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(54) **PROTECTIVE ARRANGEMENT FOR LAPTOP AND BAG**

SCHUTZANORDNUNG FÜR LAPTOP UND BEUTEL

AGENCEMENT DE PROTECTION POUR ORDINATEUR PORTABLE ET SAC

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Description

TECHNICAL FIELD

[0001] The present application relates to the technical field of protective arrangement, and more particularly to a protective arrangement for a laptop and a bag.

BACKGROUND

[0002] At present, some of bags sold in the market currently are added with an inner pocket for accommodating a laptop. However, most of these designs are still presented in the form of textiles. Although space isolation can be achieved and shaking is avoided, while the protection for the laptop resistant to collision and fall down is not enough. In addition, some of bags are not provided with a sandwich or inner pocket to hold the laptop. And with the increasing number of laptops, when a user places an unprotected laptop in this type of bag, it is easy to damage the laptop in the event of violent shaking, collision, fall down and other accidents.

[0003] To solve the above problem, in the prior art, the common methods includes:

Thickening of the bottom of the bag: the protection function is achieved by changing the thickness of the material and adding fillers, but the thickness of the fillers is limited and the material selection is limited.

[0004] Suspending the inner pocket: the bottom of the inner pocket does not directly touch the bottom of the bag and has a certain degree of buffering effect.

[0005] Thickening the package of the inner pocket: increasing thickness to the inner pocket by adding fillers; the most likely cause of damage to the laptop when it is placed inside the bag is that the backpack is falling down, the two right-angle positions and side position of the laptop closed to the bottom of the bag is suffered from violent impact, and resulting in laptop damage.

[0006] By adding fillers at the bottom of the backpack, increasing the thickness of the bottom material, suspending the inner pocket, and thickening the package of the inner pocket, which has a certain amount of mitigation, but it is very limited, especially the bag is filled with less items, the drop height is high, the falling down speed is faster and the impacted object is harder, the laptop cannot be protected effectively.

[0007] In addition, the publication CN204433393U discloses a laptop packaging cushioning structure; which further discloses that the laptop packaging cushioning structure includes a box body (1), the box body (1) is a hollow rectangular interior cavity, and each of a bottom and top inner hollow rectangular cavity is respectively provided with an M type lining for supporting the laptop received in the package.

SUMMARY

[0008] An object of the present application is to provide

a protective arrangement for a laptop, in order to solve the problem that the current bags cannot effectively protect the laptop.

[0009] An aspect of the present application provides a protective arrangement for a laptop, including:

an outer assembly;

an inner assembly, configured to be embedded in the outer assembly and configured to form one or more enclosed cavities configured for buffering with the outer assembly;

the outer assembly includes a first resilient bottom wall configured to bear a force impact, and an outer side of the first bottom wall is further formed with one or more semi-closed cavities for buffering, and the inner assembly includes one or more protective members for covering one side of the laptop.

[0010] Optionally, the number of the protective members is plural, and the plurality of the protective members are sequentially nested, and one of the enclosed cavities is formed between the two adjacent protective members; and the side of the laptop is accommodated in the innermost protective member, and one of the enclosed cavities is formed between the outermost protective member and the outer assembly.

[0011] Optionally, the protective member comprises a second bottom wall opposite to the first bottom wall, with an outer side of the second bottom wall being formed with one or more semi-closed cavity for buffering.

[0012] Optionally, the outer side of the first bottom wall and the outer side of the second bottom wall are both wavy, and the outer side of the first bottom wall and the outer side of the second bottom wall have the same shape.

[0013] Optionally, the outer side of the first bottom wall and the outer side of the second bottom wall are curved surfaces, and the outer side of the first bottom wall and the outer side of the second bottom wall have the same shape.

[0014] Optionally, the outer side of the first bottom wall and the outer side of the second bottom wall are both wavy or curved surface, and the shapes of the outer side of the first bottom wall and the outer side of the second bottom wall are different.

[0015] Optionally, the outer assembly and the protective members are both U-shaped structures.

[0016] Optionally, the outer assembly and the inner assembly are made of at least one selected from the group of selected from the group of an ethylene-vinyl acetate copolymer, a thermoplastic elastomer, and a thermoplastic rubber.

[0017] Optionally, the outer assembly is provided with an adjusting member configured for mounting or removing the inner assembly, the adjusting member is configured to adjust the size of an opening of the outer assembly relative to the inner assembly.

[0018] Another aspect of the present application pro-

vides a bag for accommodating a laptop, including a protective arrangement, the protective arrangement including:

an outer assembly;
 an inner assembly, configured to be embedded in the outer assembly and configured to form one or more enclosed cavities configured for buffering with the outer assembly;
 the outer assembly includes a first resilient bottom wall configured to bear a force impact, and an outer side of the first bottom wall is further formed with one or more semi-closed cavities for buffering, and the inner assembly includes one or more protective members for covering one side of the laptop; and
 the first bottom wall abuts against an inner bottom of the bag.

[0019] Compared with the prior art, the protective arrangement of the present application adopt the outer assembly and the inner assembly cooperated with each other to protect the laptop, one side of the laptop is covered in the protective member of the inner assembly, and one or more protective members are embedded in the outer assembly to form one or more enclosed cavities for buffering with the outer assembly, thereby the enclosed cavities can play a buffering role when the laptop is falling down. In addition, the outer side of the first bottom wall is further formed with one or more semi-closed cavities, thereby the semi-closed cavities can disperse the impact to the first bottom wall when falling down to protect the laptop from damaging.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] In order to explain the embodiments of the present application more clearly, a brief introduction regarding the accompanying drawings that need to be used for describing the embodiments of the present application or the prior art is given below; it is obvious that the accompanying drawings described as follows are only some embodiments of the present application, for those skilled in the art, other drawings can also be obtained according to the current drawings on the premise of paying no creative labor.

Figure 1 is a schematic view of protective arrangement according to an embodiment of the present application;

Figure 2 is a schematic structural view of an outer assembly according to an embodiment of the present application, wherein the figure 2A, 2B, 2C shows structural views of outer assembly according to different embodiments;

Figure 3 is a schematic structural view of an inner assembly embedded in an outer assembly according to an embodiment of the present application;

Figure 4 is a schematic structural view of an inner

assembly embedded in an outer assembly according to another embodiment of the present application.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0021] In order to make the purpose, the technical solution and the advantages of the present application be clearer and more understandable, the present application will be further described in detail below with reference to accompanying figures and embodiments. It should be understood that the specific embodiments described herein are merely intended to illustrate but not to limit the present application.

[0022] It is noted that when a component is referred to as being "fixed to" or "disposed on" another component, it can be directly or indirectly on another component. When a component is referred to as being "connected to" another component, it can be directly or indirectly connected to another component.

[0023] In the description of the present application, it needs to be understood that, directions or location relationships indicated by terms such as "length", "width", "up", "down", "front", "rear", "left", "right", "vertical", "horizontal", "top", "bottom", "inside", "outside", and so on are the directions or location relationships shown in the accompanying figures, which are only intended to describe the present application conveniently and simplify the description, but not to indicate or imply that an indicated device or component must have specific locations or be constructed and manipulated according to specific locations; therefore, these terms shouldn't be considered as any limitation to the present application.

[0024] In addition, terms "the first" and "the second" are only used in describe purposes, and should not be considered as indicating or implying any relative importance, or impliedly indicating the number of indicated technical features. As such, technical feature(s) restricted by "the first" or "the second" can explicitly or impliedly comprise one or more such technical feature(s). In the description of the present application, "a plurality of" means two or more, unless there is additional specific definition.

[0025] Please refer to FIG. 1 to FIG. 4, the present application provides a protective arrangement for a laptop, including: a substantially U-shaped outer assembly 2; a substantially U-shaped inner assembly 1 which can be embedded in the outer assembly 2, and one or more closed cavities 31a, 31b, 31c, 31d for buffering are formed between the inner assembly 1 and the outer assembly 2; the outer assembly 2 comprises an first bottom wall 22 being resilient and configured for bearing the external impact, and two side walls extending perpendicularly along the two ends of the first bottom wall 22 respectively, the inner assembly 1 is embedded between the two side walls. The outer side surface of the first bottom wall 22 is further provided with one or more semi-closed cavities 32 for buffering, or the outer side surface of the first bottom wall 22 is further provided with one or

more concave portions. The inner assembly 1 includes one or more protective members 1a, 1b, 1c, each of which has a similar shape, and a plurality of the protective members 1a, 1b, 1c can be embedded into the outer assembly 2. The protective member 1a, 1b or 1c is configured to be covered on one side of the laptop. In the embodiment, when the laptop is placed in the computer bag, the laptop is placed vertically, and the outer assembly 2 is placed in the inner bottom of the computer bag. The protective member 1a, 1b, 1c covers the lower side of the laptop and is embedded in the outer assembly 2. Thus, one or more of the enclosed cavities 31a, 31b, 31c, 31d are formed between the outer assembly 2 and the inner assembly 1 and one or more semi-closed cavities 32 are formed on the first bottom wall 22 of the outer assembly 2, the impact of the laptop on the lower side is dispersed and weakened.

[0026] Compared with the prior art, the protective arrangement of the present application adopt the outer assembly 2 and the inner assembly 1 cooperated with each other to protect the laptop, one side of the laptop is covered in the protective members 1a, 1b, 1c of the inner assembly 1, and one or more protective members 1a, 1b, 1c are embedded in the outer assembly 2 to form one or more enclosed cavities 31a, 31b, 31c, 31d for buffering with the outer assembly 2, thereby the enclosed cavities 31a, 31b, 31c, 31d can play a buffering role when the laptop is falling down. In addition, the outer side of the first bottom wall 22 is further formed with one or more semi-closed cavities 32, thereby the semi-closed cavities 32 can disperse the impact to the first bottom wall when falling down to protect the laptop from damaging.

[0027] Please refer to FIG. 1 to FIG. 4, in the present application, the number of the protective members 1a, 1b, 1c may be one or more, which depends on the size of the laptop. When the size of the laptop is small, the plurality of protective members 1a, 1b, 1c can be embedded in the outer assembly 2 sequentially, thereby realizing that one side of the laptop is accommodated in the innermost protective member 1a. In this embodiment, one of the enclosed cavities 31a, 31b, 31c, 31d is formed between two adjacent protective members 1a, 1b, 1c, and a plurality of enclosed cavities 31a, 31b, 31c, 31d are formed among the plurality of protective members 1a, 1b, 1c, therefore the buffering effect is better. In addition, one of the enclosed cavities 31a, 31b, 31c, 31d is formed between the outermost protective member 1c and the outer assembly 2.

[0028] In the present embodiment, each of the protective members 1a, 1b, 1c is provided with a slot 11 for accommodating the laptop, and the arrangement of the slot 11 can define the position of the laptop in the protective members 1a, 1b or 1c. The outer assembly 2 is also provided with a slot 21 for covering the protective member 1a, 1b or 1c.

[0029] In this embodiment, when the number of the protective members 1a, 1b, 1c is plural, the size of the protective members 1a, 1b, 1c are different, and a small-

est sized of the protective member 1a can be sequentially embedded into larger sized protective members, i. e., the protection member 1b and the protection member 1c, a largest sized of protective member 1c is embedded into the outer assembly 2, and the outer shapes of each of the protective members 1a, 1b, 1c are different, in order to form more enclosed cavities 31a, 31b, 31c, 31d or semi-closed cavities 32.

[0030] Both the inner assembly 1 and the outer assembly 2 can be used individually or in combination. The other combinations of the technical solutions of the present invention are used, which are not enumerated here.

[0031] Optionally, each of the protective members 1a, 1b, 1c includes a second bottom wall 12a, 12b, 12c opposite to the first bottom wall 22, and the outer side of the second bottom wall 12a, 12b, 12c is provided with one or more semi-closed cavities for buffering; the outer sides of the second bottom walls 12a, 12b, 12c are planar, curved or wavy surface.

[0032] In the embodiment, the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are wavy 23, and shapes of the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are the same. Alternatively, the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are curved surfaces 24, and shapes of the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are the same. The shape of the wavy 23 or the curved surface 24 can effectively reduce the impact and vibration caused by the collision during the collision of the laptop.

[0033] Optionally, the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are both wavy or curved surface, and shapes of the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are different. When the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are curved surfaces, the shapes of the outer side of the first bottom wall 22 and the outer sides of the second bottom wall 12a, 12b, 12c are a combination of different curved surfaces. The combination of different curved surface shapes enables the enclosed cavities 31a, 31b, 31c, 31d to be larger and better protecting the laptop during the collision.

[0034] Optionally, the outer assembly 2 and the inner assembly 1 are made of at least one selected from the group of an ethylene-vinyl acetate copolymer (EVA), a thermoplastic elastomer (TPE), and a thermoplastic rubber (TPR).

[0035] In the embodiment, the protective arrangement is made of EVA, TPE, TPR material having toughness, resilience, and robustness, and the materials of the outer assembly 2 and the inner assembly 1 are respectively selected from EVA, TPE, and TPR. EVA material has the characteristics of high resilience and high tensile strength and high toughness, and has the functions of good shock-

proof and cushioning properties. TPE material is environmentally friendly, non-toxic and safe, soft to the touch, superior in processing performance, free from vulcanization, and can be recycled to reduce costs. TPR material has rubber resilience and good wear resistance, excellent slip resistance and shock absorption performance.

[0036] Optionally, the outer assembly 2 is further provided with an adjusting member configured for mounting or removing the inner assembly 1, and the adjusting member is configured for adjusting the size of the outer assembly 2 relative to the opening of the inner assembly 1.

[0037] In the present embodiment, a plurality of adjustment holes 25 for mounting or removing the inner assembly 1 are provided at the opening of the outer unit 2 for adjusting the size of the opening of the outer assembly 2. The adjustment aperture 25 can make the inner assembly 11 more convenient and quicker when embedding or separating the outer assembly 2.

[0038] The present application also provides a bag for accommodating a laptop, including a protective arrangement, the protective arrangement including: a substantially U-shaped outer assembly 2; a substantially U-shaped inner assembly 1 configured to be embedded in the outer assembly 2, and one or more closed cavities 31a, 31b, 31c, 31d for buffering are formed between the inner assembly 1 and the outer assembly 2. The outer assembly 2 is provided with a first bottom wall 22 for bearing the external impact, the first bottom wall 22 is an elastic member, and two side walls extending perpendicularly along the two ends of the first bottom wall 22 respectively, the inner assembly 1 is embedded between the two side walls. The outer side surface of the first bottom wall 22 is further provided with one or more semi-closed cavities 32 for buffering, or the outer side surface of the first bottom wall 22 is further provided with one or more concave portions. The inner assembly 1 includes one or more protective members 1a, 1b, 1c, each of which has a similar shape, and a plurality of the protective members 1a, 1b, 1c can be embedded to the outer assembly 2.

[0039] The first bottom wall 22 abuts against the inner bottom of the bag. In addition, when the bag is falling down or impacted, the laptop can be effectively protected by the built-in protective arrangement.

Claims

1. A protective arrangement for a laptop, comprising:

an outer assembly (2);
an inner assembly (1), configured to be embedded in the outer assembly (2), wherein the inner assembly (1), together with the outer assembly (2), is configured to form one or more enclosed cavities (3) for buffering;
wherein the outer assembly (2) comprises a first resilient bottom wall (22) configured to bear a

force impact, and an outer side of the first bottom wall (22) is further formed with one or more semi-closed cavities (31a, 31b, 31c, 31d) for buffering, and the inner assembly (1) comprises one or more protective members (1a, 1b, 1c) for covering one side of the laptop.

2. The protective arrangement according to claim 1, wherein the number of the protective members (1a, 1b, 1c) is plural, and the plurality of the protective members (1a, 1b, 1c) are sequentially nested, and one of the enclosed cavities (3) is formed between the two adjacent protective members; and the side of the laptop is accommodated in the innermost protective member (1a, 1b, 1c), and one of the enclosed cavities (31a, 31b, 31c, 31d) is formed between the outermost protective member (1c) and the outer assembly (2).

3. The protective arrangement of claim 1, wherein the protective member comprises a second bottom wall (12) opposite to the first bottom wall (22), with an outer side of the second bottom wall (12) being formed with one or more semi-closed cavity for buffering.

4. The protective arrangement according to claim 3, wherein the outer side of the first bottom wall (22) and the outer side of the second bottom wall (12) are both wavy (23), and the outer side of the first bottom wall and the outer side of the second bottom wall (12) have the same shape.

5. The protective arrangement according to claim 3, wherein the outer side of the first bottom wall (22) and the outer side of the second bottom wall (12) are curved surfaces (24), and the outer side of the first bottom wall (22) and the outer side of the second bottom wall (12) have the same shape.

6. The protective arrangement according to claim 3, wherein the outer side of the first bottom wall (22) and the outer side of the second bottom wall (12) are both wavy or curved surfaces, and the shapes of the outer side of the first bottom wall (12) and the outer side of the second bottom wall (12) are different.

7. The protective arrangement of according to any of claims 1 to 6, wherein the outer assembly (2) and the protective members are both U-shaped structures.

8. The protective arrangement according to any one of claims 1 to 6, wherein the outer assembly (2) and the inner assembly (1) are made of at least one selected from the group of selected from the group of an ethylene-vinyl acetate copolymer, a thermoplastic elastomer, and a thermoplastic rubber.

9. The protective arrangement according to any one of claims 1 to 6, wherein the outer assembly (2) is provided with an adjusting member configured for mounting or removing the inner assembly (1), the adjusting member is configured to adjust a size of an opening of the outer assembly (2) relative to the inner assembly (1).

10. A bag for accommodating a laptop, comprising a protective arrangement, the protective arrangement comprising:

an outer assembly (2);
 an inner assembly (1), configured to be embedded in the outer assembly (2), wherein the inner assembly (1), together with the outer assembly (2), is configured to form one or more enclosed cavities for buffering;
 wherein the outer assembly (2) comprises a first resilient bottom wall (22) configured to bear a force impact, and an outer side of the first bottom wall (22) is further formed with one or more semi-closed cavities for buffering, and the inner assembly (1) comprises one or more protective members for covering one side of the laptop; and
 wherein the first bottom wall (22) abuts against an inner bottom of the bag.

Patentansprüche

1. Schutzanordnung für einen Laptop, die Folgendes umfasst:

eine äußere Anordnung (2);
 eine innere Anordnung (1), die dazu ausgelegt ist, in die äußere Anordnung (2) eingebettet zu sein, wobei die innere Anordnung (1) zusammen mit der äußeren Anordnung (2) dazu ausgelegt ist, einen oder mehrere umschlossene Hohlräume (3) zum Puffern zu bilden;
 wobei die äußere Anordnung (2) eine erste nachgiebige Bodenwand (22) umfasst, die dazu ausgelegt ist, einer Krafteinwirkung standzuhalten, und eine Außenseite der ersten Bodenwand (22) ferner mit einem oder mehreren halb geschlossenen Hohlräumen (31a, 31b, 31c, 31d) zum Puffern gebildet ist, und die innere Anordnung (1) ein oder mehrere Schutzelemente (1a, 1b, 1c) zum Abdecken einer Seite des Laptops umfasst.

2. Schutzanordnung nach Anspruch 1, wobei die Anzahl der Schutzelemente (1a, 1b, 1c) viele ist und die Vielzahl der Schutzelemente (1a, 1b, 1c) sequenziell verschachtelt sind und einer der umschlossenen Hohlräume (3) zwischen zwei benachbarten Schutzelementen gebildet ist; und die Seite des Lap-

tops im innersten Schutzelement (1a, 1b, 1c) aufgenommen ist und einer der umschlossenen Hohlräume (31a, 31b, 31c, 31d) zwischen dem äußersten Schutzelement (1c) und der äußeren Anordnung (2) gebildet ist.

3. Schutzanordnung nach Anspruch 1, wobei das Schutzelement eine zweite Bodenwand (12) gegenüber der ersten Bodenwand (22) umfasst, wobei eine Außenseite der zweiten Bodenwand (12) mit einem oder mehreren halb geschlossenen Hohlräumen zum Puffern gebildet ist.

4. Schutzanordnung nach Anspruch 3, wobei die Außenseite der ersten Bodenwand (22) und die Außenseite der zweiten Bodenwand (12) beide wellig (23) sind, und die Außenseite der ersten Bodenwand und die Außenseite der zweiten Bodenwand (12) dieselbe Form aufweisen.

5. Schutzanordnung nach Anspruch 3, wobei die Außenseite der ersten Bodenwand (22) und die Außenseite der zweiten Bodenwand (12) beide gekrümmte Flächen (24) sind, und die Außenseite der ersten Bodenwand (22) und die Außenseite der zweiten Bodenwand (12) dieselbe Form aufweisen.

6. Schutzanordnung nach Anspruch 3, wobei die Außenseite der ersten Bodenwand (22) und die Außenseite der zweiten Bodenwand (12) beide wellig oder gekrümmte Flächen sind, und die Formen der Außenseite der ersten Bodenwand (22) und der Außenseite der zweiten Bodenwand (12) sich unterscheiden.

7. Schutzanordnung nach einem der Ansprüche 1 bis 6, wobei die äußere Anordnung (2) und die Schutzelemente beide U-förmige Strukturen sind.

8. Schutzanordnung nach einem der Ansprüche 1 bis 6, wobei die äußere Anordnung (2) und die innere Anordnung (1) aus mindestens einem besteht, das ausgewählt ist aus der Gruppe ausgewählt aus der Gruppe bestehend aus einem Äthylenvinylacetatcopolymer, einem thermoplastischen Elastomer und einem thermoplastischen Gummi.

9. Schutzanordnung nach einem der Ansprüche 1 bis 6, wobei die äußere Anordnung (2) mit einem Einstellelement versehen ist, das zum Montieren oder Entfernen der inneren Anordnung (1) ausgelegt ist, wobei das Einstellelement dazu ausgelegt ist, eine Größe einer Öffnung der äußeren Anordnung (2) relativ zur inneren Anordnung (1) einzustellen.

10. Tasche zum Aufnehmen eines Laptops, die eine Schutzanordnung umfasst, wobei die Schutzanordnung Folgendes umfasst:

eine äußere Anordnung (2);
 eine innere Anordnung (1), die dazu ausgelegt ist, in die äußere Anordnung (2) eingebettet zu sein, wobei die innere Anordnung (1) zusammen mit der äußeren Anordnung (2) dazu ausgelegt ist, einen oder mehrere umschlossene Hohlräume zum Puffern zu bilden;
 wobei die äußere Anordnung (2) eine erste nachgiebige Bodenwand (22) umfasst, die dazu ausgelegt ist, einer Krafteinwirkung standzuhalten, und eine Außenseite der ersten Bodenwand (22) ferner mit einem oder mehreren halb geschlossenen Hohlräumen zum Puffern gebildet ist, und die innere Anordnung (1) ein oder mehrere Schutzelemente zum Abdecken einer Seite des Laptops umfasst; und
 wobei die erste Bodenwand (22) am inneren Boden der Tasche anliegt.

Revendications

1. Agencement de protection pour un ordinateur portable comprenant :

un ensemble externe (2) ;
 un ensemble interne (1) configuré pour être encastré dans l'ensemble externe (2), dans lequel l'ensemble interne (1), conjointement avec l'ensemble externe (2), est configuré pour former une ou plusieurs cavités enfermées (3) pour l'amortissement ;
 dans lequel l'ensemble externe (2) comprend une première paroi inférieure résiliente (22) configurée pour supporter un impact de force, et un côté externe de la première paroi inférieure (22) est en outre formé avec une ou plusieurs cavités à moitié fermées (31a, 31b, 31c, 31d) pour l'amortissement, et l'ensemble interne (1) comprend un ou plusieurs éléments de protection (1a, 1b, 1c) pour recouvrir un côté de l'ordinateur portable.

2. Agencement de protection selon la revendication 1, dans lequel le nombre d'éléments de protection (1a, 1b, 1c) est pluriel, et la pluralité d'éléments de protection (1a, 1b, 1c) sont séquentiellement emboîtés, et l'une des cavités enfermées (3) est formée entre les deux éléments de protection adjacents ; et le côté de l'ordinateur portable est logé dans l'élément de protection situé le plus à l'intérieur (1a, 1b, 1c), et l'une des cavités enfermées (31a, 31b, 31c, 31d) est formée entre l'élément de protection situé le plus à l'extérieur (1c) et l'ensemble externe (2).
3. Agencement de protection selon la revendication 1, dans lequel l'élément de protection comprend une seconde paroi inférieure (12) opposée à la première

paroi inférieure (22), avec un côté externe de la seconde paroi inférieure (12) qui est formé avec une ou plusieurs cavités à moitié fermées, pour l'amortissement.

4. Agencement de protection selon la revendication 3, dans lequel le côté externe de la première paroi inférieure (22) et le côté externe de la seconde paroi inférieure (12) sont tous deux ondulés (23), et le côté externe de la première paroi inférieure et le côté externe de la seconde paroi inférieure (12) ont la même forme.

5. Agencement de protection selon la revendication 3, dans lequel le côté externe de la première paroi inférieure (22) et le côté externe de la seconde paroi inférieure (12) sont des surfaces incurvées (24) et le côté externe de la première paroi inférieure (22) et le côté externe de la seconde paroi inférieure (12) ont la même forme.

6. Agencement de protection selon la revendication 3, dans lequel le côté externe de la première paroi inférieure (22) et le côté externe de la seconde paroi inférieure (12) sont à la fois des surfaces ondulées ou incurvées, et les formes du côté externe de la première paroi inférieure (22) et du côté externe de la seconde paroi inférieure (12) sont différentes.

7. Agencement de protection selon l'une quelconque des revendications 1 à 6, dans lequel l'ensemble externe (2) et les éléments de protection sont tous deux des structures en forme de U.

8. Agencement de protection selon l'une quelconque des revendications 1 à 6, dans lequel l'ensemble externe (2) et l'ensemble interne (1) sont réalisés d'au moins l'un choisi dans le groupe choisi dans le groupe constitué d'un copolymère d'éthylène acétate de vinyle, d'un élastomère thermoplastique et d'un caoutchouc thermoplastique.

9. Agencement de protection selon l'une quelconque des revendications 1 à 6, dans lequel l'ensemble externe (2) est prévu avec un élément d'ajustement configuré pour monter ou retirer l'ensemble interne (1), l'élément d'ajustement est configuré pour ajuster une taille d'une ouverture de l'ensemble externe (2) par rapport à l'ensemble interne (1).

10. Sac pour loger un ordinateur portable, comprenant un agencement de protection, l'agencement de protection comprenant :

un ensemble externe (2) ;
 un ensemble interne (1) configuré pour être encastré dans l'ensemble externe (2), dans lequel l'ensemble interne (1), conjointement avec l'en-

semble externe (2), est configuré pour former une ou plusieurs cavités enfermées pour l'amortissement ;

dans lequel l'ensemble externe (2) comprend une première paroi inférieure résiliente (22) configurée pour supporter un impact de force, et un côté externe de la première paroi inférieure (22) est en outre formé avec une ou plusieurs cavités à moitié fermées pour l'amortissement, et l'ensemble interne (1) comprend un ou plusieurs éléments de protection pour recouvrir un côté de l'ordinateur portable ; et dans lequel la première paroi inférieure (22) vient en butée contre un fond interne du sac.

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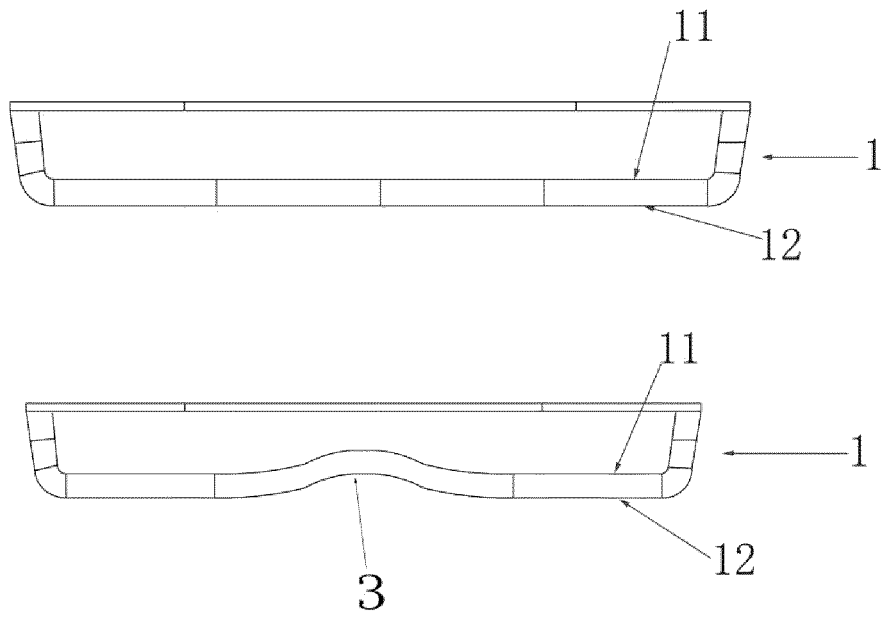


FIG. 1

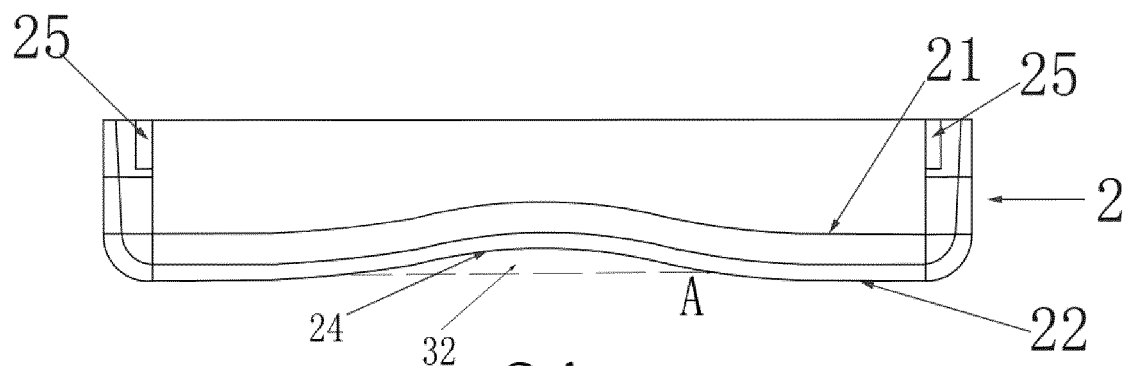


FIG. 2A

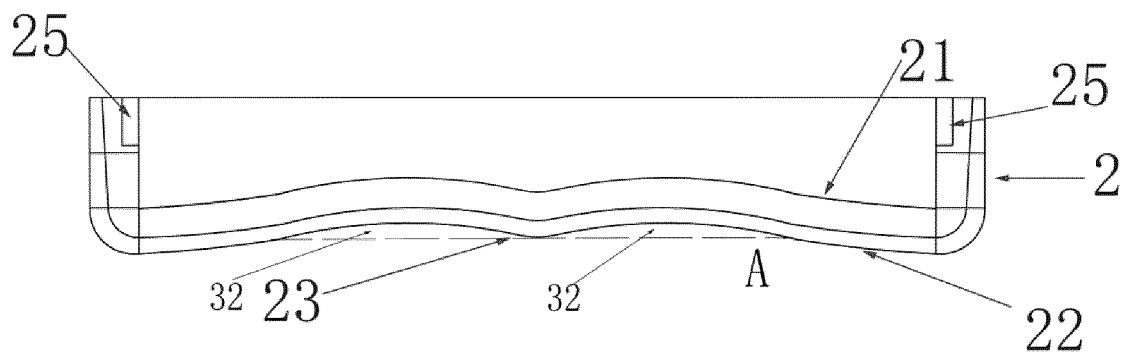


FIG. 2B

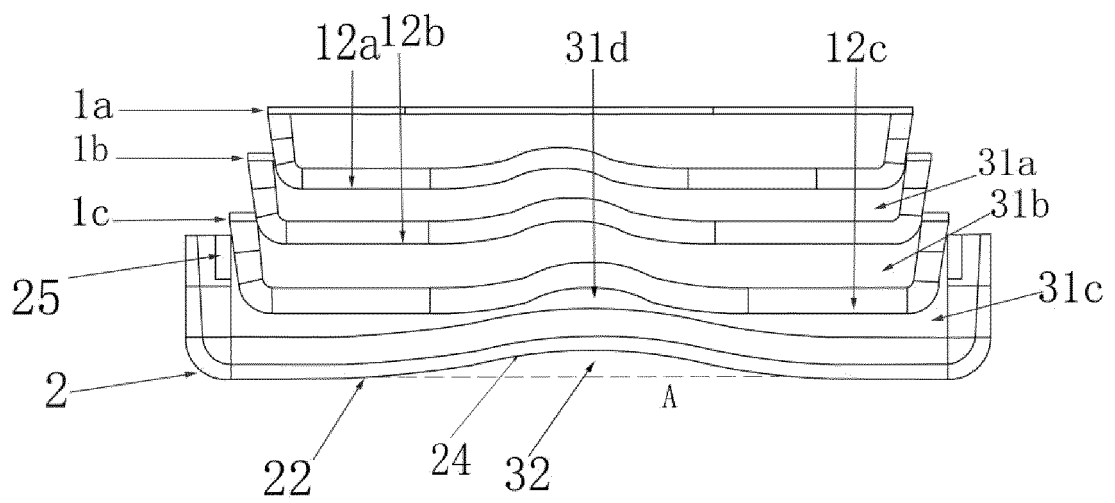


FIG. 3

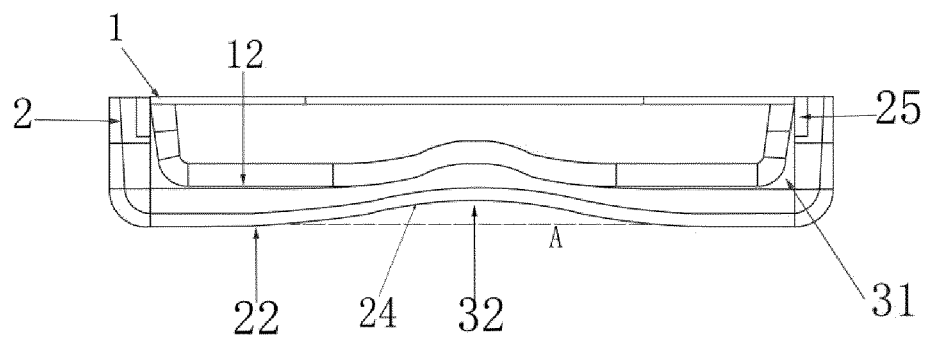


FIG. 4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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