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(54) **MAGNETICALLY ATTACHED HOLSTER AND METHODS OF MANUFACTURING AND USING SAME**

(71) Applicant: **Kenneth O'Hanlon**, Holmdel, NJ (US)

(72) Inventor: **Kenneth O'Hanlon**, Holmdel, NJ (US)

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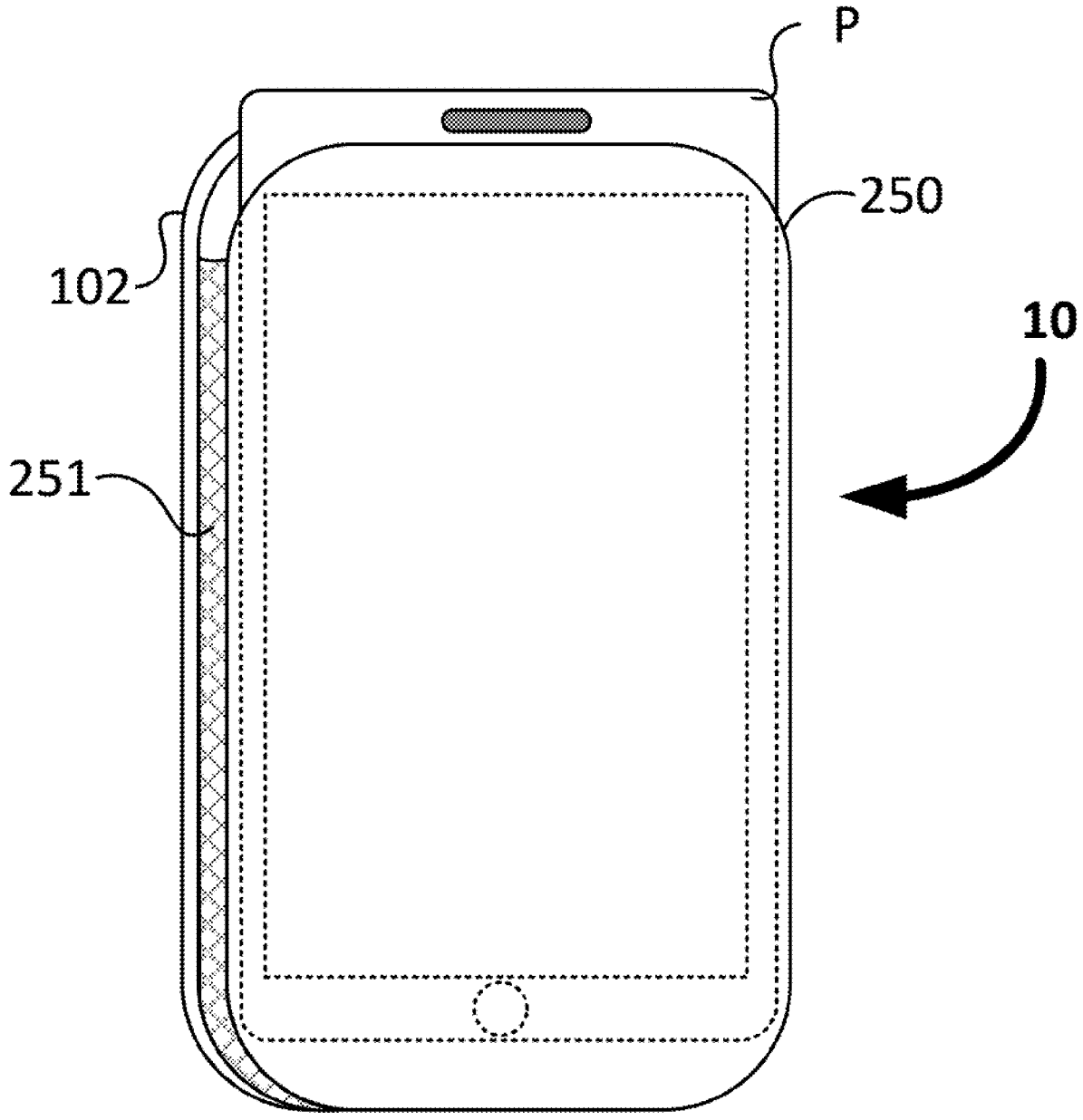
(57) **ABSTRACT**

A holster includes a first plate having at least one recess, a second plate having at least one protruding member, the at least one protruding member being aligned with the at least one recess, and a coupling member for securing at least a portion of a mobile device.



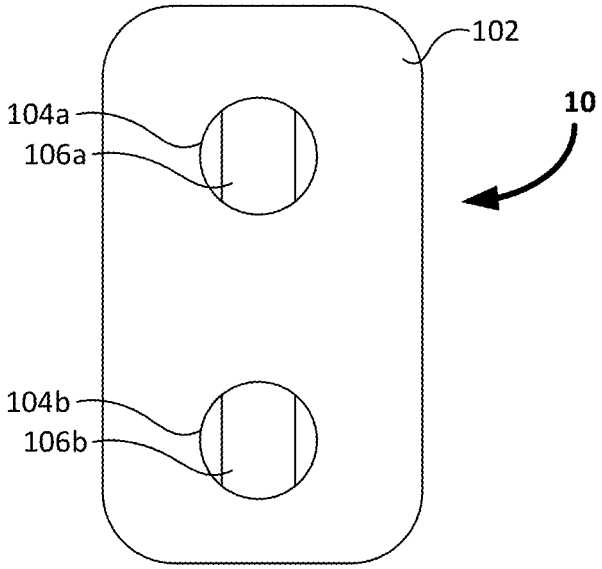


FIG. 1A

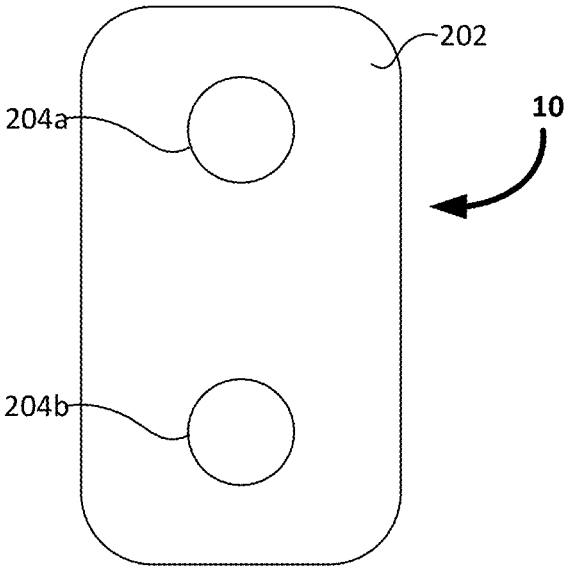


FIG. 1B

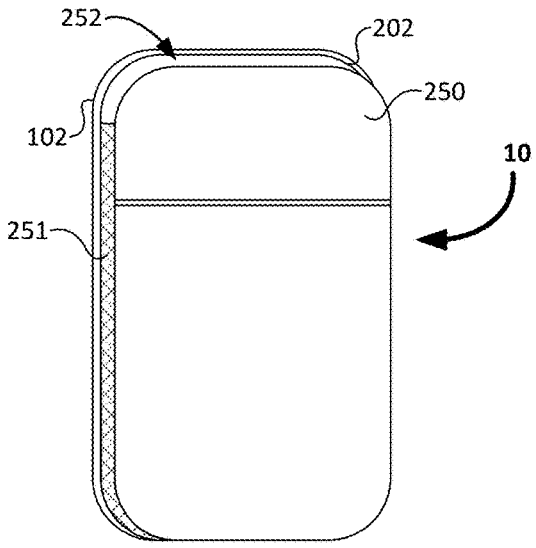


FIG. 1C

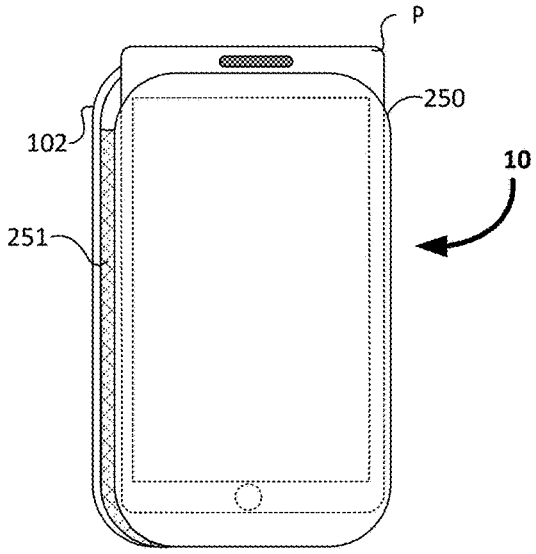


FIG. 1D

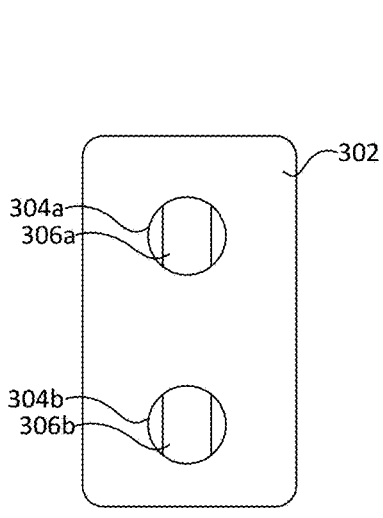


FIG. 2A

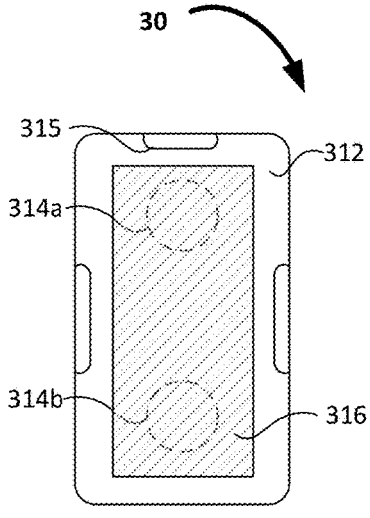


FIG. 2B

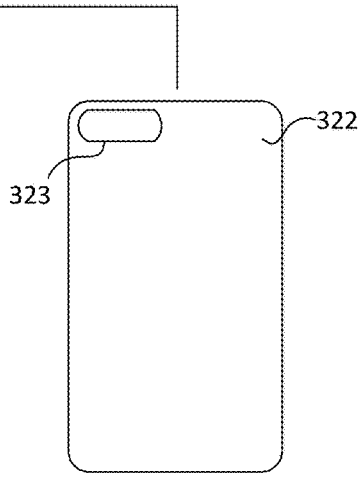


FIG. 2C

MAGNETICALLY ATTACHED HOLSTER AND METHODS OF MANUFACTURING AND USING SAME

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to 62/872,438 filed Jul. 10, 2019, the disclosure of which is incorporated herein by reference in its entirety as if full set forth herein.

FIELD OF THE DISCLOSURE

[0002] The present disclosure relates to holsters for holding objects, such as mobile phones. More specifically, the present disclosure relates to holsters that provide better securement of objects.

BACKGROUND OF THE DISCLOSURE

[0003] Mobile phones and similar objects are often carried in pockets or purses and their glass displays may be scratched or cracked as a result. Additionally, certain mobile phones are too large or bulky to fit in pockets. Other users will carry a mobile phone on a belt clip, but these clips are difficult to quickly access and are limited by where the belt clip can be attached. Moreover, these clips cannot be properly mounted on all clothes, and may be easily decoupled. Finally, if a user does not have pockets or a purse, they will be forced to carry their device in their hand, which limits their productivity while leaving the device vulnerable to damages. All of these solutions have their drawbacks.

SUMMARY OF THE DISCLOSURE

[0004] In some embodiments, a holster includes a first plate having at least one recess, a second plate having at least one protruding member, the at least one protruding member being aligned with the at least one recess, and a coupling member for securing at least a portion of a mobile device.

BRIEF DESCRIPTION OF THE DISCLOSURE

[0005] Various embodiments of the presently disclosed holsters are described herein with reference to the drawings, wherein:

[0006] FIG. **1**A is a schematic front view of a first plate;

[0007] FIG. **1**B is a schematic front view of a second plate

[0008] FIG. **1**C is a schematic perspective view of a holster having a first plate, a second plate and coupling member including a pocket;

[0009] FIG. **1**D is a schematic perspective view of the holster of FIG. **1**C as it holds a mobile phone; and

[0010] FIGS. **2**A-C illustrate yet another embodiment of a holster.

[0011] Various embodiments of the present invention will now be described with reference to the appended drawings. It is to be appreciated that these drawings depict only some embodiments of the invention and are therefore not to be considered limiting of its scope.

DETAILED DESCRIPTION

[0012] Despite the various improvements that have been made to device carrying cases, conventional methods and devices suffer felons some shortcomings as described above.

[0013] There therefore is a need for further improvements to the devices, systems, and methods of manufacturing and using device carrying cases. Among other advantages, the present disclosure may address one or more of these needs.

[0014] In some embodiments, a movable holster is described which may be located in an area convenient to the user. The holster may be a wearable light-weight device for carrying a device, such as a cell phone to any fabric through the use of magnets. In addition to being light-weight the disclosed product will also be better secured to fabric, and will not allow a foreign object to pry apart or dislodge the carrying case.

[0015] In some embodiments, a flat-ridged back plate sized the same or slightly larger than a flat-ridged front plate will attach magnetically, with fabric in between. This forms a tight sandwich difficult to pry apart. Specifically, in one example, a holster may include a flat-ridged back plate of rectangular shape made of light weight material, such as plastic, with a ferromagnetic plate below of at least 1 female recessed member, and a top plate of similar shape and/or size or slightly smaller with protruding magnet(s) (male members) to fit into the female section of the back plate.

[0016] In some embodiments, a holster **10** includes a first plate or back plate **102** (FIG. **1**A). The first plate **102** may be generally rectangular in shape as shown, and may have rounded or curved edges **103**. In at least some examples, the first plate may be of a different shape (e.g., square, circular, oval, etc.). First plate **102** may be generally flat, and may have formed of a light-weight material, such as plastic, a metal, or wood. First plate **102** may include a plurality of recesses **104***a*,**104***b*. In some examples, recesses **104***a*,**104***b* may be generally circular as shown. Alternatively, recesses **104***a*,**104***b* may be square-shaped, rectangular, or some other shape. As shown, two recesses are shown, but a single recess, or multiple recesses (e.g., two, three, four, five, etc.) may be formed in first plate **102**. One or more ferromagnetic plate **106***a*,**106***b* may be coupled, adhered or affixed to first plate **102**. In at least some examples, ferromagnetic plates **106***a*,**106***b* may be disposed adjacent recesses **104***a*,**104***b*.

[0017] Holster **10** may also include front plate or second plate **202**, formed of a shape and/or size that is similar to first plate **102** (FIG. **1**B). Second plates **202** may also be formed of a same material as first plate **102**. In at least some examples, second plate **202** includes a pair of protruding members **204***a*,**204***b*. In at least some examples, these protruding members **204***a*,**204***b* are magnetic elements that are coupled, affixed or otherwise adhered to second plate. It will be understood that second plate **202** may include a single protruding member or a plurality of protruding members (e.g., two, three, four, five or six protruding members). The protruding members may be of a same shape and/or size as recesses **104***a*,**104***b*, and they may be aligned so that each protruding members lines up with a corresponding recess **204**. In addition to having a magnetic coupling between protruding members **204** and ferromagnetic plate(s) **106**, protruding members **204** may also fit within recesses **104** to form a male-female connection with at least a portion of the protruding member being fit (e.g., friction fit) within the recess **104**. A coupling member **250** may be attached to second plate **202** or otherwise incorporated in the second plate. In at least some examples, this coupling member **250** is a pocket that includes a second wall spaced from the second plate **202** and includes a partially circumferentially border **251** that joins the two components except for the top so that an opening **252** is formed (FIG. **1**C). The opening may be sized to receive at least a portion of a mobile device

"P" (FIG. **1**D). In at least some examples, the coupling member is a clip that grips a portion of the mobile device.

[0018] In at least some example, first plate **102** is slightly larger than second plate **202** to prevent foreign objects from getting under the second plate **202**. Additionally, the two plates may be sandwiched together tightly with no room for another object to fit therebetween. This may prevent an object from catching the underneath part of the second plate and prying it off the first plate. Thus, the configuration may prevent unintended dislodging of the holster and enables the system to use lower strength magnets to insure coupling. Lower strength magnets may be lighter in weight thus preventing tugging and sagging of the fabric. Additionally, lower strength magnets may also reduce cost.

[0019] In some examples, a method of manufacturing a holster **10** includes forming a first plate **102** by molding or cutting it to an appropriate shape (e.g., rectangular). First plate may be between 1/16 and ½ inch in thickness and may have a ridge around its perimeter. In some examples, first plate **102** may be formed of a plastic or wood. One or more recesses **104***a*,**104***b* may drilled or cut into the first plate and aligned along its central axis. One or more ferromagnetic pieces or plate may be attached or coupled adjacent the recesses **104***a*,**104***b*. Second plate **202** may be molded or cut of similar material into a size that is equal to or slightly smaller than the first plate. A number of protruding members **202** (e.g., magnets) may be attached, adhered, or otherwise coupled to second plate **202** along its central axis (e.g., halfway between the two side edges). Protruding members **204***a*,**204***b* may be of the same shape and/or size (or slightly smaller) than the recesses, so that the recesses **104** can accept the protruding members **204***a*,**204***b* therein. In at least some examples, the number of protruding members is the same as the number of recesses. Alternatively, the number of protruding members is less than the number of recesses.

[0020] In this manner, the first and the second plate may be coupled together via magnetic attraction between the protruding members and the ferromagnetic components, and possible friction between the protruding member and the sidewalls of the recesses. In some examples, a rubber layer may be disposed on either all or some of the protruding members, within all or some of the recesses, or both to increase grip between the two components. In some examples, the rubber or non-skid, non-slip or gripping material may be applied to the back plate, the bottom of the recess, the protruding members and/or the front plate. In some examples, the material may be applied on a side that contacts the material sandwiched between the two plates. Thus, the non-skid material may be applied to a variety of components as described. In some examples, a magnetic shield may be placed between the magnetic protruding members and the object being carried to prevent damages from the magnets.

[0021] In a second example, a holster **30** may be formed of three components, including a backplate **302** having recesses **304***a*,**304***b* and ferromagnetic plates **306***a*,**306***b*, a front plate **312** having protruding members **314***a*,**314***b* on one side that faces and aligns with backplate **302**, and a plurality of clips **315** on an opposite side. As shown, three clips **315** are disposed on the face of front plate **312**, at the top and at each of the two side edges of the rectangular perimeter. A protective material (e.g., cloth) and/or magnetic shield **316** may also be disposed on the face of front plate **312** on the side that will face the mobile device. Finally, a case **322** having, for example, an aperture **323** may be attached to the mobile device such that when the device is inserted into the case **322**, the display of the device faces the protective material **316**, and the case **322** can be slid into the front plate from the bottom to be secured to front plate **312** via clips **315**. The front plate **312**, in turn, is secured to backplate **302** via the magnetic protruding members and the recesses. It will be understood that variations of this are possible. For example, case **322** and front plate **312** may be integrated.

[0022] Thus, a holster **10** for a cellphone or other object(s) to be placed anywhere on an article of clothing or fabric case such as a pocketbook may be formed, and the holster may be secured at a convenient and safe location. For example, the holster may be used on the front or side of a pant leg or on a jacket or shirt. Thus, the device can allow the user to choose their preferred accessible location that suits their needs.

[0023] Although the invention herein has been described with reference to particular embodiments, it is to be understood that these embodiments are merely illustrative of the principles and applications of the present invention. It is therefore to be understood that numerous modifications may be made to the illustrative embodiments and that other arrangements may be devised without departing from the spirit and scope of the present invent on as defined by the appended claims.

[0024] It will be appreciated that the various dependent claims and the features set forth therein can be combined in different ways than presented in the initial claims. It will also be appreciated that the features described in connection with individual embodiments may be shared with others of the described embodiments.

What is claimed is:

1. A holster comprising:
- a first plate having at least one recess;
- a second plate having at least one protruding member, the at least one protruding member being aligned with the at least one recess; and
- a coupling member for securing at least a portion of a mobile device.

2. The holster of claim **1**, wherein the at least one recess comprises two circular recesses.

3. The holster of claim **1**, wherein the at least one recess comprises three circular recesses.

4. The holster of claim **1**, wherein the at least one protruding member comprises two protruding members.

5. The holster of claim **1**, wherein the at least one protruding member and the at least one recess are of a same quantity.

6. The holster of claim **1**, wherein each of the at least one protruding member is magnetic.

7. The holster of claim **1**, further comprising a ferromagnetic component coupled to the first plate.

8. The holster of claim **1**, wherein the ferromagnetic component is disposed adjacent the at least one recess.

9. The holster of claim **1**, wherein the first plate and the second plate are of a same shape.

10. The holster of claim **1**, wherein the first plate and the second plate are generally rectangular.

11. The holster of claim **1**, wherein the first plate and the second plate are of a same size.

12. The holster of claim **1**, wherein the first plate and the second plate are made of plastic.

13. The holster of claim **1**, wherein the coupling member includes a clip that grips a portion of a mobile device.

14. The holster of claim **1**, wherein the coupling member includes a second wall and a partial circumferential border that forms a pocket for receiving at least a portion of a mobile device.

15. The holster of claim **14**, wherein the pocket is made of leather.

16. The holster of claim **14**, wherein the pocket is made of a fabric.

17. The holster of claim **14**, wherein the pocket is made of a synthetic material.

18. The holster of claim **14**, further comprising a magnetic shield overlying the protruding members.

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