rigid material is selected from the group consisting of a metal, an alloy, a plastic, a polymer, a carbon fiber, and leather.

7. The electronic device case of claim 1, wherein the shell and the bottle opener are made of the same material, wherein the material is selected from the group consisting of a metal, an alloy, a plastic, a polymer, a carbon fiber, and leather.

8. The electronic device case of claim 7, wherein the shell and bottle opener are a single component.

9. The electronic device case of claim 1, wherein the bottle opener is adjustably positioned within the shell.

10. The electronic device case of claim 1, wherein the bottle opener is hingely attached to the shell.

11. The electronic device case of claim 1, wherein the bottle opener is retractable.
12. The electronic device case of claim 1, wherein the bottle opener at least partially protrudes beyond a planar surface of the shell.

13. The electronic device case of claim 1, wherein the bottle opener is substantially flush with the planar surface of a planar surface of the shell.

14. The electronic device case of claim 1, wherein the bottle opener further comprises a first lip and a second lip, wherein the first lip is suitable for positioning underneath an extended edge of a bottle cap, and the second lip acts as a fulcrum when applying a force to remove the bottle cap from a bottle when the bottle opener engages the bottle cap.

15. The electronic device case of claim 14, wherein the bottle opener further comprises a first lip and a second lip, wherein the first lip is suitable for positioning underneath an extended edge of a bottle cap, and the second lip acts as a fulcrum when applying a force to remove the bottle cap from a bottle when the bottle opener engages the bottle cap.

16. A portable phone case comprising: a shell being sized and shaped for at least partially encasing a portable electronic device, the shell comprising: a first surface having a front face and a rear face; and side walls at least partially surrounding the parameter of the first surface, wherein the side walls extend away from the front face for at least partially encasing the portable electronic device; and a bottle opener positioned within at least a portion of the first surface of the shell, the bottle opener comprising: a first lip for positioning underneath an extended edge of a bottle cap; and a second lip for positioning as a fulcrum when applying a force to remove the bottle cap from a bottle when the bottle opener engages the bottle cap.

17. The portable phone case of claim 16, wherein the shell and bottle opener are each composed of a substantially rigid material.

18. The portable phone case of claim 16, wherein the bottle opener is substantially flush with the front face of the first surface of the shell.

19. The portable phone case of claim 16, wherein the bottle opener at least partially protrudes beyond the front face of the first surface of the shell.

20. The portable phone case of claim 16, wherein the shell and bottle opener are a single component.

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