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(54) Title: A PROTECTIVE DEVICE

(57) Abstract: There is provided a protective device (100) comprising a mobile phone protective portion (110) adapted for receiving at least a portion of a mobile phone device therein in use and an accessory protective portion (105) adapted for receiving at least a portion of an accessory item therein in use.

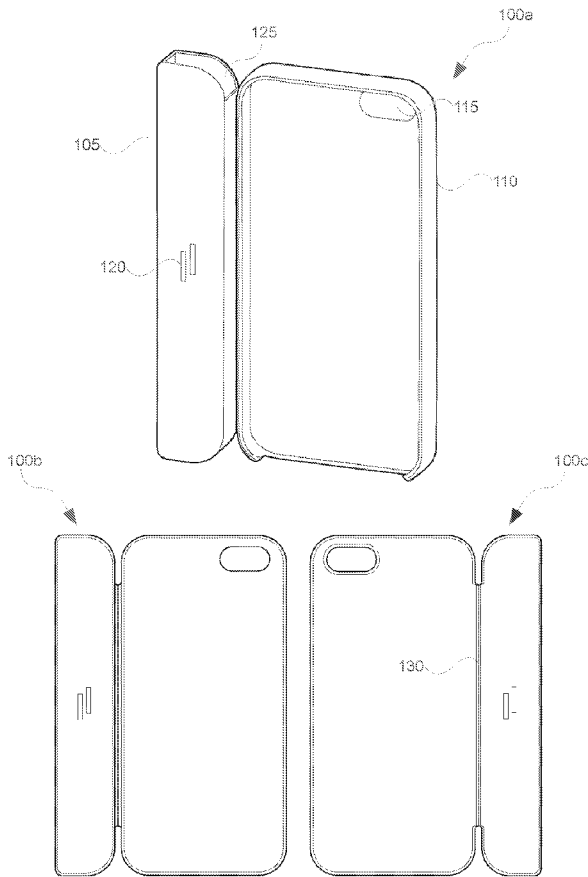


Figure 1

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UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, **Published:**
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, — *with international search report (Art. 21(3))*
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
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A PROTECTIVE DEVICE

Field of the Invention

The present invention relates to a protective device and in particular to a protective device comprising a mobile phone protective portion adapted for protecting a mobile phone device
5 and an accessory protective portion adapted for protecting an accessory item.

The invention has been developed primarily for use in protecting a mobile phone and a pair of glasses and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to this particular field of use. Specifically, the protective device may be adapted for protecting other portable electronic equipment, such
10 as tablet computing devices and the like. Yet further, the protective device may be adapted for protecting other accessory items, other than glasses.

Background

Protected devices for portable electronic equipment commonplace today usually take the form of rubberised, or silicon mobile phone cases, tablet computing device cases and the like.
15 However, use of such portable electronic equipment often requires the use of accessory items, such as glasses, styluses and the like. In this regard, a user often carries these accessory items separately, which prone to become lost or damaged.

The present invention seeks to provide a protective device, which will overcome or substantially ameliorate at least some of the deficiencies of the prior art, or to at least provide
20 an alternative.

It is to be understood that, if any prior art information is referred to herein, such reference does not constitute an admission that the information forms part of the common general knowledge in the art, in Australia or any other country.

Summary

25 According to one aspect, there is provided a protective device comprising a mobile phone protective portion adapted for receiving at least a portion of a mobile phone device therein in use; and an accessory protective portion adapted for receiving at least a portion of an accessory item therein in use.

Preferably, the accessory protective portion is adapted for wholly receiving therein the
30 accessory item in use.

Preferably, the accessory item is a pair of glasses.

Preferably, the accessory protective portion comprises padding.

Preferably, the accessory protective portion is substantially elongate.

5 Preferably, the accessory protective portion comprises an opening at one end adapted for receiving the accessory item therethrough in use.

Preferably, the opening is sealable.

Preferably, the accessory protective portion is detachable from the mobile phone protective portion.

10 Preferably, the accessory protective portion and the mobile phone protective portion are adapted for forming a complementary detachable mechanical interlock.

Preferably, the complementary detachable mechanical interlock comprises a loop fastener.

Preferably, the accessory protective portion comprises an accessory item engagement adapted for engaging the accessory item in use.

15 Preferably, the accessory protective portion is orientated along an elongate axis of the mobile phone protective portion.

Preferably, the accessory protective portion is pivotably coupled to the mobile phone protective portion

Preferably, the protective device further comprises a hinge between the accessory protective portion and the mobile phone protective portion.

20 Preferably, the hinge is a live hinge.

Preferably, the hinge is a butterfly hinge.

Preferably, the accessory protective portion is configurable in a first position with respect to the mobile phone protective portion and a second position with respect to the mobile phone protective portion

25 Preferably, in the first position, the access to protective portion in the mobile phone protective portion substantially coplanar.

Preferably, in the second position, a surface of the accessory protective portion and a surface of the mobile phone protective portion abut.

Preferably, in the second position, a profile of the accessory protective portion corresponds with a profile of the mobile phone protective portion.

Preferably, the accessory protective portion is biased in at least one of the first position in the second position.

5 Other aspects of the invention are also disclosed.

Brief Description of the Drawings

Notwithstanding any other forms which may fall within the scope of the present invention, preferred embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

10 Fig. 1 shows a front perspective view and front and back elevation of use of a protective device in accordance with a preferred embodiment of the present invention;

Fig. 2 shows back perspective views of the protective device of Fig. 1 in a first configuration and in a second configuration in accordance with another preferred embodiment of the present invention; and

15 Fig. 3 shows a back perspective view of the protective device of Fig. 1 comprising a butterfly hinge in accordance with another embodiment of the present invention.

Description of Embodiments

It should be noted in the following description that like or the same reference numerals in different embodiments denote the same or similar features.

20 Turning now to figure 1, there is shown a protective device 100. As will become apparent from the following description, the protective device 100 is adapted for protecting a mobile phone device in the normal manner and also an accessory item which may be used in conjunction with the mobile phone device. In the embodiments described herein, the accessory item is a pair of glasses, such that the protective device 100 allows a person to
25 protect not only their mobile phone device, but also their glasses.

Specifically, the protective device 100 comprises a mobile phone protective portion 110 adapted for receiving at least a portion of a mobile phone therein in use. In the embodiment given, the mobile phone protective portion 110 takes on the traditional mobile phone protective device configuration in comprising a housing adapted for receiving a mobile phone device therein without obscuring the screen of the mobile phone device. The mobile phone
30 protective portion 110 may be further configured so as to provide allowance for various

features of the mobile phone, such as a camera aperture 115 adapted to align with a camera of the mobile phone device, electronic connectors the like.

It should be noted that the use of the protective device 100 to protect a mobile phone is a preferred embodiment. However, it should be noted that the protective device 100 may
5 similarly be suited for protecting other portable electronic equipment, such as tablet computing devices and the like.

Also provided is an accessory protective portion 105 adapted for receiving at least a portion of an accessory item therein in use. As alluded to above, the embodiments described herein will be described with reference to the use of the accessory protective portion 105 adapted for
10 use in protecting a pair of glasses. However, it should be noted that the accessory protective portion 105 may be suited for protecting other accessory items also, including electronic touchscreen styluses and the like. Furthermore, no technical limitation should be imputed to the word "accessory" as used herein and indeed, the accessory protective portion 105 may be adapted for receiving a protecting an item not necessarily adapted as an accessory for the
15 mobile phone device.

As such, in use, the protective device 100 would be used by a person to simultaneously protect their mobile phone device and their accessory item, described herein as a pair of glasses. The protective device 100 further provides advantages in ensuring that the mobile phone device and the glasses do not become separated in use. Also, as will be described in
20 further detail below, the protective device 100 provides further advantages in taking on a slim profile for allowance of insertion into a pocket, and also for the configuration as a stand for better viewed of the screen of the mobile phone device purposes.

The accessory protective portion 105 comprises an opening 125 adapted for receiving the glasses therethrough. In the embodiments described herein, the accessory protective portion
25 105 is adapted for wholly receiving the glasses therein. However, in other embodiments, the accessory protective portion 105 may be adapted for only partially receiving the glasses therein. In yet further, less preferred embodiments, the accessory protective portion 105 need not necessarily comprise an aperture for receiving the glasses therein and may alternatively take the form of a clip device or the like adapted to merely engaging the glasses.

30 The accessory protective portion 105 may comprise padding (not shown) within the accessory protective portion 105 to protect the glasses in use, so as to, for example, prevent scratching, abrasion and the like.

In a preferred embodiment, as given in figure 1, the opening 125 of the accessory protective portion 105 is open, so as to allow the use of insertion and removal of the glasses in use. However, in other embodiments, the opening 135 may be sealable, such as by way of suitable lid, fastener or the like so as to prevent the glasses from becoming dislodged in use. Also, in
5 other embodiments, the opening 125 of the accessory protective portion 105 need not necessarily be at one end of the accessory protective portion 105. For example, the accessory protective portion 105 may take the form of a receptacle with an openable forward facing lid wherein, in use, the person would open the lid, insert the glasses into the accessory protective portion 105, and close the lid. In yet further embodiments, the accessory protector portion
10 105 may comprise an opening 125 at either end of the accessory protective portion 105. In this manner, the user could potentially insert the glasses from either end of the accessory protective portion 105.

The accessory protective portion 125 may comprise a logo 120, which may be embossed into the accessory protective portion 125.

15 In one embodiment, so as to substantially prevent the glasses from becoming dislodged in use, the interior of the accessory protective portion 105 may comprise inwardly located item engagements or the like so as to interfere with the glasses so as to substantially prevent the glasses from becoming dislodged from the accessory protective portion 105. Such item engagements may take the form of rubber lugs, inwardly dished surface or the like.

20 In one embodiment, the accessory protective portion 105 may be detachable from the mobile phone protective portion 110. Such may be advantages were the protective device 100 is sold in kit form with a plurality of accessory protective portions 105 each, for example, adapted for a differing size of glasses. In this manner, the user may select the most appropriate accessory protective portion 105 for the user's glasses for engagement with the mobile phone
25 protective portion 110.

In this regard, the accessory protective portion 105 and the mobile phone protective portion 110 may be adapted for forming a complementary detachable mechanical interlock, such as a clip or other similar mechanism, so as to allow the releasable attachment of the accessory protective portion 105, and the mobile phone protective portion 110. In other embodiments,
30 other mechanical interlock, such as Apocalypse fastener may be employed.

In the embodiment given in figure 1, the accessory protective portion 105 is orientated along elongate axis of the mobile phone protective portion 110. In this manner, the interior volume

of the accessory protective portion 105 is maximised, advantages for causing a pair of glasses therein. However, it should be noted that in other embodiments, the accessory protective portion 105 may be orientated along the transfers axis of the mobile phone will protective portion 110, such as by being orientated at the top one or the lower edge of the mobile phone protective portion 110. In yet further embodiments, the protective device 110 may comprise
5 more than one accessory protective portions 105, such as a first accessory protective portion 105 orientated to the left of the mobile phone protective portion 110 adapted for receiving a pair of glasses therein, and a second accessory protective portion 105 orientated to the right of the mobile phone protective portion 110 adapted for receiving a reading light therein. In it
10 in yet further embodiments, the accessory protective portion 105 need not necessarily be orientated and located along an edge of the mobile phone protective portion 110. For example, the accessory protector portion 105 may be located substantially about a midpoint of a rear surface of the mobile phone protective portion 110.

Now, in a preferred embodiment, the accessory protective portion 105 is pivotably coupled to
15 the mobile phone protective portion 110. Referring to the front view 100b and the back view 100c of the protective device 100, there is shown a hinge 130 between the accessory protective portion 105 and the mobile phone protective portion 110.

In a preferred embodiment, the hinge is a live hinge so as to allow the protective device 100 to be moulded as an integral unit. However, in further embodiments, as is illustrated in figure
20 3 in the perspective back view 100f of the protective device 100, there is shown the hinge taking the form of a butterfly hinge, so as to bias the accessory protective portion 105 in at least one hinge position with respect to the mobile phone protective portion 110.

Now, with the accessory protective portion 105 being pivotably coupled to the mobile phone protective portion 110, the protector device 100 may take on the configuration as
25 substantially given in figure 2. Specifically, the protective device 100 may take the form of a first configuration 100d wherein a surface of the accessory protective portion 105 abuts with a portion of a surface of the mobile phone protective portion 110. In the first configuration 100d, the protective portion 100 advantageously may be utilised when as a stand, wherein the screen of the mobile phone device one is angled towards the user in use. Furthermore, in the
30 first configuration 100d, the location of the accessory protective portion 105 provides a natural grip for a hand of the person when grasping the protector device 100.

In a second configuration 100e the accessory protective portion 105 is substantially coplanar with the mobile phone device protective portion 110. In the second configuration 100e, the protective device 100 advantageously allows for the insertion of the protective device into a pocket, for example.

5 As alluded to above, where the hinge takes the form of a butterfly hinge, the butterfly hinge would bias the accessory protective portion 105 with respect to the mobile phone protective portion 110, in either the first configuration 100d or the second configuration 100e. Such would prevent the accessory protective portion 105 swinging uncontrollably with reference to the mobile phone protective portion 110. It should be noted that in other embodiments, the protective device 100 may further comprises other fasteners, locking mechanisms or the like to bias or hold the protective device 100 in the first configuration 100d or the second configuration 100e. For example, the accessory protective portion 105 and the mobile phone protective portion 110 may comprise magnets so as to substantially hold the protective device 100 in the first configuration 100d.

10 It should be noted that the accessory protective portion 105 is preferably shaped such that when the protector device 100 takes the first configuration 100d, the edgewise profile of the accessory protective portion 105 comprises substantially with the edgewise profile of the mobile phone protective portion.

Interpretation

20 *Embodiments:*

Reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment, but may. Furthermore, the particular features, structures or characteristics may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments.

30 Similarly it should be appreciated that in the above description of example embodiments of the invention, various features of the invention are sometimes grouped together in a single embodiment, figure, or description thereof for the purpose of streamlining the disclosure and aiding in the understanding of one or more of the various inventive aspects. This method of

disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed embodiment. Thus, the claims following the Detailed Description of Specific Embodiments are hereby expressly incorporated into this Detailed Description of Specific Embodiments, with each claim standing on its own as a separate embodiment of this invention.

Furthermore, while some embodiments described herein include some but not other features included in other embodiments, combinations of features of different embodiments are meant to be within the scope of the invention, and form different embodiments, as would be understood by those in the art. For example, in the following claims, any of the claimed embodiments can be used in any combination.

Different Instances of Objects

As used herein, unless otherwise specified the use of the ordinal adjectives "first", "second", "third", etc., to describe a common object, merely indicate that different instances of like objects are being referred to, and are not intended to imply that the objects so described must be in a given sequence, either temporally, spatially, in ranking, or in any other manner.

Specific Details

In the description provided herein, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known methods, structures and techniques have not been shown in detail in order not to obscure an understanding of this description.

Terminology

In describing the preferred embodiment of the invention illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, the invention is not intended to be limited to the specific terms so selected, and it is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar technical purpose. Terms such as "forward", "rearward", "radially", "peripherally", "upwardly", "downwardly", and the like are used as words of convenience to provide reference points and are not to be construed as limiting terms.

Comprising and Including

In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word “comprise” or variations such as “comprises” or “comprising” are used in an inclusive sense,
5 i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

Any one of the terms: including or which includes or that includes as used herein is also an open term that also means including at least the elements/features that follow the term, but not excluding others. Thus, including is synonymous with and means comprising.

Scope of Invention

Thus, while there has been described what are believed to be the preferred embodiments of the invention, those skilled in the art will recognize that other and further modifications may be made thereto without departing from the spirit of the invention, and it is intended to claim
10 all such changes and modifications as fall within the scope of the invention. For example, any formulas given above are merely representative of procedures that may be used. Functionality may be added or deleted from the block diagrams and operations may be
15 interchanged among functional blocks. Steps may be added or deleted to methods described within the scope of the present invention.

Although the invention has been described with reference to specific examples, it will be
20 appreciated by those skilled in the art that the invention may be embodied in many other forms.

Industrial Applicability

It is apparent from the above, that the arrangements described are applicable to the protective device industries.

Claims

1. A protective device comprising:
a mobile phone protective portion adapted for receiving at least a portion of a mobile phone device therein in use; and
5 an accessory protective portion adapted for receiving at least a portion of an accessory item therein in use.
2. A protective device as claimed in claim 1, wherein the accessory protective portion is adapted for wholly receiving therein the accessory item in use.
3. A protective device as claimed in claim 1, wherein the accessory item is a pair of glasses.
- 10 4. A protective device as claimed in claim 1, wherein the accessory protective portion comprises padding.
5. A protective device as claimed in claim 1, wherein the accessory protective portion is substantially elongate.
6. A protective device as claimed in claim 5, wherein the accessory protective portion
15 comprises an opening at one end adapted for receiving the accessory item therethrough in use.
7. A protective device as claimed in claim 6, wherein the opening is sealable.
8. A protective device as claimed in claim 1, wherein the accessory protective portion is detachable from the mobile phone protective portion.
- 20 9. A protective device as claimed in claim 8, wherein the accessory protective portion and the mobile phone protective portion are adapted for forming a complementary detachable mechanical interlock.
10. A protective device as claimed in claim 9, wherein the complementary detachable mechanical interlock comprises and loop fastener.
- 25 11. A protective device as claimed in claim 1, wherein the accessory protective portion comprises an accessory item engagement adapted for engaging the accessory item in use.
12. A protective device as claimed in claim 1, wherein the accessory protective portion is orientated along an elongate axis of the mobile phone protective portion.
13. A protective device as claimed in claim 1, wherein the accessory protective portion is
30 pivotably coupled to the mobile phone protective portion
14. A protective device as claimed in claim 13, further comprising a hinge between the accessory protective portion and the mobile phone protective portion.
15. A protective device as claimed in claim 14, wherein the hinge is a live hinge.

16. A protective device as claimed in claim 14, wherein the hinge is a butterfly hinge.

17. A protective device as claimed in claim 1, wherein the accessory protective portion is configurable in a first position with respect to the mobile phone protective portion and the second position with respect to the mobile phone protective portion

5 18. A protective device as claimed in claim 17, wherein, in the first position, the accessory protective portion and the mobile phone protective portion are substantially coplanar.

19. A protective device as claimed in claim 17, wherein, in the second position, a surface of the accessory protective portion and a surface of the mobile phone protective portion abut.

10 20. A protective device as claimed in claim 19, wherein, in the second position, a profile of the accessory protective portion corresponds with a profile of the mobile phone protective portion.

21. A protective device as claimed in claim 17, wherein the accessory protective portion is biased in at least one of the first position in the second position.

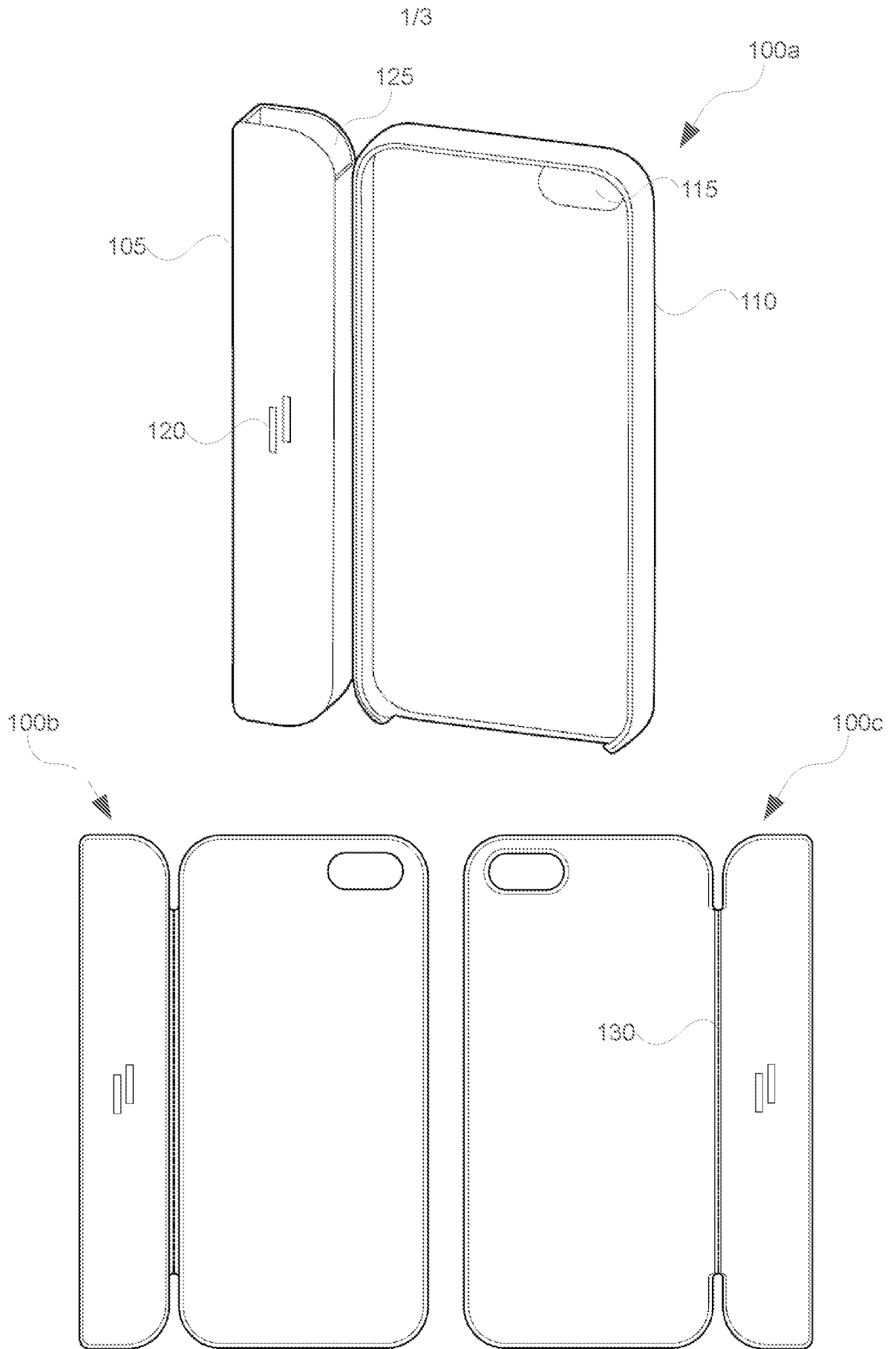


Figure 1

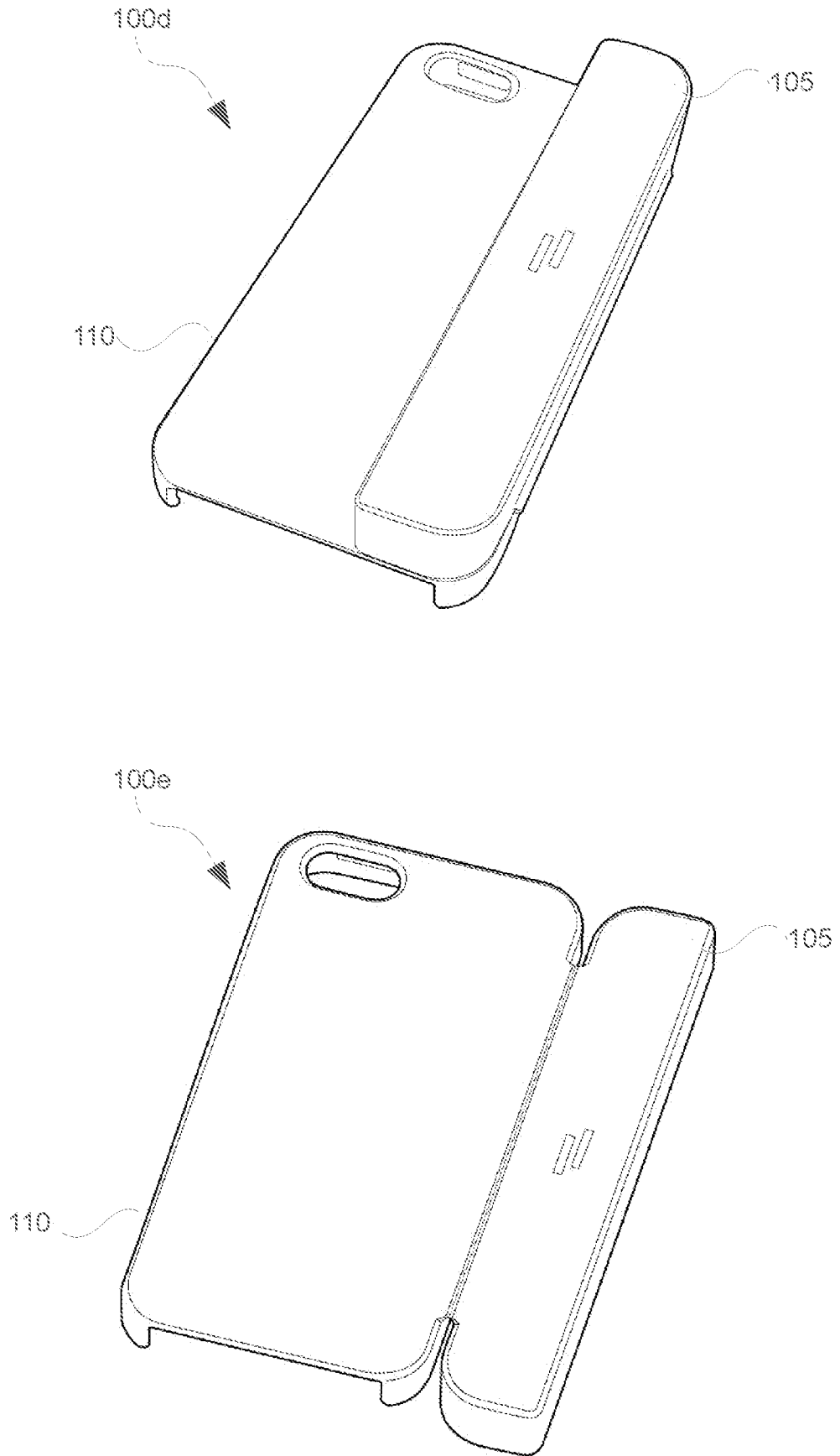


Figure 2

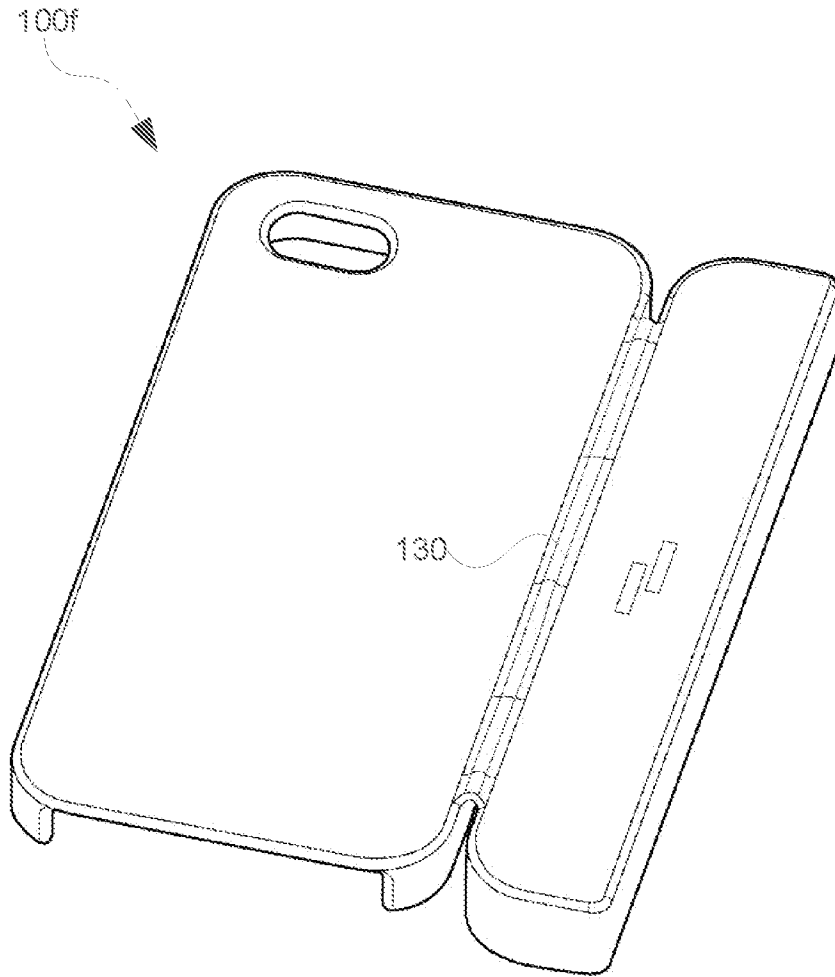


Figure 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2013/000750

A. CLASSIFICATION OF SUBJECT MATTER A45C 11/00 (2006.01) A45C 11/04 (2006.01)		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPI and EPODOC: IPC & CPC: A45C and Keywords (mobile, tablet, iPod, iPad, phone, computer,) and (spectacles, glasses, accessories, stylus, pen, pencil) and (detach, separate, remove, attach, fasten, hinge, pivot) & like terms.		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 25 September 2013	Date of mailing of the international search report 25 September 2013	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustralia.gov.au Facsimile No.: +61 2 6283 7999	Authorised officer Paula Chavez AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262832527	

INTERNATIONAL SEARCH REPORT

International application No.

C (Continuation).

DOCUMENTS CONSIDERED TO BE RELEVANT

PCT/AU2013/000750

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0210018 A1 (FRIEDMAN et al.) 01 September 2011 FIGs. 1-5, 11	1-7, 9-12, 17-21
X	CH 703829 A1 (GARTMANN WALTER) 30 March 2012 Whole document	1-12, 17-20
X	HU 0101164 A2 (NAGYIRTAS KFT) 28 July 2003 FIGs. 1a, 1b, 2a, 2b	1-5, 12-17, 19, 20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2013/000750

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
US 2011/0210018 A1	01 Sep 2011	US 2011303560 A1	15 Dec 2011
CH 703829 A1	30 Mar 2012	None	
HU 0101164 A2	28 Jul 2003	None	

End of Annex

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

Form PCT/ISA/210 (Family Annex)(July 2009)