UNIVERSAL CARRYING APPARATUS AND ATTACHMENT FOR LAPTOP OR OTHER EQUIPMENT

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ABSTRACT
A universal carrying apparatus for a laptop computer or other electric device having dual hinges wherein an end of the carrying apparatus is threaded through the gap between a screen and a computer deck and between dual hinges of the laptop computer and a strip or bar at the other end of the apparatus prevents the apparatus from disengaging from the computer. The anchoring bar against the hinges supports the weight of the computer. The invention also relates to a kit having a universal attachable carrying apparatus and a laptop computer or other electronic device with dual hinges. The invention further relates to a method of retrofitting a laptop computer or other device with a universal carrying apparatus of the invention.
UNIVERSAL CARRYING APPARATUS AND ATTACHMENT FOR LAPTOP OR OTHER EQUIPMENT

[0001] This application is a continuation in part of Ser. No. 11/891,185 filed Aug. 9, 2007, pending.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention
[0003] This invention relates to a universal carrying apparatus with optional auxiliary battery for attaching to any laptop, electronic games, DVD players or other equipment with a flat surface. This invention also relates to a method of attaching a handle or other auxiliary component to a laptop computer or other electronic device.

[0004] 2. Brief Description of Related Art
[0005] Laptop computers are lightweight and transportable. However, very few laptops have the convenience of an integrated carrying handle. Most laptops are transported inside of a carrying case such as a brief case or leather carrying bag.

[0006] Handle-IT is the only after-market handle that screws into standard holes on the chassis of some Apple Powerbooks®. However, it is not a universal handle.

[0007] Although most laptop computers and portable electronic devices are transportable, there are very few that are convenient to carry or come with a handle.

[0008] Peel and stick adhesive security locks with a tether are commercially available. However, these locking devices do not include a handle means.

[0009] Therefore, it is an object of the present invention to provide a universal carrying handle that is adaptable to any laptop or portable electronic device or otherwise having a screen and a computer deck connected together by hinges.

[0010] It is still another object of the invention to provide a universal carrying handle that is easy to affix to a laptop or electronic device.

[0011] These and other objects will become apparent upon further reading of the disclosure.

SUMMARY OF THE INVENTION

[0012] The present invention is directed to a universal carrying handle, also referred to as a universal carrying apparatus, for carrying an electronic device or laptop computer. Also included in this invention is a computer with attachable universal carrying handle apparatus and a method of carrying a computer with the universal carrying handle apparatus. Also included in this invention is a universal carrying handle with auxiliary battery or other component and method of attaching an auxiliary battery or component to a laptop computer or other electronic device.

BRIEF DESCRIPTION OF THE FIGURES

[0013] FIG. 1A is a front plan view of the universal carrying apparatus;
[0014] FIG. 1B is a front plan view of the universal carrying apparatus with tether for an auxiliary battery or component;
[0015] FIG. 2A is a schematic view of the universal carrying apparatus attached to a laptop computer;
[0016] FIG. 2B is a schematic view of the universal carrying apparatus attached to a laptop computer and showing a tether for an auxiliary battery or component;

[0017] FIG. 3 is a side plan view of the universal carrying apparatus connected to a laptop computer or electronic device; and
[0018] FIG. 4 is a schematic side view of an anchoring bar according to one embodiment of the invention.

DETAILED DESCRIPTION

[0019] A universally designed after-market applicable and removable laptop carrying apparatus with handle is the subject of this invention. It can be mounted via a pin, rigid strip or bar holding the apparatus between dual hinges that connect the laptop screen to the laptop computer deck of any OEM, from any model year. No tools or screws are required to attach the apparatus to a laptop or other device. The universal apparatus fits through the gap created between the two hinges that connect the screen and the computer deck. It permits the user to move from place to place and easily transport a laptop without a carrying case.

[0020] In FIG. 1A and FIG. 1B, the universal carrying apparatus 1 is shown. The universal carrying apparatus is made of a platform 7, a handle 6, an anchoring bar 8 and a channel pocket 9. The channel pocket 9 is defined by the platform 7 and comprises an opening for receiving the anchoring bar 8. The anchoring bar 8 is rigid and the length of the bar extends past the both opposing outer edges of the platform 7. The anchoring bar 8 slides through the channel pocket 9. The anchoring bar 8 can also be integral with the platform 7.

[0021] As shown in FIGS. 2A, 2B and 3, the function of the anchoring bar 8 is to prevent the universal carrying apparatus from detaching from a laptop computer by anchoring the carrying apparatus 1 between and below the hinges 5. The hinges 5 prevent the upward movement of the anchoring bar 8 when the handle is lifted to lift the laptop computer.

[0022] The anchoring bar 8 may have stops 10 to prevent the anchoring bar from disengaging from the channel pocket 9 and the hinges of the computer. Stops can be placed at the ends of the bar. Further, the stops 10 may be an adhesive applied to the anchoring bar on its ends to attach the anchoring bar to the surface of the computer deck 4. (See FIG. 4.) An example of a suitable material with an adhesive back is 3M® 300L.SE. The anchoring bar may be a flat rigid strip or a round rigid pin. The anchoring bar may be spring loaded so that it can be compressed to a shorter length for inserting between the hinges 5. Alternatively, the anchoring bar may be a flexible plastic strip or other comparable material with sufficient strength to support the weight of the computer or device.

[0023] The platform is substantially flat. The platform can be made out of any sturdy strong material. The preferred material is plastic, light weight polymer material, or Kevlar® (aramid fabric). Metals, alloys or woods are also acceptable. The platform may also be made of a flexible soft material such as TYVEK®, plastic, rubber, vinyl, Mylar®, Lexan®, polymer filled fabric or any other thin adhesive backed material. The dimensions of the platform may vary with the proviso that the dimensions are smaller than the distance between the dual hinges of the laptop computer that the device will be attached to. The preferred dimensions of the platform are 6 to 10 inches wide by 2 to 6 inches long by ⅛ to ¼ inch thick.

[0024] The handle bar 6 is metal or plastic, preferably a hollow metal bar. A rubberized gripping material may be applied over the handle bar for more secure handling. Other types of handles are contemplated. A handle may also be a single unit made of a single material that is affixed in some
fashion to the platform with the proviso that the handle can support the laptop or other electronic device. The preferred handle is rigid.

[0025] Optionally, any handle or apparatus design can be employed that utilizes the gap between the hinges of a laptop and wherein the hinges themselves work to hold the handle in place to permit a user to lift the laptop computer via the universal apparatus. The apparatus is most preferably a handle component 6, but may also be other auxiliary components that connect to a laptop computer using the simple design of a channel pocket and anchoring bar to hold the auxiliary component in place on the laptop computer. Other auxiliary components 6 include auxiliary power, USB Notebook Docking Station, power inverters, and USB HUBs.

[0026] In operation, a user would insert the platform of the apparatus through the gap between the dual hinges of the laptop computer. In the case where a removable anchoring bar is used, the anchoring bar would then be inserted through the channel pocket of the platform with the ends of the anchoring bar protruding beyond the platform at both ends of the channel pocket to a distance to engage the hinges. Preferably the ends of the anchoring bar extend to a center line of each of the hinges. The anchoring bar against the hinges supports the weight of the computer when the handle is lifted to lift the computer. In the case where there is an adhesive strip at the ends of the anchoring bar, the adhesive portion of the anchoring strip would be applied to the face of the computer deck or to the hinges to prevent the anchoring bar from sliding and disengaging from the computer. Further, in the case where the anchoring bar is integral to the platform and the anchoring bar is flexible, the anchoring bar would be flexed to the extent that the user could insert the anchoring bar through the gap between the screen and the computer deck and between and below the dual hinges of the computer. Still further, in the case where the anchoring bar is spring loaded, the anchoring bar would be compressed to a length less than the distance between the two hinges of the computer to feed the platform and anchoring bar through the gap between the screen and the computer deck and between and below the two hinges. The spring would then be allowed to decompress and engage below the hinges to prevent removal of the carrying apparatus from the computer.

[0027] In all embodiments of the invention, the universal carrying handle or apparatus is universal and is installed after manufacture of the computer. The carrying handle is optionally removable if needed.

[0028] In another embodiment, the handle contains or encloses an auxiliary battery for the computer. The battery may be rechargeable and would be connected to the computer via a charger tether 12.

[0029] The term electronic device includes laptop computers, electronic toys or other electronic equipment with dual hinges connecting a screen to a deck.

[0030] In all embodiments, a lock connector and tether/lock are also optional.

[0031] The invention also relates to a kit that contains a laptop computer or electronic device and one or more of the universal carrying apparatus(s) as described above.

[0032] The invention also relates to a method of retrofitting or fitting a laptop computer or other device with a universal carrying apparatus by affixing the universal carrying apparatus of the invention to a laptop computer or other electronic device.

What is claimed is:

1. A universal attachable carrying apparatus for a laptop computer or other flat surface device, said computer or device having a screen, a computer deck and dual hinges connecting said screen to said computer deck, said dual hinges defining a gap having a first distance there-between, said screen and said computer deck defining a second distance there-between, said apparatus comprising:
   a platform having an upper end and a lower end, said upper end having a handle, said lower end having a width less than the first distance and a thickness less than the second distance so that it will fit between hinges of a laptop computer and between the screen and the computer deck, said lower end further having an anchoring bar, said anchoring bar having a length greater than the first distance, wherein in use, said hinges prevent said anchoring bar from disengaging from said laptop computer and said anchoring bar supports the laptop computer when a user lifts said handle.

2. The universal attachable carrying apparatus of claim 1, wherein said lower end of said platform defines a channel pocket for receiving said anchoring bar.

3. The universal attachable carrying apparatus of claim 1, wherein saidanchoring bar has opposing ends and each of said opposing ends has adhesive thereon for attaching said bar to said computer to prevent disengagement of said bar from said hinges.

4. The universal attachable carrying apparatus of claim 1, wherein said handle contains an auxiliary battery for recharging said computer.

5. The universal carrying apparatus of claim 1, wherein said anchoring bar is attachable and removable from said platform.

6. The universal carrying apparatus of claim 1, wherein said anchoring bar is integral with said platform.

7. The universal carrying apparatus of claim 1, wherein said platform is made of plastic, vinyl, metal, aramid, rubber, or polymer filled fabric.

8. A method of retrofitting a laptop computer or other device with a universal carrying apparatus comprising:
   a) opening said laptop computer or other device,
   b) installing the universal carrying apparatus of claim 1 on said laptop computer or other flat surface device by inserting said lower end of said platform with said anchoring bar through said gap defined by said dual hinges;
   c) closing said laptop computer or other device;
   d) lifting said handle and to engage said anchoring bar below said hinges, said anchoring bar preventing said apparatus from disengaging from said laptop computer or device.

9. A kit comprising:
   a laptop computer or flat surface electronic device, said computer or device having a screen, a computer deck and dual hinges connecting said screen to said computer deck, said dual hinges defining a gap having a first distance there-between, said screen and said computer deck defining a second distance there-between; and one or more of the universal carrying apparatus(s) of claim 1.

10. A universal attachable auxiliary apparatus for a laptop computer or other flat surface device, said computer or device having a screen, a computer deck and dual hinges connecting said screen to said computer deck, said dual hinges defining a
gap having a first distance there-between, said screen and said computer deck defining a second distance there-between, said apparatus comprising:

a platform having an upper end and a lower end, said upper end having an auxiliary component, said lower end having a width less than the first distance and a thickness less than the second distance so that it will fit between hinges of a laptop computer and between the screen and the computer deck, said lower end further having an anchoring bar, said anchoring bar having a length greater than the first distance, wherein in use, said hinges prevent said anchoring bar from disengaging from said laptop computer and said anchoring bar prevents said auxiliary component from disengaging from the laptop computer.

11. The universal attachable auxiliary apparatus for a laptop computer or other flat surface device of claim 10, wherein said auxiliary component is a handle, battery, auxiliary power, USB notebook docking station, power inverters, or USB HUBs.

12. The universal attachable auxiliary apparatus of claim 10, wherein said lower end of said platform defines a channel pocket for receiving said anchoring bar.

13. The universal attachable auxiliary apparatus of claim 10, wherein said anchoring bar has opposing ends and each of said opposing ends has adhesive thereon for attaching said bar to said computer to prevent disengagement of said bar from said hinges.

14. The universal attachable auxiliary apparatus of claim 10, wherein said anchoring bar is attachable and removable from said platform.

15. A kit comprising:

a laptop computer or flat surface electronic device, said computer or device having a screen, a computer deck and dual hinges connecting said screen to said computer deck, said dual hinges defining a gap having a first distance there-between, said screen and said computer deck defining a second distance there-between; and

disengaging from said anchoring bar preventing said auxiliary apparatus from disengaging from said laptop computer or device.

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