A case for a portable digital device, such as a mobile telephone or a portable digital media player, includes a set of interchangeable rear panels having different appearances or functions at least at one outer surface thereof. Two mutually interlocking shells engage one of the rear panels. The shells and the panels cooperate for receiving and locking the device within the shells and in front of the one rear panel.
MOBILE TELEPHONE OR PORTABLE DIGITAL MEDIA PLAYER CASE HAVING INTERCHANGEABLE PANELS

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the priority, under 35 U.S.C. §119(e), of provisional application No. 61/406,794 filed Oct. 26, 2010; the prior application is herewith incorporated by reference in its entirety.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention:
[0003] The invention relates to a mobile telephone or portable digital media player case having interchangeable panels which are used to change the appearance and/or function of the case.
[0004] 2. Description of the Related Art
[0005] Prior art cases for portable digital devices are provided with different appearances by virtue of their color, texture or pattern. Some cases have added functions, such as providing the ability to attach the case to a belt.
[0006] However, once the case is purchased and placed on the device, it cannot change its appearance or function.

BRIEF SUMMARY OF THE INVENTION

[0007] It is accordingly an object of the invention to provide a mobile telephone or portable digital media player case having interchangeable panels, which overcomes the hereinbefore-mentioned disadvantages of the heretofore-known devices of this general type and which provides the ability to easily change the appearance and/or function of the case.
[0008] With the foregoing and other objects in view there is provided, in accordance with the invention, a case for a portable digital device, such as a mobile telephone or a portable digital media player. The case comprises a set of interchangeable rear panels having different appearances or functions at least at one outer surface thereof. Two mutually interlocking shells are configured for engaging one of the rear panels. The shells and the panels cooperate for receiving and locking the device within the shells and in front of the one rear panel.
[0009] In accordance with another feature of the invention, a locking device is disposed on the shells for locking the shells together. The locking device may include a tongue protruding from one of the shells and having a catch formed thereon and a slot formed in the other of the shells for receiving the catch. In this way, the shells are locked together with the panel in place, which protects the device while using the device to give strength, rigidity and support to the case.
[0010] In accordance with a further feature of the invention, the shells each have a respective channel formed therein for receiving one of the rear panels. The channels hold the panel in place and therefore also add to the rigidity of the case.
[0011] In accordance with an added feature of the invention, different coverings are disposed on the panels for providing the different appearances. The different coverings may be formed of natural or synthetic materials and may have different colors, surface designs, textures, patterns or finishes.
[0012] In accordance with a concomitant feature of the invention, a belt clip articulates on one of the panels. An arm band or other attachment apparatus could also be fixed to the rear panel instead of a belt clip, all of which provide a different function for the rear panel.

[0013] Other features which are considered as characteristic for the invention are set forth in the appended claims.
[0014] Although the invention is illustrated and described herein as embodied in a mobile telephone or portable digital media player case having interchangeable panels, it is nevertheless not intended to be limited to the details shown, since various modifications and structural changes may be made therein without departing from the spirit of the invention and within the scope and range of equivalents of the claims.
[0015] The construction of the invention, however, together with additional objects and advantages thereof will be best understood from the following description of the specific embodiment when read in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0016] FIG. 1 is a diagrammatic, front-elevational view of a case according to the invention, in which a device, such as a mobile telephone or portable digital media player, is disposed;
[0017] FIGS. 2-6 are respective right side-elevational, rear-elevational, left side-elevational, bottom-plan and top-plan views of the case shown in FIG. 1, having a plain rear panel;
[0018] FIG. 7 is a rear-elevational view of the case shown in FIG. 1 having the plain rear panel;
[0019] FIG. 8 is a front-elevational view of the case shown in FIG. 1;
[0020] FIG. 9 is an exploded, rear-elevational view of the case without a device disposed therein;
[0021] FIG. 10 is a rear-elevational view of a rear panel with a wood-grained surface;
[0022] FIG. 11 is a rear-elevational view of a rear panel with a belt-hook thereon; and
[0023] FIGS. 12, 13, 14 and 15 are rear-elevational views of respective rear panels having natural wood, fabric or canvas, imitation or fake leather and reflective or mirrored surfaces.

DETAILED DESCRIPTION OF THE INVENTION

[0024] Referring now to the figures of the drawing in detail and first, particularly, to FIG. 1 thereof, there is seen a case 1 according to the invention, in which a device 40 is disposed. The device 40 may be a portable digital media player, a mobile telephone such as the iPhone 4® from Apple or another device. The case 1 may be formed of a synthetic material, such as polycarbonate or ABS, and has two interlocking U-shaped shells or frames 2, 3 and a rear panel 10 which allow the case 1 to be assembled around the device 40 and protect it from shock and soiling. The shells 2, 3 and the rear panel 10 have various openings formed therein to permit access to ports, buttons, switches and camera lenses of the device. The shells 2, 3 are joined together at a parting line 4 in the assembled condition or state. The rear panel 10 is one of several interchangeable rear panels, as will be explained below. FIG. 7 is a perspective view showing the case in the assembled condition or state with a plain rear panel 10 as in FIG. 3 and FIG. 8 is a perspective view showing the case in the assembled condition or state with a device 40 disposed therein.
[0025] As is seen in FIG. 9, the right side of the larger U-shaped shell 2 has a protruding tongue 12 with a detent or catch 13 formed thereon, which is snapped into a correspond-
ing slot 14 in the smaller U-shaped shell 3. It will be understood that the left side of the shell 2 has an identical tongue 12 and detent or catch 13, which is snapped into a corresponding slot 14 in the smaller U-shaped shell 3. The tongues and the detents or catches cooperate to form a locking device for locking the shells 2, 3 and the rear panel 10 together in the assembled condition or state. The rear panel 10 is retained in channels 16, 17 respectively provided within the U-shaped shells 2, 3.

[0026] FIGS. 10-15 show rear panels to be slid into the channels 16, 17 in place of the rear panel 10. The rear panel 20 in FIG. 10 has a wood-grained covering 21 disposed thereon so as to provide the case 1 with a wood-grained finish, as seen from the back. The rear panel 22 in FIG. 11 has a belt hook thereon, which is described below. The rear panel 28 in FIG. 12 has a natural wood covering 29, the rear panel 30 in FIG. 13 has a fabric or canvas covering 31, the rear panel 32 in FIG. 14 has a natural, imitation or faux leather covering 33 and the rear panel 34 in FIG. 15 has reflective or mirrored covering 35.

[0027] Therefore, the coverings may be formed of natural wood, leather, fur, metal, carbon fiber or any other natural material or of synthetic wood, vinyl, fur or any other synthetic material. The panels may also be provided in any color or with a surface design, texture or pattern.

[0028] The rear panel 22 has a base 23 and a belt clip 24 which pivots on the base at a shaft 25 and is biased by a non-illustrated spring, so that an end 26 of the belt clip 24 is normally pushed against the outer surface of the rear panel 22. The base 23 is mounted on the rear panel 22. An arm band or other device with a different function could also be used in place of the belt clip.

[0029] The case 1 is assembled by sliding the device 40 into the larger U-shaped shell 2 and then sliding one of the panels into the channel 16 behind the device. The smaller U-shaped shell 3 is then slid over the device 40, so that the channel 17 slides over the exposed end of the panel. The shell 3 is locked into place by allowing the detent or catch 13 to snap into the slot 14. The device 40 is protected while strengthening and supporting the case 1 which is tightly disposed thereon.

1. A case for a portable digital device, the case comprising:
   a set of interchanging rear panels having different appearances or functions at least at one outer surface thereof; and
   two mutually interlocking shells for engaging one of said rear panels;
   said shells and said panels cooperating for receiving and locking the device within said shells and in front of said one rear panel.

2. The case according to claim 1, which further comprises a locking device disposed on said shells for locking said shells together.

3. The case according to claim 2, wherein said locking device includes a tongue protruding from one of said shells and having a catch formed thereon and a slot formed in the other of said shells for receiving said catch.

4. The case according to claim 1, wherein said shells each have a respective channel formed therein for receiving one of said rear panels.

5. The case according to claim 1, which further comprises different coverings disposed on said panels for providing said different appearances.

6. The case according to claim 5, wherein said different coverings are selected from the group consisting of natural and synthetic materials.

7. The case according to claim 1, wherein said different appearances of said rear panels are provided by different colors, surface designs, textures, patterns or finishes.

8. The case according to claim 1, which further comprises a belt clip articulating on one of said panels.

9. The case according to claim 1, wherein the portable digital device is a mobile telephone or a portable digital media player.

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