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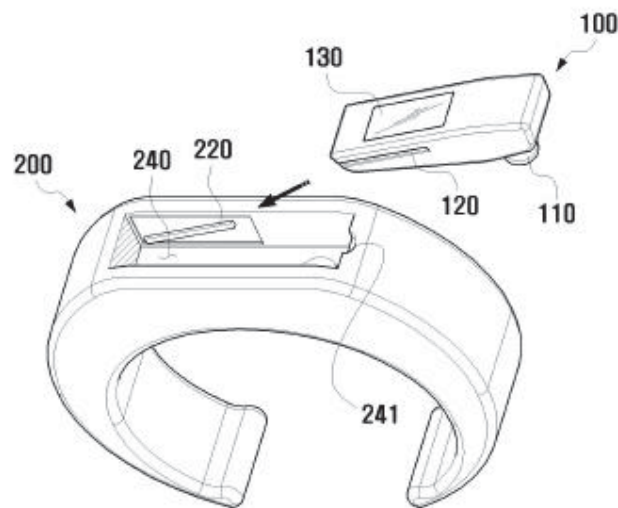
#### (54) Portable electronics device module

#### (57) Abstract

The present invention relates to a portable electronic device module. The portable electronic device module of the present invention comprises a portable electronic device and an electronic device storage unit. The guide groove formed on the side of the portable electronic device and the engaging protrusion formed on the side of the receiving unit of the electronic device storage unit are slidably coupled to each other. In addition, the electronic device storage unit may comprise a cover capable of covering the electronic device.

According to the present invention, it is easy to attach and detach the electronic device and the electronic device storage unit; the electronic device can also be used in a state in which it is coupled to the electronic device storage unit. The cover protects the electronic device.

*Representative Figure* – FIG. 4A



*Scope of Patent Claims*

**Claim 1**

A portable electronic device module, comprising a portable electronic device having a guide groove formed on a side thereof, and an electronic device storage unit equipped with a receiving unit capable of receiving the portable electronic device and a bar-shaped coupling protrusion formed on a side surface of the receiving unit; wherein the guide groove of the portable electronic device slides and couples the electronic device storage unit to the coupling protrusion.

**Claim 2**

The portable electronic device module according to claim 1, wherein the coupling protrusion is rotatable around the inner end to the extent of the angle set by the outer end.

**Claim 3**

The portable electronic device module according to claim 2, wherein the outer end is connected to a fixed point inside the electronic device storage unit by a spring.

**Claim 4**

The portable electronic device module according to claim 1, wherein the coupling protrusion is rotatable around the outer end to the extent of the angle set by the inner end.

**Claim 5**

The portable electronic device module according to claim 4, wherein the inner end is connected to a fixed point inside the electronic device storage unit by a spring

**Claim 6**

The portable electronic device module according to claim 1, wherein the electronic device storage unit further comprises a fastening unit that can be worn on a part of a user's body.

**Claim 7**

The portable electronic device module according to claim 1, wherein the electronic device storage unit further comprises a cover, so that when the electronic device is coupled to the electronic device storage unit, the cover covers the electronic device to prevent external contact.

**Claim 8**

The portable electronic device module according to claim 7, wherein the cover comprises a hinge at one end, and the hinge is detachable from the hinge groove formed in the electronic device storage unit.

**Claim 9**

The portable electronic device module according to claim 7, wherein the cover is made of a transparent material.

**Claim 10**

The portable electronic device module according to claim 1, wherein the portable electronic device is a wireless headset capable of wireless communication with a portable terminal.

**Claim 11**

The portable electronic device module according to claim 10, wherein the electronic device storage unit comprises a fastening unit that can be worn on a part of the user's body.

**Claim 12**

The portable electronic device module according to claim 11, wherein the fastening unit is of a wristband shape

**Claim 13**

The portable electronic device module according to claim 10, wherein magnets are mounted on the insertion surface of the wireless headset and the inner surface of the receiving unit, and when the wireless headset is coupled to the electronic device storage unit, the magnets are attracted and coupled to each other.

**Claim 14**

The portable electronic device module according to claim 10, wherein the wireless headset comprises a display unit, and the display unit displays the time when the wireless headset and the electronic device storage unit are coupled.

**Claim 15**

The portable electronic device module according to claim 10, wherein the wireless headset comprises a microphone unit, and the receiving unit is a microphone hole formed at a position in contact with the microphone unit.

**Claim 16**

The portable electronic device module according to claim 10, wherein the wireless headset comprises a microphone terminal for external input, the electronic device storage unit comprise an external microphone, and when the wireless headset is coupled to the electronic device storage unit, the microphone terminal for external input of the wireless headset is electrically connected to the external microphone of the electronic device storage unit.

**Claim 17**

The portable electronic device module according to claim 10, wherein the wireless headset comprises a speaker unit, and the receiving unit has a speaker hole formed at a position in contact with the speaker unit.

**Claim 18**

The portable electronic device module according to claim 10, wherein the wireless headset comprises a speaker terminal for external output, the electronic device storage unit comprises an external speaker, and when the wireless headset is coupled to the electronic device storage unit, the external output speaker terminal is electrically connected to the external speaker of the electronic device storage unit.

**Claim 19**

The portable electronic device module according to claim 10, wherein the electronic device storage unit further comprises a cover, and when the wireless headset is coupled to the electronic device storage unit, the cover covers the wireless headset to prevent external contact.

**Claim 20**

A cover for a portable electronics module, wherein as a cover of a wireless headset module comprising a portable electronic device and an electronic device storage unit, the cover is equipped with a main body that can cover the wireless headset; and a hinge positioned at one end of the main body and detachably attached to a hinge groove formed in the electronic device storage unit.

*Specification**Detailed Description of the Invention**Object of the Invention**Technical Field of the Invention and Prior Art*

<9>

The present invention relates to a portable electronic device module, and more specifically, relates to a portable electronic device module capable of receiving the portable electronic device in the electronic device storage unit in a sliding manner.

<10> In general, portable electronic devices refer to electronic devices such as portable terminals or MP3 players that users can always carry and freely use anywhere. In recent years, the size of portable electronic devices has gradually decreased due to technological development.

<11> Portable electronic devices are usually carried in a bag or one's pocket. However, such storage method increases the risk of loss as the size of the portable electronic device decreases. In addition, there is a problem in that portable electronic devices are easily scratched or damaged.

*Problem to be Solved by the Invention*

<12> An object of the present invention is to provide a portable electronic device module that is easy to couple and convenient to store by sliding and coupling a portable electronic device to an electronic device storage unit.

<13> Another object of the present invention is to enable an electronic device to be used while being coupled to an electronic device storage unit.

<14> Yet another object of the present invention is to provide an electronic device storage unit with a cover to protect the electronic device from external shock or stimulation.

*Configuration and Operation of the Invention*

<15> To achieve the above objects, the portable electronic device module according to the present invention comprises a portable electronic device and an electronic device storage unit. A guide groove is formed on the side of the portable electronic device. The electronic device storage unit comprises a receiving unit and a coupling protrusion. Portable electronic devices can be received in the receiving unit. The coupling protrusion is formed on the side of the receiving unit in a bar shape. The guide groove of the portable electronic device may slide and be coupled to the coupling protrusion of the electronic device storage unit.

<16> The coupling protrusion of the portable electronic device module according to the present invention the coupling protrusion is rotatable around the inner end to the extent of the angle set by the outer end. The outer end may be connected to a fixed point inside the electronic device storage unit by a spring. In another embodiment of the present invention, the coupling protrusion may be rotatable around the outer end to the extent of the angle set by the inner end. The inner end may be connected to a fixed point inside the electronic device storage unit by a spring.

<17> The electronic device storage unit of the portable electronic device module according to the present invention may further comprise a fastening unit that can be worn on a part of the user's body. In addition, the electronic device storage unit may further comprise a cover. When the cover is coupled to the electronic device storage unit, the cover may cover the electronic device to prevent external contact. The cover may comprise a hinge at one end, and the hinge may be detachably attached to a hinge groove formed in the electronic device storage unit. The cover can be made of a transparent material.

<18> The portable electronic device of the portable electronic device module according to the present invention may be a wireless headset capable of wireless communication with a portable terminal. The electronic device storage unit may comprise a fastening unit that can be worn on a part of the user's body, and the fastening unit may have a wristband shape.

<19> In the portable electronic device module according to the present invention, magnets are mounted on the insertion surface of the wireless headset and the inner surface of the receiving unit, and when the wireless headset is coupled to the electronic device storage unit, the magnets may be attracted to one other so as to be coupled.

<20> The wireless headset of the portable electronic device module according to the present invention may comprise a display unit. The display unit may display the time once the wireless headset and the electronic device storage unit are coupled.

<21> The wireless headset of the portable electronic device module according to the present invention may comprise a microphone unit. The receiving unit may have a microphone hole formed at a position in contact with the microphone unit. In another embodiment of the present invention, the wireless headset comprises a microphone terminal for external input. The electronic device storage unit may comprise an external microphone. If the wireless headset is coupled to the electronics storage unit, the microphone terminal for external input of the wireless headset may be electrically connected to the external microphone of the electronic device storage unit.

<22> The wireless headset of the portable electronic device module according to the present invention may comprise a speaker unit. A speaker hole may be formed at a position in contact with the receiving unit and the speaker unit. In another embodiment of the present invention, the wireless headset comprises a speaker terminal for external output, and the electronic device storage unit may comprise an external speaker. When the wireless headset is coupled to the electronic device storage unit, a speaker terminal for external output may be electrically connected to the external speaker of the electronic device storage unit.

<23> Embodiments

<24> Hereinafter, preferred embodiments of the present invention will be described in detail with reference to the accompanying drawings in such a manner that those skilled in the art can easily implement the present invention.

<25> In describing the embodiments, descriptions of technical details that are well known in the technical field to which the present invention pertains and are not directly related to the present invention will be omitted. This is for more clearly communicating the summary of the present invention by omitting unnecessary descriptions.

<26> For the same reason, some elements in the accompanying drawings are exaggerated, omitted, or schematically illustrated. In addition, the size of each component does not fully reflect the actual size. The same reference numerals are assigned to the same or corresponding components in each drawing.

<27> Hereinafter, among portable electronic devices, a wireless headset will be described as an embodiment. A portable terminal capable of communicating with a wireless headset refers to an electronic device such as a mobile phone, a personal digital assistant (PDA), an MP3 player, a portable multimedia player (PMP), and a digital broadcasting receiver. A wireless headset according to an embodiment of the present invention refers to a headset capable of transmitting and receiving data through short-range communication with such a portable terminal.

<28> FIG. 1 is a perspective view showing a wireless headset according to an embodiment of the present invention.

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