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(54) **FASTENER WITH PROTECTIVE COVER**

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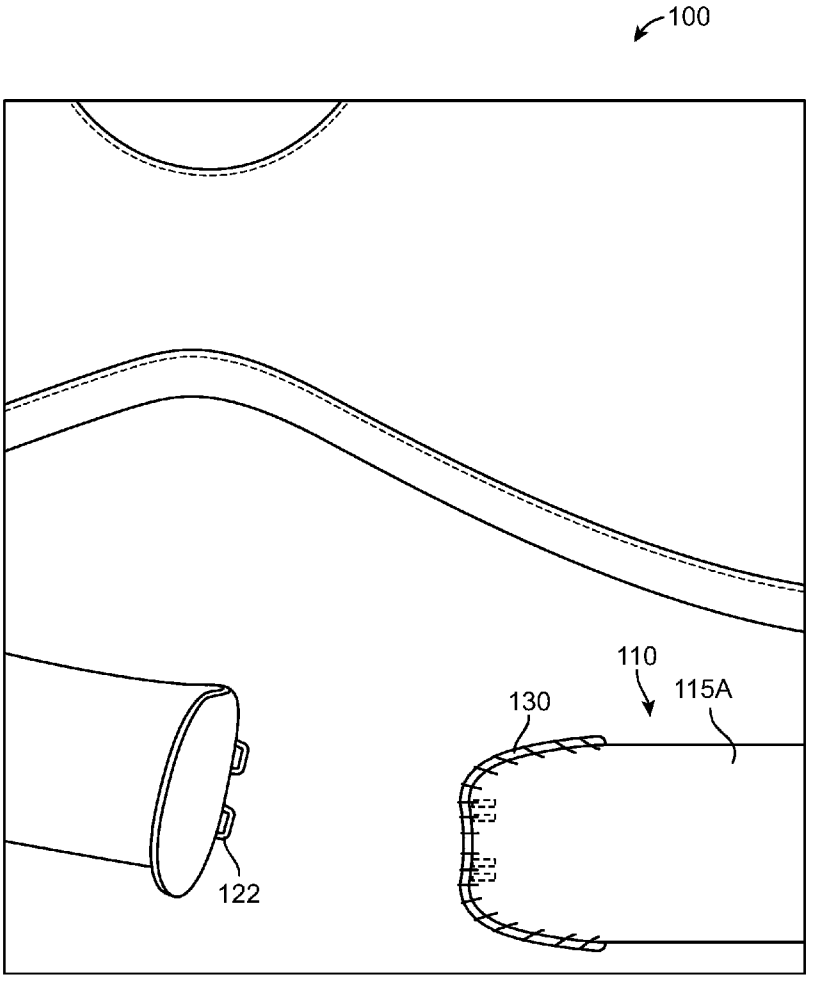
(57) **ABSTRACT**

Disclosed are articles, brassieres, clothing items, and other implementations, including an article that includes an underlying structure, a fastener coupled to the underlying structure, with at least part of the fastener placed at a first location of the underlying structure, and a protective cover positioned at a location proximate the first location at which the at least part of the fastener is coupled to the underlying structure, the protective cover configured to be placed over the fastener so that the at least part of the fastener is substantially placed in an interior space defined by the protective cover placed over the fastener at the first location of the underlying structure when the article is not in use.



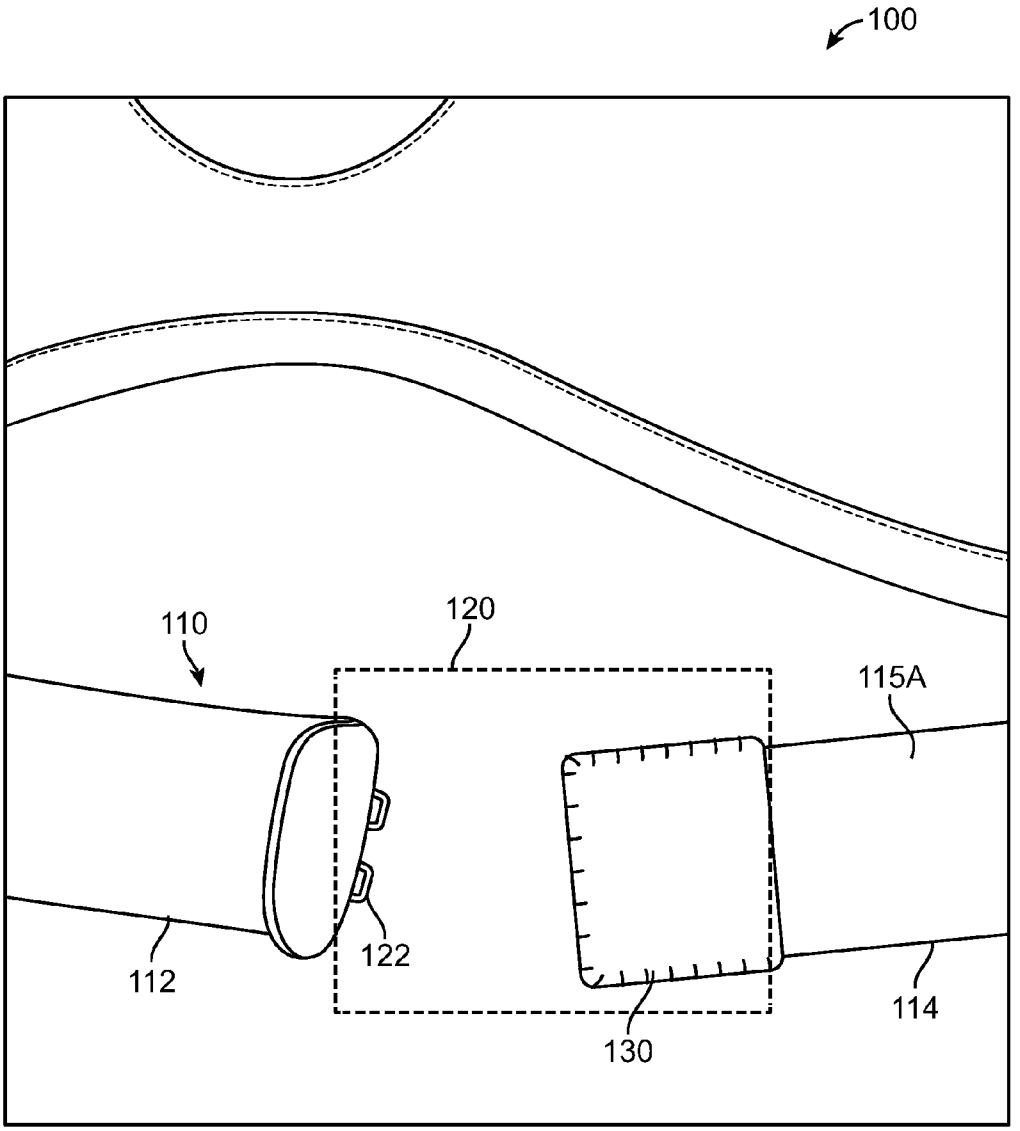


FIG. 1

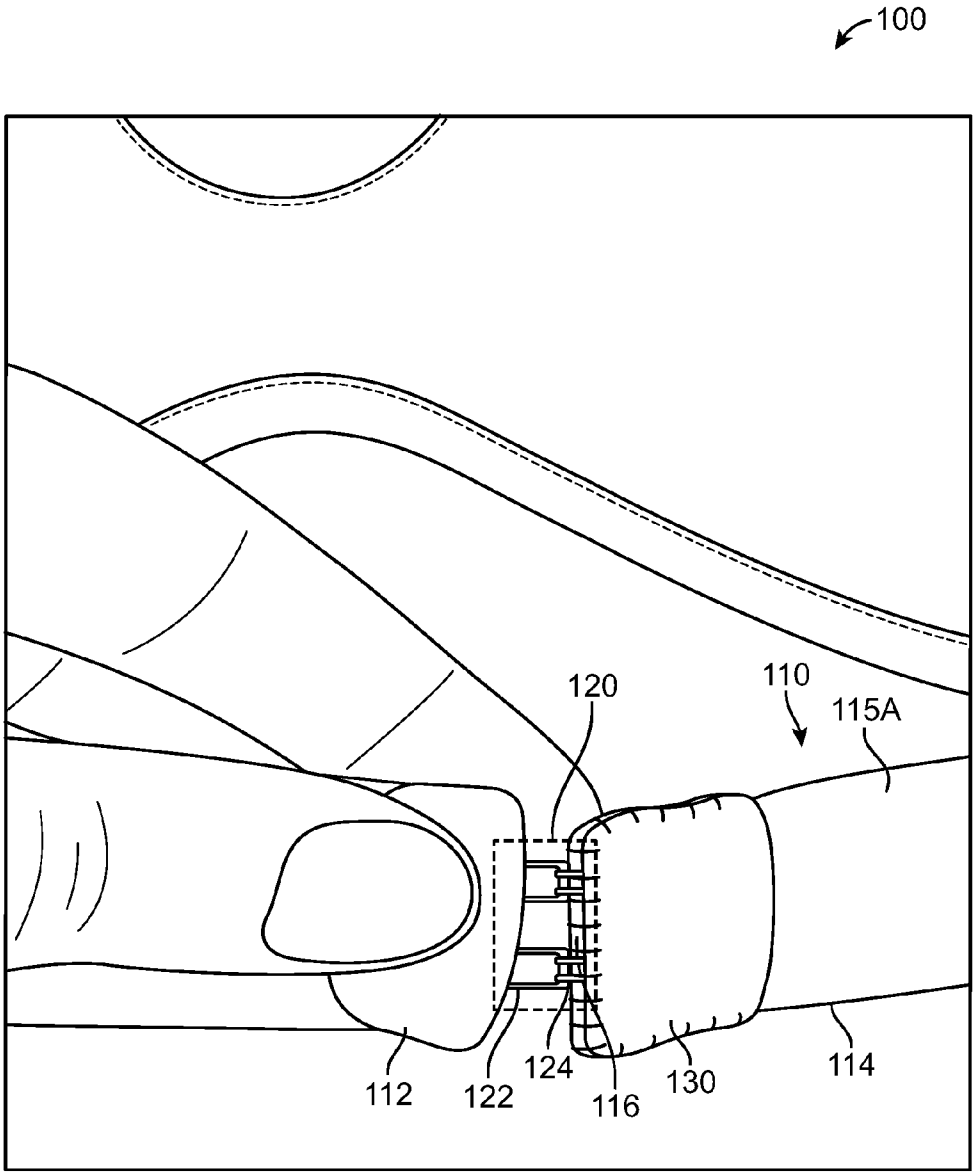


FIG. 2

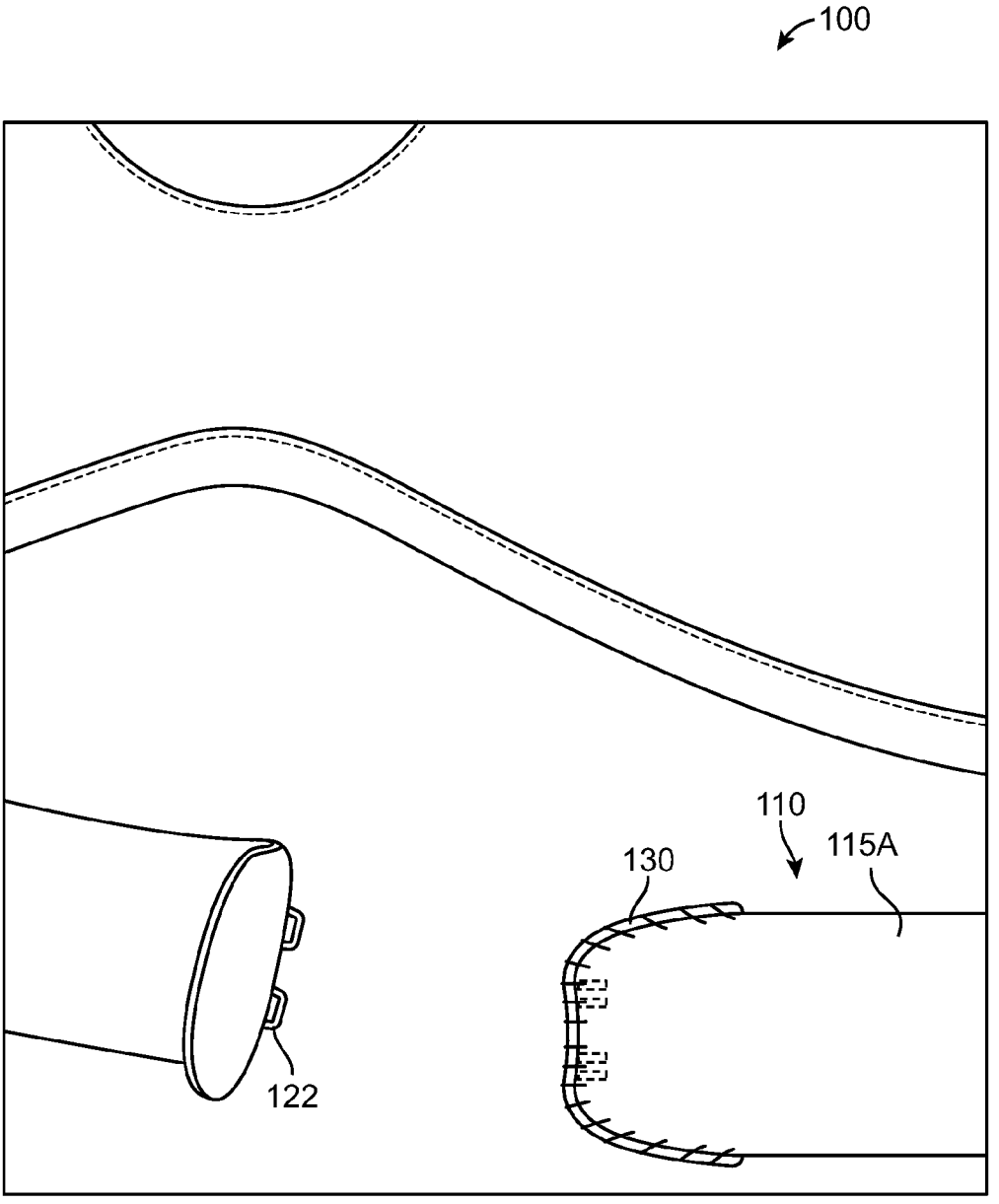


FIG. 3

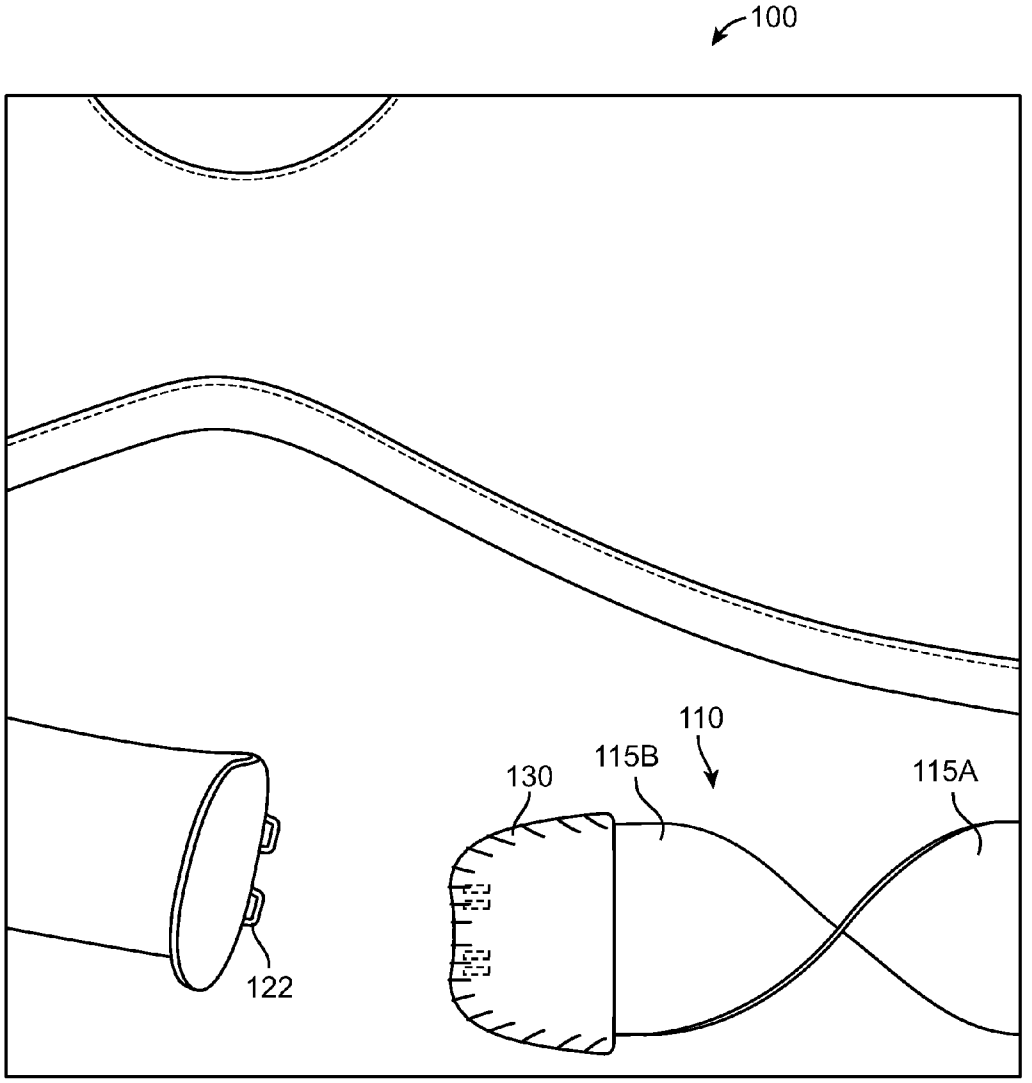


FIG. 4

FASTENER WITH PROTECTIVE COVER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of, and priority to, U.S. Provisional Patent Application No. 62/183,094, entitled "FASTENER WITH PROTECTIVE COVER," and filed Jun. 22, 2015, the content of which is incorporated herein by reference in its entirety.

FIELD

[0002] The present disclosure is directed to fasteners with protective covers, including, for example, hook-and-eye fastener, and covers therefor. Such fasteners with protective covers may be used with brassieres, and other like undergarments, as well as with other clothing articles and/or with other types of products.

BACKGROUND

[0003] Various articles of clothing, such as brassieres, that include fasteners (e.g., hook-and-eye fasteners) may be difficult to wash due to the delicate nature of the fastener components (frequently metal-made). Often, a fastener of a clothing article may bend out of shape in as little as one cycle, thus making it difficult or impossible to re-fasten (e.g., re-hook) on the next wear. Damaged fasteners can also cause, under some circumstances, health risks. For example, metal jutting could lead to, for example, infections (e.g., staph infection). Furthermore, fasteners of clothing articles can snag the clothing article itself, or snag other clothing articles being washed in a laundering apparatus, thus causing rips and/or pulls. Fasteners of clothing articles can also cause damage to the interior of washing and/or drying machines.

SUMMARY

[0004] In some variations, an article is provided that includes an underlying structure, a fastener coupled to the underlying structure, with at least part of the fastener placed at a first location of the underlying structure, and a protective cover positioned at a location proximate the first location at which the at least part of the fastener is coupled to the underlying structure, the protective cover configured to be placed over the fastener so that the at least part of the fastener is substantially placed in an interior space defined by the protective cover placed over the fastener at the first location of the underlying structure when the article is not in use.

[0005] Embodiments of the article may include at least some of the features described in the present disclosure, including one or more of the following features.

[0006] The fastener may include a hook-and-eye fastener. The hook-and-eye fastener may include one or more hooks coupled to the underlying structure at the first location and substantially covered by the protective cover when the article is not in use. The hook-and-eye fastener may further include one or more eye elements attachable to corresponding ones of the one or more hooks, with the one or more eye elements coupled to another, second, location of the underlying structure.

[0007] The protective cover may be coupled to the underlying structure via one or more of, for example, thread, adhesive, Velcro™, or the like.

[0008] The protective cover may include an elastic-based overlay. The elastic-based overlay, when not covering the at least part of the fastener, may define, with the underlying structure to which it is coupled, a first pocket configuration. The elastic-based overlay may be configured to be turned over the at least part of the fastener such the turned-over elastic-based overlay defines, with the underlying structure, a second pocket configuration with the at least part of the fastener being placed substantially inside an interior-space of the second pocket configuration.

[0009] The protective cover may include a pouch defining an interior pouch space, wherein the at least part of the fastener is coupled to an interior wall of the pouch within the interior pouch space, and wherein the pouch is configured to receive within the interior pouch space at least another part of the fastener.

[0010] The at least the other portion of the fastener may include an eye element of a hook-and-eye fastener mechanism.

[0011] The underlying structure may include a portion of a clothing article, and the protective cover, when placed over the fastener, may be configured to protect the article and a washing apparatus from damage during a washing cycle when the article is placed within the washing machine.

[0012] The protective cover may be defined by at least two layers of the underlying structure defining the interior space in which the at least part of the fastener is substantially placed when the article is not in use.

[0013] The clothing article may include a brassiere.

[0014] In some variations, a brassiere is provided that includes an underlying strap comprising a first portion and a second portion connectable to the first portion by a fastener mechanism. The fastener mechanism includes a first part coupled to the first portion of the underlying strap, and a second part coupled to the second portion of the underlying strap. The brassiere further includes and an elastic-based overlay coupled to the second portion of the underlying strap at a location proximate a fastener location at which the second part of the fastener is coupled to the underlying structure, the elastic-based overlay, when not covering any part of the fastener mechanism, defines, with the second portion of the underlying strap to which it is coupled, a first pocket configuration. The elastic-based overlay is configured to be turned over the second part of the fastener mechanism such the turned-over elastic-based overlay defines, with the second portion of the underlying strap, a second pocket configuration with the second part of the fastener mechanism being placed substantially inside an interior-space of the second pocket configuration.

[0015] Embodiments of the brassiere may include at least some of the features described in the present disclosure, including at least some of the features described above in relation to the article, as well as one or more of the following features.

[0016] The fastener mechanism may include a hook-and-eye fastener.

[0017] The second part of the hook-and-eye fastener may include one or more hooks coupled to the underlying strap at the fastener location proximate an end of the second portion of the underlying strap, with the one or more hooks being substantially covered by the elastic-based overlay when the brassiere is not in use.

[0018] The first part of the hook-and-eye fastener may include one or more eye elements attachable to correspond-

ing ones of the one or more hooks, the one or more eye elements coupled to an end of the first portion of the underlying strap.

[0019] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly or conventionally understood. As used herein, the articles "a" and "an" refer to one or to more than one (i.e., to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element. "About" and/or "approximately" as used herein when referring to a measurable value such as an amount, a temporal duration, and the like, encompasses variations of ±20% or ±10%, ±5%, or +0.1% from the specified value, as such variations are appropriate in the context of the systems, devices, circuits, methods, and other implementations described herein. "Substantially" as used herein when referring to a measurable value such as an amount, a temporal duration, a physical attribute (such as frequency), and the like, also encompasses variations of ±20% or ±10%, ±5%, or +0.1% from the specified value, as such variations are appropriate in the context of the systems, devices, circuits, methods, and other implementations described herein.

[0020] As used herein, including in the claims, "or" or "and" as used in a list of items prefaced by "at least one of" or "one or more of" indicates that any combination of the listed items may be used. For example, a list of "at least one of A, B, or C" includes any of the combinations A or B or C or AB or AC or BC and/or ABC (i.e., A and B and C). Furthermore, to the extent more than one occurrence or use of the items A, B, or C is possible, multiple uses of A, B, and/or C may form part of the contemplated combinations. For example, a list of "at least one of A, B, or C" (or "one or more of A, B, or C") may also include A, AA, AAB, AAA, BB, BCC, etc.

[0021] As used herein, including in the claims, unless otherwise stated, a statement that a function, operation, or feature, is "based on" an item and/or condition means that the function, operation, feature is based on the stated item and/or condition and may be based on one or more items and/or conditions in addition to the stated item and/or condition.

[0022] Other and further objects, features, aspects, and advantages of the present disclosure will become better understood with the following detailed description of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] FIG. **1** is view of a clothing article (e.g., brassiere) with a fastener and a protective cover, with the protective cover shown in a non-utilized (deactivated) state.

[0024] FIG. **2** is a view of the clothing article of FIG. **1** in which the separate parts of the fastener are secured to each other.

[0025] FIG. **3** is a view of the clothing article of FIG. **1** in which the protective cover is being utilized to cover at least part of the fastener.

[0026] FIG. **4** is another view of the clothing article in FIG. **3**, in which the protective cover is utilized so as to cover at least part of the fastener, and with the underlying strap structure twisted so that the opposite (i.e. the backside) surface is shown.

[0027] Like reference symbols in the various drawings indicate like elements.

DESCRIPTION

[0028] Described herein are articles, devices, methods, and other implementations for fasteners with protective covers, including an article that includes an underlying structure (e.g., strap of a brassiere), a fastener coupled to the underlying structure, with at least part of the fastener placed at a first location of the underlying structure, and a protective cover coupled to the underlying structure at a location proximate the first location at which at least part of the fastener is coupled to the underlying structure, the protective cover configured to be placed over the fastener so that at least part of the fastener is substantially placed in an interior space defined by the protective cover placed over the fastener at the first location of the underlying structure. In some embodiments, the fastener may include a hook-and-eye fastener, and the protective cover may be an overlay, constructed from any manufacturer-chosen material, and configured to cover, in whole or in part, the (typically metal) hook-and-eye fastener. The protective cover can serve any number of purposes, including protecting objects with which the hook-and-eye fastener might come into contact (e.g., walls of a washing machine).

[0029] There are only a handful of precautionary-measure products on the market designed to protect brassieres and the like in any meaningful way, none of which is primarily intended (or, indeed, succeeds in an acceptable fashion) to protect, for example, the hook-and-eye fastener itself so as to eliminate or minimize damage to both the brassiere and the garment(s) with which it comes into contact (as well as the machine(s) used to launder). Rather, most commonly, these products are intended to protect the shape and, when applicable, underwire, of the brassiere cups.

[0030] With reference now to FIG. **1**, a view of a brassiere **100** that includes a fastener mechanism and a protective cover (in its non-utilized state, i.e., when the protective cover is not covering any part of the fastener mechanism) is shown. Although FIG. **1** shows the fastener and protective cover described herein when used in conjunction with a brassiere, the fastener and protective cover may be used with any other type of clothing article, as well as with other devices and different types of articles used in different industries (medical industry, etc.) The brassiere **100** includes an underlying structure **110**, in this case an underlying strap, that includes a first portion **112** connectable to a second portion **114** through a fastener (fastener mechanism) **120** that includes, in some embodiments, one or more loops (or eyes) **122**. In the illustrated view of FIG. **1**, a first surface **115**A of one side of the second portion **114** is shown. A part of a second surface **115**B of the second portion **114** is shown in FIG. **4**. The loops **122** of the fastener are coupled proximate to an end of the first portion **112** of the underlying structure **110** using any one of possible securing devices/implements (e.g., threads, adhesives, etc.)

[0031] As further shown in FIG. **1**, a protective cover, e.g., an overlay **130**, is coupled to the second portion **114** of the underlying structure **110** (e.g., attached to the second portion **114** at or near an end area of the second portion). In some embodiments, the protective cover may be an overlay, made, for example, from elastic (e.g., elastic cord) that is secured to the end of the second portion **114** of the underlying structure. The elastic-based overlay illustrated in FIG. **1** is shown to have been sown with threads to the end portion **114** of the underlying structure (the strap) **110**, but may be secured to the underlying structure in other possible mecha-

nisms and means, such as Velcro™, staples, screws, adhesives, etc. In some embodiments, the overlay **130** (or some other protective cover implementation used with the brassiere **100**) may be detachable.

[0032] While FIG. **1** shows a brassiere with fastener and protective cover mechanism in which the fastener mechanism is at a rest position (i.e., the hooks of the fastener are not secured to the loop fastener), FIG. **2**, on the other hand, shows the brassiere of FIG. **1** with the two portions of the underlying strap **110** connected to each other through coupling of hooks **124** of the fastener **120** to its loops **122** (here too, FIG. **2** shows the cover **130** in its non-utilized, or deactivated, state, in which the cover **130** is not covering any part of the fastener mechanism). The hooks **124** are coupled to the second portion **114** of the underlying structure at a location where the cover **130** may be placed over the hooks when the brassiere **100** is not being used (e.g., when not worn, and/or when it is to be washed in a washing machine). In the embodiments depicted in FIGS. **1** and **2**, the hooks **124** are coupled proximate an edge **116** of the second portion **114** of the underlying strap **110**, and the overlay **130** is positioned so that, when not covering any part of the fastener **120**, the overlay defines, with the underlying strap to which it is coupled, a first pocket configuration.

[0033] FIG. **3** is a further view of the example embodiments of the brassiere **100** that includes the fastener and a protective cover at a time when the elastic-based overlay **130** is turned over at least part of the fastener **120** (e.g., the hooks **124** in the example of FIG. **3**, but a similar overlay structure may be used to cover the loops/eyes **122** of the fastener **120**). When turned-over, the overlay **130** defines, with the underlying strap **110** (or more specifically, with the second portion **114** of the underlying strap **110**) a second pocket configuration. With the overlay **130** turned over and defining the second pocket configuration, the hooks **124** of the fastener **120** are placed substantially inside an interior-space of the second pocket configuration (illustrated using broken lines to depict the hooks **124**, to indicate that the hooks are inside the interior space of the second pocket configuration, and thus hidden from view). Accordingly, in that position (which may be used when the article of clothing is to be washed, or otherwise treated), the protective overlay covers the hooks **124**, thus preventing damage to the hooks, or damage to materials that might have come in contact with the hooks **124** had the hook(s) not been covered. FIG. **4** is another view of the example embodiments of the brassiere **100** when the elastic-based overlay **130** is utilized (activated) so that it is turned over at least part of the fastener **120**. In the example embodiments of FIG. **4**, the second portion **114** of the underlying strap **110** is rotateably twisted about a longitudinal axis of the second portion **114** so that at least part of the surface **115**B (opposite the surface **115**A depicted in FIGS. **1-3**) of the second portion **114** is visible (in FIG. **4**, a part of the surface **115**B is seen to the left of the twisting point).

[0034] In some embodiments, the hooks **124** may be coupled to the underlying structure within an interior space defined by another protective cover implementation and the end part of the second portion **114** of the strap **110**. When the brassiere is being used, i.e., when worn, the hooks **124** may be pulled out of the interior space defined by the other protective cover implementation and the end part of the second portion **114** of the strap **110**, and be secured to the loops **122** of the fastener **120**. After completing use of the brassiere (or whichever clothing article the fastener and protective cover assembly described herein is being used with), the hooks may retract into the interior space defined by the protective cover **130** and the end part of the second portion **114** of the strap **110**. For example, in some embodiments, the underlying structure may be made from a resilient material, and, therefore, the end part of the second portion **114** of the strap may, through its elasticity, retract to its resting position (in which it substantially overlaps the other protective cover implementation), thus causing the hooks coupled/attached to it to also retract to their resting position within the interior space defined by the other protective cover implementation and the end part of the second portion **114** of the strap **110**. In some embodiments, the hooks attached to the second portion **114** of the strap may be retracted into an opening at or near the edge at the end part of the second portion **114**, and may therefore be covered by the fabric/material constituting the second portion **114** of the strap **110**. Thus, in such embodiments, the protective cover **130** may comprise two or more layers of the second portion of the strap **110** defining an opening that covers the hooks **124** when the hooks **124** are not attached to the other part of the fastener.

[0035] In some embodiments, the protective cover used with the clothing article may include a piece of fabric that can be placed (e.g., by a user) over at least part of a fastener (e.g., the hooks of a hook-and-eye fastener) when the clothing article is not in use, or when the clothing article is to be placed in a washing machine. For example, the protective cover may be a flap that is permanently secured along one of its edges to the underlying structure, with the other edges remaining unsecured while the clothing article is being worn, thus resulting in the various parts of the fastener being exposed while the clothing article is being used. When not in use, the otherwise loose edges of the protective cover may be placed over at least part of the fastener (e.g., over the hooks of a hook-and-eye fastener) and secured to the underlying structure (e.g., through Velcro™, adhesive, or some other coupling mechanism) so that at least part of the fastener is contained within an interior space defined by the protective cover and an end part of the portion to which the at least part of the fastener is secured, thus preventing that covered part of the fastener from being exposed. In some embodiments, the protective cover may include a pouch defining an interior pouch space, with at least part of the fastener (e.g., the hooks of a hook-and-eye fastener) being coupled to an interior wall of the pouch within the interior pouch space. The pouch, in such embodiments, is configured to receive within the interior pouch space at least another part of the fastener (e.g., the loops/eyes of a hook-and-eye fastener) when the clothing article is being used, or when the clothing article is to be washed. Other ways to implement the protective cover and/or fastener mechanism are also possible.

[0036] As noted, an objective of the hook-and-fastener overlay (and other fastener with protective cover embodiments) in the example embodiments of FIGS. **1-4**, and in the description provided herein, is to provide protection to the hook-and-eye mechanism during laundering, with the goal that the fastener will retain its shape, escape accidental connection or entanglement to other items or garments with which it comes into contact, and avoid damaging the laundering apparatus (namely, a washing machine and/or dryer) during the laundering process.

[0037] In some embodiments, the protective cover is configured to connect intentionally to its product base by, for example, thread, glue, Velcro™, or another bind. In some embodiments, the protective cover may be configured for controllable detachment in situations in which the protective cover needs to be removed for instances of, for example, laundering, replacement, or repair. The detachment option may rest with manufacturers as they deem necessary for the product to which they are applying the overlay.

[0038] While the description of the fastener and protective cover embodiments provided herein is made with respect to fastener and protective cover implementations used for clothing articles, it will be appreciated that in some embodiments the fastener and protective cover described herein may be used in other industries and markets and may have a myriad of other applications. For instance, the fastener and protective cover implementations may be used in the fishing industry, the medical field, children's bibs, men's and women's accessories, and/or other areas. The implementations described herein are not limited to any particular industry and the spirit of the invention shall remain true across reasonable deviations. To that end, specifics mentioned throughout this disclosure are provided as guidance and exemplification of how one might use the implementations rather than an exhaustive detailing.

[0039] Although particular embodiments have been disclosed herein in detail, this has been done by way of example for purposes of illustration only, and is not intended to be limiting with respect to the scope of the appended claims, which follow. Some other aspects, advantages, and modifications are considered to be within the scope of the claims provided below. The claims presented are representative of at least some of the embodiments and features disclosed herein. Other unclaimed embodiments and features are also contemplated.

What is claimed is:

1. An article comprising:

an underlying structure;

a fastener coupled to the underlying structure, with at least part of the fastener placed at a first location of the underlying structure; and

a protective cover positioned at a location proximate the first location at which the at least part of the fastener is coupled to the underlying structure, the protective cover configured to be placed over the fastener so that the at least part of the fastener is substantially placed in an interior space defined by the protective cover placed over the fastener at the first location of the underlying structure when the article is not in use.

2. The article of claim **1**, wherein the fastener comprises a hook-and-eye fastener.

3. The article of claim **2**, wherein the hook-and-eye fastener comprises one or more hooks coupled to the underlying structure at the first location and substantially covered by the protective cover when the article is not in use.

4. The article of claim **3**, wherein the hook-and-eye fastener further comprises one or more eye elements attachable to corresponding ones of the one or more hooks, the one or more eye elements coupled to another, second, location of the underlying structure.

5. The article of claim **1**, wherein the protective cover is coupled to the underlying structure via one or more of: thread, adhesive, or Velcro™.

6. The article of claim **1**, wherein the protective cover comprises an elastic-based overlay.

7. The article of claim **6**, wherein the elastic-based overlay, when not covering the at least part of the fastener, defines, with the underlying structure to which it is coupled, a first pocket configuration, and wherein the elastic-based overlay is configured to be turned over the at least part of the fastener such the turned-over elastic-based overlay defines, with the underlying structure, a second pocket configuration with the at least part of the fastener being placed substantially inside an interior-space of the second pocket configuration.

8. The article of claim **1**, wherein the protective cover comprises a pouch defining an interior pouch space, wherein the at least part of the fastener is coupled to an interior wall of the pouch within the interior pouch space, and wherein the pouch is configured to receive within the interior pouch space at least another part of the fastener.

9. The article of claim **8**, wherein the at least the other portion of the fastener comprises an eye element of a hook-and-eye fastener mechanism.

10. The article of claim **1**, wherein the protective cover is defined by at least two layers of the underlying structure defining the interior space in which the at least part of the fastener is substantially placed when the article is not in use.

11. The article of claim **1**, wherein the underlying structure comprises a portion of a clothing article, and wherein the protective cover, when placed over the fastener, is configured to protect the article and a washing apparatus from damage during a washing cycle when the article is placed within the washing machine.

12. The article of claim **11**, wherein the clothing article comprises a brassiere.

13. A brassiere comprising:

an underlying strap comprising a first portion and a second portion connectable to the first portion by a fastener mechanism;

the fastener mechanism, comprising a first part coupled to the first portion of the underlying strap, and a second part coupled to the second portion of the underlying strap; and

an elastic-based overlay coupled to the second portion of the underlying strap at a location proximate a fastener location at which the second part of the fastener is coupled to the underlying structure, the elastic-based overlay, when not covering any part of the fastener mechanism, defines, with the second portion of the underlying strap to which it is coupled, a first pocket configuration, and wherein the elastic-based overlay is configured to be turned over the second part of the fastener mechanism such that the turned-over elastic-based overlay defines, with the second portion of the underlying strap, a second pocket configuration with the second part of the fastener mechanism being placed substantially inside an interior-space of the second pocket configuration.

14. The brassiere of claim **13**, wherein the fastener mechanism comprises a hook-and-eye fastener.

15. The brassiere of claim **14**, wherein the second part of the hook-and-eye fastener comprises one or more hooks coupled to the underlying strap at the fastener location proximate an end of the second portion of the underlying strap, the one or more hooks being substantially covered by the elastic-based overlay when the brassiere is not in use.

16. The brassiere of claim **15**, wherein the first part of the hook-and-eye fastener comprises one or more eye elements attachable to corresponding ones of the one or more hooks, the one or more eye elements coupled to an end of the first portion of the underlying strap.

* * * * *