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(54) Title: MOUNT BRACKET FOR PORTABLE ELECTRONIC DEVICES

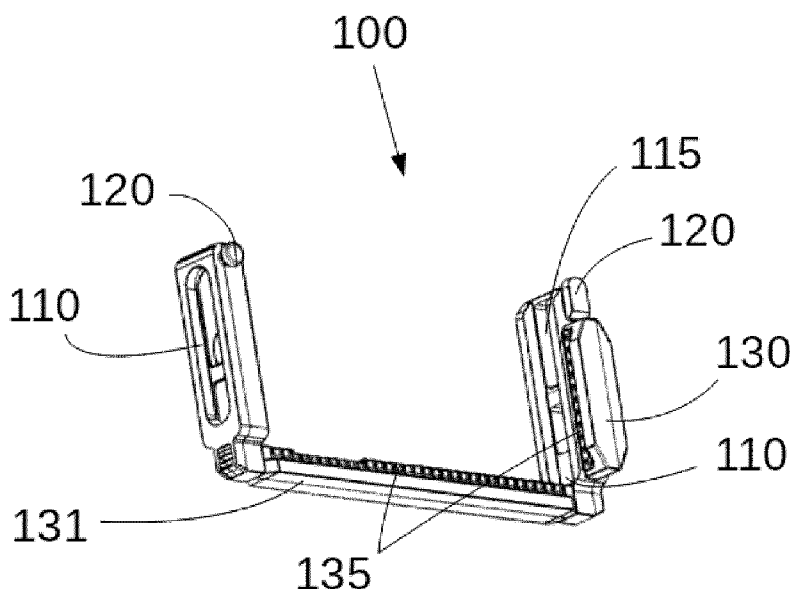


Fig. 1

(57) Abstract: The mount bracket for portable electronic devices comprises a frame (100) in which an electronic device can be detachably attached. The frame (100) has at least one slider (130,131) that includes at least one line of coupling notches(135).Two sliders (130, 131)are provided on two sides of the frame (100) substantially perpendicular to each other. The slider (130, 131) may have a T-shaped section, with a proximal portion and a distal portion, the distal portion being wider than the proximal portion.



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MOUNT BRACKET FOR PORTABLE ELECTRONIC DEVICES

This application claims the benefit of Spanish Utility Model Application No. U201630285 filed 04/03/2016.

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DESCRIPTION

The present invention relates to a mount bracket for portable electronic devices. These devices may be for example a mobile phone, a tablet or laptop
10 computer, a navigator, a GPS device or the like, comprising a display screen and/or a photographic and/or video camera.

BACKGROUND

15 Brackets are known to mount a portable electronic device such as a mobile phone or a GPS on a car dashboard, or to facilitate the use of the mobile phone to take pictures under certain circumstances, such as extending arms or selfie sticks.

20 However, known brackets are generally adapted to a particular base or application and are not very versatile. The object of the present invention is to provide a mount bracket that is adaptable and that can be easily used by the user for multiple applications.

25 SUMMARY OF THE INVENTION

The present invention provides a mount bracket for portable electronic devices, comprising a frame in which an electronic device can be detachably attached, the frame having at least one slider comprising at least one line of
30 coupling notches.

The slider is adapted to slide on a guide of a holder, and the coupling notches of the slider are adapted to be press fitted with a protrusion provided in the guide of the holder.

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The frame may be designed and sized for a particular of portable electronic device mode, and allows the device to be mounted on a plurality of different

bases, for different applications, with which a holder that is complementary to the slider may be associated. A frame adapted to each device model allows a very strong attachment of the electronic device in the frame, and therefore a great reliability.

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Mounting of the device on the holder, and therefore mounting on any base, is adjustable thanks to the presence of the slider that is allowed to slide along the holder and be attached in a plurality of positions thanks to a line of coupling notches.

10

If the user changes, for example, a mobile phone model, or if more than one device is used, such as a mobile phone and a tablet, advantage can be taken of the same holders provided in different bases (car dashboard, helmet, bicycle, selfie stick, tripod, etc.) simply with a frame suitable for each device, and using the same holders. Thanks to the slider and the property of the frame to be able to slide with respect to the holder and to be placed in different positions, problems for adapting different devices to the same base are remarkably reduced.

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In addition, the operation for placing the device in the desired position on a holder is simple and safe: in fact, thanks to the configuration of coupling notches in the slider, it is not necessary to provide tightening screws or other adjustment elements, but cooperation between the slider and the guide may be under pressure. Indeed, the frame and holder assembly may be configured so that the slider is attached in stable positions with the protrusion of the holder within one of the notches of the guide, but allowed to slid from one position to another along the guide exerting a certain force.

25

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According to one embodiment, the bracket comprises two sliders on the two sides of the frame that are substantially perpendicular to each other. This provides greater versatility since the frame can be attached in both vertical and horizontal positions.

35

According to one embodiment, the slider has a T-shaped section with a proximal portion and a distal portion, the distal portion being wider than the proximal portion. Safer guiding is thus ensured since the slider is effectively confined.

According to another embodiment, the line of coupling notches is located in the proximal portion of the slider.

- 5 According to one embodiment, the slider is provided with two lines of coupling notches, one on each of its sides. This results in a better attachment of the frame, since a greater number of attachment points is provided.

- 10 According to some embodiments, the coupling notches may be substantially circular or substantially semi-cylindrical recesses, or the line of coupling notches has a substantially undulated or substantially sawed shape.

- 15 According to one embodiment, the frame is U-shaped with channels in the facing walls for inserting the electronic device.

According to one embodiment, the frame comprises an elastic member and means for attaching the elastic member in two facing walls. The electronic device is therefore reliably attached to the frame under pressure.

- 20 According to one embodiment, the frame is made of polyamide.

- 25 According to one embodiment, the mount bracket further comprises a holder that comprises an adapter for attaching the holder to a base and a guide. Said guide is configured to slidably receive the slider of the frame and it is provided with at least one protrusion on one of its walls. The protrusion is adapted to be selectively press fitted in one of the notches of the slider.

- 30 In this way, the electronic device may be easily and efficiently attached to a wide variety of bases, such as a helmet, a handlebar or a selfie stick.

According to one embodiment, the guide of the holder has at least two protrusions. By pressing the slider in two points a better attachment is achieved since possible swinging of the frame is avoided

- 35 According to one embodiment, the protrusions are provided in facing walls of the guide

According to one embodiment, the holder further comprises a hinge between the guide and the adapter. In this way, a possibility for changing the orientation of the device is provided.

- 5 According to one embodiment, the adapter comprises at least a member for attaching to a base, selected from a flange, a threaded bore, or a self-adhesive surface.

10 In this way, versatility is provided to the electronic device since it can be efficiently coupled to a wide variety of bases.

Additional objects, advantages and features of embodiments of the invention will become apparent to those skilled in the art upon examination of the description, or may be learned by practice of the invention.

15

BRIEF DESCRIPTION OF THE DRAWINGS

Particular embodiments of the present invention will be described in the following by way of non-limiting examples, with reference to the appended
20 drawings, in which:

Figure 1 shows a frame according to one embodiment;

25 Figures 2A and 2B show different embodiments of a holder; and

Figure 3 shows a frame and a holder coupled according to one embodiment.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

30 Figure 1 shows a frame 100 of a mount bracket for portable electronic devices that can be coupled to a holder and then attached to a base or outer member. Said frame can be formed by a single piece, by three separate pieces joined together, for example, by means of a hinge or welded; or at least one of the walls thereof may be formed by a slider.

35

The frame 100 is formed by two walls 110 facing each other, each having a channel 115 for facilitating the insertion of the electronic device, and a third

wall formed by a slider 131, which will be described below with greater detail. Each of the facing walls has an attaching element 120 for engaging an elastic member (not shown) so as to pressure fit the electronic device.

5 The frame 100 is further provided with a second slider 130, both sliders 130, 131 being located on sides of the frame substantially perpendicular to each other. The slider 131 forms the third wall of the frame while the slider 130 is attached to one of the walls of the frame from which it protrudes. The sliders 130, 131 have a T-shaped section and comprise two lines of notches 135 on
10 both sides of the proximal portion of the slider. According to the present embodiment, said notches 135 are substantially semi-cylindrical recesses.

Figure 2A illustrates one embodiment or example of another component of a mount bracket, comprising a holder 210 designed to cooperate with
15 embodiments of a frame such as for example the frame 100.

The holder 210 has a guide 211, adapted to receive one of the sliders 130 (see Figure 1); and an adapter 212, suitable for attaching the holder to a base, which in this case may be any substantially flat surface, such as a car
20 dashboard.

One of the sliders 130 is slidably inserted into the guide 211 and, thanks to a protrusion 223 located in one of the walls of the guide, it is selectively press fitted in one of the notches 135 of the slider. In this way, the frame 100 is
25 capable of sliding along the guide 211 to the desired position.

The holder 210 may be further provided with an element for attachment to a base, in this example a self-adhesive surface 230, that attaches it to the base or external element.

30 Figure 2B shows a holder according to another embodiment. In the present embodiment, and compared with Figure 2A, the holder 220 is further provided with a hinge 224 between the guide 221 and the adapter 222, such that changing the orientation of the device is thus allowed.

35 As in the embodiment of Figure 2A, the guide is provided with a protrusion 213 on one of the walls thereof. In this embodiment, the adapter 222 is

substantially curved so as to be able to engage a curved surface, such as a bicycle handlebar.

Figure 3 shows the frame 100 in Figure 1 attached to a holder 320 according to a further embodiment, in a horizontal and substantially centred position. The frame 100 has the same parts as indicated in figure 1, this perspective also showing the second line of notches 135 of the slider 130 that is not attached to the holder 320 and the channel 115 of the wall that is not provided with slider.

In this embodiment, the holder 320 comprises a guide 321, an adapter 322 and, in addition, an attaching element 323, which in this case is a threaded element, such as for example a screw, which makes it possible to attach the holder 320 to bases with a corresponding nut, such as a tripod or a selfie stick.

In this embodiment, the slider 130 of the frame 100 slides through the guide 321 to a corresponding notch into the desired position. Once said position is reached, the frame remains attached due to the pressure that is exerted on the notch by a protrusion (not shown) equivalent to the protrusions 213, 223 shown in Figures 2A, 2B.

The holder may be an element independent of the frame or of the mount bracket that comprises the frame, and therefore, each piece may be designed independently.

On the one hand, the frame may be designed to couple different types of electronic devices, such as smartphones, tablets or cameras; or also different models of the same electronic device.

On the other hand, the holder may be designed to fit a wide variety of different bases, such as helmets, bicycle handlebars or tripods.

Therefore, all of the frames can be coupled to the different holders, making it possible to attach different devices (with their corresponding frame) to the same holder or the same frame can be attached to different bases thanks to the different adapters provided in the holders. The mount bracket is therefore

very versatile.

As explained above, both the frame and the holder may be independent elements and they may be designed, manufactured and/or marketed separately. Thus, the user may choose the frame intended for the desired electronic device, for example a smartphone, and one or several holders to place it in different external elements, such as for example a tripod and a helmet.

10 The mount bracket, together with its elements (independent or not), allows a great variety of combinations of devices as well as possible external elements to which they can be attached, in a safe, easy and quick way, thanks to the different holders.

15 The frame, the holder, or both, may be made of polyamide, such as for example polyamide 6 (PA 6) with fiberglass, such as 15% fiberglass.

These materials have a good wear resistance, so they are very suitable to provide reliability to the slider system, and they have also high dimensional stability, avoiding clearances and interferences over time. Its deformation temperature is high, and therefore they allow to maintain the properties of a bracket that will be subjected to low temperatures in winter and high temperatures in summer. They are also resistant to oils and fats, which property prevents deformations, breaks caused by cleaning chemicals and the like to which the bracket may be exposed. Its good adhesiveness allows, for example, to apply a double-sided adhesive tape to the holder for attachment to a base, without any risk of detachment.

Although only a number of particular embodiments and examples of the invention have been disclosed herein, it will be understood by those skilled in the art that other alternative embodiments and/or uses of the invention and obvious modifications and equivalents thereof are possible. Furthermore, the present invention covers all possible combinations of the particular embodiments described. Reference signs related to drawings and placed in parentheses in a claim, are solely for attempting to increase the intelligibility of the claim, and shall not be construed as limiting the scope of the claim. Thus, the scope of the present invention should not be limited by particular

embodiments, but should be determined only by a fair reading of the claims that follow.

CLAIMS.

- 1- Mount bracket for portable electronic devices, comprising a frame (100) in which an electronic device can be detachably attached, characterized in that the frame (100) has at least one slider (130, 131), comprising at least one line of coupling notches (135).
- 2- Mount bracket as claimed in claim 1, wherein it comprises two sliders (130, 131), on two sides of the frame (100) substantially perpendicular to each other.
- 3- Mount bracket as claimed in any one of claims 1 or 2, wherein the slider (130, 131) has a T-shaped section, with a proximal portion and a distal portion, the distal portion being wider than the proximal portion.
- 4- Mount bracket as claimed in any of the preceding claims, wherein the line of coupling notches (135) is located in the proximal portion of the slider (130, 131).
- 5- Mount bracket as claimed in any of the preceding claims, wherein the slider (130, 131) is provided with two lines of coupling notches (135), one on each of its sides.
- 6- Mount bracket as claimed in any of the preceding claims, wherein the coupling notches (135) are substantially circular recesses.
- 7- Mount bracket as claimed in any one of claims 1 to 5, wherein the coupling notches (135) are substantially semi-cylindrical recesses.
- 8- Mount bracket as claimed in claim 7, wherein the line of coupling notches (135) has a substantially undulated shape.
- 9- Mount bracket as claimed in any one of the preceding claims, wherein the frame (100) is U-shaped with channels (115) in the facing walls (110) for inserting the electronic device.
- 10- The mount bracket according to claim 9, wherein the frame (100)

comprises an elastic member and means (120) for attaching the elastic member in two facing walls (110) of the frame (100).

5 11- Mount bracket as claimed in any one of the preceding claims, wherein the frame (100) is made of polyamide.

10 12- Mount bracket as claimed in any one of the preceding claims, wherein it further comprises a holder (320) comprising an adapter (322) for attaching the holder (320) to a base and a guide (321) configured to slidably receive the slider (130, 131) of the frame (100) and provided with at least one protrusion (213, 223) on one of its walls (110), intended to be press fitted and selectively in one of the notches (135) of the slider (130, 131).

15 13- Mount bracket as claimed in claim 12, wherein the guide (321) of the holder (320) has at least two protrusions (213, 223).

14- Mount bracket as claimed in claim 13, wherein the protrusions (213, 223) are in facing walls (110) of the guide (321).

20 15- Mount bracket as claimed in any one of claims 12 to 14, wherein the holder (320) further comprises a hinge (224) between the guide (321) and the adapter (322).

25 16. Mount bracket as claimed in any one of claims 12 to 15, wherein the adapter (322) comprises at least one member for attachment to a base selected from a flange, a threaded bore or a self-adhesive surface.

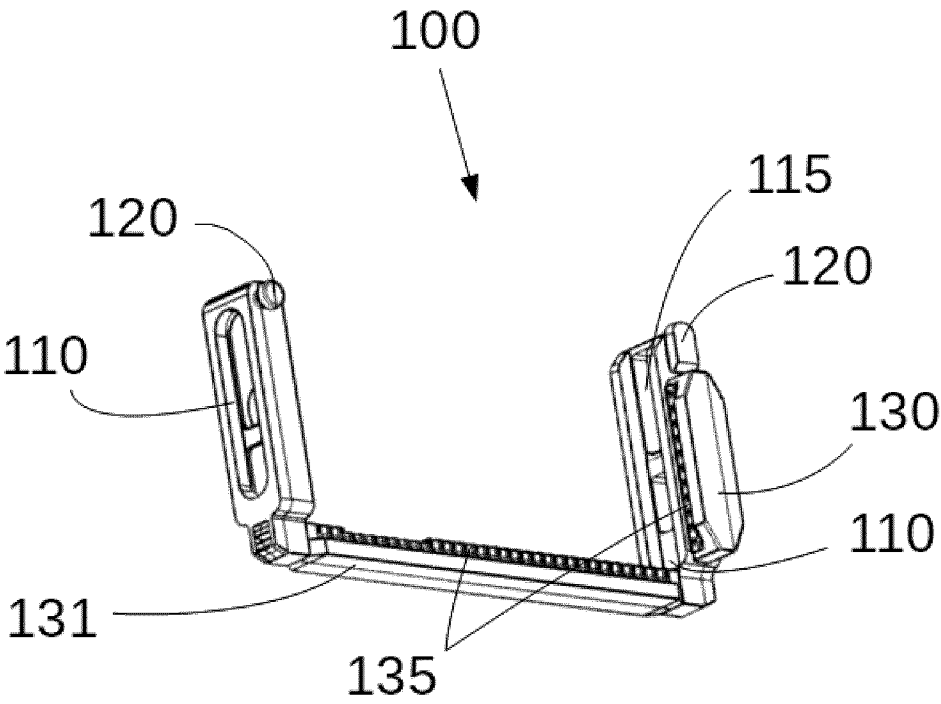


Fig. 1

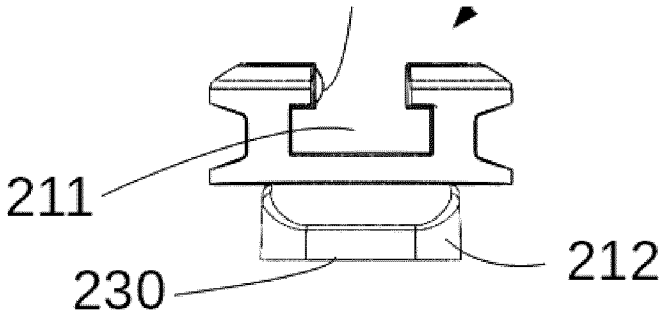


Fig. 2A

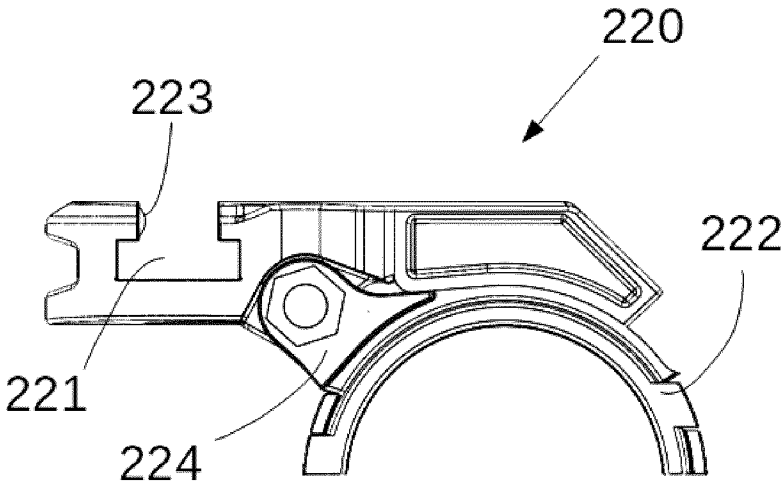


Fig. 2B

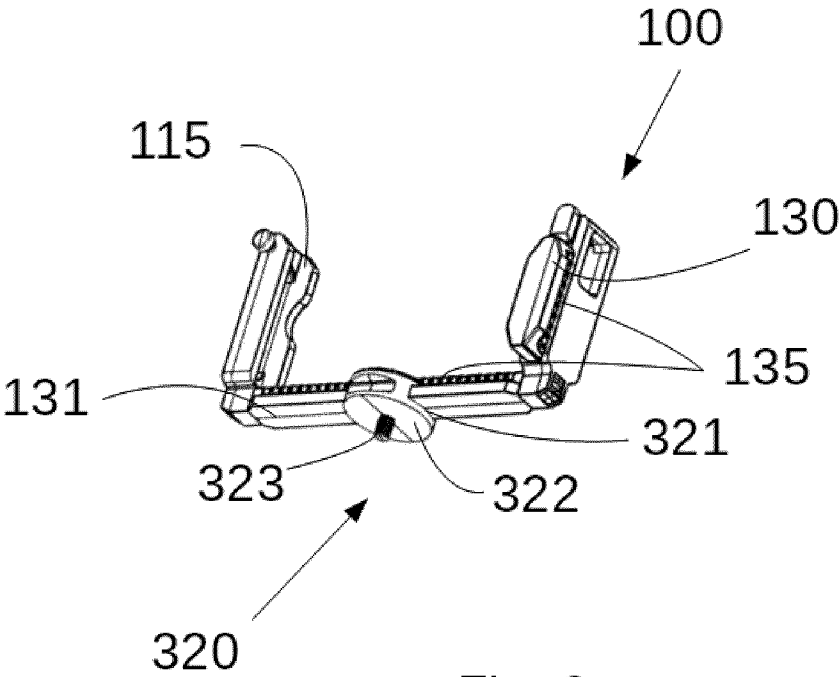


Fig. 3

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/055032

A. CLASSIFICATION OF SUBJECT MATTER INV. F16M11/04 F16M13/00 F16M13/02 G03B17/56 H04M1/04 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) F16M G03B H04M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	paragraph [0022] - paragraph [0027]; figures 2,2a,3,6,6b paragraph [0030]	2-4,9,10
Y	-----	
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A	figures 1-4,7,8 paragraph [0023] - paragraph [0031]	1,12-14, 16
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A	figures 1-5	1
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☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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