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(54) **MOBILE TERMINAL DEVICE, IN PARTICULAR FOR A VEHICLE, AS WELL AS METHOD FOR MANUFACTURING A MOBILE TERMINAL DEVICE**

(57) The invention relates to a mobile terminal device (10) comprising at least one housing element (14) enclosing at least partially a receiving area (16) for accommodating at least one electronic component (12) of the mobile terminal device (10) and at least one covering element (18) made of leather, the covering element (18) covering at least one portion (20) of a first outer surface (22) of the housing element (14), wherein the first outer surface (22) faces away from the receiving area (16), wherein the covering element (18) has a second outer surface (24) which faces away from the first outer surface (22), the second outer surface (24) having at least one touch portion (T) being visible and touchable by a user of the mobile terminal device (10), and wherein at least one elastically deformable cushion element (26) is arranged at least partially between the covering element (18) and the housing element (14).

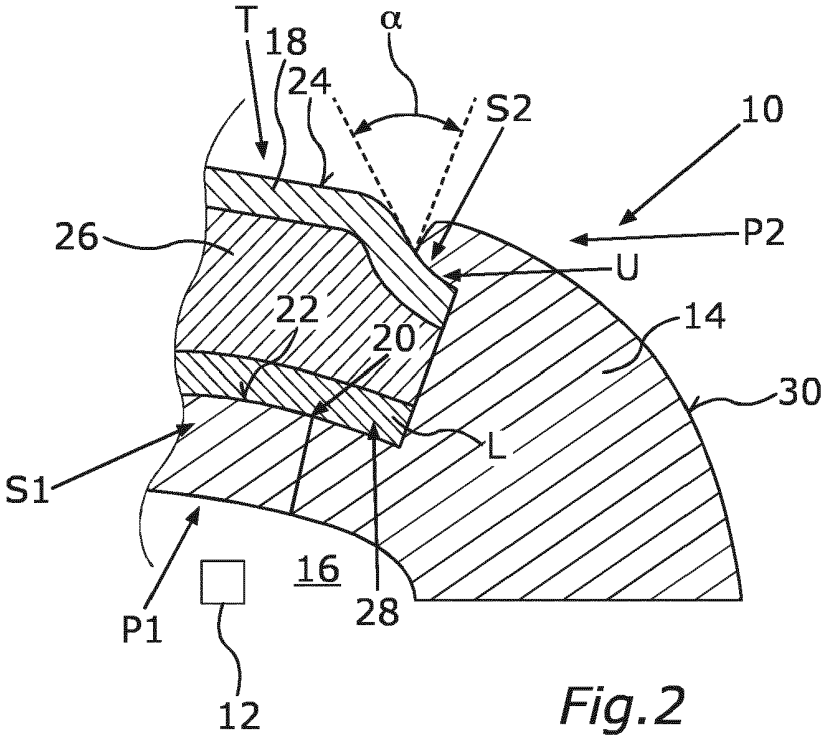

Fig.2

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Description

[0001] The invention relates to a mobile terminal device, in particular for a vehicle. The invention further relates to a method for manufacturing a mobile terminal device.

[0002] A mobile terminal device in the form of a remote control device for a vehicle is disclosed in EP 1 966 454 B1. In EP 1 966 454 B1 the remote control device is an electronic key consisting of a housing, which accommodates an energy store, at least one transmission and/or reception device, and an electronic store for an identification code. Furthermore, the housing is fully or partially layered on the outer surface with at least one friction-enhancing material.

[0003] It is an object of the present invention to provide a mobile terminal device and a method for manufacturing such a mobile terminal device so that a particularly good feel of the mobile terminal device can be realized in a particularly cost effective way.

[0004] This object is solved by a mobile terminal device having the features of claim 1 as well as a method having the features of claim 13. Advantageous embodiments with expedient developments of the invention are indicated in the other claims.

[0005] A first aspect of the present invention relates to a mobile terminal device, in particular for a vehicle. As used here and in the following, the expression "mobile terminal device" refers to an electronic handheld device. Preferably, the mobile terminal device is configured as a remote control device for a vehicle, in particular for a passenger vehicle. For example, the remote control device is a remote car key of an access system of the vehicle by means of which at least one door lock of the vehicle can be remotely unlocked. This means that, for example, the door lock can be unlocked without the remote control device touching or contacting the vehicle. This means that, by means of the remote control device, at least one function of the vehicle can be remotely effected without the remote control device touching or contacting the vehicle.

[0006] The mobile terminal device comprises at least one housing element which encloses at least partially a receiving area for accommodating at least one electronic component of the mobile terminal device. This means, in a completely assembled state of the mobile terminal device, the at least one electronic component is accommodated or arranged in the receiving area at least partially, wherein the receiving area is enclosed by the housing element at least partially. For example, the electronic component comprises at least one storage device configured to store and release electric energy. For example, the storage device can be configured as a battery or an accumulator. Alternatively or additionally, the electronic component can comprise at least one transmitting device by means of which at least one signal, in particular at least one electronic signal, can be transmitted, wherein the at least one function of the vehicle can be effected by means of said signal. For example, the transmitting device can be operated by means of electric energy stored in and provided by said storage device so that the transmitting device can use the electric energy provided by the storage device in order to transmit the signal. For example, this signal can be received by means of a receiving device of the vehicle. For example, the vehicle performs said function when the receiving device receives said signal provided by the mobile terminal device. Moreover, alternatively or additionally, the electronic component can comprise a memory for storing data.

[0007] The mobile terminal device further comprises at least one covering element which is made of leather, in particular artificial leather. The covering element covers at least one portion of a first outer surface of the housing element, wherein the first outer surface faces away from the receiving area. Furthermore, the covering element has a second outer surface which faces away from the first outer surface. Therein, the second outer surface, in a completely manufactured and assembled state of the mobile terminal device, has at least one touch portion which, in the completely manufactured and assembled state of the mobile terminal device, is visible and touchable by a human user of the mobile terminal device. In other words, when a human user uses and actuates or operates the mobile terminal device, the user grasps, handles and thus touches the mobile terminal device, wherein the user touches said touch portion of the second outer surface which is formed by the covering element.

[0008] In order to realize a particularly good feel of the mobile terminal device in a particularly cost effective way, the mobile terminal device further comprises at least one elastically deformable cushion element which is arranged at least partially between the covering element and the housing element. Particularly, the cushion element is arranged at least partially between said portion of said first outer surface and said touch portion so that said user operating and thus grasping and handling the mobile terminal device can reversibly move, in particular push, the touch portion towards the housing element, in particular towards the at least one portion of the first outer surface, since the cushion element is elastically deformable and, for example, since the covering element per se is flexible. Thereby, a particularly pleasant and high-quality soft touch feel of the mobile terminal device can be realized.

[0009] In order to realize a particularly pleasant and high-quality feel of the mobile terminal device in a particularly cost effective way, in an embodiment of the invention, the cushion element is made of a foam material.

[0010] In a further embodiment of the present invention, at least one first portion of the housing element is located on a first side of the cushion element and the covering element. For example, the cushion element and the covering element form an assembly so that, for example, the first portion of the housing element is located on a first side of said assembly. Therein, the portion of the first outer surface is formed by the first portion of the

housing element. Moreover, in this embodiment, at least one second portion of the housing element is located on a second side of the cushion element and the covering element, so that, for example, the second portion of the housing element is located on a second side of said assembly. The second side is opposite of the first side. Furthermore, in this embodiment, the second portion of the housing element covers at least one covered portion of the second outer surface, the covered portion adjoining the touch portion. This means the second outer surface has said covered portion which is covered by the second portion of the housing element. Preferably, the second portion of the housing element forms a third outer surface being visible and touchable by said user. Thus, the user can see and touch both the touch portion and the third outer surface. However, since the second portion of the housing element and thus the third outer surface cover the covered portion of the second outer surface the user cannot see or touch the covered portion.

[0011] In this embodiment, said assembly can be integrated in the mobile terminal device particularly advantageously. In particular, said assembly can be connected with the housing element in a particularly cost effective way. Moreover, since the second portion of the housing element covers the covered portion of the second outer surface, a high extent of functions of the housing element can be realized so that the housing element can be used to enclose the receiving area and can fulfill at least one further function.

[0012] In a further embodiment of the invention said portion of the first outer surface touches the cushion element directly. Alternatively or additionally, the covered portion of the second outer surface touches the second portion of the housing element directly. Thus, a particularly good feel of the mobile terminal device can be realized in a particularly cost effective way since the number of parts of the mobile terminal device can be kept particularly low.

[0013] Preferably, said further function of the housing element can comprise forming at least one manufacturer's emblem so that, preferably, the second portion of the housing element forms said manufacturer's emblem. This means the manufacturer's emblem and the second portion of the housing element are formed in one piece .

[0014] Alternatively, at least one manufacturer's emblem can be arranged on the second portion of the housing element. This means the manufacturer's emblem and the second portion of the housing element can be separately manufactured components which are connected with each other, wherein said further function of the second portion of the housing element comprises holding the manufacturer's emblem. Thereby, the manufacturer's emblem can be integrated in the mobile terminal device in a particular cost effective way.

[0015] In order to manufacture the mobile terminal device in a particular cost effective way, in a further embodiment of the invention, the housing element is formed in one piece.

[0016] Preferably, the housing element is manufactured by injection molding so that the housing element can be manufactured in a particularly cost and time effective way.

[0017] In a further embodiment of the invention the cushion element and the covering element form said assembly which is overmolded by the housing element by means of said injection molding. In other words, the housing element is manufactured by means of an injection molding process, wherein the assembly is overmolded with the housing element by means of the injection molding process. Thus, the housing element is manufactured and the assembly is simultaneously overmolded with the housing element so that the assembly is connected with the housing element whilst manufacturing the latter. Thereby, the mobile terminal device can be manufactured in a particularly time and cost effective way.

[0018] In particular, the application is based on the consideration that mobile terminal devices such as remote control devices which can be configured as, for example, remote keys for vehicles have seen multiple various decorative trends over the past years. One of the recent demands arose from the customers' expectations to apply materials with leather appearance as decorative elements to the remote control device housing to enhance the end customer value proposition. The major challenge lies in the realization of this request with minimum technological process effort being suitable for an automotive mass production. In the majority of the cases of leather appearance applications, additional cost-intensive and usually manual assembly steps are required. In other words, leather appearance decorative applications usually require a high level of effort in manufacturing processes. In order to be able to manufacture remote control devices having leather appearances, the leather application concept and the manufacturing process have to be adapted to mass production process needs whilst keeping the quality appearance of premium leather applications. The aforementioned problems can be solved by means of the invention, wherein the covering element made of leather, in particular artificial leather, and the cushion element as well as their connection with the housing element are suitable for mass or serial production.

[0019] Preferably, the assembly which is a leather cushion element can be integrated in said injection molding process by means of which the housing element is manufactured. Thus, the housing element is made of a plastic material. Moreover, the second portion of the housing element can serve as a manufacturer's emblem or as a platform for a manufacturer's emblem, wherein the platform is also referred to as a logo platform. Since, preferably, said assembly is connected with the housing element by means of said injection molding process by means of which the housing element is manufactured, a mobile terminal device component comprising at least the housing element and the assembly connected with the housing element can be manufactured in a particu-

larly time and cost effective way. In particular, the mobile terminal device component can be manufactured as a finished part in an injection tool by means of which the injection molding process is carried out. Moreover, the finished part can be manufactured in the injection tool without requiring additional assembly and joining steps for connecting the leather cushion element (assembly) with the injection molded plastic housing element.

[0020] In a further embodiment of the invention the covering element is connected with the cushion element by injection molding the cushion element against the covering element so that the covering element and the cushion element form a composite component. In other words, the aforementioned assembly is said composite component which is manufactured in such a way that the cushion element is molded, in particular injection molded, against the covering element. Therein, for example, the cushion element is molded, in particular injection molded, against the premanufactured covering element thereby manufacturing the composite component. Subsequently, the premanufactured composite component can be overmolded with the housing element by means of said injection molding process. Thus, for example, the cushion element can be made of a plastic material.

[0021] In order to realize a particularly good feel of the mobile terminal device in a particularly cost effective way, in a further embodiment of the invention, the cushion element touches both the covering element and the housing element directly.

[0022] A second aspect of the present invention relates to a method for manufacturing a mobile terminal device, in particular for a vehicle. For example, the mobile terminal device according to the first aspect of the present invention can be manufactured by means of the method according to the second aspect of the invention. The method comprises a first step of providing at least one housing element enclosing at least partially a receiving area for accommodating at least one electronic component of the mobile terminal device. The method further comprises a second step of providing at least one covering element made of leather, in particular artificial leather. The covering element covers at least one portion of a first outer surface of the housing element, wherein the first outer surface faces away from the receiving area. The covering element has a second outer surface which faces away from the first outer surface, the second outer surface having at least one touch portion being visible and touchable by a user of the mobile terminal device.

[0023] In order to realize a particularly good feel of the mobile terminal device in a particularly cost effective way, at least one elastically deformable cushion element is arranged at least partially between the covering element and the housing element.

[0024] Advantages and advantageous embodiments of the first aspect of the invention are to be regarded as advantages and advantageous embodiments of the second aspect of the invention and vice versa.

[0025] In order to manufacture the mobile terminal device in a particularly time and cost effective way, in an embodiment of the second aspect of the invention, the cushion element and the covering element form a premanufactured assembly. Said premanufactured assembly can be the aforementioned composite component. Alternatively or additionally, the assembly can be manufactured in such a way that the cushion element is molded, in particular injection molded, against the covering element, in particular against the premanufactured covering element, thereby connecting the cushion element with the covering element and thereby manufacturing said assembly. Hence, by molding the cushion element against the covering element, the cushion element is manufactured by injection molding.

[0026] Moreover, the assembly is overmolded with the housing element by means of injection molding thereby manufacturing the housing element such that at least a first portion of the housing element is located on a first side of the assembly, the portion of the first outer surface being formed by the first portion of the housing element. Moreover, the housing element is manufactured such that at least one second portion of the housing element is located on a second side of the assembly, the second side being opposite of the first side, wherein the second portion of the housing element covers at least one covered portion of the second outer surface, the covered portion adjoining or abutting the touch portion.

[0027] Further advantages, features and details of the invention derive from the following description of preferred embodiments as well as from the drawings. The features and feature combinations previously mentioned in the description as well as the features and feature combinations mentioned in the following description of the figures and/or shown in the figures alone can be employed not only in the respective indicated combination but also in any other combination or taken alone without leaving the scope of the invention.

[0028] The drawings show in:

Fig. 1 a schematic top view of a first embodiment of a mobile terminal device according to the present invention;

Fig. 2 part of a schematic sectional view of the mobile terminal device according to a second embodiment of the invention; and

Fig. 3 part of a schematic, sectional and perspective view of a third embodiment of the mobile terminal device.

[0029] In the figures the same elements or elements having the same functions are indicated by the same reference signs.

[0030] Fig. 1 shows a mobile terminal device 10, i.e. an electronic handheld device, according to a first embodiment. For example, the mobile terminal device 10 is a remote control device for a vehicle such as a passenger

vehicle. In particular, the mobile terminal device 10 may be a car key by means of which at least one door lock of the vehicle can be remotely unlocked. Alternatively, the mobile terminal device can be a consumer electronic handheld device such as a smartphone, a tablet PC or the like. In its completely assembled state the mobile terminal device 10 comprises at least one electronic component 12 which is schematically shown in Fig. 2. For example, the electronic component 12 comprises at least one storage device configured to store electric energy and/or at least one transmitting device configured to transmit at least one signal, in particular at least one electronic signal. Moreover, the mobile terminal device 10 comprises at least one housing element 14 which can be made of a plastic material such as polycarbonate (PC) or polyethylene terephthalate (PET). Preferably, the housing element 14 is made in one piece. As can be seen from Fig. 2, the housing element 14 encloses at least partially a receiving area 16 for accommodating the electronic component 12 at least partially. In other words, in the completely assembled state of the mobile terminal device 10, the electronic component 12 is at least partially, in particular completely, arranged in the receiving area 16.

[0031] Furthermore, the mobile terminal device 10 comprises at least one covering element 18 which in the illustrated embodiment is made of artificial leather. The covering element 18 covers at least one portion 20 of a first outer surface 22 of the housing element 14. In other words, the housing element 14 comprises the first outer surface 22 and thus the portion 20 which is covered by the covering element 18. The first outer surface 22 faces away from the receiving area 16. Moreover, the covering element 18 has a second outer surface 24 which faces away from the first outer surface 22 and the receiving area 16. The second outer surface 24 is made of said artificial leather. Moreover, the second outer surface 24 has at least one touch portion T being visible and touchable by a human user of the mobile terminal device 10.

[0032] In order to realize a particularly good feel of the mobile terminal device 10 in a particularly cost effective way, the mobile terminal device 10 comprises at least one elastically deformable cushion element 26 which is arranged at least partially between the covering element 18 and the housing element 14. In particular, the at least one elastically deformable cushion element 26 may be arranged entirely between the covering element 18 and the housing element 14. Particularly, the cushion element 26 is arranged between the portion 20 and the covering element 18. Since the cushion element 26 is elastically deformable and since, for example, the covering element 18 per se is flexible, said user can push the touch portion T reversibly against the portion 20 so that a particularly high-quality soft touch feel of the mobile terminal device 10 can be realized. Preferably, the cushion element 26 is made of a foam material. For example, the cushion element 26 can be a sponge.

[0033] Preferably, the housing element 14 is formed in one piece, wherein the housing element 14 is manufactured by injection molding. Thus, for example, the housing element 14 is made of a plastic material. In order to manufacture the mobile terminal device 10 in a particularly cost and time effective way, the cushion element 26 and the covering element 18 form a premanufactured assembly 28 which is overmolded with the housing element 14 by means of said injection molding by means of which the housing element 14 is manufactured. The assembly 28 is overmolded with the housing element 14 in such a way that at least a first portion P1 of the housing element 14 is located on a first side S1 of the assembly 28. The portion 20 of the first outer surface 22 is part of the first portion P1 of the housing element 14. Moreover, the assembly 28 is overmolded with the housing element 14 in such a way that at least one second portion P2 of the housing element 14 is located on a second side S2 of the assembly 28, the second side S2 being opposite of the first side S1. Furthermore, the second portion P2 of the housing element 14 covers at least one covered portion U of the second outer surface 24, the covered portion U adjoining the uncovered touch portion T. Thus, for example, the housing element 14, in particular the second portion P2, forms a third outer surface 30 which is touchable and visible by said user. Moreover, the assembly 28 is at least partially arranged between the portions P1 and P2, wherein the assembly 28 is connected with the housing element 14. Particularly, the assembly 28 is connected with the housing element 14 by means of said injection molding by means of which the housing element 14 is manufactured. In other words, the housing element 14 is configured as an injection molded plastic housing, wherein the assembly 28 has an advantageous geometry so that the assembly 28 can be overmolded with the housing element 14 particularly advantageously. As can be seen from Fig. 2, the covering element 18, in particular the surface 24 of the covering element 18, and the second portion P2 confine an angle α. In the illustrated embodiment, the angle α is in a range of $0° < \alpha < 90°$.

[0034] In an embodiment, the portion 20 of the first outer surface 22 touches the cushion element 26 directly. Alternatively, as illustrated in Fig. 2, the mobile terminal device 10 may comprise a layer L which is arranged between the cushion element 26 and the portion 20 so that, for example, the portion 20 touches the layer L directly. For example, the layer L and the housing element 14 are made of different materials. For example, the layer L can be made of polycarbonate (PC). For example, the layer L can be formed by a sheet which is arranged on the housing element 14, in particular on the portion 20. Moreover, alternatively or additionally, the covered portion U of the second outer surface 24 touches the second portion P2 of the housing element 14 directly. Moreover, the cushion element 26 touches the covering element 18 directly so that a particularly high-quality feel of the mobile terminal device 10 can be realized. Furthermore, the number of parts of the mobile terminal device 10 can be kept particularly low in this way.

[0035] As can be seen from Fig. 1, the second portion P2 of the housing element 14 can form at least one manufacturer's emblem E so that, for example, said manufacturer's emblem E and the housing element 14 are formed in one piece.

[0036] Alternatively, the second portion P2 can form a platform 32 for holding a manufacturer's emblem. Thus, the platform 32 and the housing element 14 are formed in one piece. Moreover, the housing element 14 and the manufacturer's emblem can be configured as separately manufactured parts, wherein the manufacturer's emblem can be or is connected with the platform 32 thereby connecting the manufacturer's emblem with the housing element 14.

[0037] Whilst Fig. 2 shows a second embodiment of the mobile terminal device 10, Fig. 3 shows a third embodiment of the mobile terminal device 10. As can be seen from Fig. 3, the platform 32 or the manufacturer's emblem can be surrounded by the covering element 18 thereby realizing a particularly good feel of the mobile terminal device 10. Particularly, the covering element 18 can enclose a receptacle 34 in which the platform 32 and/or the manufacturer's emblem are or is received or arranged.

List of reference signs

[0038]

10	mobile terminal device
12	electronic component
14	housing element
16	receiving area
18	covering element
20	portion
22	first outer surface
24	second outer surface
26	cushion element
28	assembly
30	third outer surface
32	platform
34	receptacle
E	manufacturer's emblem
L	layer
P1	first portion
P2	second portion
S1	first side
S2	second side
T	touch portion
U	covered portion
α	angle

Claims

1. A mobile terminal device (10) comprising:

- at least one housing element (14) enclosing at least partially a receiving area (16) for accommodating at least one electronic component (12) of the mobile terminal device (10); and
- at least one covering element (18) made of leather, the covering element (18) covering at least one portion (20) of a first outer surface (22) of the housing element (14), wherein the first outer surface (22) faces away from the receiving area (16), and wherein the covering element (18) has a second outer surface (24) which faces away from the first outer surface (22), the second outer surface (24) having at least one touch portion (T) being visible and touchable by a user of the mobile terminal device (10);

characterized by

at least one elastically deformable cushion element (26) arranged at least partially between the covering element (18) and the housing element (14).

2. The mobile terminal device (10) according to claim 1, wherein the mobile terminal device (10) is a remote control device for a vehicle, in particular a car key of an access system of the vehicle.

3. The mobile terminal device (10) according to claim 1 or 2, wherein the cushion element (26) is made of a foam material.

4. The mobile terminal device (10) according to any one of the preceding claims, wherein the at least one covering element (18) is made of artificial leather.

5. The mobile terminal device (10) according to any one of the preceding claims, wherein at least a first portion (P1) of the housing element (14) is located on a first side (S1) of the cushion element (26) and the covering element (18), the portion (20) of the first outer surface (22) being formed by the first portion (P1) of the housing element (14) and wherein at least one second portion (P2) of the housing element (14) is located on a second side (S2) of the cushion element (26) and the covering element (18), the second side (S2) being opposite of the first side (S1), and wherein the second portion (P2) of the housing element (14) covers at least one covered portion (U) of the second outer surface (24), the covered portion (U) adjoining the touch portion (T) .

6. The mobile terminal device (10) according to claim 5, wherein the portion (20) of the first outer surface (22) touches the cushion element (26) directly and wherein the covered portion (U) of the second outer surface (24) touches the second portion (P2) of the housing element (14) directly.

7. The mobile terminal device (10) according to claim 5 or 6, wherein the second portion (P2) of the housing

element (14) forms at least one manufacturer's emblem (E) or wherein at least one manufacturer's emblem (E) is arranged on the second portion (P2) of the housing element (14).

8. The mobile terminal device (10) according to any one of the preceding claims, wherein the housing element (14) is formed in one piece.

9. The mobile terminal device (10) according to any one of the preceding claims, wherein the housing element (14) is manufactured by injection molding.

10. The mobile terminal device (10) according to claim 9, wherein the cushion element (26) and the covering element (18) form an assembly (28) which is overmolded with the housing element (14) by means of the injection molding.

11. The mobile terminal device (10) according to any one of the preceding claims, wherein the covering element (18) is connected with the cushion element (26) by injection molding the cushion element (26) against the covering element (18) so that the covering element (18) and the cushion element (26) form a composite component (28).

12. The mobile terminal device (10) according to claims 10 and 11, wherein the assembly (28) is the composite component (28).

13. The mobile terminal device (10) according to any one of the preceding claims, wherein the cushion element (26) touches both the covering element (18) and the housing element (14) directly.

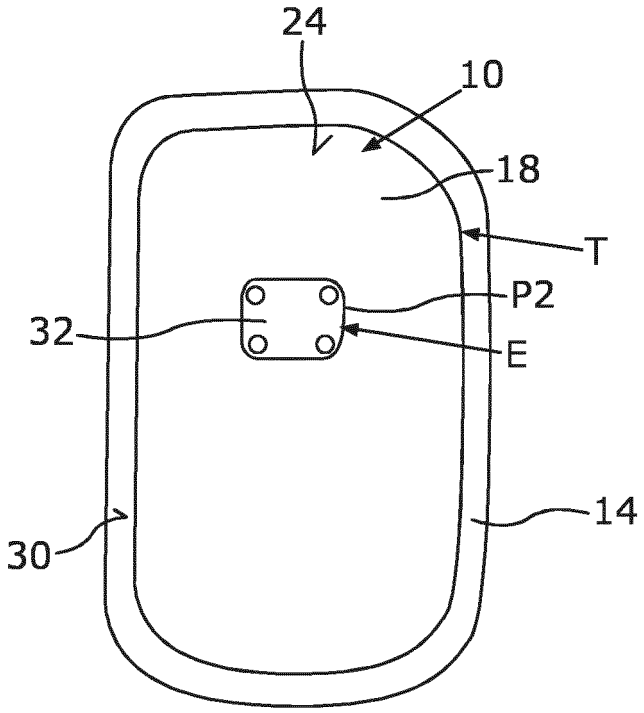
14. A method for manufacturing a mobile terminal device (10), the method comprising:

- providing at least one housing element (14) enclosing at least partially a receiving area (16) for accommodating at least one electronic component (12) of the mobile terminal device (10); and
- providing at least one covering element (18) made of leather, the covering element (18) covering at least one portion (20) of a first outer surface (22) of the housing element (14), wherein the first outer surface (22) faces away from the receiving area (16), wherein the covering element (18) has a second outer surface (24) which faces away from the first outer surface (22), the second outer surface (24) having at least one touch portion (T) being visible and touchable by a user of the mobile terminal device (10);

characterized in that

at least one elastically deformable cushion element (26) is arranged at least partially between the covering element (18) and the housing element (14).

15. The method according to claim 14, wherein the cushion element (26) and the covering element (18) form a premanufactured assembly (28) which is overmolded with the housing element (14) by means of injection molding thereby manufacturing the housing element (14) such that at least a first portion (P1) of the housing element (14) is located on a first side (S1) of the assembly (28), the portion (20) of the first outer surface (22) being formed by the first portion (P1) of the housing element (14), wherein at least one second portion (P2) of the housing element (14) is located on a second side (S2) of the assembly (28), the second side (S2) being opposite of the first side (S1), and wherein the second portion (P2) of the housing element (14) covers at least one covered portion (U) of the second outer surface (24), the covered portion (U) adjoining the touch portion (T).


24
10
18
T
P2
32
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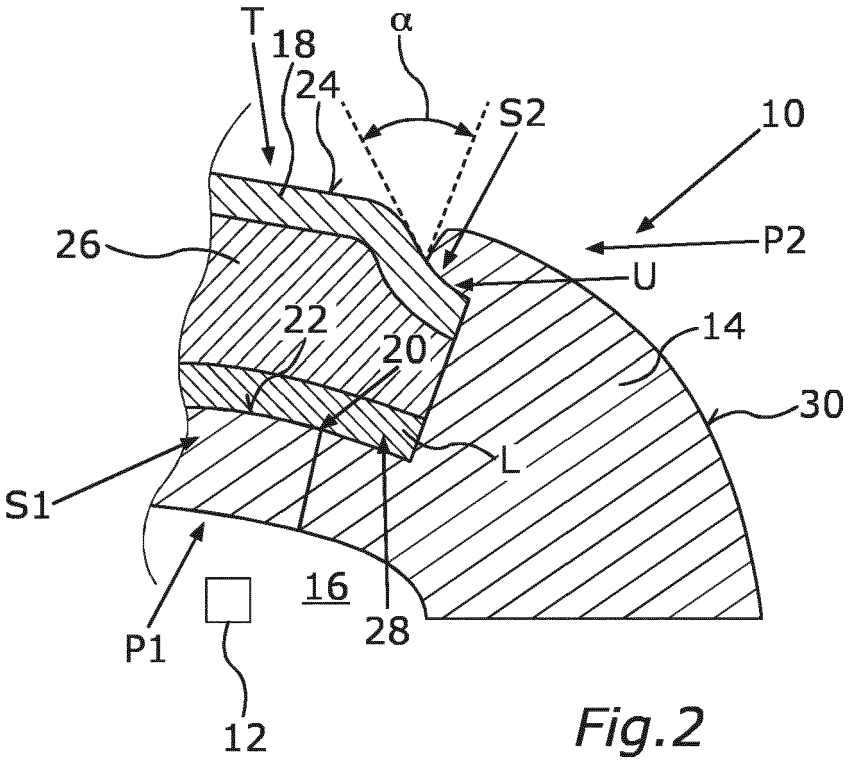
30

Fig.1


T
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12

Fig.2

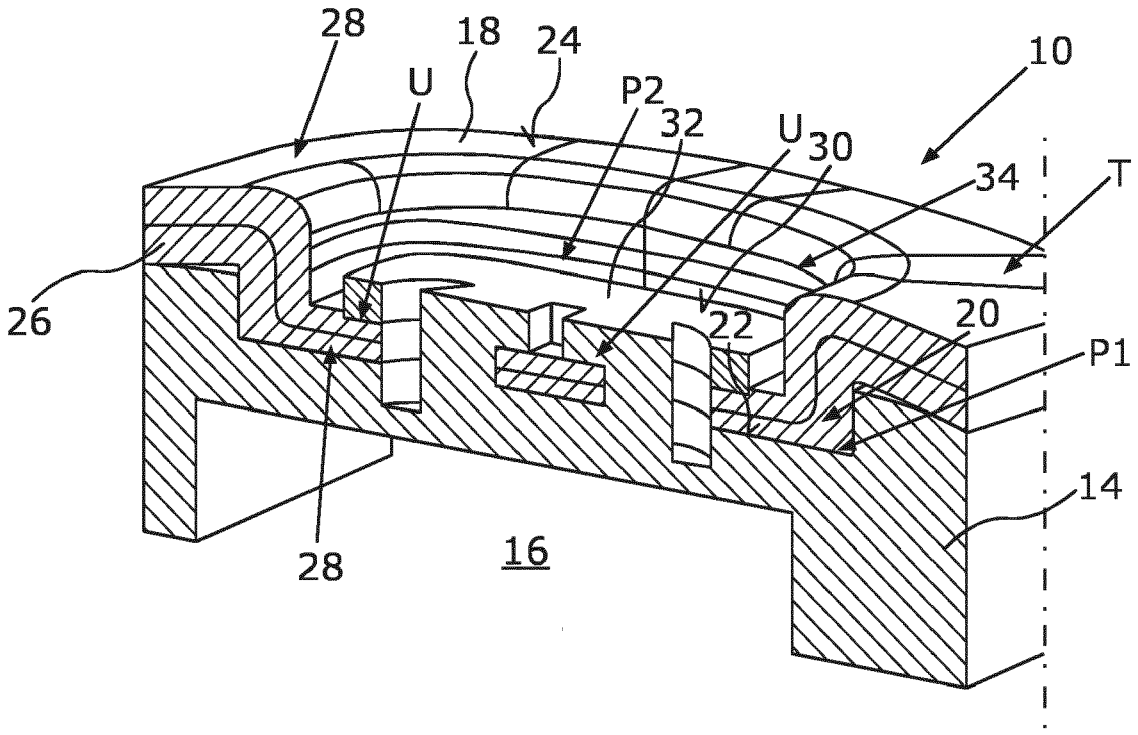

Fig.3

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EUROPEAN SEARCH REPORT

Application Number
EP 18 46 5530

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X,D	WO 2007/079896 A1 (HUF HUELSBECK & FUERST GMBH [DE]) 19 July 2007 (2007-07-19) * abstract; figures 1,2 * * page 4, line 17 - page 8, line 17 *	1-15	INV. G07C9/00 H05K5/00 E05B19/26
X	Anonymous: "Remote key fob shell - leather - XC90 2018 - Volvo Cars Accessories", , 25 April 2018 (2018-04-25), XP055526983, Retrieved from the Internet: URL:https://accessories.volvocars.com/en-se/XC90(16-)/Accessories/Document/VCC-510386/2018 [retrieved on 2018-11-26] * the whole document *	1-15	
A	Anonymous: "Molded-In Fabrics Give New Look and Feel To Electronic Enclosures : Plastics Technology", , 20 November 2016 (2016-11-20), XP055527162, Retrieved from the Internet: URL:https://web.archive.org/web/20161120060535/https://www.ptonline.com/articles/molded-in-fabrics-give-new-look-and-feel-to-electronic-enclosures [retrieved on 2018-11-26] * the whole document *	8-13,15	

TECHNICAL FIELDS SEARCHED (IPC)

G07C
H05K
B29C
B29L
E05B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	26 November 2018	Pfyffer, Gregor

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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D : document cited in the application
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26-11-2018

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