A protection case includes a first panel including resilient material, a second panel including resilient material and a connection part connected between the first and second panels. A space is defined between the first and second panels such that an article such as a computer, personal computer, laptop computer, thin computer, electronics and use for normal daily good is received in the space and protected by the first and second panels.
ARTICLE PROTECTION CASE

FIELD OF THE INVENTION

[0001] The present invention relates to a protection case composed of first and second panels and a connection part, all of which are made by resilient material, the article such as a laptop computer is received in the space of the case, and of course use this protective case as normal daily use case.

BACKGROUND OF THE INVENTION

[0002] A conventional protection case is used to protect article in the protection case from wear and tear encountered during transportation and some protection cases include cushion material in the case to further protect the article. However, not any of the conventional protection cases can become a flat sheet-like structure when not in use and a case when protecting the articles in it while having weight, easily manufactured and simple structured.

[0003] Most of the people today use computers which are a part of people's everyday life and the laptop computers are made slim and portable so that the users can easily carry the laptop computer to different places as needed.

[0004] Basically, the desk PC is heavy and bulky so that the users have to hold the PC by arms or put it in a box when removing from one place to another. A special case is developed to receive the desk PC when transportation, and the case is huge enough to receive all the parts of the desk PC therein and multiple cushion pads are located in the case to protect the PC. The case requires multiple sewing processes and the cushion pads cannot protect every part of the desk PC. The case for the desk PC involves complicated structure and high manufacturing cost.

[0005] The present invention intends to provide a protection case for articles such as a laptop computer so as to improve the shortcomings of the conventional protection cases.

SUMMARY OF THE INVENTION

[0006] The present invention relates to a protection case which comprises a first panel, a second panel and a connection part connected between the first and second panels. The first and second panels and the connection part include resilient material and a space is defined between the first and second panels. An article such as a computer received in the space and protected by the first and second panels.

[0007] The primary object of the present invention is to provide a protection case for protecting a computer, especially for the weak sides of the computer, by the resilient material included in the first and second panels and the connection part of the protection case. The first and second panels and the connection part are made integrally as a sheet-like form.

[0008] Another object of the present invention is to provide a protection case which is easily manufactured at low cost and has simple structure. The first and second panels and the connection part are made integrally as a sheet-like form.

[0009] Yet another object of the present invention is to provide a protection case which is light in weight and can be used for protecting different types of articles. The first and second panels and the connection part are made integrally as a sheet-like form by way of foaming processes.

[0010] The concept for the present invention is to provide a protection case for protection of computers such as a laptop computer so as to protect the weak sides of the computers.

[0011] Another concept for the present invention is to provide a protection case for protection of computers such as a laptop computer, the protection case is easily manufactured at low cost, light in weight, simple structure, and easy to use.

[0012] The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view to show the protection case of the present invention;

[0014] FIG. 2 shows the second embodiment of the present invention, wherein the first and side panels and the connection part is made integrally as a sheet-like form;

[0015] FIG. 3 shows that the sheet-like form of the protection case in FIG. 2 includes four rounded corners;

[0016] FIG. 4 shows that the sheet-like form of the protection case in FIG. 2 includes four include edges at the four corners;

[0017] FIG. 5 is a cross sectional view of the sheet-like form of the protection case in FIGS. 3 and 4;

[0018] FIG. 6 is an enlarged cross sectional view of the circled portion of the sheet-like form of the protection case in FIG. 5;

[0019] FIG. 7 shows that the protection case in FIG. 2 and a laptop computer to be received in the protection case;

[0020] FIG. 8 is a perspective view to show the third embodiment of the protection case of the present invention;

[0021] FIG. 9 is a cross sectional view of the sheet-like form of the protection case in FIG. 8;

[0022] FIG. 10 is an enlarged cross sectional views to show the connection of the interior pad and the first/second panel;

[0023] FIG. 11 shows a strap is connected to the protection case by connection pieces and a bag is connected to the protection case by a connection ring, and

[0024] FIG. 12 shows that the protection case is used as a support pad on which a laptop computer is put.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0025] Referring to FIGS. 2 and 7, the protection case of the present invention comprises a first panel 10, a second panel 20 and a connection part 30, wherein the first and second panels 10, 20 include resilient material and the connection part 30 is connected between the first and second panels 10, 20 so as to define a space 17 between the first and second panels 10, 20. An article such as a laptop computer 90 is received in the space 17 and protected by the first and second panels 10, 20. The protection case can also be used as a support pad on which a laptop computer 90 is put as shown in FIG. 11.

[0026] The first embodiment of the protection case is shown in FIG. 1 and includes a first panel 10, a second panel 20 and a connection part 30, wherein the first and second panels 10, 20 include resilient material and the connection part 30 is connected between the first and second panels 10, 20 so as to define a space 17 between the first and second panels 10, 20. The resilient material of the first and second panels 10, 20 is mixed with foaming agent and foamed to
become a resilient sheet-like form which is light in weight and absorbs impact. The resilient material is selected from groups of Ethylene Vinyl Acetate, Thermo-Plastic Rubber, Thermo-Plastic Urethane, Polyvinyl chloride, Rubber and Polyurethane. It is noted that the connection part 30 includes resilient material which provides cushion and protection feature from the underside of the protection case. Wherein, the Ethylene Vinyl Acetate can be mixed with rubber to promote the quality of the resilient material.

[Figs. 2-7 show the second embodiment of the protection case of the present invention wherein the first panel 10, the second panel 20 and the connection part 30 are made integrally as a one-piece by resilient material and the one-piece is in a sheet-like form when expanded. The resilient material of the first and second panels 10, 20 is mixed with foaming agent and foamed to become a resilient sheet-like form which is light in weight and absorbs impact. The resilient material is selected from groups of Ethylene Vinyl Acetate, Thermo-Plastic Rubber, Thermo-Plastic Urethane, Polyvinyl chloride, Rubber and Polyurethane. It is noted that the connection part 30 includes resilient material which provides cushion and protection feature from the underside of the protection case.

[Figs. 3 and 4 show the second embodiment of the protection case wherein the expanded first and second panels 10, 20 and the connection part 30 is a rectangular plate. The rectangular plate includes four rounded corners as shown in Fig. 3 or the rectangular plate includes four inclined edges at four corners thereof as shown in Fig. 4. The four rounded corners or the four inclined edges at the four corners are designed to meet aesthetic purposes and avoid from torn.

[Referring to Fig. 8, the distal ends of the first panel 10 and the second panel 20 each may have a curved edge 11/21 thereon.

[As shown in Fig. 2, the first method for making the resilient material to become foam type material is to mix the resilient material with foaming agent and put in a mold set of a foaming machine, the mixture is then foamed to become the sheet-like form of the integral first panel 10, the second panel 20 and the connection part 30.

[The second method for making the resilient material to become foam type material is to mix the resilient material with foaming agent and put in a foaming machine, the mixture is then foamed. The foamed material is cooled and heat or cold pressed and cut into the integral first panel 10, the second panel 20 and the connection part 30.

[The third method for making the resilient material to become foam type material is to mix the resilient material with foaming agent and the mixture is injected and foamed by an injection molding machine so as to make the integral first panel 10, the second panel 20 and the connection part 30.

[As shown in Figs. 2, 5 and 6, the connection part 30 is an elongate part and includes multiple grooves 31 defined in a surface facing the space 17. The grooves 31 make the connection part 30 be flexible between the first and second panels 10, 20. By the grooves 31 in the connection part 30, the protection case is easily folded to a desired shape to receive the computer.

[As shown in Fig. 2, each of the first and second panels 10, 20 has an elongate slot 12, 22 and used as a handle 13/23 for convenient grasp by the user’s hand. Besides, each of the first and second panels 10, 20 has multiple through holes 14, 24, and each through hole 14/24 has at least 2 cm in diameter so as to reduce the material required and the weight of the protection case.

[As shown in FIGS. 9 and 10, the protection case further includes an interior pocket 50 located in the space 17 between the first and second panels 10, 20, and the interior pocket 50 includes two interior pads 51 and a zipper 52 connects the two interior pads 51. The two interior pads 51 each are connected to the first and second panels 10, 20 respectively by connection devices which include multiple passages 15, 25 defined in the first and second panels 10, 20 respectively, and the interior pads 51 have protrusions 53 which are engaged with the passages 15, 25.

[FIG. 11 shows that a strap 60 is connected to the protection case and two connection pieces 61 are connected between two ends of the strap 60 on the case. The strap 60 allows the user to carry the protection case while two hands can carry other articles.

[Referring to FIG. 11, the protection case may include at least one connection ring 70 which is connected to the case and a bag 71 is connected with the at least one connection ring 70. The bag 71 is used to carry cellular phone or small items.

[As shown in FIG. 2, the two inner layers 16 are connected to two respective insides of the first and second panels 10, 20, the inner layers 16 are made by woven or non-woven material so as to reinforce the first and second panels 10, 20. The inner layers 16 are selected from groups of nylon, Thermo-Plastic Urethane, Thermo-fusion rubber, Polyvinyl chloride, Thermo-Plastic Rubber, Rubber, metal, carbon, Glass fibers, Canvas and Textiles.

[As shown in FIGS. 2 and 7, the first and second panels 10, 20 are connected to each other by a fixing device 80 which includes at least one side wrap 81 is connected between the first and second panels 10, 20. The at least one side wrap 81 can be made integrally with the first and second panels 10, 20. The at least one side wrap 81 may have a protrusion 82 and the first panel 10 or the second panel 20 has a hole 83 with which the protrusion 82 is engaged so as to connect the first and second panels 10, 20.

[The first and second panels 10, 20 each have resilient material and are easily opened by the flexible connection part 30 to receive the laptop computer 90 therewith which is protected from each side thereof. The first and second panels 10, 20 can be directly made by the foamed resilient material so that the protection case is light in weight and easily carried. The protection case has simple structure and easily manufactured at low cost so that it has high competitive advantage in the market. The first and second panels 10, 20 are easily connected to each other by the fixing devices 80 and the strap 60 and bag 71 can be added to the protection case by using the connection pieces 61 and the connection ring 70 to increase the function of the protection case.

[The article that is protected within the protection case can be selected from personal computer, laptop computer and thin computer, electronics, and normal daily using goods.

[While we have shown and described the embodiment in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.
What is claimed is:
1. A protection case comprising:
a first panel including resilient material;
a second panel including resilient material, and
a connection part connected between the first and second panels so as to define a space between the first and second panels, an article received in the space and protected by the first and second panels.
2. The protection case as claimed in claim 1, wherein the resilient material is a foam material.
3. The protection case as claimed in claim 1, wherein the resilient material is selected from groups of Ethylene Vinyl Acetate, Thermo-Plastic Rubber, Thermo-Plastic Urethane, Polyvinyl chloride, Rubber and Polyurethane.
4. The protection case as claimed in claim 3, wherein the Ethylene Vinyl Acetate mixed with rubber.
5. The protection case as claimed in claim 1, wherein the connection part includes resilient material.
6. The protection case as claimed in claim 5, wherein the first panel, the second panel and the connection part are made integrally by the resilient material, the first panel, the second panel and the connection part are expanded as a plate.
7. The protection case as claimed in claim 6, wherein the first panel, the second panel and the connection part expanded to form a rectangular plate.
8. The protection case as claimed in claim 7, wherein the rectangular plate includes four rounded corners or inclined edges at four corners thereof.
9. The protection case as claimed in claim 6, wherein the distal ends of the first panel and the second panel each have a curved edge thereon.
10. The protection case as claimed in claim 6, wherein the resilient material is selected from groups of Ethylene Vinyl Acetate, Thermo-Plastic Rubber, Thermo-Plastic Urethane, Polyvinyl chloride, Rubber and Polyurethane.
11. The protection case as claimed in claim 10, wherein the Ethylene Vinyl Acetate mixed with rubber.
12. The protection case as claimed in claim 6, wherein the resilient material is a foam material.
13. The protection case as claimed in claim 6, wherein the resilient material is mixed with foaming agent and put in a mold set of a foaming machine to foam combination of the resilient material and foaming agent to make the integral first panel, the second panel and the connection part.
14. The protection case as claimed in claim 6, wherein the resilient material is mixed with foaming agent and foamed by a foaming machine, the foamed material is cooled and heat or cold pressed and cut into the integral first panel, the second panel and the connection part.
15. The protection case as claimed in claim 6, wherein the resilient material is mixed with foaming agent and injected and foamed by an injection molding machine so as to make the integral first panel, the second panel and the connection part.
16. The protection case as claimed in claim 6, wherein the connection part is an elongate part and includes multiple grooves defined in a surface facing the space, the grooves make the connection part be flexible between the first and second panels.
17. The protection case as claimed in claim 1, wherein each of the first and second panels has an elongate slot for convenient grasp.
18. The protection case as claimed in claim 1, wherein each of the first and second panels has multiple through holes.
19. The protection case as claimed in claim 1, wherein an interior pocket is located in the space between the first and second panels.
20. The protection case as claimed in claim 19, wherein the interior pocket includes two interior pads and a zipper connects the two interior pads.
21. The protection case as claimed in claim 19, wherein the interior pocket includes two interior pads which are connected to the first and second panels respectively by connection devices.
22. The protection case as claimed in claim 21, wherein the connection devices include multiple passages defined in the first and second panels respectively, the interior pads have protrusions which are engaged with the passages.
23. The protection case as claimed in claim 1 further comprising a strap and two connection pieces which are connected between two ends of the strap and the case.
24. The protection case as claimed in claim 1 further comprising at least one connection ring connected to the case and a bag is connected with the at least one connection ring.
25. The protection case as claimed in claim 1, wherein two inner layers are connected to two respective insides of the first and second panels, the inner layers are made by woven or non-woven material so as to reinforce the first and second panels.
26. The protection case as claimed in claim 1, wherein the inner layers are selected from groups of nylon, Thermo-Plastic Urethane, Thermo-fusion rubber, Polyvinyl chloride, Thermo-Plastic Rubber, Rubber, metal, carbon, Glass fibers, Canvas and Textiles.
27. The protection case as claimed in claim 1, wherein the first and second panels are connected to each other by a fixing device.
28. The protection case as claimed in claim 27, wherein the fixing device includes at least one side wrap which is connected between the first and second panels.
29. The protection case as claimed in claim 28, wherein the at least one side wrap is integrally formed with the first and second panels.
30. The protection case as claimed in claim 1, wherein the article is selected from personal computer, laptop computer, thin computer, electronics and daily goods.

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