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(54) **ZIPPER, RECLOSABLE PACKAGE**

REISSVERSCHLUSS, WIEDERVERSCHLIESSBARE VERPACKUNG

FERMETURE À GLISSIÈRE, EMBALLAGE REFERMABLE

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Description**BACKGROUND OF THE DISCLOSURE****Field of the Disclosure**

[0001] The present disclosure pertains to a reclosable package with a scented or fragrant component and a zipper, in order to provide an olfactory feedback mechanism that enhances the contents of the package for the user.

Description of the Prior Art

[0002] It is well known in the prior art to package scented products in reclosable packages. However, this typically requires a relatively large amount of fragrance-carrying material and further requires the release of the fragrance within the storage volume of the package at the time of initial packaging, which is typically well before the package is opened by the consumer. The prior art further includes U. S. Patent No. 7,497,623 entitled "Packages with Active Agents", issued on March 3, 2009 to Thomas.

[0003] JP2008154767A describes a resin-made fastener includes: a resin-made male tape having a male line in a tape base material; and a resin-made female tape having a female line in a tape base material.

[0004] EP1988034A1 describes a containing bag in which the amount of fragrance diffused from a contained matter can be regulated.

[0005] DE102009020524A1 describes a container which is associated with a fragrance to avoid that uncontrolled fragrance is emitted to the environment.

[0006] WO03052033A2 describes a long-lasting environmental odor altering device comprising a carrier member defining a plurality of voids.

OBJECTS AND SUMMARY OF THE DISCLOSURE

[0007] There is provided a zipper according to claim 1 and a reclosable package according to claim 3. It is therefore an object of the present disclosure to provide a reclosable package or bag wherein fragrance can be provided with a reduced amount of fragrance-carrying material.

[0008] According to the invention the fragrance-carrying scent oil is contained within the zipper, typically within an internal zipper volume. The scent remains covered until the zipper is opened. The consumer is exposed to the scent only when the package or bag is opened. The consumer is likewise isolated from the scent when the package is closed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Further objects and advantages of the disclosure will become apparent from the following description and from the accompanying drawings, wherein:

Figure 1 is a perspective view of a typical reclosable package used with the zippers or reclosures of the present disclosure.

Figure 2 is a cross-sectional view a zipper profile of the present disclosure.

Figure 3 is a cross-sectional view of a zipper profile of the present disclosure.

Figure 4 is a cross-sectional view of a still further zipper profile of the present disclosure.

Figure 5 is a cross-sectional view of a further zipper of the profile of the present disclosure, shown with the bag walls of a reclosable package

Figure 6 is a cross-sectional view of a variation of Figure 5.

Figure 7 is a cross-sectional view of a further variation of Figure 5.

Figure 8 is a cross-sectional view of a still further variation of Figure 5.

Figure 9 is a cross-sectional view of the disclosure, shown with the bag walls of a reclosable package.

Figure 10 is a cross-sectional view of a variation of Figure 9.

Figure 11 is a cross-sectional view of a further variation of the disclosure.

Figure 12 is a cross-sectional view of a still further variation of the disclosure.

Figure 13 is a cross-sectional view of the invention.

Figure 14 is a cross-sectional view of a variation of the disclosure wherein a header is formed over the zipper.

Figure 15 is a cross-sectional view of a disclosure with fragrance-carrying oil located between two peel seals.

Figure 16 is a cross-sectional view of a disclosure with fragrance-carrying oil located within a peel seal.

Figure 17 is a cross-sectional view of a disclosure with fragrance-carrying oil mixed within the peel seal.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] Referring now to the drawings in detail wherein

like numerals indicate like elements throughout the several views, one sees that Figure 1 is a typical reclosable package 100 incorporating the zipper or reclosure 10 of the present disclosure.

[0011] The package 100 of Figure 1 is meant to be illustrative and is representative of many different possible embodiments. Package 100 includes first (front) and second (rear) walls 102, 104 which are co-extensive with each other and are sealed together by bottom seal 106 and side seals 108, 110, which may include thermal, ultrasonic, adhesive or similar seals. Some embodiments may substitute a fold in a single sheet of material or one of the seals, particularly the bottom seal 106. The first and second walls 102, 104 are typically made of polymer or laminate, but are not limited thereto. The resulting structure forms mouth 112 which is reclosable by zipper or reclosure 1, leading to storage volume 114 where the consumer product is stored.

[0012] Various zippers 10 are illustrated in Figures 2-13. Zipper 10 is typically formed from polymeric material and includes first profile 12 and second profile 14 which extend across the length of the mouth 112. The zipper 10 is attached to the interior of first and second walls 102, 104, but other disclosures may include a zipper which is attached to the upper edge of front and rear walls 102, 104. In Figure 2, first profile 12 includes first base 16 from which first and second arms 18, 20 extend thereby forming an internal zipper volume 22 therebetween. First and second arms 18, 20 further terminate in respective first and second distal hooks 24, 26 thereby forming an interlocking female element 28. Second profile 14 includes second base 30 with a post 32 extending therefrom, terminating in an arrowhead-shaped element 34 thereby forming an interlocking male element 36 for engagement with the interlocking female element 28.

[0013] In Figure 2, fragrance-carrying oil 40 is placed within internal zipper volume 22 in first profile 12 near the juncture of first base 16 and first and second arms 18, 20. This fragrance-carrying oil 40 could either be blended on the polymer formulation of the zipper 10 (fully or coextruded) or applied in a separate step after formation (such as extrusion) of first and second profiles 12, 14. In this configuration, prior to the opening of the zipper 10 (i.e., the separation of the first and second profiles 12, 14 from each other) the fragrance will be substantially confined within internal zipper volume 22 and will not penetrate into storage volume 114 of the package 100 (see Figure 1). As it is expected that the fragrance would not escape externally, the fragrance would be expected to last for an extended period. The fragrance-carrying oil 40 could be applied on a single zipper 10 wherein intention could be to modify the smell of the packed product or to release the fragrance externally to increase the appeal of the product before the consumer opened the zipper 10.

[0014] The fragrance-carrying oil 40, and therefore the scent, is therefore contained within internal zipper volume 22. The scent remains covered until the package

100 is opened by separating the first and second profiles 12, 14 of the zipper 10 (and may be re-covered by closing the package). The resulting advantages include that the scent is used more economically in that the zipper 10, rather than the entire package 100, is scented. Similarly, the shelf-life of the scent is preserved. The consumer is exposed to the scent only when the package 10 is open, and is isolated from the scent when the package 100 is closed.

[0015] Figure 3 illustrates a disclosure wherein first profile 12 includes first and second extending detent arms 42, 44 (terminating in respective first and second detent hooks 43, 45) and second profile 14 includes third and fourth extending detent arms 46, 48 (terminating in respective third and fourth detent hooks 47, 49). The detent arms 42, 44, 46, 48 inter-engage as shown in figure 3. Two alternative locations (that is, typically, only one location needs to be used, however, some applications may use both locations) 40, 40' for

fragrance-carrying oil are disclosed. Location 40 is at the valley or cavity formed between first and second extending detent arms 42, 44 while location 40' is on the top of second extending detent arm 44.

[0016] Figure 4 illustrates a disclosure wherein first and second detent hooks 43, 45 are oriented outwardly to engage third and fourth detent hooks 47, 49 which are oriented inwardly. Ridge 50 is formed between third and fourth extending detent arms 46, 48, extending into internal zipper volume 22. Two alternative locations 40, 40' for the fragrance-carrying oil are disclosed. Location 40 is on the inverted apex of ridge 50 of second profile 14 while location 40' is on first profile 12, immediately below the inverted apex of ridge 50, within the internal zipper volume 22.

[0017] Figures 5 and 6 disclose flanged zippers 10, similar to the zipper 10 disclosed in Figure 3. In both Figures 5 and 6, first profile 12 includes first customer side flange 52 and first product side flange 54. In Figure 5, second profile 14 includes second customer side flange 56 and second product side flange 58. In Figure 6, second customer side flange 56 is provided while second product side flange is eliminated. In Figure 5, first and second bag walls 102, 104 are sealed to respective first and second product side flanges 54, 58. In Figure 6, first bag wall 102 is sealed to first product side flange 54 while second bag wall 104 is sealed to second profile 14. In Figure 5, peel seal 60 is positioned between first and second product side flanges 54, 58 thereby forming internal zipper volume 22 between the peel seal 60 and the interlocking elements. In Figure 6, peel seal 60 is positioned between first product side flange 54 and second bag wall 104, forming an internal zipper volume 22 similar to that of Figure 5. In both Figures 5 and 6, there are two alternative locations 40, 40' for fragrance-carrying oil. Location 40 is on the first product side flange 54 within internal zipper volume 22. Location 40' is on a lower exterior surface of fourth extending detent arm 48 within internal zipper volume 22.

[0018] Figure 7 is similar to Figure 5, eliminating first and second consumer side flanges, and extending second product side flange 58. There are two alternative locations 40, 40' for fragrance-carrying oil. Location 40 is on the interior of the tip of first product side flange 54 and location 40' is on the interior of the tip of second (extended) product side flange 58.

[0019] Figure 8 is similar to Figure 7. Second product side flange 58 is not extended in this figure. There are two alternative locations 40, 40' for fragrance-carrying oil. Location

40 is on first product side flange 54, proximate to the interlocking elements while location 40' is on the lower exterior surface of fourth extending detent arm 48.

[0020] Figures 9 and 10 illustrate a zipper similar to that of Figure 2. First and second bag walls 102, 104 are sealed or otherwise attached to respective first and second bases 16, 30. In Figure 9, the location 40 for the fragrance-carrying oil is on the exterior of second arm 20, oriented toward an interior or product side of the package 100. In Figure 10, location 40 for the fragrance-carrying oil is on the lower side (i.e., oriented toward the interior) of the interlocking male element 36, while alternative location 40' is on the interior lower side of second base 30.

[0021] Figure 11 illustrates a zipper 10 similar to that of Figure 3, with the first and second bag walls 102, 104 sealed or otherwise attached to base portions of the respective first and second profiles 12, 14. There is a product side portion of the second profile 14 which is free of attachment to second bag wall 104 thereby forming a further portion of the interior of bag 100. Location 40 for the fragrance-carrying oil is formed on the exterior of the base portion of the second profile 14 which is free of attachment to the second bag wall 104.

[0022] Figure 12 illustrates a zipper 10 similar to that of Figure 2, wherein first and second wings 60, 62 are formed outwardly adjacent from respective first and second arms 18, 20. The exterior side of first wing 60 includes the location 40 for the fragrance-carrying oil.

[0023] Figure 13 illustrates a zipper 10 similar to that of Figure 2. Protrusion 64, including fragrance-carrying oil 40, extends from second base 30 so as to be positioned adjacent to first arm 18, within the interior of package 100.

[0024] Figure 14 illustrates a zipper 10 similar to that shown in Figure 3. First and second bag walls 102, 104 are sealed or otherwise attached to an exterior of first and second profiles 12, 14, respectively and extend over zipper 10 to be joined to each other at seal 106 thereby forming header 108. First and second bag walls 102, 104 include first and second lines of weakness 110, 112, allowing the user to tear off a portion of header 108 thereby gaining access to zipper 10. Fragrance-carrying oil 40 is located on the exterior of second profile 14 so as to be contained within the space of header 108, whereby the fragrance would be released when the user opens or tears off the header 108.

[0025] Figure 15 illustrates a disclosure wherein the fragrance-carrying oil 40 is located at a position between closely-spaced first and second peel seals 60, 61. Figure 16

5 illustrates a disclosure an embodiment when the fragrance-carrying oil 40 is a location within the peel seal 60 while Figure 17 illustrates a disclosure wherein the fragrance-carrying oil 40 is mixed with the material of peel seal 60. Typically, the peel seals 60, 61 are on the product side of the zipper 10.

Claims

1. A zipper (10) for a reclosable package (100) including:
 - a first profile (12) including a female interlocking structure (18,20), which receives a male interlocking structure (32);
 - a second profile (14) including a second base (30);
 - and the male interlocking structure (32) extending from the second base (30);
 - wherein the male interlocking structure interlocks with the female interlocking structure (18, 20); **characterised in that**
 - the second base portion (30) has a post extending therefrom, terminating in an arrowhead-shaped element thereby forming the male interlocking structure (32); and
 - a protrusion (64) including fragrance-carrying oil also extending from the said second base (30) so as to be positioned adjacent to the female interlocking structure (18, 20) and within the interior of said reclosable package (100) when the male and female interlocking structures are interlocked, thereby being configured to modify the smell of a packaged product before the zipper (10) is opened.
2. A zipper (10) as claimed in Claim 1, wherein the female interlocking structure is formed from first and second arms (18, 20) extending from a first base (16), thereby forming an internal zipper volume, the first and second arms (18, 20) terminating in respective first and second distal hooks (24, 26).
3. A reclosable package (100) including a zipper (10) as claimed in any one or more of the preceding claims.

Patentansprüche

1. Reißverschluss (10) für eine wiederverschließbare Verpackung (100), umfassend:

ein erstes Profil (12), das eine Aufnahmeverriegelungsstruktur (18, 20) umfasst, die eine Steckverriegelungsstruktur (32) aufnimmt;
 ein zweites Profil (14), das eine zweite Basis (30) und die sich von der zweiten Basis (30) erstreckende Steckverriegelungsstruktur (32) umfasst;
 wobei sich die Steckverriegelungsstruktur mit der Aufnahmeverriegelungsstruktur (18, 20) verriegelt;
dadurch gekennzeichnet, dass
 der zweite Basisteil (30) einen sich davon erstreckenden Stift aufweist, der in einem pfeilspitzenförmigen Element endet, wodurch die Steckverriegelungsstruktur (32) gebildet wird;
 und
 sich ein Vorsprung (64), der einen Duftstoff führendes Öl enthält, auch von der zweiten Basis (30) erstreckt, derart, dass er neben der Aufnahmeverriegelungsstruktur (18, 20) und in dem Innenraum der wiederverschließbaren Verpackung (100) positioniert ist, wenn die Steck- und Aufnahmeverriegelungsstruktur miteinander verriegelt sind, wodurch er zum Modifizieren des Geruchs eines verpackten Produkts vor Öffnen des Reißverschlusses (10) ausgeführt ist.

2. Reißverschluss (10) nach Anspruch 1, wobei die Aufnahmeverriegelungsstruktur durch einen ersten und einen zweiten Arm (18, 20) gebildet wird, die sich von einer ersten Basis (16) erstrecken, wodurch ein inneres Reißverschlussvolumen gebildet wird, wobei der erste und der zweite Arm (18, 20) in einem ersten bzw. zweiten distalen Haken (24, 26) enden.
3. Wiederverschließbare Verpackung (100), die einen Reißverschluss (10) nach einem oder mehreren der vorhergehenden Ansprüche enthält.

Revendications

1. Fermeture à glissière (10) pour un emballage refermable (100) comprenant :
 un premier profilé (12) comprenant une structure de mise en prise réciproque femelle (18, 20), qui reçoit une structure de mise en prise réciproque mâle (32) ;
 un second profilé (14) comprenant une seconde base (30) ;
 et la structure de mise en prise réciproque mâle (32) s'étendant à partir de la seconde base (30) ;
 la structure de mise en prise réciproque mâle venant en prise de manière réciproque avec la structure de mise en prise réciproque femelle (18, 20) ; **caractérisée en ce que**
 la partie de seconde base (30) comporte une

tige s'étendant à partir de celle-ci, se terminant par un élément en forme de tête de flèche et formant ainsi la structure de mise en prise réciproque mâle (32) ; et
 une saillie (64) comprenant une huile vectrice d'un parfum s'étendant également à partir de ladite seconde base (30) de façon à être positionnée de manière adjacente à la structure de mise en prise réciproque femelle (18, 20) et à l'intérieur dudit emballage refermable (100) lorsque les structures de mise en prise réciproque mâle et femelle sont en prise réciproque, et étant ainsi configurée pour modifier l'odeur d'un produit emballé avant l'ouverture de la fermeture à glissière (10).

2. Fermeture à glissière (10) selon la revendication 1, dans laquelle la structure de mise en prise réciproque femelle est constituée de premier et second bras (18, 20) s'étendant à partir d'une première base (16), et formant ainsi un volume intérieur de fermeture à glissière, les premier et second bras (18, 20) se terminant par des premier et second crochets distaux (24, 26) respectifs.
3. Emballage refermable (100) comprenant une fermeture à glissière (10) selon l'une ou une pluralité quelconque des revendications précédentes.

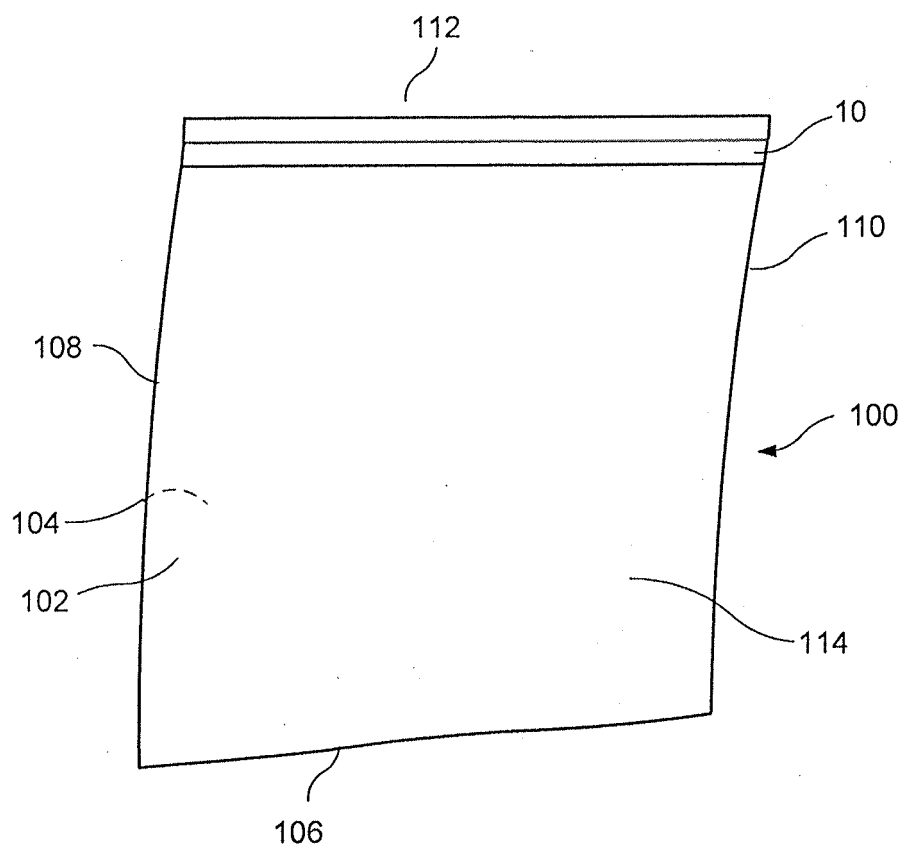


FIG. 1

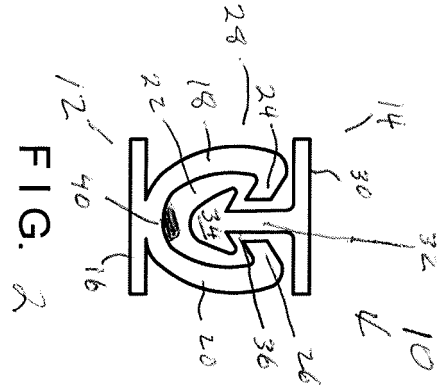


FIG. 2

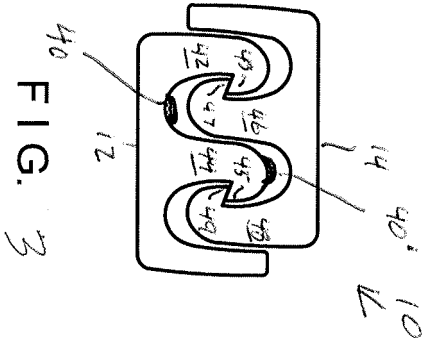


FIG. 3

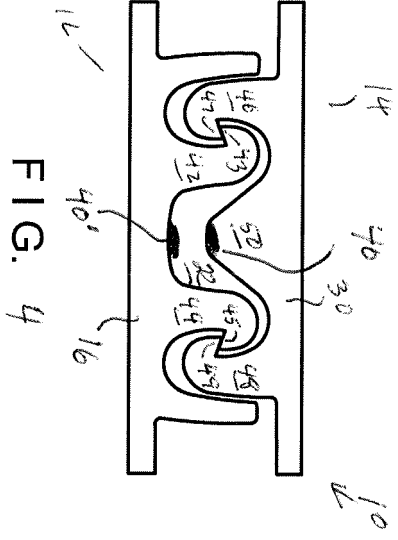


FIG. 4

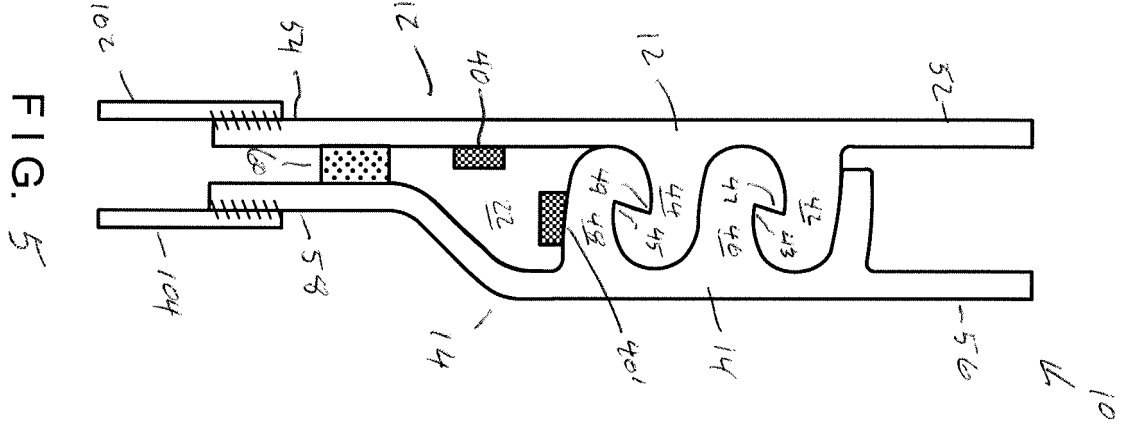


FIG. 5

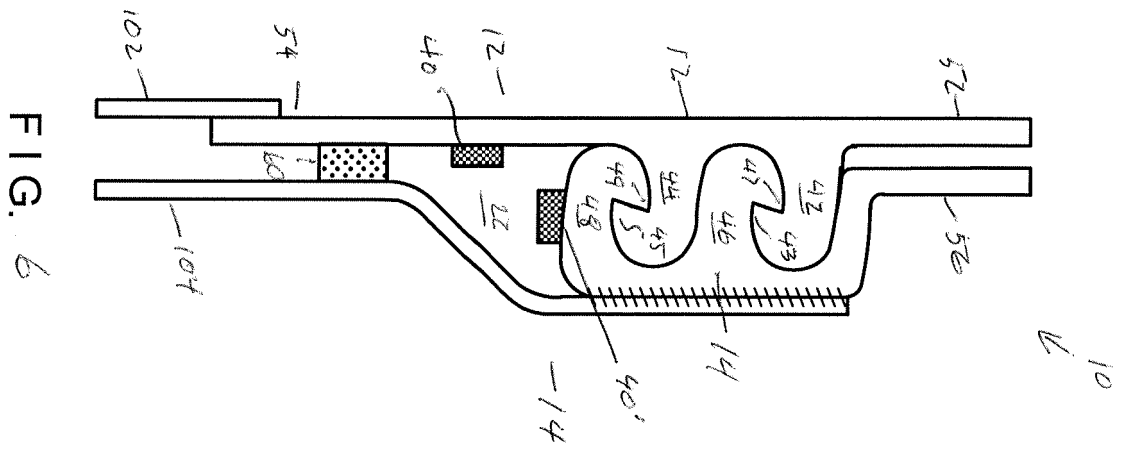
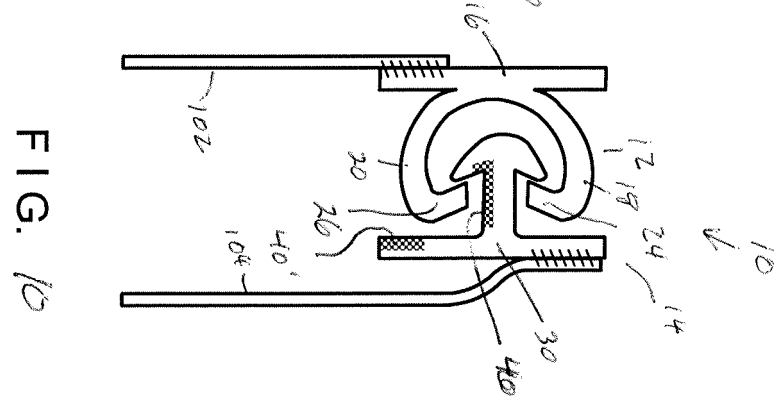
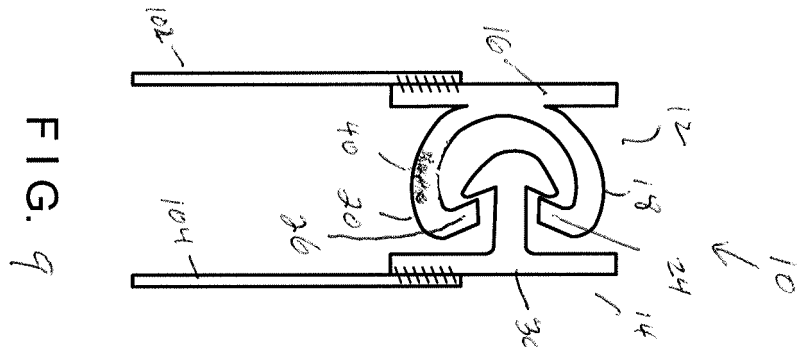
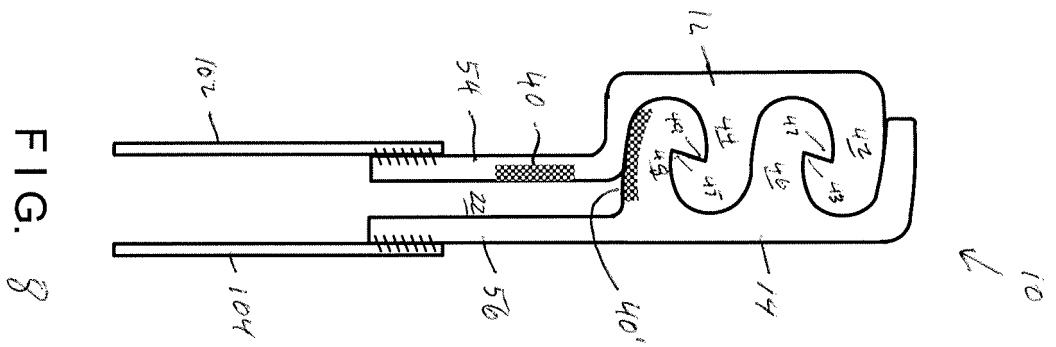
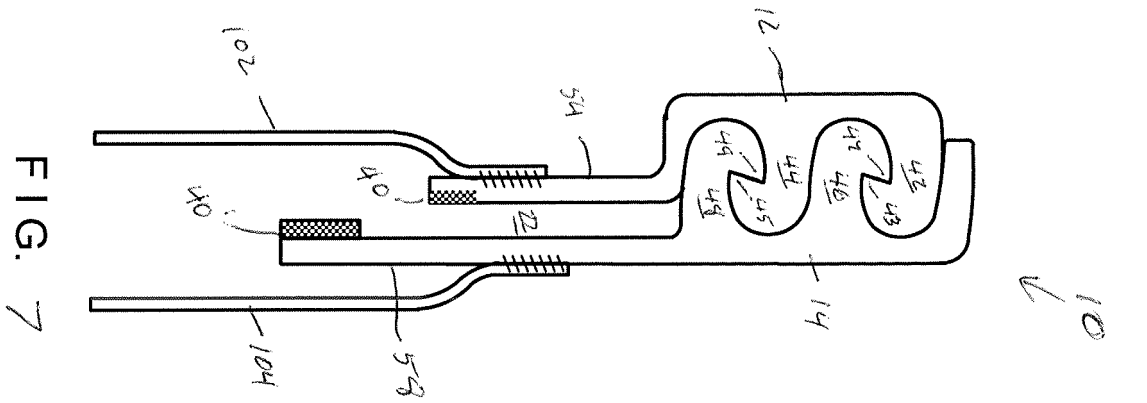


FIG. 6



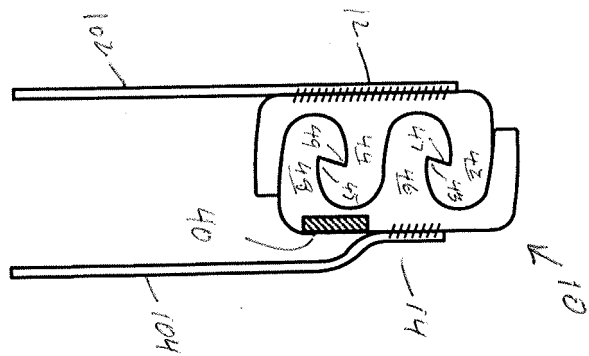


FIG. 1

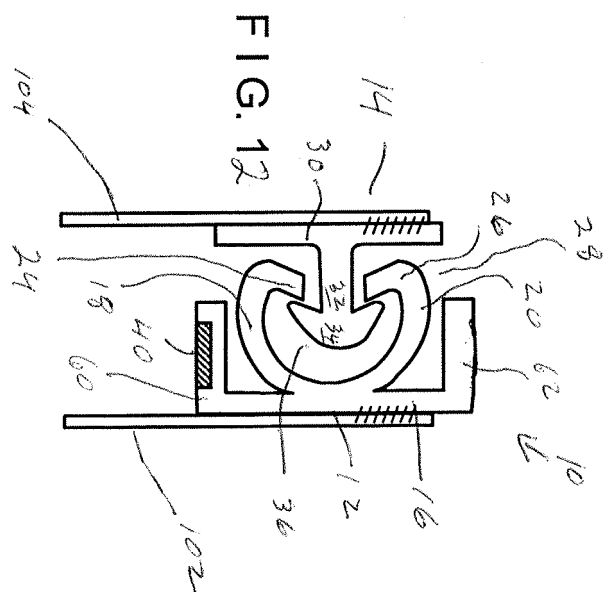


FIG. 12

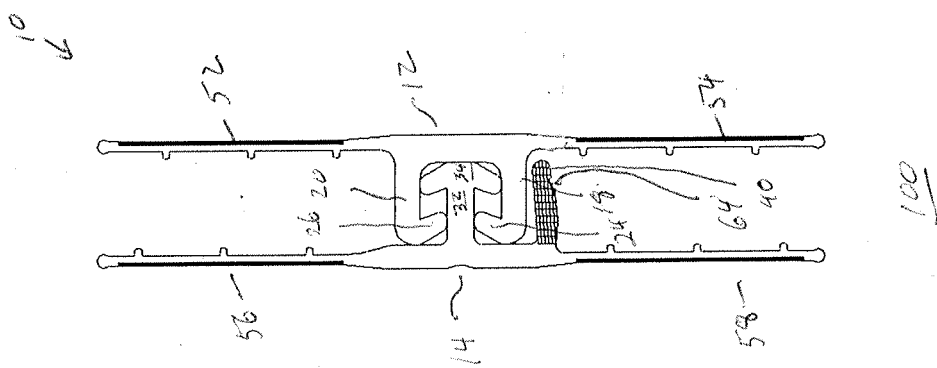


Figure 13

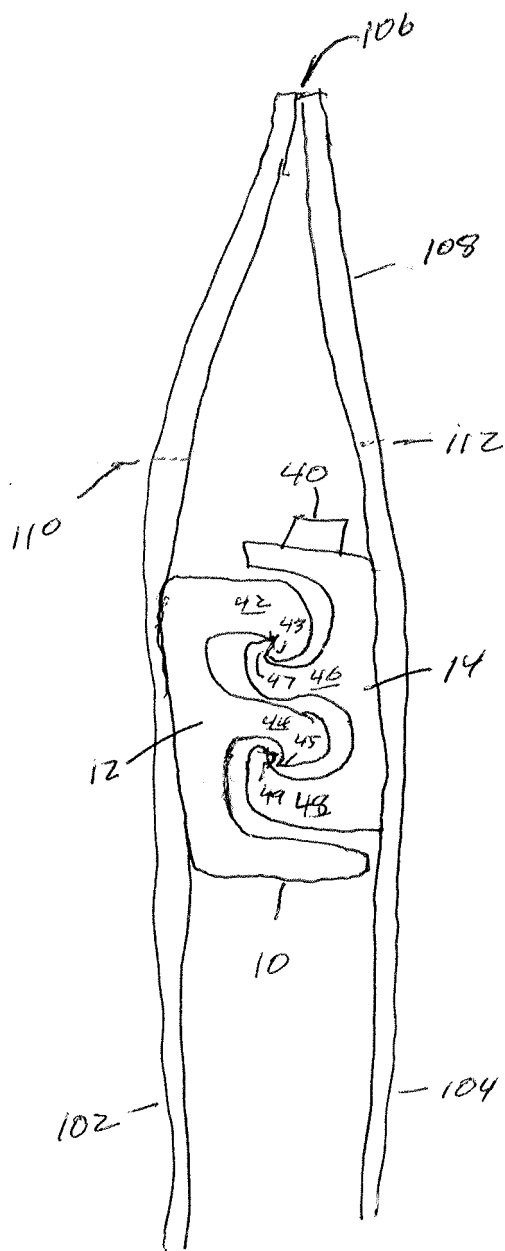
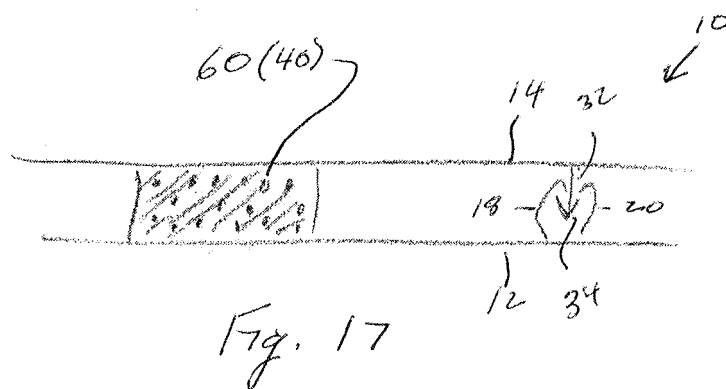
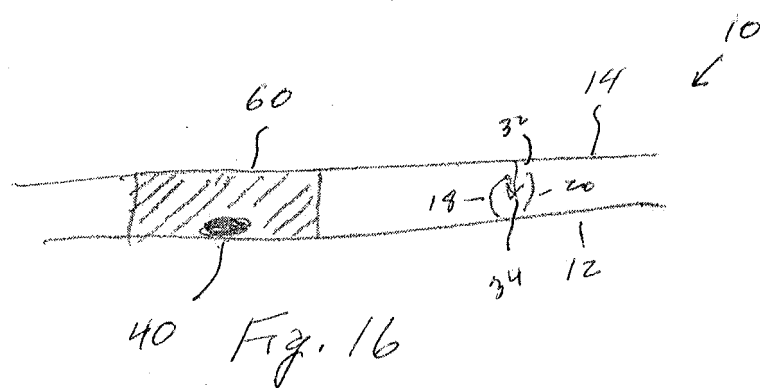
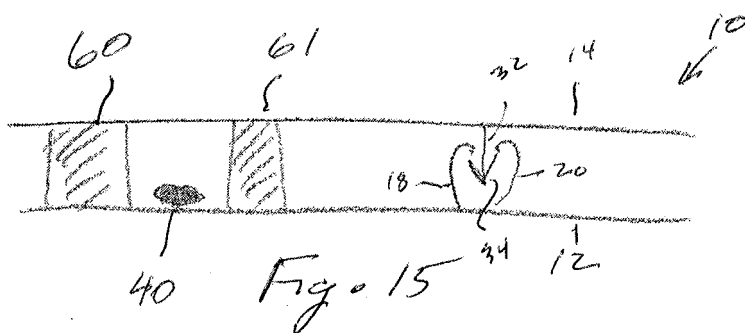


Fig. 14



REFERENCES CITED IN THE DESCRIPTION

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