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(54) STABILITY STRUCTURE FOR MOBILE ELECTRONIC DEVICES

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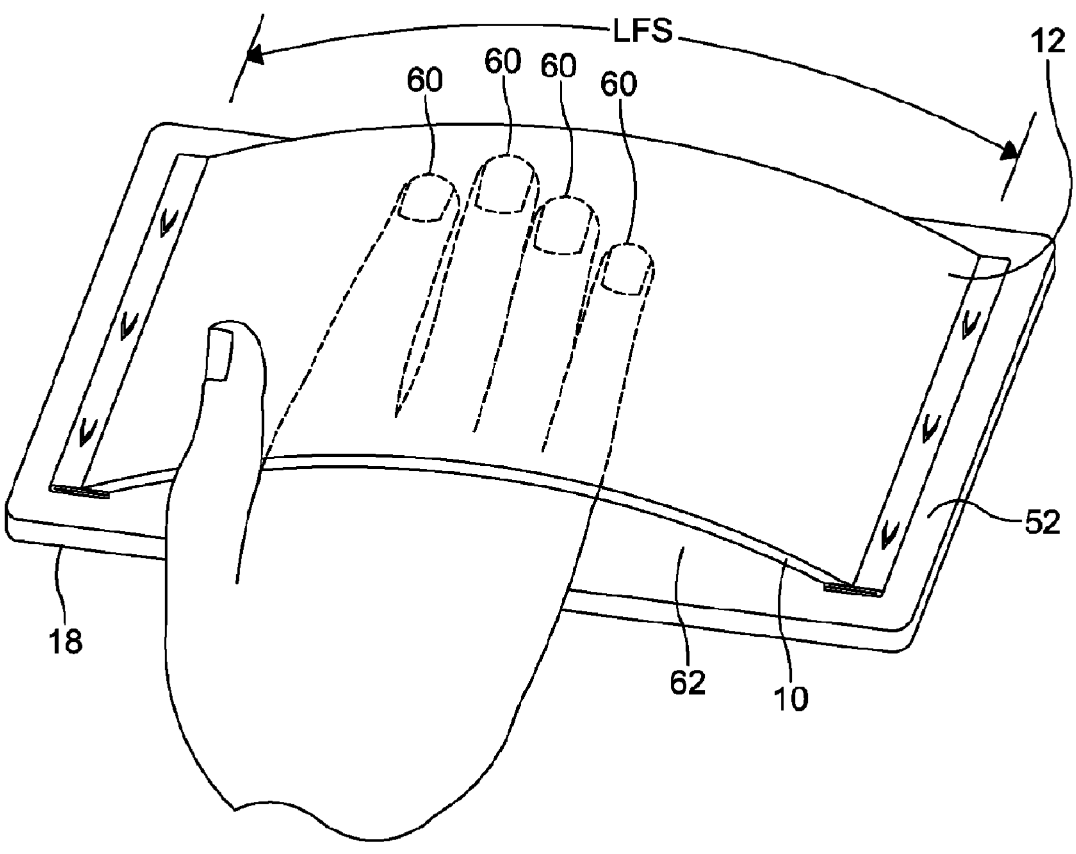
CPC ***A45F 5/00*** (2013.01); *A45F 2200/0525* (2013.01); *A45F 2200/0516* (2013.01); *A45F 2200/0508* (2013.01)

(57) **ABSTRACT**

A stability structure for a mobile electronic device is provided. The stability structure includes a plurality of aglets. An elastic member is connected to and extends between the aglets. The elastic member is placed against a back surface of a mobile electronic device or a back surface of its protective case. Adhesive members attach the aglets to the back surface of the mobile electronic device or the back surface of its protective case. In an installed position, the elastic member and the back surface of the mobile electronic device or the back surface of its protective case form a gap to receive a user's fingers. The elastic member urges the inserted fingers against the back surface of the mobile electronic device or the back surface of its protective case thereby allowing the user to securely hold the mobile electronic device with one hand.



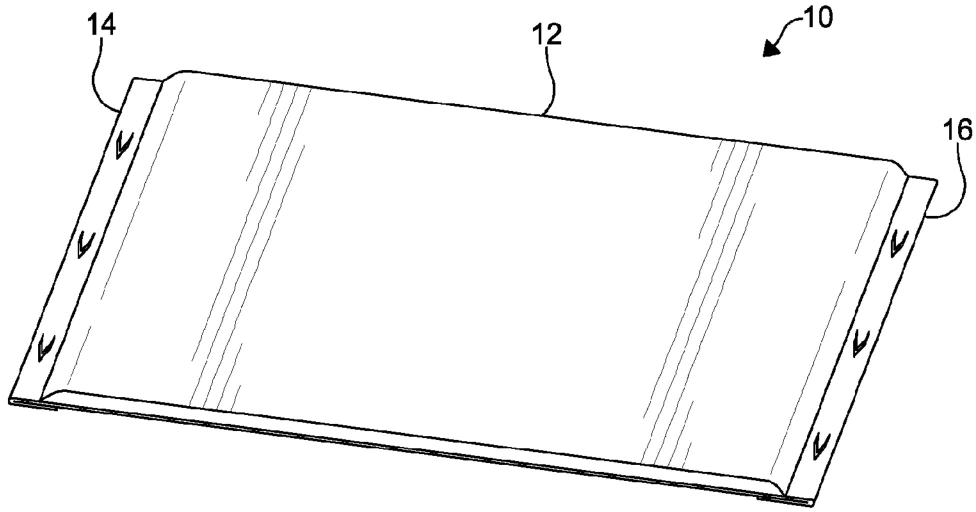


FIG. 1

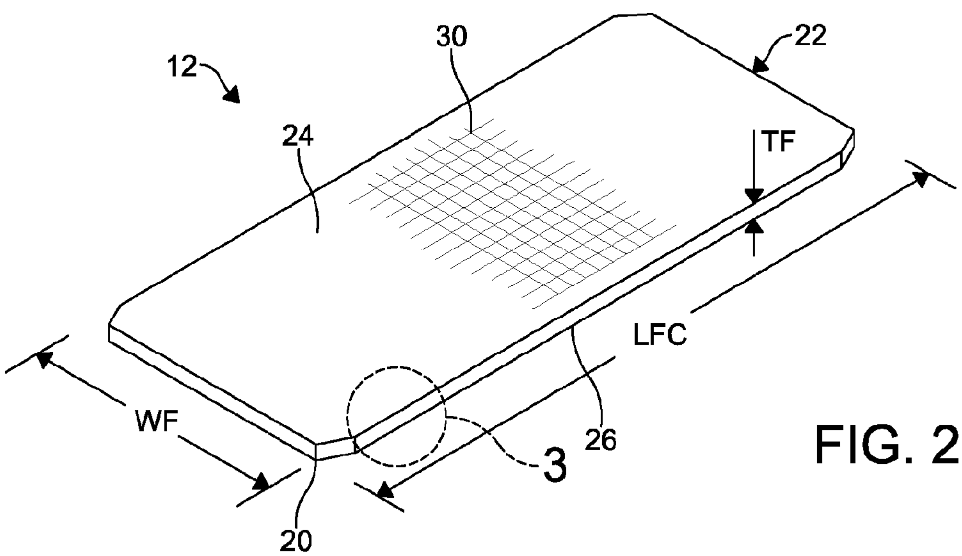


FIG. 2

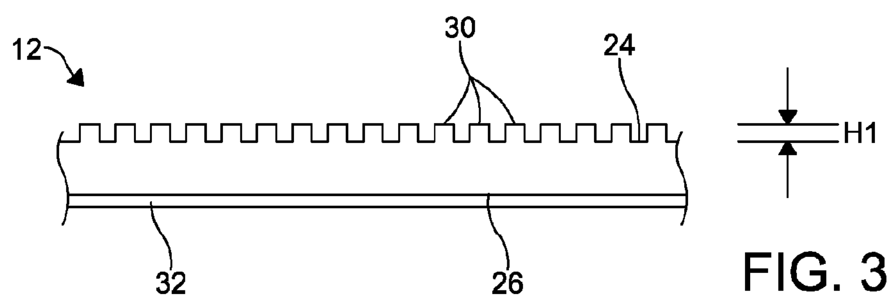


FIG. 3

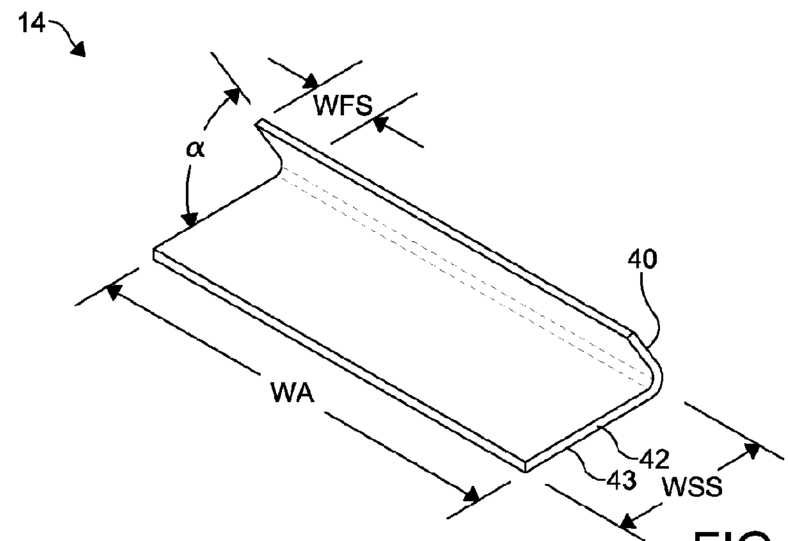


FIG. 4

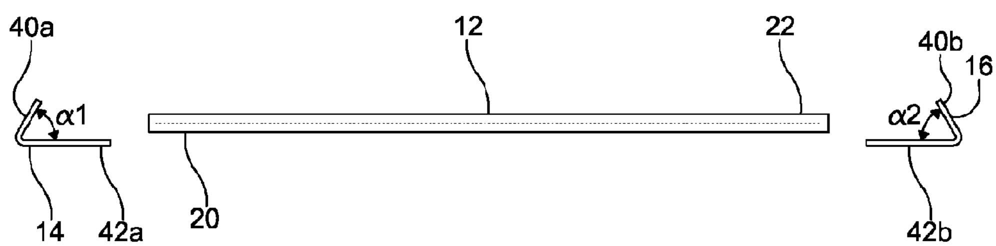


FIG. 5

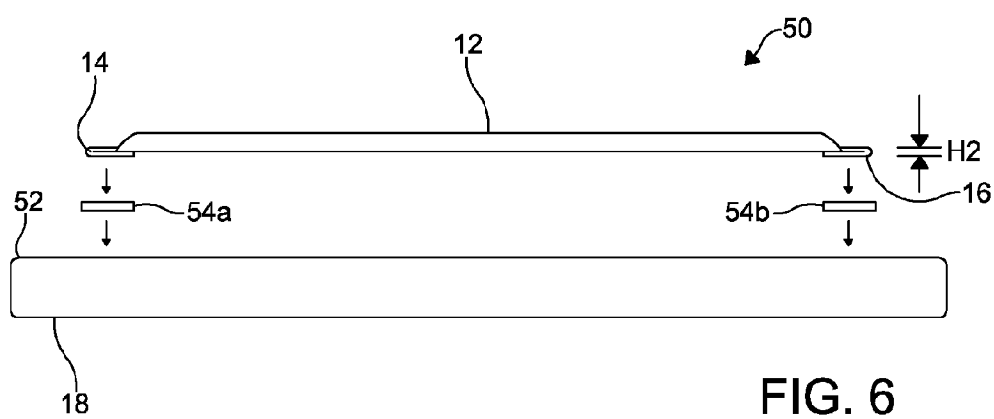


FIG. 6

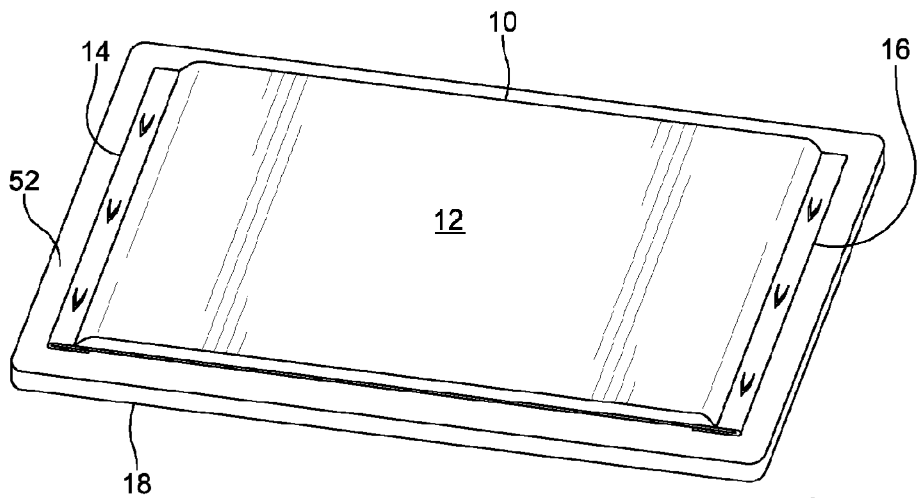


FIG. 7

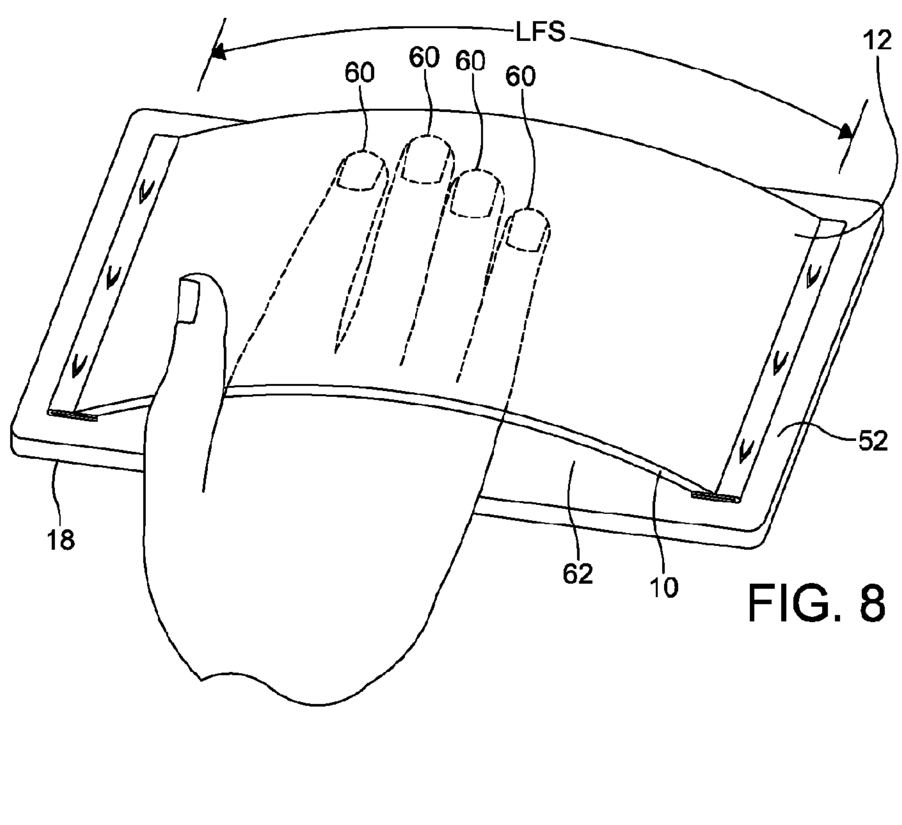


FIG. 8

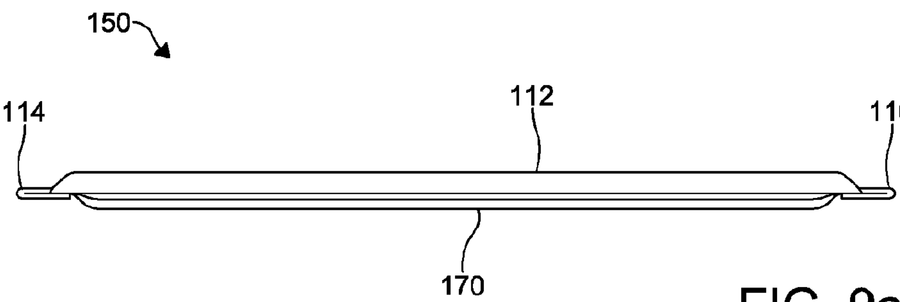


FIG. 9a

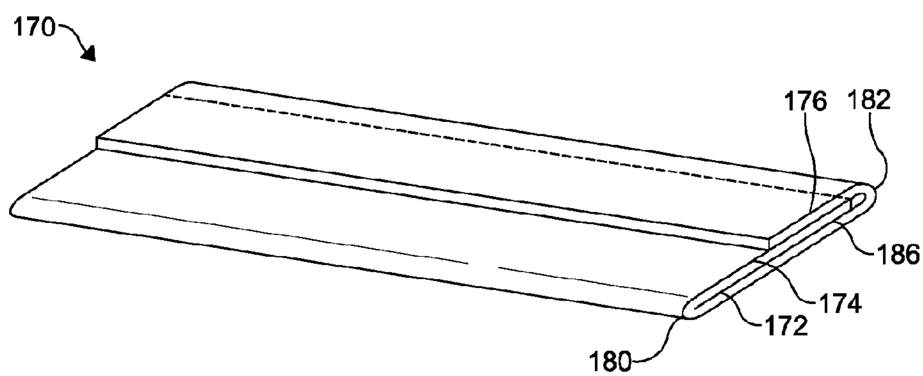


FIG. 9b

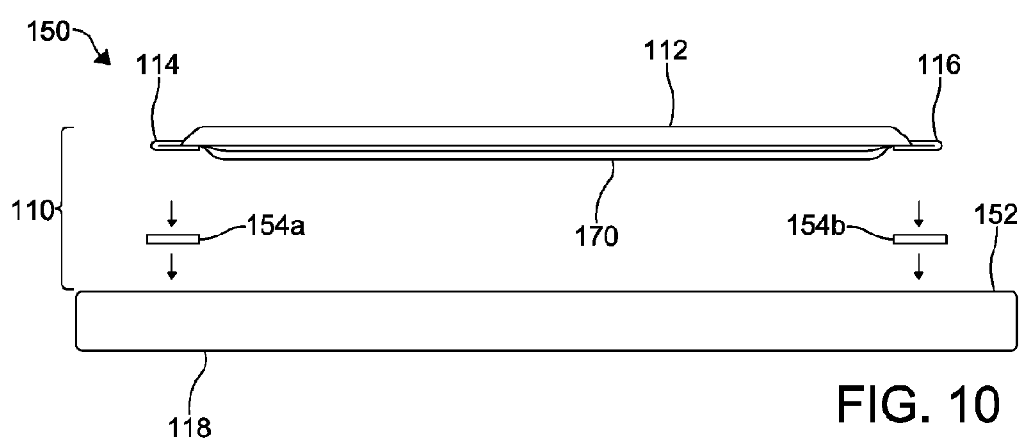


FIG. 10

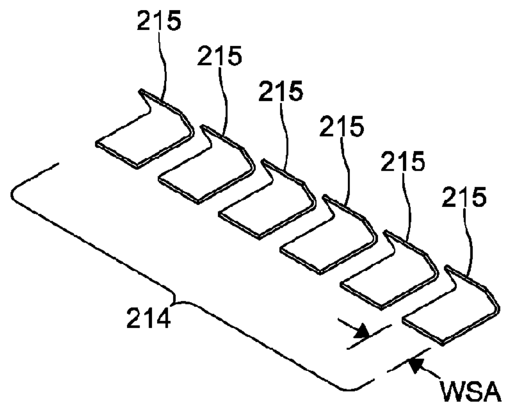


FIG. 11

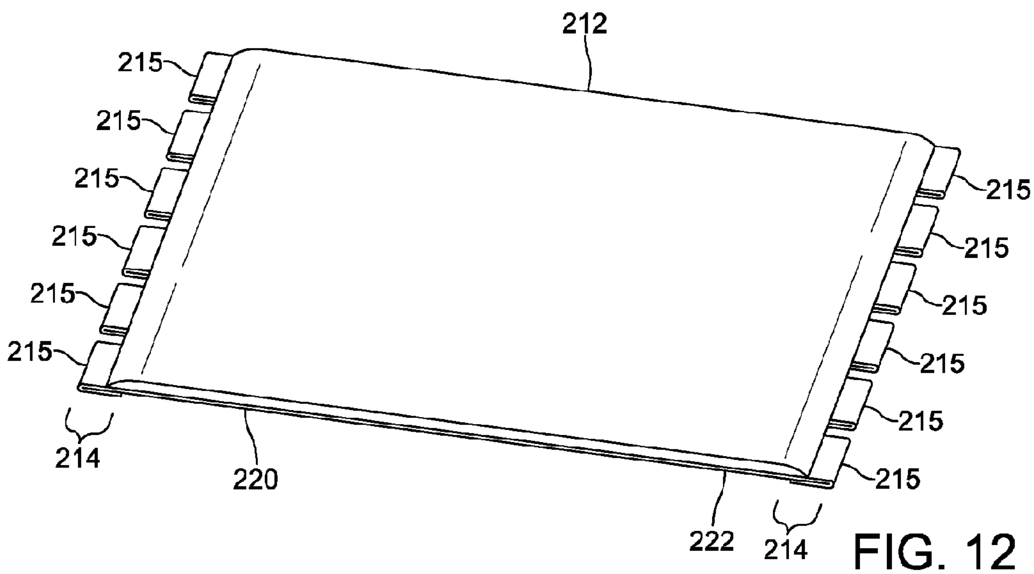


FIG. 12

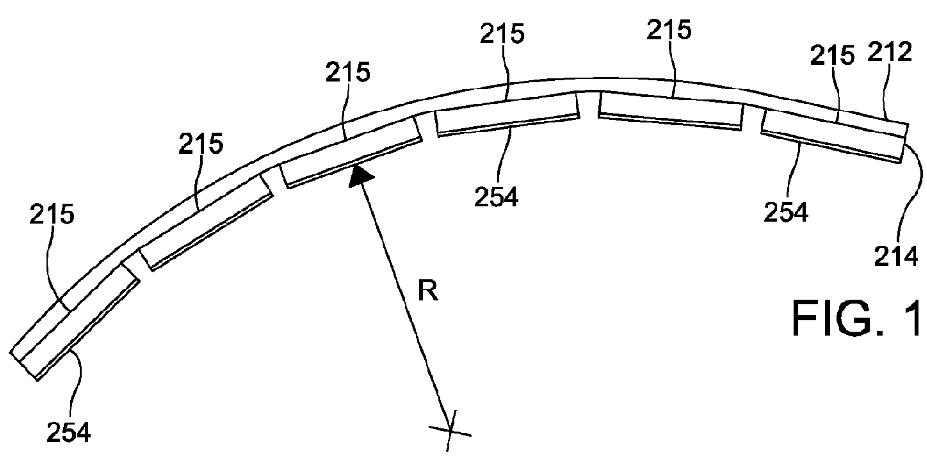


FIG. 13

STABILITY STRUCTURE FOR MOBILE ELECTRONIC DEVICES

RELATED APPLICATIONS

[0001] This application claims priority from pending U.S. Provisional Patent Application No. 62/157136, filed May 5, 2015, the disclosure of which is incorporated herein by reference in its entirety.

BACKGROUND

[0002] Mobile electronic devices are increasingly popular. Non-limiting examples of mobile electronic devices include MP3-style players, cellular phones, laptop and tablet-style computers.

[0003] Mobile electronic devices are often enclosed within a housing having a substantially rectangular shape, with a relatively flat, thin profile. In certain instances, it can be difficult to hold the mobile electronic device single handedly due to the shape and/or size of the housing. In these instances, there is a risk of damage to the mobile electronic device from being dropped.

[0004] It would be advantageous if mobile electronic devices were easier to hold and operate.

SUMMARY

[0005] The above objects as well as other objects not specifically enumerated are achieved by a stability structure configured for a mobile electronic device. The stability structure includes a plurality of aglets. The aglets have a lower surface. An elastic member is connected to and extends between the plurality of aglets. The elastic member has lower surface and is configured for placement against a back surface of a mobile electronic device or a back surface of its protective case. A plurality of adhesive members is attached to the lower surfaces of the aglets. The adhesive members are configured to attach the aglets to the back surface of the mobile electronic device or the back surface of its protective case. With the stability structure in an installed position, the lower surface of the elastic member and the back surface of the mobile electronic device or the back surface of its protective case are configured to form a gap to receive a user's fingers. The elastic member is further configured to urge the fingers inserted into the gap against the back surface of the mobile electronic device or the back surface of its protective case thereby allowing the user to securely hold the mobile electronic device with one hand.

[0006] Various objects and advantages of the stability structure for mobile electronic devices will become apparent to those skilled in the art from the following detailed description, when read in light of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. **1** is a perspective view of a first embodiment of a stability structure for a mobile device.

[0008] FIG. **2** is a perspective view of an elastic member of the stability structure of FIG. **1**.

[0009] FIG. **3** is an enlarged front view of a portion of the elastic member of the stability structure of FIG. **1** illustrating surface structures and a covering material.

[0010] FIG. **4** is a perspective view of a pre-crimped aglet of the stability structure of FIG. **1**.

[0011] FIG. **5** is a side view, in elevation, of the aglets and elastic member of FIG. **1** shown in a pre-assembled arrangement.

[0012] FIG. **6** is a side view, in elevation, of the stability structure of FIG. **1** shown in a pre-assembled arrangement with a mobile electronic device.

[0013] FIG. **7** is a perspective view of the stability structure of FIG. **1** shown in an assembled arrangement with a mobile electronic device.

[0014] FIG. **8** is a perspective view of the assembled stability structure and mobile electronic device of FIG. **7** shown with fingers inserted into a gap formed between the stability structure and the mobile electronic device.

[0015] FIG. **9** is a front view, in elevation of a second embodiment of a stability structure for a mobile electronic device.

[0016] FIG. **10** is a side view, in elevation, of the stability structure of FIG. **9** shown in a pre-assembled arrangement with a mobile electronic device.

DETAILED DESCRIPTION OF THE INVENTION

[0017] The stability structure for mobile electronic devices (hereafter "stability structure") will now be described with occasional reference to the specific embodiments. The stability structure may, however, be embodied in different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the stability structure to those skilled in the art.

[0018] Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which the stability structure belongs. The terminology used in the description of the stability structure herein is for describing particular embodiments only and is not intended to be limiting. As used in the description of the stability structure and the appended claims, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise.

[0019] Unless otherwise indicated, all numbers expressing quantities of dimensions such as length, width, height, and so forth as used in the specification and claims are to be understood as being modified in all instances by the term "about." Accordingly, unless otherwise indicated, the numerical properties set forth in the specification and claims are approximations that may vary depending on the desired properties sought to be obtained in embodiments of the present invention. Notwithstanding that the numerical ranges and parameters setting forth the broad scope of the stability structure are approximations, the numerical values set forth in the specific examples are reported as precisely as possible. Any numerical values, however, inherently contain certain errors necessarily resulting from error found in their respective measurements.

[0020] The description and figures disclose a stability structure for mobile electronic devices. Generally, the stability structure is attached to a portion of the back surface of the mobile electronic device and coordinates with the back surface of the mobile electronic device to form a gap. In operation, a user simply inserts one or more fingers in the gap between the back surface of the mobile electronic device and the stability structure. An elastic feature of the stability structure urges the inserted fingers against the back surface of the mobile electronic device and allows the user to securely hold the mobile electronic device with one hand. Rather than requiring two hands to hold the mobile electronic device, the user advantageously can hold the mobile electronic device with one hand and operate the mobile electronic device with the other hand. As will be discussed in more detail below, the stability structure is formed from an elastic material that is attached to the back surface of the mobile electronic device.

[0021] Referring now to FIG. **1**, the stability structure is illustrated generally at **10**. The stability structure **10** is configured to span and attach to a portion of a back surface of a mobile electronic device. The stability structure **10** includes an elastic member **12** extended between and connected to opposing first and second aglets **14**, **16** at opposing distal ends of the elastic member **12**.

[0022] Referring now to FIGS. **2** and **3**, the elastic member is illustrated generally at **12**. As will be explained in more detail below, the elastic member **12** is configured for a contracted first orientation and a stretched second orientation. The elastic member **12** includes a first distal end **20**, a second distal end **22**, an upper surface **24** and a lower surface **26**. In the illustrated embodiment, the elastic member **12** has a generally rectangular shape and the upper and lower surfaces **24**, **26** have a substantially parallel orientation. Alternatively, the elastic member **12** can have other shapes and the upper and lower surfaces **24**, **26** can have a non-parallel orientation.

[0023] Referring again to FIG. **2**, the elastic member **12** has a width WF, a contracted length LFC, a stretched length LFS (as shown in FIG. **8**) and a thickness TF. In the illustrated embodiment, the width WF of the flexible member **12** generally corresponds to a width WA of one of the aglets **14**, **16**, as shown in FIG. **4**. However, it should be appreciated that in other embodiments, the width. WF of the elastic member **12** need not correspond to the width WA of one of the aglets **14**, **16**. In the embodiment illustrated in FIG. **2**, the width WF of the elastic member **12** is in a range of from about 1.5 inches to about 5.0 inches. In other embodiments, the width WF of the elastic member can be less than about 1.5 inches or more than about 5.0 inches.

[0024] Referring again to FIG. **2**, the contracted length LFC of the elastic member **12** generally corresponds to a length of the mobile electronic device. As one non-limiting example, a mobile electronic device having a length of about 5.5 inches uses an elastic member **12** having a contracted length LCF of about 4.25 inches. However, it should be appreciated that the contracted length LFC of the elastic member **12** need only be less than the length of the mobile electronic device. In the embodiment illustrated in FIG. **2**, the contracted length LFC of the elastic member **12** is in a range of from about 3.0 inches to about 10.0 inches. In other embodiments, the contracted length LFC of the elastic member **12** can be less than about 3.0 inches or more than about 10.0 inches.

[0025] Referring now to FIG. **8**, the stretched length LFS of the elastic member **12** is configured to form a gap **62** to accommodate one or more fingers between the back surface of the mobile electronic device and the stability structure **10**, In the illustrated embodiment, the stretched length LFS of the elastic member **12** is longer than the contracted length LFC of the elastic member **12** by an amount in a range of from about 10.0% to about 50.0%. Accordingly, an elastic member **12** having a contracted length of about 4.0 inches has a stretched length LFS in a range of from about 4.4 inches to about 6.0 inches. Alternatively, the stretched length LFS can be longer than the contracted length LFC of the elastic member **12** by an amount less than 10.0% or more than 50.0%, sufficient to form a gap **62** to accommodate one or more fingers between the back surface of the mobile electronic device and the stability structure **10**.

[0026] Referring again to FIG. **2**, the thickness TF of the elastic member **12** is configured for several functions. First, the thickness TF is configured to provide the elastic member **12** with sufficient tensile strength to ensure the structural integrity of the elastic member **12** during use. Second, the thickness TF of the elastic member **12** is configured to provide a desired elasticity from the contracted length LFC to the stretched length LFS, as discussed above. In the embodiment illustrated in FIGS. **2** and **3**, the thickness TF of the elastic member **12** is in a range of from about 0.05 inches to about 0.10 inches. In other embodiments, the thickness TF of the elastic member **12** can be less than about 0.05 inches or more than about 0.10 inches.

[0027] Referring again to FIGS. **2** and **3**, optionally the upper surface **24** of the elastic member **12** can include a plurality of surface structures **30**. The term "surface structure", as used herein, is defined to mean any structure or treatment located on or extending from a surface. The surface structures **30** are configured to minimize slippage of a mobile electronic device equipped with the stability structure **10** as the mobile electronic device sits on a surface.

[0028] Referring again to FIG. **3**, the surface structures **30** are configured to extend from the upper surface **24** of the elastic member **12** a height H I such that the surface structures **30** can engage and grip other surfaces. In the illustrated embodiment, the height HI is in a range of from about 0.02 inches to about 0.20 inches. In other embodiments, the height H**1** can be less than about 0.02 inches or more than about 0.20 inches sufficient that the surface structures **30** can engage and grip other surfaces.

[0029] Referring again to the embodiment illustrated in FIG. **3**, the surface structures **30** have the form of a plurality of nibs. The term "nib", as used herein, is defined to mean any structure having a protruding extremity. However, in other embodiments, the surface structures **30** can have other forms, such as for example serrations, teeth and the like.

[0030] Referring again to FIG. **3**, the surface structures **30** are arranged in rows and columns. However, the surface structures **30** can be arranged in any desired pattern sufficient that the surface structures **30** can engage and grip other surfaces.

[0031] Referring again to FIGS. **2** and **3**, the surface structures **30** extend continuously across the upper surface **24** of the elastic member **12** from the first distal end **20** to the second distal end **22**. In other embodiments, the surface structures **30** can be any desired pattern of discontinuous segments and the surface structures **30** can extend any desired distance on the upper surface **24** of the elastic member **12**.

[0032] Referring again to the embodiment shown in FIG. **3**, the elastic member **12** is formed from an elastic, polymeric-based material, such as the non-limiting example of neoprene. Alternatively, the elastic member **12** can be formed from other elastic, polymeric-based materials, sufficient to have a contracted, substantially flat orientation and an extended, stretched orientation.

[0033] While the elastic member **12** has been illustrated in FIGS. **2** and **3** as having surface structures **30**, it should be appreciated that the surface structures **30** are optional and not required for successful operation of the stability structure **10**.

[0034] Referring now to FIG. **3**, optionally the lower surface **26** of the elastic member **12** can include a covering material **32**. The covering material **32** is configured is to provide an elastic, slip resistant surface for contact with a portion of a user's hand. In the illustrated embodiment, the covering material **32** is formed from an elastic polymeric material, such as the non-limiting example of Lycra®, marketed by the Invista Corporation, headquartered in Wichita, Kans. However, it should be appreciated that in other embodiments, the covering material **32** can be formed from other elastic polymeric materials sufficient to provide an elastic, slip resistant surface for contact with a portion of a user's hand.

[0035] Referring now to FIG. **4**, a representative aglet **14** is illustrated. The aglet **14** is configured for several purposes. First, the aglet **14** is configured to attach to an end of the elastic member **12** such that the aglet **14** and the elastic member **12** are securely fastened together. Second, the aglet **14** is configured to attach to a portion of a back surface of a mobile electronic device in a manner that will be discussed in more detail below.

[0036] Referring again to FIG. **4**, the aglet **14** includes a first segment **40** connected to a second segment **42** along a longitudinal edge. For purposes of clarity, the embodiment shown in FIG. **4** shows the relative position of the first and second segments **40**, **42** prior to crimping of the elastic member **12** between the first and second segments **40**, **42**. The first and second segments **40**, **42** form a pre-crimped angle α therebetween. The pre-crimped angle α is configured to receive a distal end **20**, **22** of the elastic member **12**. In the illustrated embodiment, the pre-crimped angle α is in a range of from about 50° to about 75°. Alternatively, the pre-crimped angle α can be less than about 50° or more than about 75°, sufficient that the pre-crimped first and second segments **40**, **42** can receive a distal end **20**, **22** of the elastic member **12**.

[0037] Referring again to FIG. **4**, the second segment **42** has a substantially flat lower surface **43**. As will be explained below in more detail, the lower surface **43** of the second segment **42** is configured to receive an adhesive strip and is further configured to seat against a flat segment of a portion of the back surface of the mobile electronic device. However, it is within the contemplation of the stability structure that the aglet **14** can be configured with a curved or arcuate cross-sectional shape, sufficient to seat against a curved or arcuate segment of a portion of the back surface of the mobile electronic device. The embodiment of an aglet **14** having a curved or arcuate cross-sectional shape will be discussed in more detail below.

[0038] Referring again to FIG. **4**, the first segment **40** has a width WFS and the second segment **42** has a width WSS. In the illustrated embodiment, the width WFS of the first segment **40** is shorter than the width WSS of the second segment **42** such that in a crimped and stretched arrangement as shown in FIG. **8**, the elastic member **12** initiates an arcuate cross-sectional shape at locations closer to the ends of the mobile electronic device, thereby allowing any desired quantity of the user's fingers within the gap **62**. Referring again to the embodiment illustrated in FIG. **4**, the width WFS of the first segment **40** is in a range of from about 0.15 inches to about 0.35 inches and the width WSS of the second segment **42** is in a range of from about 0.40 inches to about 0.60 inches. However, it should be appreciated that in other embodiments, the WFS of the first segment **40** can be less than about 0.15 inches or more than about 0.35 inches and the width WSS of the second segment **42** can be less than about 0.40 inches or more than about 0.60 inches.

[0039] Referring again to the embodiment illustrated in FIG. **4**, the aglet **14** is formed from a thin, metallic, ductile material, such as for example thin gauge steel. In other embodiments, the aglet **14** can be formed from other materials sufficient to retain the elastic member **12** in a crimped arrangement while assuring the elastic material **12** cannot be pulled out during use.

[0040] While the aglet **14** is described above as being formed from a thin, metallic, ductile material such as to allow crimping of the elastic member **12**, it should be appreciated that in other embodiments, the elastic member **12** can be attached to the aglet **14** in other manners, such as the non-limiting examples of vulcanizing, ultra-sonic welding and adhesives. In these embodiments, the aglet **14** can be formed from non-metallic materials, such as for example, polymeric materials.

[0041] Referring now to FIG. **5**, the stability structure **10** is initially formed as the distal ends **20**, **22** of the elastic member **12** are inserted into the pre-crimped angles α**1**, α**2**, formed by the first and second segments **40***a*, **40***b*, **42***a*, **42***b* of the aglets **14**, **16**. Next, the first segment **40***a* is crimped to the second segment **42***a*, thereby securing the first distal end **20** of the elastic member **12** to the aglet **14**. Similarly, the first segment **40***b* is crimped to the second segment **42***b*, thereby securing the second distal end **22** of the elastic member **12** to the aglet **16**.

[0042] Referring now to FIG. **6**, the crimped aglets **14**, **16** have a thin cross-sectional profile **1-12**. The thin cross-sectional profile H**2** is configured to allow the thickness TF of the elastic member **12** to extend beyond the aglets **14**, **16** as the elastic member **12** is in a contracted, substantially flat orientation. The term "cross-sectional profile", as used herein, is defined to mean the thickness **1-12** of the crimped aglet **14**, **16** from a bottom surface to a top surface. In the illustrated embodiment, the cross-sectional profile **112** is in a range of from about 0.02 inches to about 0.06 inches. However, in other embodiments, the cross-sectional profile H**2** can be less than about 0.02 inches or more than about 0.06 inches. Attachment of the aglets **14**, **16** to the elastic member **12** forms sub-assembly **50**.

[0043] Referring again to FIG. **6**, the sub-assembly **50** is attached to a portion of a back surface **52** of a mobile electronic device **18** through use of a plurality of adhesive members **54***a*, **54***b* positioned to contact the aglets **14**, **16** and the back surface **52**. In the illustrated embodiment, the adhesive members **54***a*, **54***b* are made of a polymeric film material having a thickness in a range of about 30 gauge to about 96 gauge. In other embodiments, the adhesive members **54***a*, **54***b* can be made of other desired materials or combinations of materials and can have thicknesses less than about 30 gauge or more than about 96 gauge.

[0044] Referring again to FIG. **6**, it should be appreciated that in other embodiments, the sub-assembly **50** can be attached to the back surface **52** by other mechanisms or structures. While the sub-assembly **50** is shown in FIG. **6** as being attached to the back surface **52** of a mobile electronic device **18**, it is within the contemplation of the invention that the sub-assembly **50** can be attached to a back surface of a housing or case enclosing a mobile electronic device.

[0045] Referring now to FIG. **7**, the stability structure **10** is shown attached to the back surface **52** of the mobile electronic device **18**. The elastic member **12** has the contracted, substantially flat orientation and extends from one aglet **14** to the other aglet **16**. In the contracted first position, the elastic member **12** has a substantially flat orientation. The term "flat orientation", as used herein, is defined to mean the elastic member **12** forms a longitudinal plane that is substantially parallel to a longitudinal plane of the mobile electronic device **18**.

[0046] Referring now to FIG. **8**, the stability structure **10** is shown in the extended, stretched orientation with a plurality of the user's fingers **60** positioned in a gap **62** formed between the back surface **52** of the mobile electronic device **18** and the elastic member **12**. In the extended stretched orientation, the elastic member **12** forms a generally arcuate shape that the inserted fingers **60** against the back surface **52** of the mobile electronic device **18** and allows the user to securely hold the mobile electronic device **18** with one hand. When the user removes the fingers **60** from the gap **62**, the elastic member **12** is configured to return to the contracted, substantially flat orientation shown in FIG. **7**.

[0047] While the embodiment shown in FIG. **8** illustrates a quantity of four fingers **60** inserted into the gap **62**, any desired number of fingers **60** can be used sufficient to securely hold the mobile electronic device **18** with one hand. In certain instances, the size of the user's hand, coupled with the length of the stability structure, can cooperate to allow the entire hand of the user to slip through the stability structure **10** such that the stability structure **10** urges the user's wrist against the back surface of the mobile electronic device **10**.

[0048] The stability structure **10** provides significant benefits, however, all benefits may not be present in all embodiments. First, the stability structure **10** provides an easily applied gripping means that can applied to many mobile electronic devices. Second, the stability structure **10** allows a user to single handedly engage a mobile electronic device **18** with an assured grip thereby providing a snug feel. Third, the stability structure **10** can act as a shock absorber if the mobile electronic device **18** is dropped on the back surface. Four, the stability structure **10** provides an aesthetically pleasing means of providing a secure gripping means. Fifth, the stability structure **10** can be made to any size and fit any mobile electronic device **18**. Sixth, the stability structure **10** can be oriented on the mobile electronic device **18** such as to provide any desired engagement. Seventh, the stability structure **10** can arranged on the mobile electronic device **18** such as to provide a gap **62** having any desired level of snugness with portions of the user's hand.

[0049] While the stability structure **10** has been illustrated in FIGS. **6-8** and described above as being attached to a portion of the back surface of the mobile electronic device, it should be appreciated that in other embodiments the stability structure **10** can be attached to a portion of a protective case within which the mobile electronic device resides.

[0050] Referring now to FIG. **9***a*, another embodiment of a sub-assembly is illustrated generally at **150**. The sub-assembly **150** includes a first elastic member **112** extending between aglets **114**, **116**. In the illustrated embodiment, the first elastic member **112** and aglets **114**, **116** are the same as, or similar to, the elastic member **12** and aglets **14**, **16** shown in FIG. **6** and discussed above. In other embodiments, the first elastic member **112** and aglets **114**, **116** can be different from the elastic member **12** and aglets **14**, **16**.

[0051] Referring again to FIG. **9***a*, a second elastic member **170** extends from the aglet **114** to the aglet **116**. The ends of the second elastic member **170** are secured in the aglets **114**, **116** in the same manner as the first elastic member **112**.

[0052] Referring now to FIG. **9***b*, the second elastic member **170** includes a plurality of layers **172**, **174** and **176** arranged in a folded orientation. The intermediate layer **174** forms a first fold **180** with the bottom layer **174** and the bottom layer forms a second fold **182** with the top layer **176**. The resulting folded structure forms a "closed" pouch **186** between the bottom layer **172** and the intermediate layer **174**. The closed pouch **186** is configured for retaining small items such as credit cards, driver licenses, folded paper money and the like. In certain embodiments, the closed pouch **186** can be secured in closed arrangement with any desired mechanisms or structures, such as the non-limiting examples of hook and loop fasteners or a zipper.

[0053] Referring now to FIG. **10**, the sub-assembly **150**, having the elastic member **112**, aglets **114**, **116**, and the second elastic member **170** are attached to the back surface **152** of the mobile electronic device **118** using adhesive members **154***a*, **154***b* in the same manner as described above. When attached to the back surface **152** of the mobile electronic device **118**, the sub-assembly **150** is configured to have the same flat orientation relative to the back surface **152** of the mobile electronic device **118** as discussed above for the sub-assembly **50**.

[0054] Referring again to FIG. **10**, the flat orientation of the stability structure **110** against the back surface **152** of the mobile electronic device **118** advantageously allows small items inserted into the closed pouch **186** to be generally hidden from view.

[0055] Referring again to FIG. **10**, it is within the contemplation of the stability structure **150** that other structures can be crimped by the aglets **114**, **116** and positioned under the elastic member **112**. As one non-limiting example, one or more elastic strings can be used to store a tethered, hidden key within the in closed pouch **186**.

[0056] Referring again to FIG. **4** and as discussed above, the aglet **14** can be configured with a curved or arcuate cross-sectional shape, sufficient to seat against a curved or arcuate segment of a portion of the back surface of the mobile electronic device. Referring now to FIG. **11**, one non-limiting example of an alternate aglet **214** can be formed from a plurality of sub-aglets **215**. In the illustrated embodiment, each of the sub-aglets **215** has the same, or similar, structure as the aglet **14** illustrated in FIG. **4** and discussed above, with the exception that the sub-aglets **215** have a shorter width WSA. In the illustrated embodiment, the width WSA of the sub-aglets **215** is in a range of from about 0.25 inches to about 0.75 inches. However, in other embodiments, the width WSA of the sub-aglets **215** can be less than about 0.25 inches or more than about 0.75 inches, sufficient that a plurality of sub-aglets **215** can form a curved or arcuate cross-sectional shape.

[0057] Referring now to FIG. **12**, an elastic member **212** is shown with aglets **214**, formed from a plurality of sub-aglets **215**, connected to the distal ends **220**, **222**. In the illustrated embodiment, the elastic member **212** is connected to the sub-aglets **215** by the same crimping manner as discussed above. However, it should be appreciated that other connection methods can be used.

[0058] Referring now to FIG. **13**, the aglet **214** is shown in a curved orientation. The individual sub-aglets **215** form segments of an arc, and cooperate to allow the aglet **214** to form a curved or arcuate shape. In the illustrated embodiment, the aglet **214** forms a radius R in a range of from about 0.50 inches to about 2.0 inches. In other embodiments, the aglet **214** can form a radius R of less than about 0.50 inches or more than about 2.0 inches, sufficient to seat against a curved or arcuate segment of a portion of the back surface of the mobile electronic device.

[0059] While the embodiment of the aglet **214** illustrated in FIGS. **11-13** show a quantity of six sub-aglets **215** forming the aglet **214**. It should be appreciated that in other embodiments, more or less than six sub-aglets **215** can be used.

[0060] The principle and mode of operation of the stability structure for mobile electronic devices have been described in certain embodiments. However, it should be noted that the stability structure for mobile electronic devices may be practiced otherwise than as specifically illustrated and described without departing from its scope.

What is claimed is:

1. A stability structure configured for a mobile electronic device, the stability structure comprising:

a plurality of aglets, the aglets having a lower surface;

an elastic member connected to and extending between the plurality of aglets, the elastic member having lower surface, the elastic member configured for placement against a back surface of a mobile electronic device or a back surface of its protective case;

a plurality of adhesive members attached to the lower surfaces of the aglets, the adhesive members configured to attach the aglets to the back surface of the mobile electronic device or the back surface of its protective case;

wherein with the stability structure in an installed position, the lower surface of the elastic member and the back surface of the mobile electronic device or the back surface of its protective case are configured to form a gap to receive a user's fingers, and wherein the elastic member is further configured to urge the fingers inserted into the gap against the back surface of the mobile electronic device or the back surface of its protective case thereby allowing the user to securely hold the mobile electronic device with one hand.

2. The stability structure of claim **1**, wherein the aglet includes a first segment connected to a second segment along a longitudinal edge.

3. The stability structure of claim **2**, wherein the first segment has a shorter width than the width of the second segment.

4. The stability structure of claim **1**, wherein elastic member has a width that corresponds to the width of the aglets.

5. The stability structure of claim **1**, wherein the elastic member has an upper surface and wherein the upper surface includes a plurality of surface structures.

6. The stability structure of claim **1**, wherein the elastic member has a stretched length that is longer than a contracted length by an amount in a range of from about 10.0% to about 50%.

7. The stability structure of claim **1**, wherein the elastic member is formed from an elastic material, such as neoprene.

8. The stability structure of claim **1**, wherein in an installed position against the back surface of the mobile electronic device, the elastic member has a contracted, substantially flat orientation.

9. The stability structure of claim **1**, wherein in an installed position against the back surface of the mobile electronic device and with the user's fingers inserted into gap, the elastic member has an arcuate cross-sectional shape.

10. The stability structure of claim **1**, wherein a lower surface of the elastic member includes a covering material.

11. The stability structure of claim **10**, wherein the covering material is formed from an elastic polymeric material, such as Lycra®.

12. The stability structure of claim **1**, wherein the elastic member has a crimped connection with the aglets.

13. The stability structure of claim **1**, wherein the aglets have a curved or arcuate cross-sectional shape.

14. The stability structure of claim **1**, wherein a second elastic member is connected to the aglets and extends therebetween, and wherein the second elastic member is positioned between the elastic member and the back surface of the mobile electronic device.

15. The stability structure of claim **14**, wherein the second elastic member includes a plurality of layers.

16. The stability structure of claim **15**, wherein the plurality of layers cooperate to form a closed pouch.

17. The stability structure of claim **16**, wherein the closed pouch is positioned between the elastic member and the back surface of the mobile electronic device.

18. The stability structure of claim **14**, wherein in an installed position against the back surface of the mobile electronic device, the elastic member and the second elastic member have a contracted, substantially flat orientation.

19. The stability structure of claim **16**, wherein in an installed position against the back surface of the mobile electronic device, the closed pouch is hidden from view.

20. The stability structure of claim **14**, wherein the second elastic member is formed from an elastic polymeric material, such as Lycra®.

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