(57) **Abstract:** A twist-tie includes a fastener having a malleable material surrounded by an outer coating having a longitudinal axis and extending between a first end and a second end; and an indicia portion extending at least partially along the longitudinal axis, the indicia portion including at least a portion that is attached to the fastener and at least a portion that is separated from the fastener, wherein a separation between the indicia portion and the fastener defines a slit that extends from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

**FIG. 1**


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TWIST-TIE PRODUCT

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is being filed on March 13, 2017 as a PCT International Patent Application and claims the benefit of U.S. Patent Application Serial No. 62/307,766, filed on March 14, 2016, the disclosure of which is incorporated herein by reference in its entirety.

FIELD

[0002] The present disclosure relates generally to twist-tie fasteners and methods of use.

BACKGROUND

[0003] There are many uses for twist-ties. In a grocery store, for example, consumers commonly place produce items, bakery items, bulk food items, and the like in bags and use twist-ties to temporarily close the bags. Cost-effective manufacture, refill, or replacement of the twist-ties is advantageous.

[0004] For the reasons stated above and for other reasons stated below, which will become apparent to those skilled in the art upon reading and understanding the present specification, there is a need in the art for an improved twist-tie fastener.

SUMMARY

[0005] The following summary is made by way of example and not by way of limitation. It is merely provided to aid the reader in understanding some of the aspects of the inventive features.

[0006] In one embodiment, the twist-tie fastener includes an indicia portion that can be used by consumers to provide indicia on the twist-tie in addition to the fastening function of the twist-tie. The indicia portion may include a blank space/area for the consumers to write notes, label the goods, and apply other indicia thereon. The indicia portion may include pre-applied or printed indicia such as coupon codes, advertising, or trademarks.
The twist-ties of the present disclosure may be provided in a cluster, wherein a plurality of the twist-ties are attached to the cluster by methods such as by adhesive. The cluster, once spent, may be disposed from a dispenser unit and replaced. The dispenser unit itself may be configured as a disposable product, wherein the dispenser can be thrown away or disposed of once the twist-tie cluster is spent. Conventional twist-tie dispensers may comprise a housing and a twist-tie cluster attached to the housing. The housing may include a generally U-shaped portion forming a pocket that is for receiving the twist-tie cluster. A rear portion or wall of the housing may define mounting members used for mounting the housing to a fixture at a consumer location such as a grocery store.

According to one example embodiment, the twist-tie of the present disclosure includes a fastener portion extending between a first end and a second end and an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a slit, the slit extending from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

According to another example embodiment of the twist-tie of the present disclosure, the twist-tie includes a fastener portion extending between a first end and a second end and an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a first slit extending from an open end toward a closed end in the direction of the first end toward the second end and a second slit extending from an open end toward a closed end in the direction of the second end toward the first end.

According to another example embodiment of a twist-tie of the present disclosure, the twist-tie includes a fastener including a malleable material surrounded by an outer coating having a longitudinal axis and extending between a first end and a second end and an indicia portion extending at least partially along the longitudinal axis, the indicia portion including at least a portion that is attached to the fastener and at least a portion that is separated from the fastener, wherein a separation between the indicia portion and the fastener defines a slit that extends from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.
According to another example aspect, the present disclosure is directed to an inventive twist-tie cluster. The twist-tie cluster of the present disclosure includes a plurality of twist-ties defining the cluster, each twist-tie comprising a fastener portion extending between a first end and a second end and an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a slit, the slit extending from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

According to one example embodiment of the twist-tie cluster of the present disclosure, the twist-tie cluster includes a plurality of twist-ties defining the cluster, wherein the plurality of twist-ties defines twist-tie pairs. Each twist-tie of the pair defines a fastener portion extending along a longitudinal direction between a first end and a second end and an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a slit, the slit extending from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end. The twist-ties of each pair are positioned on the cluster so as to at least partially overlap along the longitudinal direction.

According to yet another example embodiment of a twist-tie cluster of the present disclosure, the twist-tie cluster includes a plurality of twist-ties defining the cluster, each twist-tie comprising a fastener including a malleable material surrounded by an outer coating having a longitudinal axis and extending between a first end and a second end and an indicia portion extending at least partially along the longitudinal axis, the indicia portion including at least a portion that is attached to the fastener and at least a portion that is separated from the fastener, wherein a separation between the indicia portion and the fastener defines a slit that extends from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

BRIEF DESCRIPTION OF THE DRAWINGS

The inventive aspects of the present disclosure can be more easily understood, and further advantages and uses thereof can be more readily apparent, when considered in view of the detailed description and the following Figures in which:
[0015] Figure 1 illustrates a first embodiment of a twist-tie fastener having features that are examples of inventive aspects in accordance with the present disclosure;

[0016] Figure 2 illustrates another embodiment of a twist-tie fastener having features that are examples of inventive aspects in accordance with the present disclosure; and

[0017] Figure 3 illustrates an example embodiment of a twist-tie cluster formed from the twist-ties of FIG. 1.

[0018] In accordance with common practice, the various described features may not be drawn to scale but are drawn to emphasize specific inventive features relevant to the present disclosure. Reference characters denote like elements throughout the Figures and the text.

DETAILED DESCRIPTION

[0019] In the following detailed description, reference is made to the accompanying drawings, which form a part hereof, and in which is shown by way of illustration, embodiments in which the inventions may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the inventive features, and it is to be understood that other embodiments may be utilized and mechanical changes may be made without departing from the spirit and scope of the present disclosure. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present inventive features are defined only by the claims and equivalents thereof.

[0020] Embodiments of the present disclosure provide improved twist-tie fasteners.

[0021] A first embodiment of a twist-tie 10 having features that are examples of inventive aspects is illustrated in FIG. 1. The twist-tie 10, as shown, defines a fastener portion 12 extending between a first end 14 and a second end 16. The fastener portion 12 extends along a longitudinal axis A and defines a length L between the first and second ends 14, 16. The fastener portion 12 of the twist-tie 10 provides the closure function for the twist-tie 10 and, in certain examples, includes a malleable material surrounded by an outer coating. According to certain examples, the malleable material can be manufactured from various metals and the outer coating may be of paper or polymeric construction.

[0022] Still referring to FIG. 1, the twist-tie 10 of the present disclosure also includes an indicia portion 18 extending at least partially along the fastener portion 12 of the twist-tie 10. The indicia portion 18 provides an area or space 20 for the application of indicia.
For example, the indicia portion 18 may be used by the consumers to provide indicia on the twist-tie 10 in addition to the fastening function of the twist-tie 10, where the consumers can label the packages/bags enclosed by the twist-ties, take notes, or apply other indicia thereon. In contrast to consumer use, the area 20 provided by the indicia portion 18 may be used for branding and include pre-applied or printed indicia such as coupon codes, advertising, or trademarks.

[0023] The indicia portion 18 of the twist-tie 10 includes at least a portion 22 that is attached to the fastener 12 and at least a portion 24 that is separated from the fastener 12. The separation between the indicia portion 18 and the fastener 12 of the twist-tie defines a slit 26. The slit 26 defines an open end 28 and a closed end 30 and extends between the open and closed ends 28, 30.

[0024] In the example embodiment shown in FIG. 1, the twist-tie 10 includes a single slit 26 that extends in a direction from the first end 14 toward the second end 16. As will be discussed in further detail below, other twist-tie designs that provide for a first slit extending from an open end toward a closed end in the direction of the first end 14 toward the second end 16 and a second slit extending from an open end toward a closed end in the direction of the second end 16 toward the first end 14 are also contemplated as shown in FIG. 2. Such designs may include indicia portions 18 that extend generally the entire length of the fastener portions 12 of the twist-ties 10 and may provide a larger area/length for application of indicia, especially pre-applied or printed indicia.

[0025] The separation of the indicia portion 18 and the fastener portion 12 of the twist-tie 10 via the slit 26 enables provision of a longer fastener portion 12 for the twist-tie 10 than would otherwise be possible by an indicia portion that was fully attached to the fastener portion 12. Thus, in this manner, the length of the usable fastener portion 12 is increased as compared to a twist-tie that does not utilize a slit. Since a longer usable portion is enabled for the fastening function, the overall length of the fastener portion 12 extending from the first end 14 to the second end 16 (as well as the overall length of the twist-tie 10) can be reduced for space savings. Conventional twist-ties that do not provide for a separation between the indicia portion and the fastener portion of the twist-tie often require a substantially longer fastener portion in order to fully utilize the closure function of the twist-tie, making the overall twist-tie longer for a given indicia portion.

[0026] As shown in the example of FIG. 1, the indicia portion 18 defines an angled side 32. The provision of the angled side 32 improves manufacturability. The angled side 32 allows a pair 34 of symmetric twist-ties 10 shown in FIG. 1 to be provided as a unit in
a cluster 36 of twist-ties 10, where each twist-tie 10 of the pair 34 is positioned opposing each other and positioned so as to at least partially overlap along the longitudinal axis/direction A. When positioned in this manner, the open end 28 of the slit 26 for each twist-tie 10 of a given pair 34 is located at an opposite end of the pair 34.

[0027] With the specific design of the twist-tie 10 shown in FIG.1, a blade of a manufacturing apparatus can efficiently make the required slits 26 in forming two separate twist-ties 10, each with a separate indicia portion 18, from a single given piece of paper. A twist-tie cluster 36 that includes a plurality of the described twist-tie pairs 34 is shown in FIG. 3.

[0028] Another example of a twist-tie 110 is shown in FIG. 2. As noted above, in certain examples, the twist-tie 110 may define an indicia portion 118 that extends generally along the entire length L of the fastener portion 112. Such a design provides for a first slit 126a extending from an open end 128a toward a closed end 130a in the direction of the first end 114 toward the second end 116 and a second slit 126b extending from an open end 128b toward a closed end 130b in the direction of the second end 116 toward the first end 114. This type of a design may be advantageous for providing branding on the twist-ties 110, where the branding can extend along the entire length L of the twist-tie 110, while the fastener portion 112 is used for the closure function.

[0029] Although illustrated as such, it should be noted that the open ends 128a, 128b of the slits 126a, 126b do not have to be adjacent the ends 114, 116 of the fastener portion 112. The indicia portions 118 do not have to extend all the way to the ends 114, 116 of the fastener portions 112 and can be provided in differing lengths/sizes. The same is applicable to all of the noted embodiments of the twist-ties.

[0030] Also, as shown in the depicted embodiments, in the twist-ties 10, 110 of the present disclosure, the closed ends of the slits are generally provided at a location that is positioned close to but at generally less than halfway along the length L of the fastener when taken in a direction from either the first end toward the second end or the second end toward the first end (see, e.g., FIG. 1). In the example of the twist-tie 110 shown in FIG. 2, the closed end 130a of the first slit 126a is positioned close to but at less than halfway along the length L when taken in a direction from the first end 114 toward the second end 116, and the closed end 130b of the second slit 126b is positioned close to but at less than halfway along the length L when taken in a direction from the second end 116 toward the first end 114. This configuration allows sufficient connection between the indicia portion 18, 118 and the fastener portion 12,112 of the twist-tie 10, 110, while
maximizing the length of the indicia portion 18, 118 along the longitudinal direction. Placing the closed end of the slit close to the center-point of the fastener 12 (in combination with an angled side 32) also allows overlapping positioning of symmetric twist-ties 10 as shown in FIG. 3 to facilitate manufacturability and provide space saving.
CLAIMS:

1) A twist-tie comprising:
   a fastener portion extending between a first end and a second end; and
   an indicia portion extending at least partially along the fastener portion, the indicia
   portion including at least a portion that is attached to the fastener portion and at least a
   portion that is separated from the fastener portion by a slit, the slit extending from an open
   end toward a closed end in a direction of at least one of the first end toward the second end
   and the second end toward the first end.

2) A twist-tie according to claim 1, wherein the slit extends from the open end toward
   the closed end only in the direction of the first end toward the second end.

3) A twist-tie according to claim 1, wherein the slit defines a first slit extending from
   an open end toward a closed end in the direction of the first end toward the second end and
   a second slit extending from an open end toward a closed end in the direction of the
   second end toward the first end.

4) A twist-tie according to claim 1, wherein the open end of the slit is adjacent to at
   least one of the first end and the second end.

5) A twist-tie according to claim 4, wherein the open end of the slit is only adjacent to
   the first end.

6) A twist-tie according to claim 3, wherein the open end of the first slit is adjacent
   the first end and the open end of the second slit is adjacent the second end.

7) A twist-tie according to claim 1, wherein the fastener portion includes a malleable
   material surrounded by an outer coating.

8) A twist-tie according to claim 1, wherein the indicia portion includes pre-printed
   indicia thereon.

9) A twist-tie according to claim 1, wherein the fastener portion defines a length
   extending between the first end and the second end, the slit defining the closed end at a
location that is positioned at less than halfway along the length when taken in a direction either from the first end toward the second end or from the second end toward the first end.

10) A twist-tie according to claim 9, wherein the closed end is at a location that is positioned at less than halfway along the length when taken in a direction from the first end toward the second end.

11) A twist-tie according to claim 3, wherein the fastener portion defines a length extending between the first end and the second end, wherein the closed end of the first slit is positioned at less than halfway along the length when taken in a direction from the first end toward the second end, and the closed end of the second slit is positioned at less than halfway along the length when taken in a direction from the second end toward the first end.

12) A cluster of twist-ties comprising:
   a plurality of twist-ties defining the cluster, each twist-tie comprising:
   a fastener portion extending between a first end and a second end; and
   an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a slit, the slit extending from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

13) A cluster according to claim 12, wherein the open end of the slit is adjacent to at least one of the first end and the second end.

14) A cluster according to claim 12, wherein the slit defines a first slit extending from an open end toward a closed end in the direction of the first end toward the second end and a second slit extending from an open end toward a closed end in the direction of the second end toward the first end.

15) A cluster according to claim 12, wherein the fastener portion includes a malleable material surrounded by an outer coating.
16) A cluster according to claim 12, wherein the indicia portion includes pre-printed indicia thereon.

17) A cluster according to claim 12, wherein the fastener portion defines a length extending between the first end and the second end, the slit defining the closed end at a location that is positioned at less than halfway along the length when taken in a direction either from the first end toward the second end or from the second end toward the first end.

18) A cluster according to claim 12, wherein the plurality of twist-ties defines twist-tie pairs, each twist-tie of the pair defining a fastener portion extending along a longitudinal direction between a first end and a second end and an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a slit, the slit extending from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end, wherein the twist-ties of each pair are positioned on the cluster so as to at least partially overlap along the longitudinal direction.

19) A cluster according to claim 18, wherein the open end of the slit for each twist-tie of a pair are positioned on opposite ends of the pair.

20) A twist-tie comprising:
    a fastener portion extending between a first end and a second end; and
    an indicia portion extending at least partially along the fastener portion, the indicia portion including at least a portion that is attached to the fastener portion and at least a portion that is separated from the fastener portion by a first slit extending from an open end toward a closed end in the direction of the first end toward the second end and a second slit extending from an open end toward a closed end in the direction of the second end toward the first end.

21) A twist-tie according to claim 20, wherein the open end of the first slit is adjacent the first end and the open end of the second slit is adjacent the second end.
22) A twist-tie according to claim 20, wherein the fastener portion includes a malleable material surrounded by an outer coating.

23) A twist-tie according to claim 20, wherein the indicia portion includes pre-printed indicia thereon.

24) A twist-tie according to claim 20, wherein the fastener portion defines a length extending between the first end and the second end, wherein the closed end of the first slit is positioned at less than halfway along the length when taken in a direction from the first end toward the second end, and the closed end of the second slit is positioned at less than halfway along the length when taken in a direction from the second end toward the first end.

25) A twist-tie comprising:
   a fastener including a malleable material surrounded by an outer coating having a longitudinal axis and extending between a first end and a second end; and
   an indicia portion extending at least partially along the longitudinal axis, the indicia portion including at least a portion that is attached to the fastener and at least a portion that is separated from the fastener, wherein a separation between the indicia portion and the fastener defines a slit that extends from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.

26) A cluster of twist-ties comprising:
   a plurality of twist-ties defining the cluster, each twist-tie comprising:
   a fastener including a malleable material surrounded by an outer coating having a longitudinal axis and extending between a first end and a second end; and
   an indicia portion extending at least partially along the longitudinal axis, the indicia portion including at least a portion that is attached to the fastener and at least a portion that is separated from the fastener, wherein a separation between the indicia portion and the fastener defines a slit that extends from an open end toward a closed end in a direction of at least one of the first end toward the second end and the second end toward the first end.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
B65D 33/16(2006.01)i, B65D 77/10(2006.01)i, B65D 65/42(2006.01)i, B65D 33/00(2006.01)i, A47F 13/08(2006.01)i

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)
B65D 33/16; B65D 63/10; B32B 3/02; B32B 38/10; B65D 77/10; B31D 1/00; B32B 7/12; B65D 65/42; B65D 33/00; A47F 13/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords:
twist-tie, fastener portion, indica portion, slit, first end, open end

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of Box C.

See patent family annex.

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  *&* document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**
Information on patent family members

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