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(54) **SLEEVE BLISTER PACKAGE ASSEMBLY FOR CONFECTIONARY PRODUCTS**

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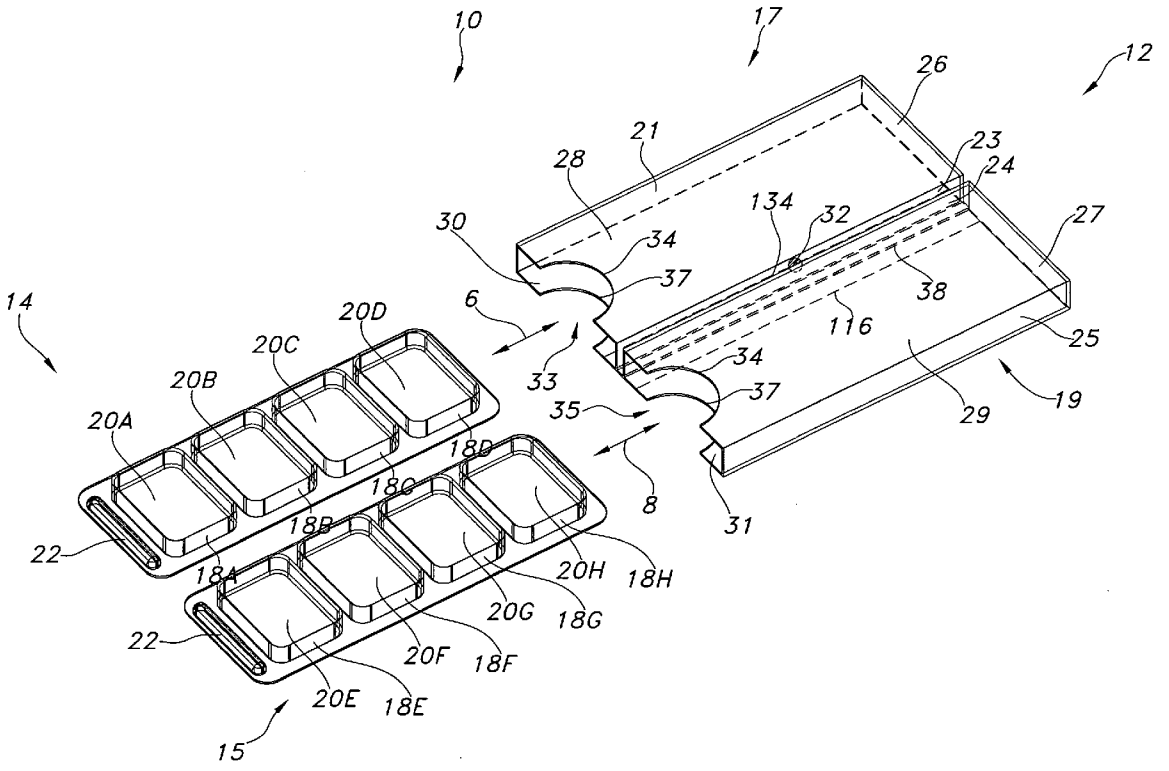
(57) **ABSTRACT**

A packaging assembly supports and dispenses a plurality of retail products, such as confectionary products. The assembly includes a housing having a plurality of package sleeves that are removably attached to one another. A blister tray attachment is slidably insertable into one or more of the package sleeves.



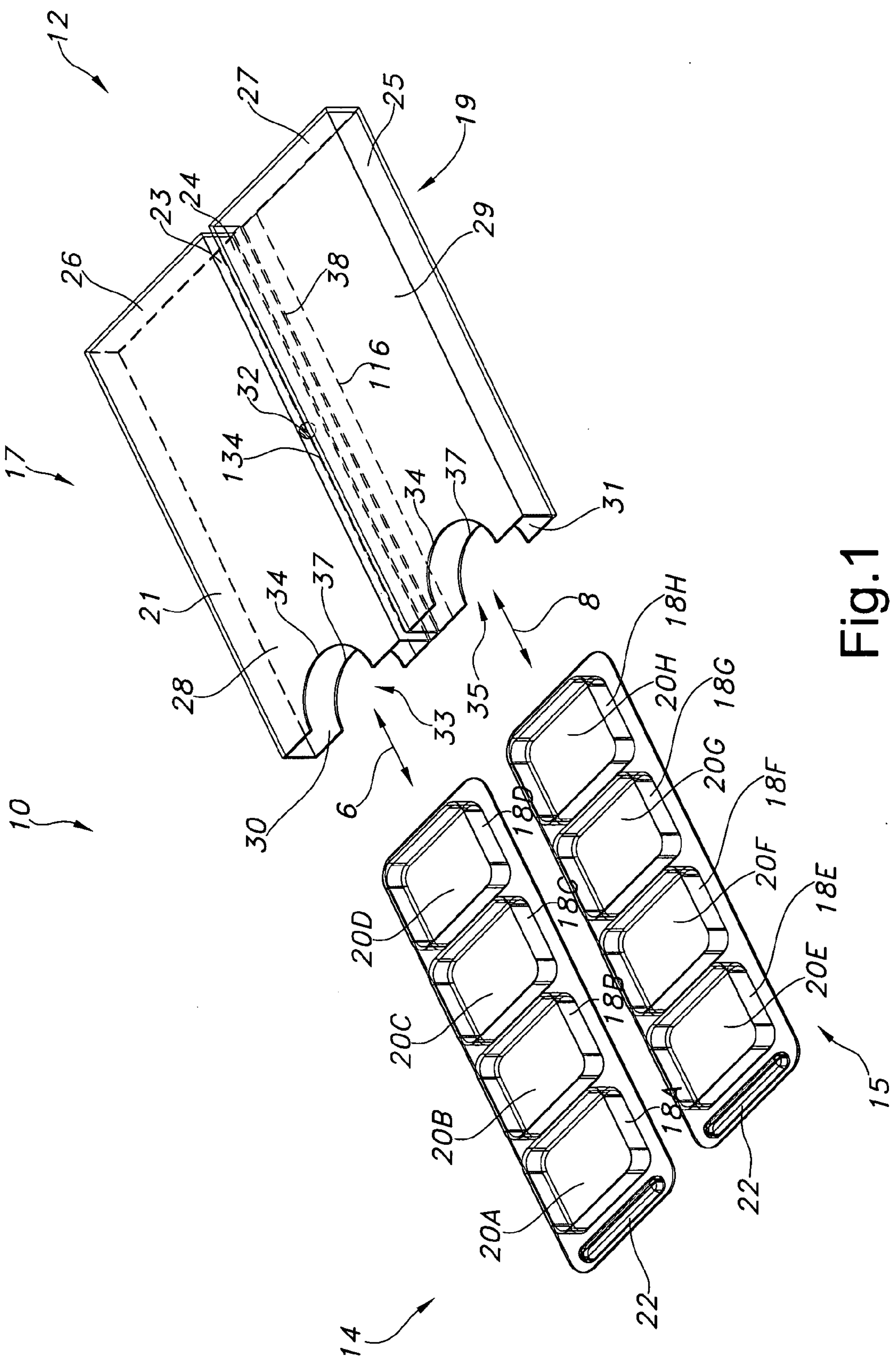


Fig.1

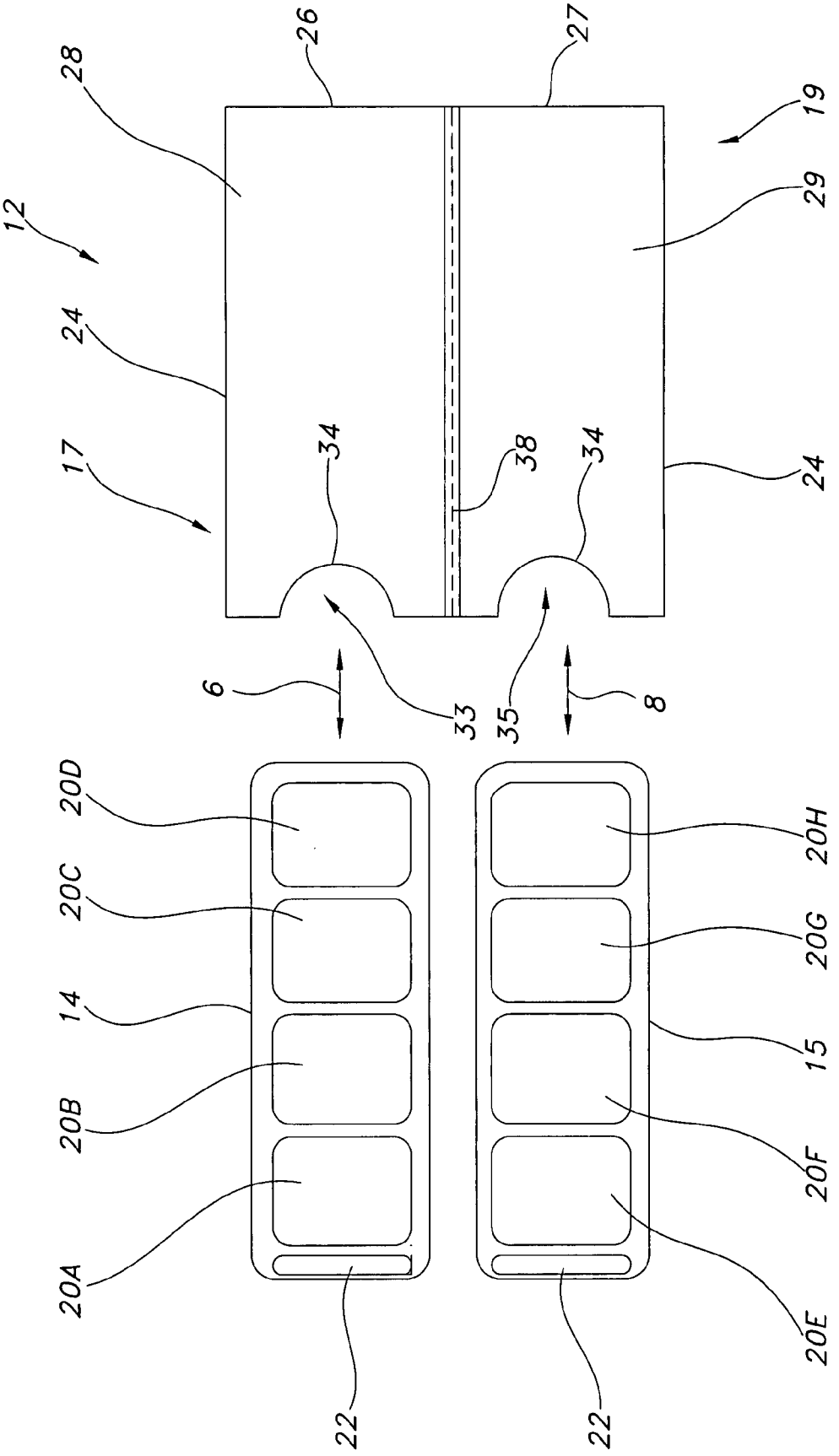

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Fig.2

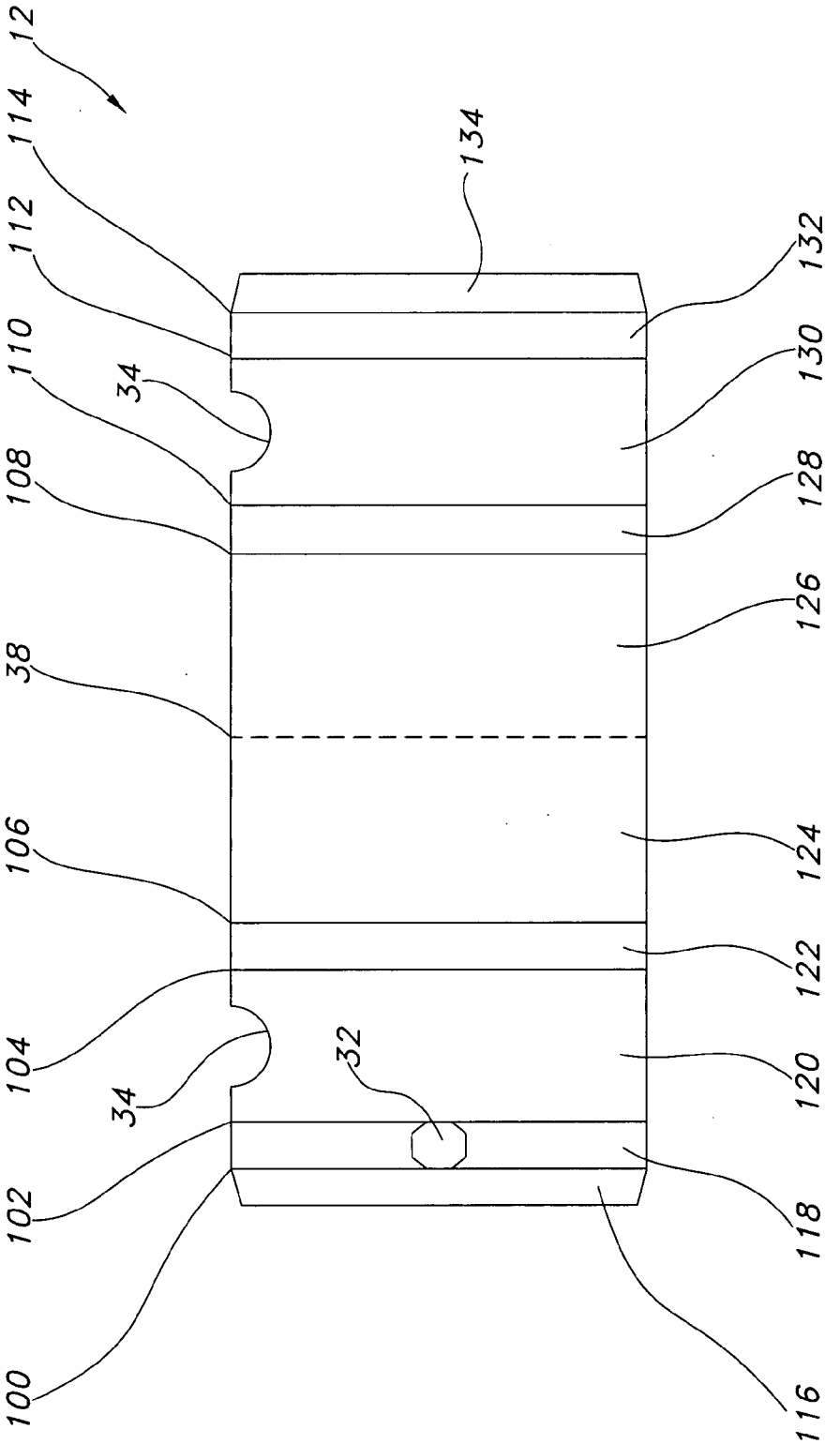
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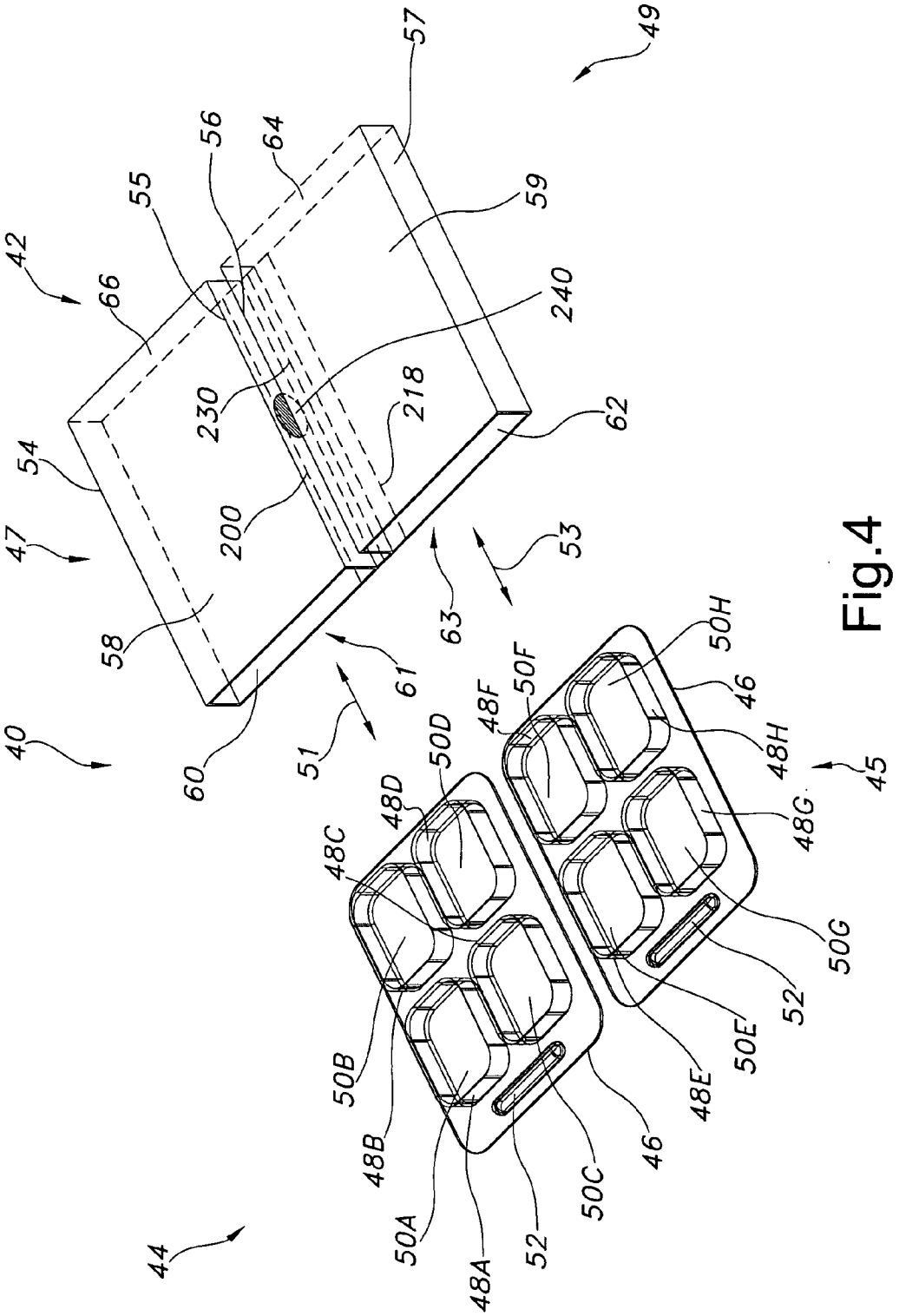
Fig.3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48C
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48A
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Fig.4

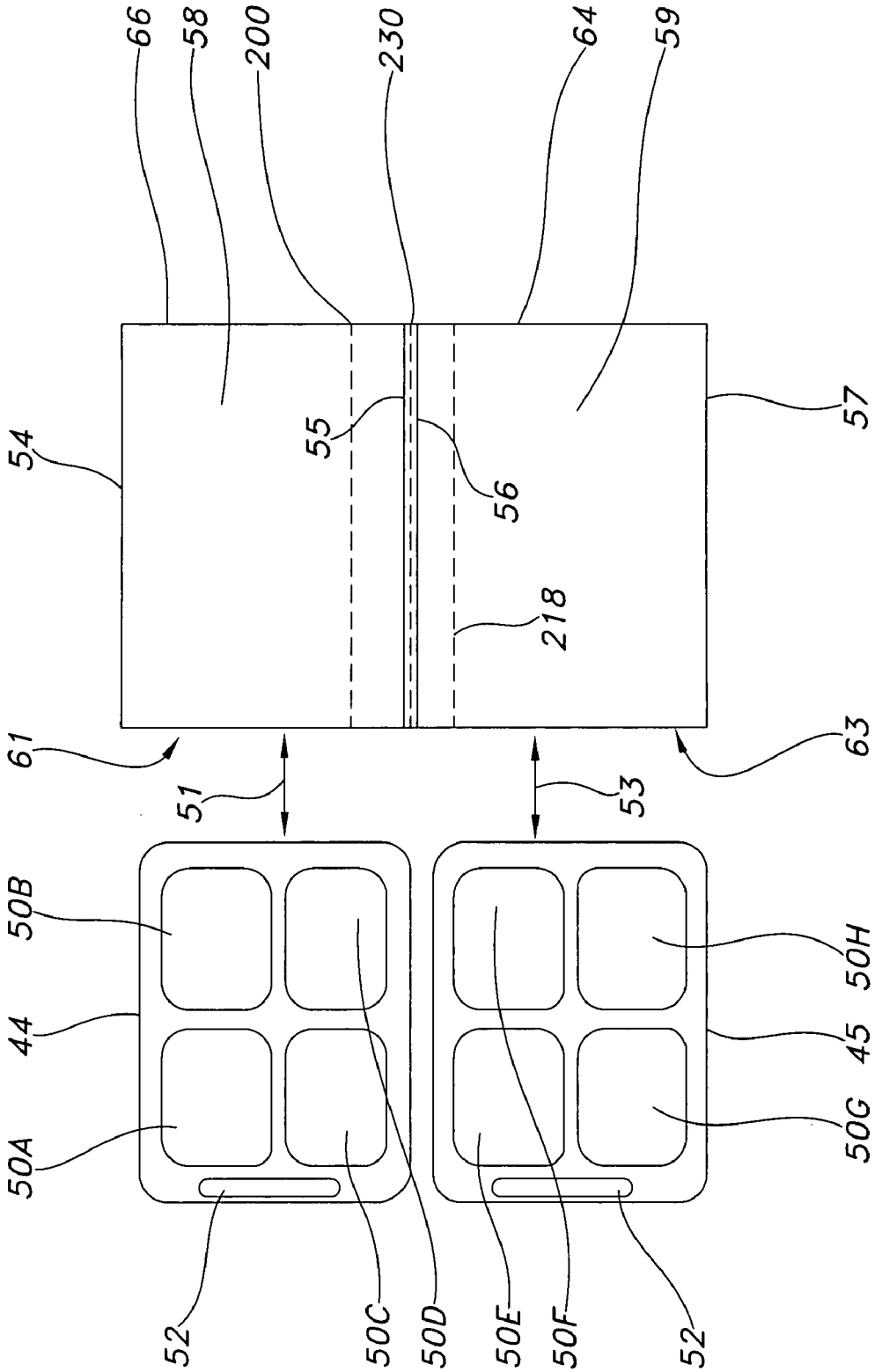
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Fig.5

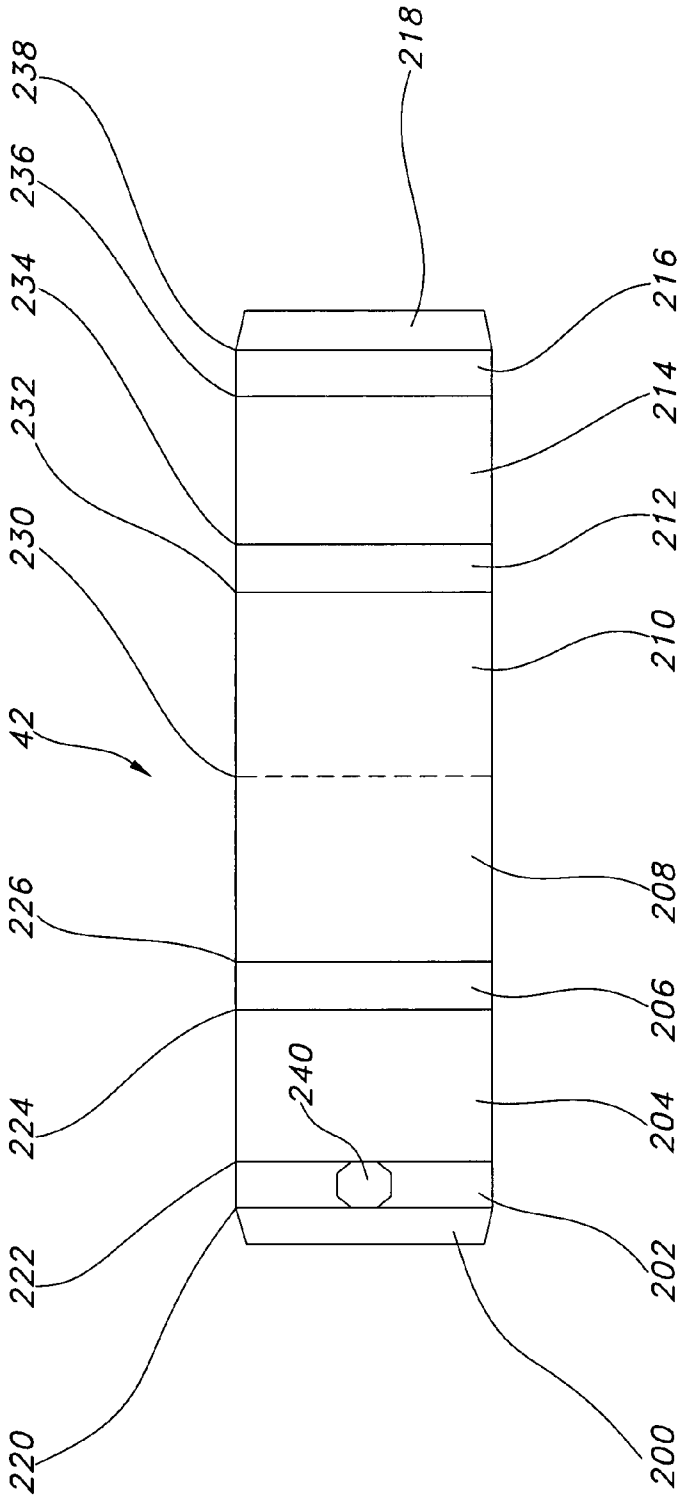
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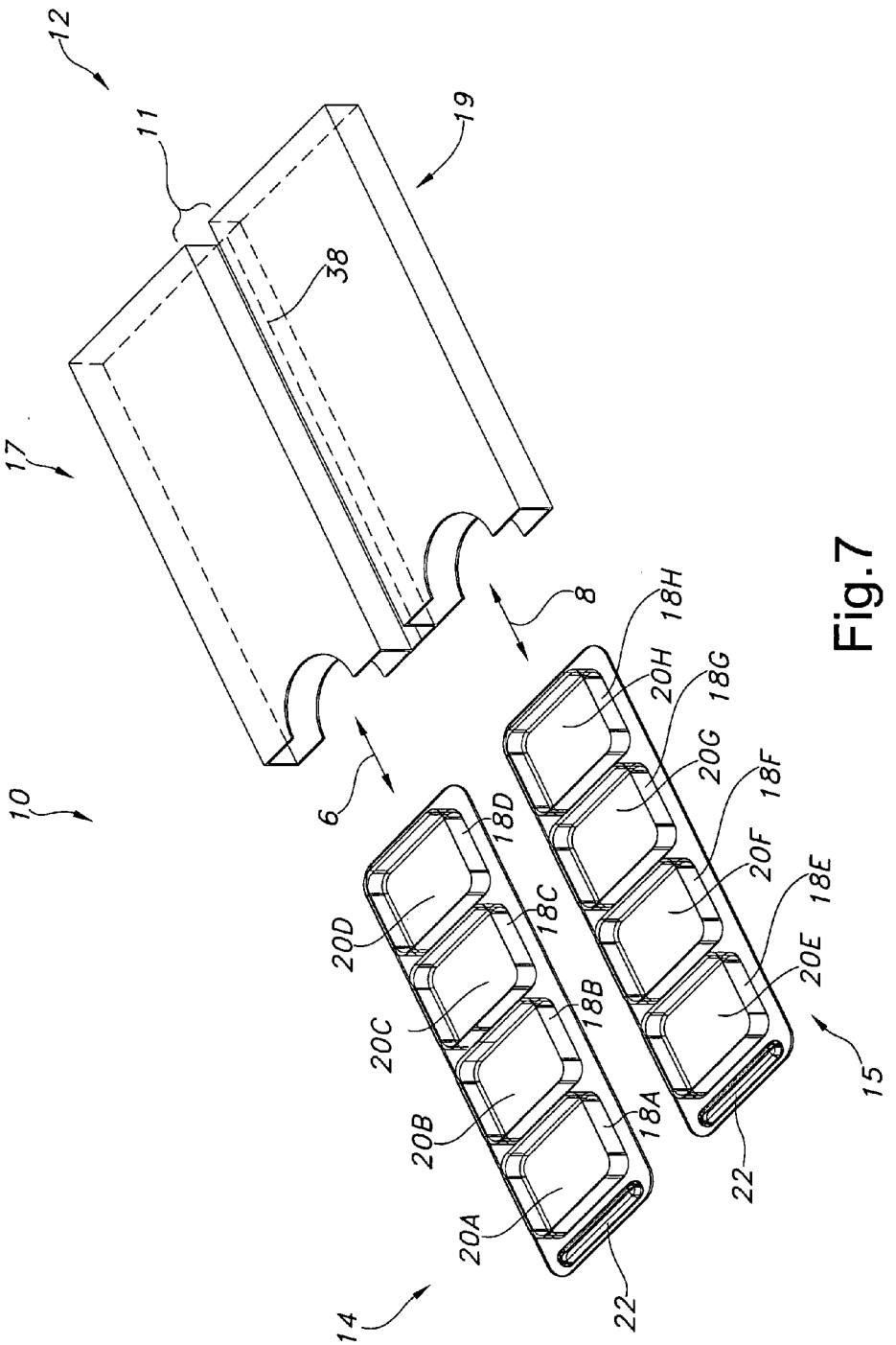
Fig.6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20D
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20C
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Fig.7

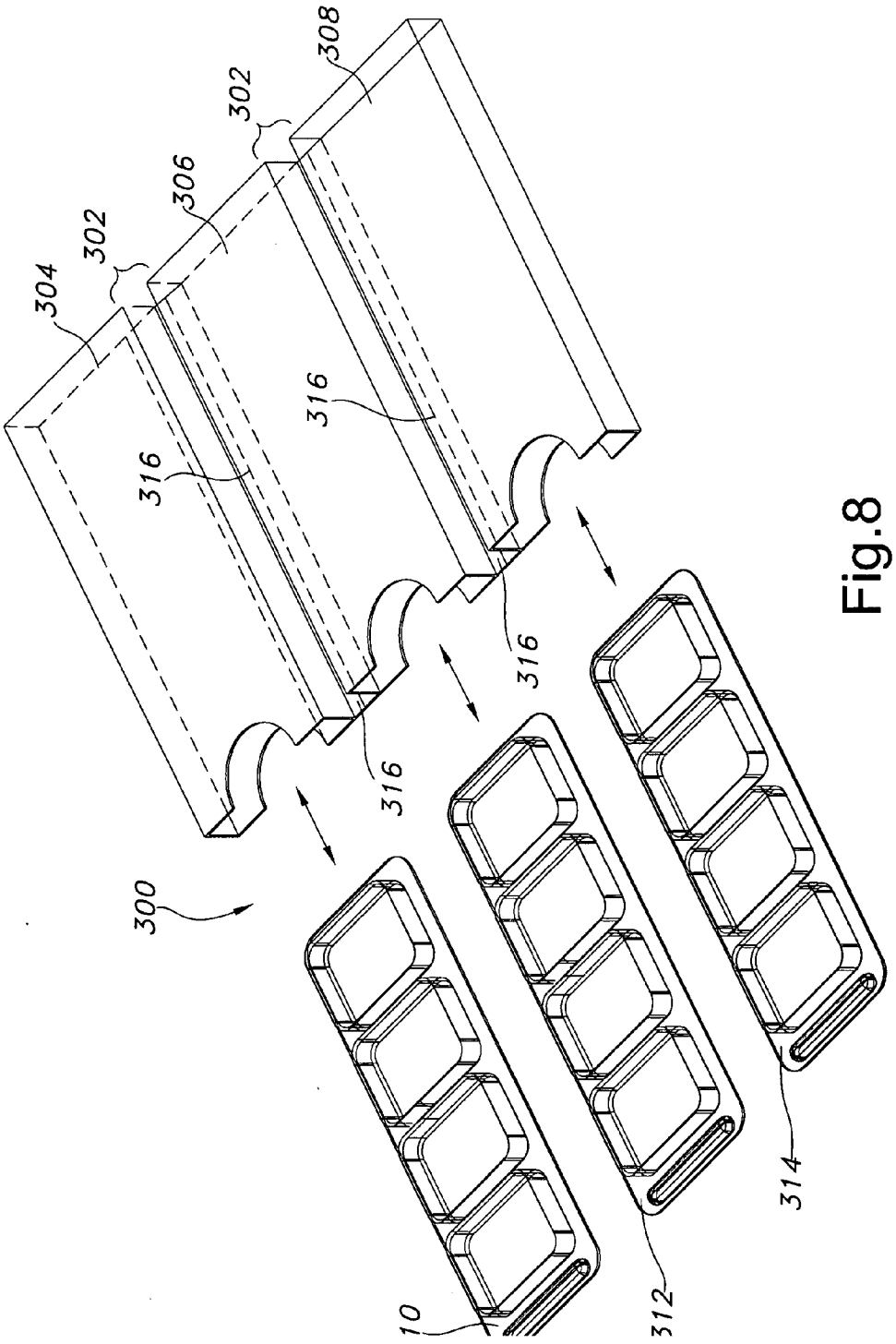

Fig.8

SLEEVE BLISTER PACKAGE ASSEMBLY FOR CONFECTIONARY PRODUCTS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/841,294 filed Aug. 30, 2006, and U.S. Provisional Application No. 60/841,291 filed Aug. 30, 2006, the contents all of which are incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention relates generally to consumer product packaging. More particularly, the present invention relates to packaging of confectionary products, pharmaceutical products, or the like.

BACKGROUND OF THE INVENTION

[0003] The packaging for consumable products is very important to the storage of the product. Frequently, the packaging attempts to visually convey indicia about the type of product, the taste of the product or the purpose of the product. For example, some packages for consumer products, such as gum or candy, frequently include indicia on the package indicating the type of tasting product available in the package. Once a consumer identifies the type of product from the package, the consumer typically chooses a product based solely on the packaging indicia.

[0004] Various types of blister package assemblies are known in the art. For example, in U.S. Pat. No. 5,358,118 to Thompson et al., a stepped-edge blister pack for containing and dispensing units of doses of medication such as capsules, tablets, caplets or fast-dissolving dosage forms is disclosed. In U.S. Pat. No. 6,092,660 to Rune et al., a blister pack is disclosed that comprises at least one blister pack with individually openable blisters including a number of blisters containing placebo (placebo blisters), and a number of blisters containing an active pharmaceutical drug.

[0005] Although today's blister packages adequately support products contained therein, there are some disadvantages. For example, if it is felt that an entire portion of the product may be consumed in one sitting, such as in the case of a candy bar, the manufacturer may wish to provide a once only usable package to store the product, rather than a reusable package. Furthermore, there are also practical facets to packaging consumable products, namely, ease of access to the products stored in the packaging, flexibility of the packaging once pieces of the product are removed, and providing a reusable package.

[0006] It is therefore desirable to provide a product package assembly that supports one or more products in a reusable assembly that is not costly and is robust enough to support less than all the products that are removed from the package. Furthermore, it is desirable to provide a packaging assembly that is flexible and yet robust enough to support one or more various types of products once some are consumed.

SUMMARY OF THE INVENTION

[0007] A packaging assembly supports and dispenses a plurality of retail products, such as confectionary products. The assembly includes a housing having a plurality of package sleeves that are removably attached to one another. A blister tray attachment is slidably insertable into one or more of the package sleeves.

[0008] For example, in one aspect of the invention, a method of providing a package assembly for consumable products includes forming a housing including a plurality of sleeves, removably attaching the plurality of sleeves to one another using an adhesive, and providing a blister tray slidably insertable into one or more of the sleeves, the blister tray supporting consumable products. The method also can include attaching the plurality of sleeves to one another using an adhesive.

[0009] In one preferred embodiment, the method includes forming at least one cut score on an outer surface of one of the plurality of sleeves and applying the adhesive to the at least one cut score. Preferably, the method further includes forming the cut score by cutting a fifty percent cut score through a top layer of one of the plurality of sleeves.

[0010] In one preferred embodiment, the method includes attaching the plurality of sleeves to the housing at a detachable perforated line so as to allow the removal of one of the plurality of sleeves. The method can also include folding ends of a flat piece of paperboard material toward one another and attaching at least one surface of the ends to the housing.

[0011] In another aspect, a blister package assembly for consumable products includes a housing including a plurality of sleeves, a blister tray slidably insertable into at least one of the plurality of sleeves, the blister tray supporting consumable products, wherein the plurality of sleeves are removably attached to one another using an adhesive, the adhesive applied to an outer surface of one of the plurality of sleeves.

[0012] In one preferred embodiment, the adhesive is applied to a cut score formed on the outer surface. Preferably, the cut score is a fifty percent cut score formed on the outer surface. In another preferred embodiment, the package assembly includes a plurality of cut scores formed on the outer surface, each of the plurality of cut scores including adhesive.

[0013] Preferably, the plurality of sleeves are attached to the housing at a detachable perforated line so as to allow the removal of one of the plurality of sleeves.

[0014] Additional features and advantages will be readily apparent from the following detailed description, the accompanying drawings and the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. **1** is a perspective showing a first embodiment of the package assembly.

[0016] FIG. **2** is a top view of the package assembly of FIG. **1**.

[0017] FIG. **3** is a plan view of the package housing of FIG. **1** according to the invention.

[0018] FIG. **4** is a perspective showing a second embodiment of the package assembly.

[0019] FIG. **5** is a top view of the package assembly of FIG. **4**.

[0020] FIG. **6** is a plan view of the package housing of FIG. **4** according to the invention.

[0021] FIG. **7** is a perspective showing of the blister sleeves of FIG. **1** spaced apart.

[0022] FIG. **8** is a perspective showing a third embodiment of the package assembly.

[0023] Like reference symbols in the various drawings indicate like elements.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0024] The present invention provides a packaging assembly for supporting and dispensing retail products. The products are consumable or confectionery products. The products include any type of consumable or confectionery products such as gum or candy. The products can alternatively be any other type of consumable products. For instance, the products can be gum or candy or other type of medical or consumable product.

[0025] FIG. **1** illustrates a perspective view of a first embodiment of a package assembly **10** according to the present invention. FIG. **2** illustrates a top view of the package assembly **10** of FIG. **1**. Although the package assembly **10** shown in the drawings is designed to preferably be used to support and dispense confectionery products, e.g., gum, the assembly also can be used to support and dispense other products, e.g., pharmaceuticals.

[0026] As shown in FIGS. **1** and **2**, the package assembly **10** of the present invention includes a plurality of sleeves **17**, **19** that are removably attached to a housing **12**. In one preferred embodiment, for example, the plurality of sleeves **17**, **19** are uniform in shape and have a generally rectangular form. The assembly also includes one or more packages or blister trays **14**, **15** that are removable from and reinsertable into the sleeves **17**, **19**. For example, as shown by the arrows **6**, **8** in FIGS. **1** and **2**, a consumer may slidably remove blister trays **14**, **15** from the sleeves **17**, **19** and slidably reinsert the blister trays **14**, **15** into the sleeves **17**, **19** as desired.

[0027] Preferably, the blister trays **14**, **15** of the present invention are made primarily from plastic and/or plastic or metal foils. As shown in FIG. **1**, each tray **14**, **15** includes a plurality of compartments **18**A-D, **18**E-H, respectively, of generally equal dimensions that generally extend outwardly from each tray **14**, **15**. The trays **14**, **15** are dimensioned to press-fit against walls of the sleeves **17**, **18** upon insertion of the trays **14**, **15** into the sleeves **17**, **18**. In one preferred embodiment, the center of each blister tray **14**, **15** includes a hinge **9** allowing each tray to be folded onto itself and to be stacked. Once stacked, the two blister trays **14**, **15** may be slidably removed and inserted into the sleeves, resulting in shorter and wider sleeves. The compartments **18**A-H generally hold or store a single product **20**A-H, however, in other embodiments, compartment dimensions may be varied and can store multiple and varied products. In one preferred embodiment, the compartments **18**A-H are made from plastic that is clear so that a consumer can see the products stored therein. As shown in FIGS. **1** and **2**, in a preferred embodiment, the compartments **18**A-D of tray **14** and compartments **18**E-H of tray **15** are arranged in a series of four (4) longitudinally spaced compartments each, however, each of the trays **14**, **15** may be adapted to have any number of compartments in various configurations.

[0028] As shown in FIGS. **1** and **2**, in one preferred embodiment, the blister trays **14**, **15** are configured to include a slot **22** that may aid the consumer in slidably inserting and removing the blister trays from the sleeves **17**, **19**. The slot **22** also may be used to facilitate mounting of the package assembly on a product display module. For example, the slot **22** is configured to receive a product display bracket extending from a product display module.

[0029] The sleeves **17**, **19** of the present invention are made from single or multiple pieces of cardboard or other suitable material and are shaped to support the blister trays **14**, **15**. The material for the sleeves **17**, **19** is preferably chosen to be relatively inexpensive and may in certain embodiments be biodegradable or recyclable. For example, biodegradable paperboard may be used to form the sleeves **17**, **19**. Of course, it will be appreciated by one skilled in the art that other materials, such as unbleached board as well as polymeric material, may be used to form the sleeves **17**, **19** depending on the desired appearance of the assembly **10**. If paperboard is used, preferably, the paperboard is coated on at least one side with a conventional coating selected for compatibility with a printing method and board composition chosen for the assembly **10**.

[0030] Preferably, the sleeves **17**, **19** are formed by folding the housing **12** so that after folding, the coated side of the housing would become the external surface of each sleeve **17**, **19**. This allows for indicia concerning the product contents of the assembly **10** to be viewed without removing the package trays **14**, **15** from the sleeves **17**, **19**. Details with respect to folding the housing **12** to form the sleeves **17**, **19** are discussed in connection with FIGS. **3** and **6** of the application. It should be noted, however, that the sleeves **17**, **19** of the present invention are not limited to being formed by folding the housing **12**. For example, in one preferred embodiment, the sleeves **17**, **19** are formed separately from the housing **12** and are made from paperboard. Once the sleeves **17**, **19** are formed, the sleeves **17**, **19** are attached to a flat piece of paperboard using an adhesive, such as glue, to form the housing **12**.

[0031] As shown in FIGS. **1** and **2**, each of the sleeves **17**, **19** includes opposing side walls **21**, **23** and **24**, **25**, top walls **28**, **29** and bottom walls **30**, **31**, respectively. Preferably, the sidewalls **21**,**23**, **24**,**25**, top walls **28**, **29** and bottom walls **30**,**31** define front open ends or front openings **33**, **35** and back open ends or back openings **26**, **27** of each sleeve **17**, **19**, respectively. Of course, it will be appreciated by one skilled in the art that the sleeves of the present invention are not limited to having both front openings and back openings. For example, in one preferred embodiment, the sleeves include front openings and back walls instead of back openings. In another preferred embodiment, the openings of sleeves are configured diagonally to one another, resulting in each sleeve having either a front wall or a back wall and a back opening or front opening, respectively. Further, as shown in the FIG. **1** and **2** example, the top walls **28**, **29** and bottom walls **30**, **31** of each sleeve **17**, **19** may include recesses **34**, **37** that may aid the consumer in slidably inserting and removing the package trays **14**, **15** and/or are for aesthetic purposes.

[0032] Referring now to FIG. **3**, a plan view of the housing **12** of FIG. **1** is shown. The housing **12** of the present invention is preferably a paper product made in a flat piece. For example, in one preferred embodiment, the housing **12** is made from a single flat piece of paperboard material. As shown in FIG. **3**, the housing **2** includes a series of wall flaps **118**, **120**, **122**, **124**, **126**, **128**, **130** and **132**, folds **100**, **102**, **104**, **106**, **108**, **110**, **112**, and **114**, and attachment flaps **116**, **134**, wherein the housing folds together and forms the sleeves **17**, **19**.

[0033] For example, as shown in FIG. **3**, a surface of the attachment flaps **116**, **134** is covered with an adhesive, such as glue, such that, by folding the attachment flaps **116**, **134** over and toward one another, sleeves having an approximately equal dimension to one another are achieved. As shown in FIGS. **1**, **2** and **3**, the attachment flaps **116**, **134** are folded over approximately one-half (½) the diameter of the housing **12** and form the sleeves **17**, **19** by contact and adhesion of the attachment flaps to wall flaps **124**, **126**. In addition, in some preferred embodiments, the outer surface of one of the wall flaps **118** includes a glue print side **32** that includes an adhesive, such as glue, that as the sleeves **17**, **19** are positioned in juxtaposition with one another, the glue print side **32** contacts and loosely couples sidewalls **23**, **24** of the sleeves **17**, **19** together.

[0034] For example, in one preferred embodiment, as shown in FIG. **3**, the glue print side **32** is formed from a fifty percent (50%) cut score through the top layer for a clean release of the sleeves **17**, **19** that results in non-tearing of the sleeves **17**, **19** upon separation. In some preferred embodiments having longer sleeves, a plurality of release cut-scores are provided on the outer surface of one of the wall flaps **118** that can contact and loosely couple sidewalls of sleeves.

[0035] Of course, it will be appreciated by one skilled in the art that the points of adhesion on the flaps may be varied and that various sleeve diameters may be achieved to support varying tray diameters. For example, as shown in FIG. **7**, the sleeves **17**, **19** may be positioned spaced apart from one another at a predetermined distance **11**. In addition, it will be appreciated by one skilled in the art that other techniques may be used to secure attachment flaps **116**, **134** to wall flaps **124**, **126**. For example, in one preferred embodiment, attachment flaps **116**, **134** and wall flaps **124**, **126** may be secured together as interlocking flaps. Further, when the housing **12** is made from polymeric material, such as plastic, the desirable shape of the sleeves may be made via a process of molds or other suitable method of mass producing plastic.

[0036] As shown in FIGS. **1**, **2**, and **3**, a center of the housing **12** is provided as a hinge **38** that allows the sleeves **17**, **19** to be flexed about each other. Preferably, the hinge **38** allows the sleeves **17**, **19** to be pulled back from one another and stacked, resulting in an outer surface of a top wall of one of the sleeves contacting an outer surface of a bottom wall of another sleeve. Several benefits may be derived by this feature. For example, by providing the flexible hinge **38** as part of the housing **12**, formed sleeves **17**, **19** may be flexed toward and away from one another and thereby reduce the overall dimensions needed to store the product assembly **10**. The hinge **38** of the housing **12** may be constructed as a detachable perforated line allowing the sleeves **17**, **19** to be independently separated from the housing **12** to further reduce the space necessary for storing the product especially after partial use of the product. The perforated line also allows the housing **12** to be split into two pieces, thus allowing each sleeve to be used independently.

[0037] Referring now to FIGS. **4**, **5** and **6**, a second embodiment of a package assembly **40** according to the present invention is disclosed. In particular, FIG. **4** illustrates a perspective view of the package assembly **40** and FIG. **5** illustrates a top view of the assembly **40**. As shown in FIGS. **4** and **5**, the package assembly **40** includes one or more package or blister trays **44**, **45** that are removable and reinsertable, as indicated by arrows **51**, **53**, respectively, into sleeves **47**, **49** of a housing **42**. In the preferred embodiment, the sleeves **47**, **49** have a generally square form and are of generally uniform shape.

[0038] As shown in FIGS. **4** and **5**, each of the package trays **44**, **45** includes four (4) compartments **48**A-D, **48**E-H arranged in a side-by-side 2×2 configuration that generally extend outward from each tray **44**, **45** and are configured to press-fit against walls of the sleeve **47**, **49**. The compartments **48**A-H, like the compartments **18**A-H described above, may be made of clear plastic so that the consumer can see the products **50**A-H stored therein.

[0039] Similar to the blister trays **14**, **15** described above, the blister trays **44**, **45** of the second embodiment are configured to include a slot **52** that may aid the consumer in removing and inserting the blister trays **44**, **45** into the sleeves **47**, **49**. The slot **52** similarly may be adapted to receive a product display bracket to display the assembly **40** from a product display module.

[0040] Similar to the sleeves **17**, **19** described above, the sleeves **47**, **49** of the second embodiment are made from single or multiple pieces of cardboard or other suitable material. Preferably, the material chosen is relatively inexpensive and may, as described previously, in certain embodiments, be biodegradable or recyclable. Preferably, if paperboard is used to form the sleeves **47**, **49**, the paperboard is coated on at least one side with a conventional coating selected for compatibility with a printing method and board composition chosen for the assembly **40**.

[0041] The sleeves **47**, **49** are also formed by folding the housing **42** so that after folding, the coated side of the housing **42** becomes the external surface of each sleeve **47**, **49**. By using this technique, indicia concerning the product contents of the assembly **40** may be viewed without removing the package trays **44**, **45** from the sleeves **47**, **49**.

[0042] As shown in FIGS. **4** and **5**, each of the sleeves **47**, **49** includes opposing side walls **54**, **55** and **56**, **57**, top walls **58**, **59** and bottom walls **60**,**62**, respectively. Preferably, the sidewalls **54**, **55**, **56**, **57**, top walls **58**, **59** and bottom walls **60**, **62** define front openings **61**, **63** and back openings **66**, **64** of each sleeve **47**, **49**, respectively.

[0043] Referring now to FIG. **6**, a plan view of the housing **42** of FIG. **4** is shown. As described previously, the housing **42** of the present invention is preferably a paper product made in a flat piece. Similar to the housing **12** described above, the housing **42** of the package assembly **40** also includes a series of wall flaps **202**, **204**, **206**, **208**, **210**, **212**, **214** and **216**, folds **220**, **222**, **224**, **226**, **232**, **234**, **236** and **238**, and attachment flaps **200**, **218** that are dimensioned such that when the housing **42** folds together, a desired shape for the sleeves **47**, **49** is obtained.

[0044] Similar to the attachment flaps **116**, **134** described above, as shown in FIG. **6**, a surface of the attachment flaps **200**, **218** is covered with an adhesive, such as glue, such that, by folding the attachment flaps **200**, **218** over and toward one another, sleeves **47**,**49** having an approximately equal dimension are achieved. For example, to form the two (2) relatively square shaped sleeves **47**, **49** shown in FIGS. **4** and **5**, the attachment flaps **200**, **218** are folded over approximately one-half (½) the diameter of the housing **42** and form the sleeves **47**, **49** by contact and adhesion of the attachment flaps **200**, **218** to wall flaps **208**, **210**, respectively. The sleeves **47**, **49** are positioned spaced apart from one another at a predetermined distance. In addition, the outer surface of one of the wall flaps **202** can include a print glue side **240**

that includes an adhesive, such as glue, that as the sleeves **47**, **49** are positioned in juxtaposition with one another, contacts and loosely couples sidewalls **55**, **56** of the sleeves **47**, **49** together. Preferably, the print glue side **240** is formed similarly as discussed in connection with the glue print side **32** of FIG. **3**.

[0045] As shown in FIGS. **4**, **5** and **6**, preferably, a center of the housing **42** includes a hinge **230** that allows the sleeves **47**, **49** to be flexed about each other. Similar to the housing **12** described above, the hinge **230** may be formed as a detachable perforated line allowing the sleeves **47**, **49** to be independently separated from the housing **42** regardless of product in the sleeves **47**, **49**.

[0046] It will be appreciated by one skilled in the art that the current invention is not limited to a housing including only two sleeves nor a single hinge, but can include any number of sleeves and multiple hinges or detached perforated lines. For example, referring now to FIG. **8**, in one preferred embodiment, a package assembly **300** is provided that includes three sleeves **304**, **306** and **308** that are removably attached via detachable perforation lines **316** to a housing **302**. The assembly **300** also includes three blister trays **310**, **312** and **314** that are removable from and reinsertable into the sleeves **304**, **306** and **308**, as discussed in connection with FIGS. **1-2** and **4-5**. The housing **302**, sleeves **304**, **306**, **308** and hinges **302** are formed similarly as discussed in connections with FIGS. **1-7**.

[0047] Although preferred embodiments of the present invention have been described herein with reference to the accompanying drawings, it is to be understood that the invention is not limited to those precise embodiments and that various other changes and modifications may be affected herein by one skilled in the art without departing from the scope or spirit of the invention, and that it is intended to claim all such changes and modifications that fall within the scope of the invention.

What is claimed is:

1. A blister package assembly for consumable products comprising:

a housing comprising a plurality of sleeves; and

a blister tray slidably insertable into at least one of said plurality of sleeves, said blister tray supporting consumable products,

wherein said plurality of sleeves are removably attached to one another using an adhesive, said adhesive applied to an outer surface of one of said plurality of sleeves.

2. The package assembly of claim **1**, wherein said adhesive is applied to a cut score formed on said outer surface.

3. The package assembly of claim **2**, wherein said cut score is a fifty percent cut score through a top layer of said outer surface.

4. The package assembly of claim **2**, further comprising a plurality of cut scores formed on said outer surface, each of said plurality of cut scores including adhesive.

5. The package assembly of claim **2**, wherein said plurality of sleeves are attached to said housing at a detachable perforated line so as to allow the removal of one of the plurality of sleeves.

6. A method of providing a blister package assembly for consumable products comprising:

forming a housing comprising a plurality of sleeves;

removably attaching said plurality of sleeves to one another using an adhesive; and

providing a blister tray slidably insertable into at least one of said plurality of sleeves, the blister tray supporting consumable products.

7. The method of claim **6**, wherein said forming step further includes:

forming at least one cut score on an outer surface of one of said plurality of sleeves; and

applying said adhesive to said at least one cut score.

8. The method of claim **7**, further comprising forming said cut score by cutting a fifty percent cut score through a top layer of one of said plurality of sleeves.

9. The method of claim **6**, further comprising attaching said plurality of sleeves to said housing at a detachable perforated line so as to allow the removal of one of the plurality of sleeves.

10. The method of claim **6**, wherein said forming step further includes:

folding ends of a flat piece of paperboard material toward one another; and

attaching at least one surface of said ends to said housing.

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