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**SUNG**(10) **Pub. No.: US 2012/0261305 A1**(43) **Pub. Date: Oct. 18, 2012**(54) **ELECTRONIC DEVICE WITH SUPPORT  
ASSEMBLY****Publication Classification**(51) **Int. Cl.**  
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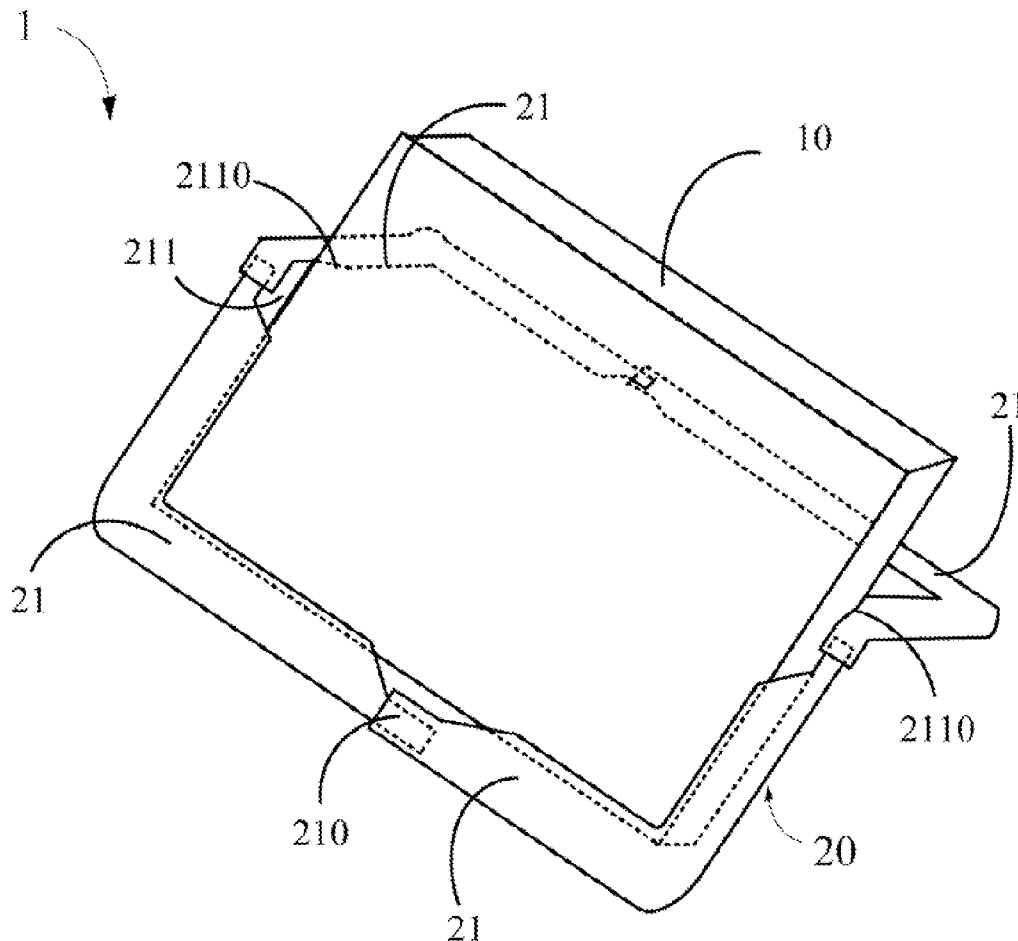
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(52) **U.S. Cl.** ..... **206/736**(57) **ABSTRACT**

An electronic device includes a main body and a support assembly including four L-shaped components. The L-shaped components are arranged around edges of the main body. Each L-shaped component includes two flexible end portions. Each adjacent L-shaped components can be connected to each other at the end portions thereof, allowing the L-shaped components to rotate relative to each other about the two connected end portions. Two connected L-shaped components are able to rotate with respect to the other two L-shaped components, thereby forming an angled structure to support the main body.

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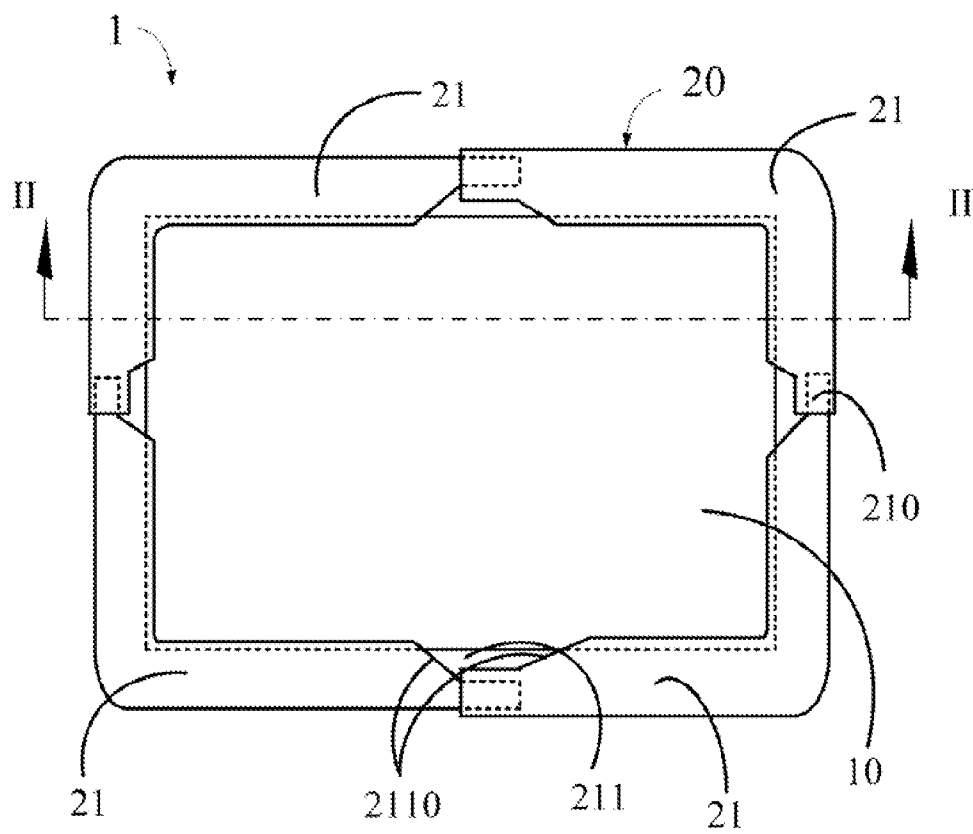


FIG. 1

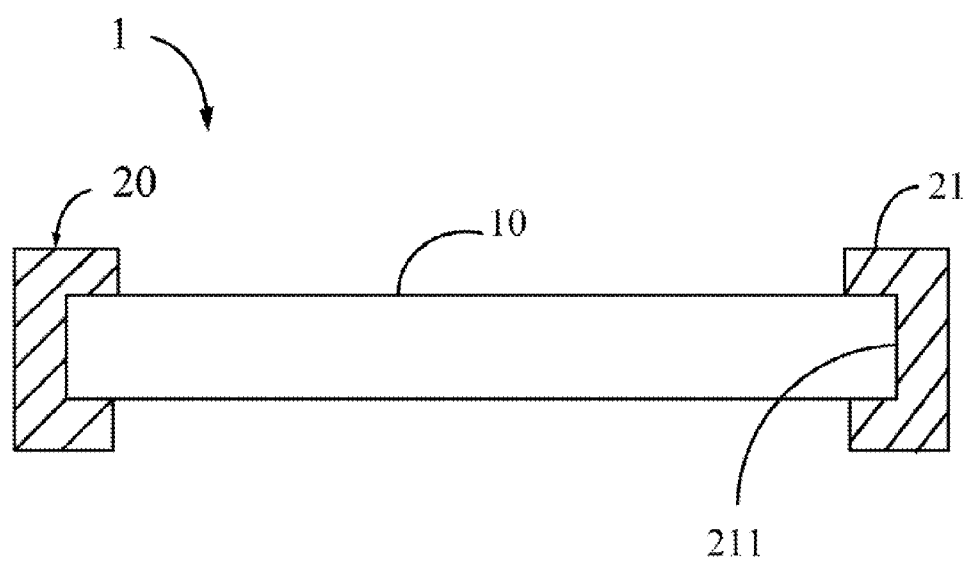


FIG. 2

FIG. 3

## ELECTRONIC DEVICE WITH SUPPORT ASSEMBLY

### BACKGROUND

[0001] 1. Technical Field

[0002] The present disclosure relates to electronic devices, and more specifically to an electronic device having a support assembly.

[0003] 2. Description of Related Art

[0004] It is common for people to take their portable electronic devices, such as digital photo frames and tablet computers, with them when traveling. Typically the photo frames include a stand for supporting the frames in an upright position on a desk or other flat surface. Although this type of stand is somewhat useful, a stand with a new support structure is still needed.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a schematic view of an electronic device with a support assembly in a first state, in accordance with an embodiment.

[0006] FIG. 2 is a cross-sectional view of the electronic device with the support assembly of FIG. 1, along line II-II.

[0007] FIG. 3 is similar to FIG. 1, but showing the support assembly in a second state.

### DETAILED DESCRIPTION

[0008] Referring to FIGS. 1-3, an exemplary embodiment of an electronic device 1 is illustrated. The electronic device 1 can be a tablet computer, a digital photo frame, etc.

[0009] The electronic device 1 includes a main body 10 and a support assembly 20 including four L-shaped components 21 rotatably connected to each other. The four L-shaped components 21 cooperatively define a space to fit the main body 10 therein.

[0010] When the support assembly 20 is not in use, the four L-shaped components 21 can be adjusted to form a rectangular structure framing the main body 10, thus protecting the edges of the electronic device 1 (see FIGS. 1-2). When the support assembly 20 is in use, two connected L-shaped components 21 can be rotated relative to other two L-shaped components 21 to form an angled structure to support the main body 10 (see FIG. 3).

[0011] In the embodiment, each two L-shaped components 21 are connected to each other at end portions 210 and can rotate relative to each other about the end portions 210. In this case, the end portions 210 of each L-shaped component 21 can be made of flexible materials, so that the end portions 210 are flexible enough to be bent, thereby allowing the L-shaped components 21 to rotate with respect to other L-shaped components 21.

[0012] When not in use, the L-shaped components 21 can be adjusted to be wrapped around the edges of the main body 10 as shown in FIG. 1. To use the support assembly 20, a user can select two connected L-shaped components 21 according to a desired orientation of the electronic device 1, such as portrait or landscape, and bend at the end portions 210 of the selected L-shaped components 21. The two selected connected

[0013] L-shaped components 21 can then rotate relative to the other two L-shaped components 21, which then form an angled structure to support the main body 10 as shown in FIG. 3.

[0014] In the embodiment, each two connected end portions 210 cooperatively form a cutout 211 with two opposite sides 2110 respectively formed on each of the two connected end portions 210. When the two connected L-shaped components 21 are rotated with respect to the other two L-shaped components 21 to a predetermined position, the opposite sides 2110 formed by each of the end portions 210 of the two connected L-shaped components 21 that are rotated support a back surface of the main body 10.

[0015] In the embodiment, each two connected L-shaped components 21 rotate about an axis parallel to a front surface of the main body 10. To adjust the angle between the main body 10 and a support surface (i.e., desktop), a user can further bend the end portions 210 of the two connected L-shaped components 21 until a desired angle is obtained.

[0016] As shown in FIG. 2, each L-shaped component 21 defines a receiving groove 211 to receive the edges of the main body 10. Therefore, the four L-shaped components 21 can protect the electronic device 1 from being damaged such as when accidentally dropped. In the embodiment, at least the portions of the L-shaped component 21 defining the receiving grooves 211 are made of rubber or other flexible material, so that the L-shaped components 21 can be firmly wrapped around the edges of the main body 10 in the first state as shown in FIG. 1, but are flexible enough to be resiliently deformed when rotating with respect to the main body 10 to the second state as shown in FIG. 3.

[0017] In the embodiment, the L-shaped components 21 are made of a material which can be easily bent and keep the shape, e.g., a material combining metal wires and rubber, thereby allowing the L-shaped components 21 to be maintained at a desired orientation for supporting the main body 10. In an alternative embodiment, the main body 10 can be maintained at a desired position by friction between the L-shaped components 21 and the support surface.

[0018] Although the present disclosure has been described in accordance with the embodiments shown, one of ordinary skill in the art will readily recognize that there could be variations to the embodiments and those variations would be within the spirit and scope of the present disclosure. Accordingly, many modifications may be made by one of ordinary skill in the art without departing from the spirit and scope of the appended claims.

What is claimed is:

1. An electronic device comprising:

a main body; and

a support assembly comprising four L-shaped components arranged around edges of the main body, each L-shaped component comprising two flexible end portions, and each adjacent two L-shaped components being connected to each other at the end portions thereof, allowing the L-shaped components to rotate relative to each other about the two connected end portions, wherein two connected L-shaped components are able to rotate with respect to the other two L-shaped components, thereby forming an angled structure to support the main body.

2. The electronic device as described in claim 1, wherein each L-shaped component defines a receiving groove to receive a corresponding one of the edges of the main body, allowing the L-shaped components to wrap around the edges of the main body.

3. The electronic device as described in claim 2, wherein the L-shaped components are made of rubber.

4. The electronic device as described in claim 2, wherein portions of the L-shaped components defining the receiving grooves are made of rubber.

5. The electronic device as described in claim 1, wherein each two connected end portions cooperatively form a cutout with two opposite sides respectively formed on each of the two connected end portions, and when the two connected L-shaped components are rotated with respect to the other two L-shaped components to a predetermined position, the opposite sides formed by each of the end portions of the two connected L-shaped components that are rotated support a back surface of the main body.

6. The electronic device as described in claim 1, wherein the L-shaped components are made of a material which can keep the shape after being bent.

7. A support assembly for an electronic device, comprising:

four L-shaped components for being arranged around edges of the electronic device, each L-shaped component comprising two flexible end portions, and each adjacent two L-shaped components being connected to each other at the end portions thereof, allowing the L-shaped components to rotate relative to each other about the two connected end portions, wherein two connected L-shaped components are able to rotate with

respect to the other two L-shaped components, thereby forming an angled structure to support the electronic device.

8. The support assembly as described in claim 7, wherein each L-shaped component defines a receiving groove to receive a corresponding one of the edges of the electronic device, allowing the L-shaped components to wrap around the edges of the electronic device.

9. The support assembly as described in claim 8, wherein the L-shaped components are made of rubber.

10. The support assembly as described in claim 8, wherein portions of the L-shaped components defining the receiving grooves are made of rubber.

11. The support assembly as described in claim 7, wherein each two connected end portions cooperatively form a cutout with two opposite sides respectively formed on each of the two connected end portions, and when the two connected L-shaped components are rotated with respect to the other two L-shaped components to a predetermined position, the opposite sides formed by each of the end portions of the two connected L-shaped components that are rotated support a back surface of the electronic device.

12. The support assembly as described in claim 7, wherein the L-shaped components are made of a material which can keep the shape after being bent.

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