

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
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DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 379 FASE NACIONAL INCLUIDO CAPITULO II
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 6
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
LUZ CLEMENCIA DE PÁEZ

Asunto: Radicación: 14-63386- -5
 Trámite: 11
 Evento: 379
 Actuación: 430
 Oficio: 5325
 Folios: 6

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I		Capítulo II	X
No. Solicitud Internacional	PCT/EP2012/064493				
Fecha de Presentación Internacional	24/07/2012				

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1. Documentos estudiados

Descripción:	Rad. N° 14-063386-00000-0000	25/Marzo/2014
Reivindicaciones:	Rad. N° 14-063386-00000-0000	25/Marzo/2014
	Rad. N° 14-063386-00002-0000	22/Mayo/2014
Dibujos:	Rad. N° 14-063386-00000-0000	25/Marzo/2014
Prioridad:	US 13/221,190	30/Agosto/2011

2. Análisis de la Prioridad

Se acepta la reivindicación de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 14.

Título de la solicitud: “Dispensador de productos y miembro que forma la cubierta para un dispensador de productos” (Fl. 1).

El problema planteado en esta solicitud, consiste en lograr un dispensador de productos que pueda posicionarse en un corte de un soporte, por ejemplo un mostrador, sin necesidad de realizar daños a dicho mostrador con tornillos o algún otro elemento de unión.

Para resolver este problema técnico, la solicitud en estudio propone un dispensador de productos que comprende un alojamiento y un miembro de cobertura, donde dicho alojamiento tiene un reborde con el cual se posiciona el dispensador en un mostrador.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): A 47 K 10/24.

4. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

El capítulo reivindicatorio no es claro porque:

- Las reivindicaciones 4, 5, 6, 10, 14 y las expresiones: “...para contener una pila de hojas...”, “...a través de la cual los productos (...) está cubierta para dispensar...”, “...por medio de la que se dispensan los productos (...) la posición abierta...”, “y la guía del mecanismo de la guía de levas y saliente esta moldeada de tal forma (...) segunda posición...”, “...y en donde el saliente está ubicado en la depresión (...) puede rotar a la posición abierta.”, “...en donde el miembro de cobertura se puede mover (...) ranuras...”, (reivindicaciones 1 y 2), “...que es montable de forma extraíble a un alojamiento de producto...”, “...la al menos un aparte del alojamiento del dispensador es una alojamiento de producto de un dispensador.” (reivindicación 3), “...que resisten el movimiento del miembro de cobertura en una dirección de apertura...” (reivindicación 7), “...y la guía de mecanismo de guía de levas y saliente (...) segunda posición.” (reivindicación 9), “...sobre la cual el miembro de cobertura puede rotar entre las posiciones (...) primera posición.” (reivindicación 11), “...que son capaces de pasarse el uno al otro (...) posición abierta.” (reivindicación 12), “...sobre el cual el miembro de cobertura (...) por el miembro de cobertura.” (reivindicación 13); describen funciones, efectos, ventajas o resultados a alcanzar, los cuales no son aspectos susceptibles de patente. Para mayor claridad, el producto reclamado se debe definir técnicamente mediante sus características estructurales. Se sugiere al solicitante eliminar las reivindicaciones y expresiones citadas.
- La reivindicación 5 incluye la expresión “...el saliente esta sesgado...”, la cual es de carácter general y sugiere de forma imprecisa que la protección se extiende a otras posibles variaciones o modificaciones, lo que no permite compararlo con el estado de

la técnica. Lo anterior, debido a que no se exponen de forma clara las características estructurales del saliente.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de prioridad: agosto 30 de 2011, y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	US 2005/0279756	'Wipes Dispensing system'	22/Diciembre/2005
D2	US 2006/0273100	'Tabletop napkin dispenser with diplay window for promotional material'	07/Diciembre/2006
D3	US 2004/0206769	'Container and cartridge for dispensing paper products'	21/Octubre/2004

El documento D1¹ divulga un dispensador de toallitas que comprende una abertura de dispensado y un alojamiento que comprende una pila de toallitas (resumen).

El documento D2² divulga un dispensador de servilletas interplegadas que incluye un alojamiento con un panel frontal, un panel posterior, un par de paredes laterales, una pared superior y una pared inferior (resumen).

El documento D2³ divulga un contenedor para dispensar productos de papel que incluye un alojamiento, una cubierta articulada o desmontablemente unida al alojamiento, donde la cubierta define una abertura de dispensado (resumen).

6. Examen de Patentabilidad (Art 14 D486)

Novedad (Art 16 D486)

La reivindicación 1 consiste en: *“Un dispositivo dispensador de productos que comprende al menos una parte de un alojamiento de dispensador y un miembro de cobertura...”* (Ver página 14 del radicado N° 14-063386-00002-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D2
Un dispositivo dispensador de productos que comprende:	Dispensador de toallitas (10) caracterizado por:	Dispensador de servilletas caracterizado por:
Una parte de alojamiento de dispensador y un miembro de cobertura, en donde el alojamiento dispensador define un depósito de producto.	Comprende una puerta de relleno (102) y una base (100) (Párr. [0034]), en donde la base define un depósito de producto (Fig. 1A).	Dispensador (10) que incluye un alojamiento (12) con un panel frontal (14), un panel posterior (16), dos paneles laterales (18) y (20), un panel superior (22) y un panel inferior (24) (Fig. 1; Párr. [0031]).
La parte del alojamiento del dispensador define una abertura.	La base (100) define una abertura (Fig. 1C).	Un alojamiento (12) (Fig. 1; Párr. [0031]).
El miembro de cobertura comprende una abertura para	La puerta de relleno (102) comprende una abertura para	El panel frontal (14) tiene una ranura (28) (Fig. 1; Párr. [0032]).

1 <https://docs.google.com/viewer?url=patentimages.storage.googleapis.com/pdfs/US20050279756.pdf>

2 <https://docs.google.com/viewer?url=patentimages.storage.googleapis.com/pdfs/US20060273100.pdf>

3 <https://docs.google.com/viewer?url=patentimages.storage.googleapis.com/pdfs/US20040206769.pdf>

dispensar.	dispensar (114) (Fig. 1B; Párr. [0037])	
El mecanismo de guía y saliente es un mecanismo de la guía de levas y saliente. La guía incluye una depresión de pivote.	Una guía (150) acoplada a la base en la superficie (133) de la base (100). La guía (150) está configurada como una placa e incluye una ranura (152) que coopera con el pin (154) acoplado a la superficie interior (156) de la puerta de rellenado (Párr. [0049]).	El panel frontal (14) es articuladamente asegurado al alojamiento (12) por medio de los postes (34) y (36), insertados dentro de los agujeros alargados (48) y (49) (Figs. 3 y 4; Párrs. [0037] y [0038]).

De acuerdo con la tabla anterior, las características esenciales del dispensador de la reivindicación 1 habían sido divulgadas previamente en los documentos D1 y D2, por lo tanto, la materia reivindicada no es nueva.

Nivel inventivo (Art18 D486)

La reivindicación 2 consiste en: *“Un dispositivo dispensador de productos que comprende al menos una parte de un alojamiento de dispensador y un miembro de cobertura...”* (Ver página 14 del radicado N° 14-063386-00002-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D3
Un dispositivo dispensador de productos que comprende:	Dispensador de toallitas (10) caracterizado por:	Dispensador de productos de papel, caracterizado por:
Una parte de alojamiento de dispensador y un miembro de cobertura, en donde el alojamiento dispensador define un depósito de producto.	Comprende una puerta de rellenado (102) y una base (100) (Párr. [0034]), en donde la base define un depósito de producto (Fig. 1A).	Un contenedor (10) que incluye un alojamiento (14) (Párr. [0025]) y una cubierta (34) (Fig. 2; Párr. [0027])
La parte del alojamiento del dispensador define una abertura.	La base (100) define una abertura (Fig. 1C).	Un alojamiento (14) (Párr. [0025])
El miembro de cobertura comprende una abertura para dispensar.	La puerta de rellenado (102) comprende una abertura para dispensar (114) (Fig. 1B; Párr. [0037])	La cubierta (34) define una abertura de dispensado (40) (Párr. [0027]).
Mecanismo de pines y ranuras. En donde la guía incluye una depresión de pivote. En donde se proporciona una ranura del mecanismo de pines y ranuras en una superficie interna del ala perimetral.	Una guía (150) acoplada a la base en la superficie (133) de la base (100). La guía (150) está configurada como una placa e incluye una ranura (152) que coopera con el pin (154) acoplado a la superficie interior (156) de la puerta de rellenado (Párr. [0049]).	No menciona.
El miembro de cobertura comprende un ala perimetral.	No menciona.	La cubierta comprende un ala perimetral (Fig. 2)

Los documentos D2 y D3 se consideran el estado de la técnica cercano a la invención definida en la reivindicación 2 porque divulgan dispensadores de producto.

La diferencia entre la invención, definida en la reivindicación 2 y el dispensador de D1 consiste en que el miembro de cobertura comprende un ala perimetral.

La diferencia entre la invención, definida en la reivindicación 2 y el dispensador de D3 consiste en el mecanismo de pines y ranuras.

El efecto que logra el incluir el miembro de cobertura que comprende un ala perimetral es

que define una cavidad interior entre el alojamiento y el miembro de cobertura.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “cómo modificar el dispensador conocido en D1 definir una cavidad interior entre el alojamiento y el miembro de cobertura”.

Sin embargo, el miembro de cobertura que comprende un ala perimetral para definir una cavidad interior entre el alojamiento y el miembro de cobertura, ya está divulgado en el documento D3 que se refiere a una cubierta que comprende un ala perimetral (Fig. 2).

En consecuencia, el la persona del oficio normalmente versada en la materia, incluiría la cubierta que comprende un ala perimetral del documento D3 en el dispensador divulgado en el documento D1 para llegar así al objeto de la reivindicación 1 de la solicitud. Por lo cual se considera obvia.

Asimismo, los documentos antecedentes divulgan las características de las reivindicaciones dependientes así:

- Reivindicación 3: Un embolo (100) es dispuesto en el interior del alojamiento (14) junto con al menos un resorte (102) (Párr. [0048]). El contenedor (10) incluye una cubierta (34) articulada al alojamiento (14) (D3: Párr. [0027]).
- Reivindicación 7, 12 y 13: Un gancho de cierre (104) en el extremo opuesto de las guías (150) y los pines (154) (D1: Párr. [0027]). Los postes (36), (34) y (40) están enganchadas con las ranuras (50) y (51) al extremo opuesto de los postes (34) y (36) y los agujeros (48) y (49) (D3: Párr. [0037]).
- Reivindicación 8: Una guía (150) acoplada a la base en la superficie (133) de la base (100). La guía (150) está configurada como una placa e incluye una ranura (152) que coopera con el pin (154) acoplado a la superficie interior (156) de la puerta de relleno (D1: Párr. [0049]). La cubierta comprende un ala perimetral (D3: Fig. 2).
- Reivindicaciones 9 y 11: Una guía (150) acoplada a la base en la superficie (133) de la base (100). La guía (150) está configurada como una placa e incluye una ranura (152) que coopera con el pin (154) acoplado a la superficie interior (156) de la puerta de relleno (D1: Párr. [0049]). El panel frontal (14) es articuladamente asegurado al alojamiento (12) por medio de los postes (34) y (36), insertados dentro de los agujeros alargados (48) y (49) (D2: Figs. 3 y 4; Párrs. [0037] y [0038]).

Las reivindicaciones 4 a 6, 10 y 14 fueron afectadas en el numeral 4 de la presente comunicación. .

7. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	US 2005/0279756	1, 2, 7, 8, 12, 13	Novedad/Nivel Inventivo
D2	US 2006/0273100	1, 9, 11	Novedad/Nivel Inventivo
D3	US 2004/0206769	2, 3, 7, 8, 9, 11, 12, 13	Nivel inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-05-19

Elaboró: Monica Andrea Gutierrez Almonacid
Revisó: Sonia Andrea Diaz Pirazan



US 20050279756A1

(19) **United States**(12) **Patent Application Publication**(10) **Pub. No.: US 2005/0279756 A1****Bitowft et al.**(43) **Pub. Date:****Dec. 22, 2005**(54) **WIPES DISPENSING SYSTEM****Publication Classification**

(76) Inventors: **Bruce K. Bitowft**, Pleasanton, CA (US); **Audy L. Baack**, Oakland, CA (US); **William Ouellette**, Pleasanton, CA (US); **Ted Shapas**, Pleasanton, CA (US); **Joe Timmons**, Pleasanton, CA (US)

(51) **Int. Cl.⁷** **B65H 1/00; A47K 10/24**(52) **U.S. Cl.** **221/45**

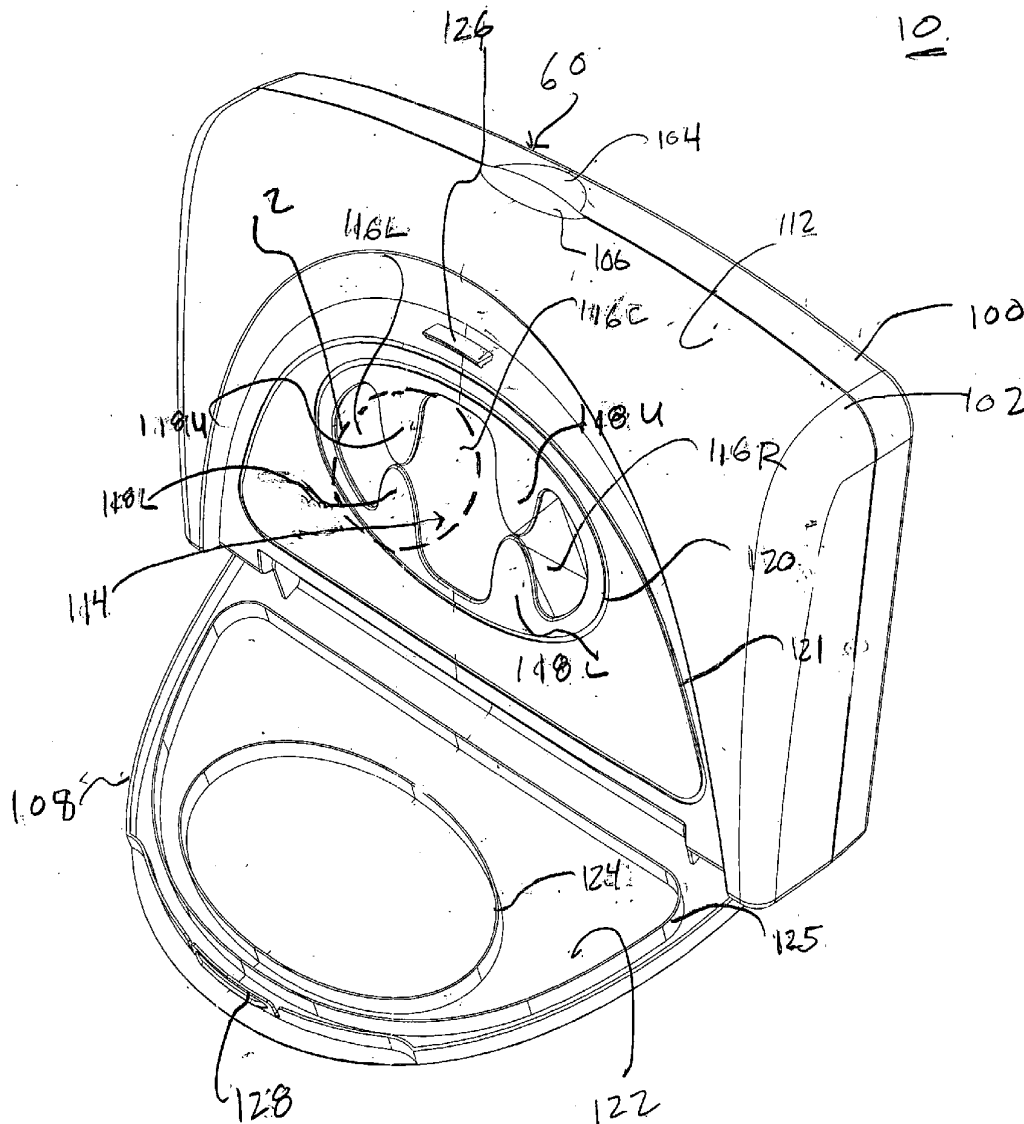
(57)

ABSTRACT

Provided is a wipes dispensing system including a dispenser having a dispensing aperture, a pouch containing an interleaved stack of wipes or a rolled perforated web of wipes contained within the dispenser and accessed through the dispensing aperture, and a mounting element for mounting the dispenser to a mounting surface. The wipes dispensing system may further include a pivotable dispensing lid that closes against the dispensing aperture and seals the wipes from the outside environment when the wipes dispensing system is not in use.

Correspondence Address:

THE CLOROX COMPANY
1221 BROADWAY PO BOX 2351
OAKLAND, CA 94623 (US)

(21) Appl. No.: **10/870,656**(22) Filed: **Jun. 16, 2004**

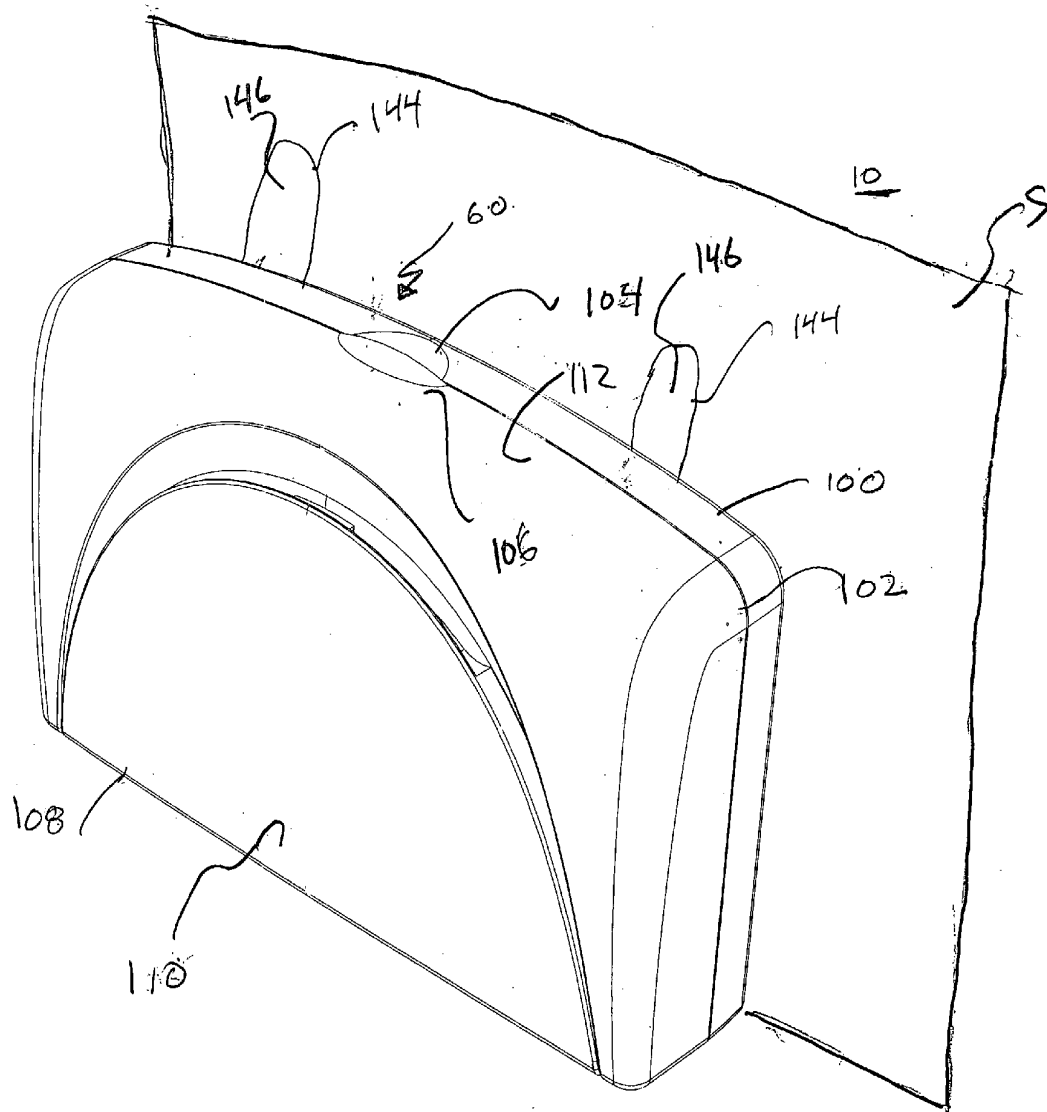
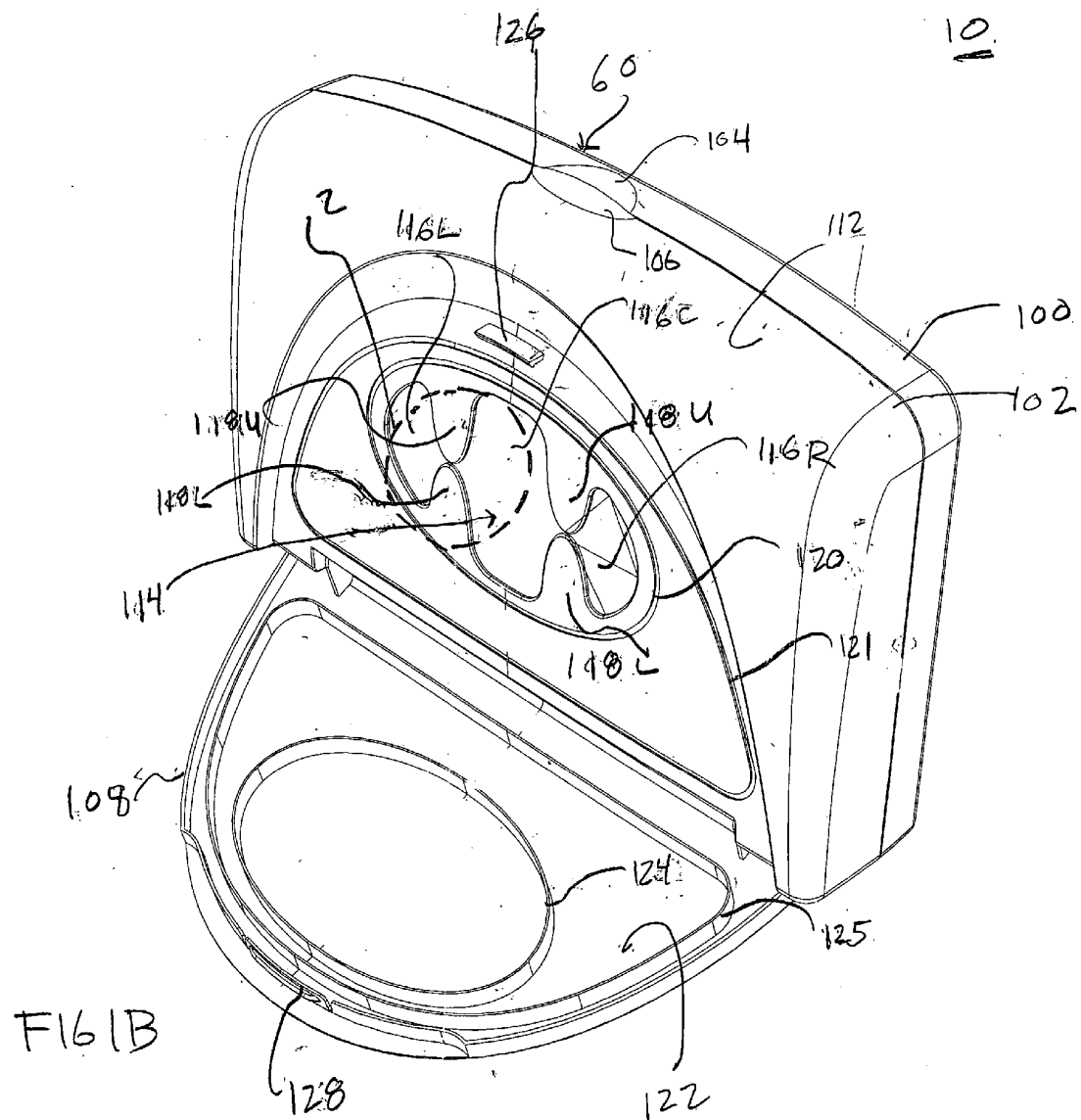


FIG 1A



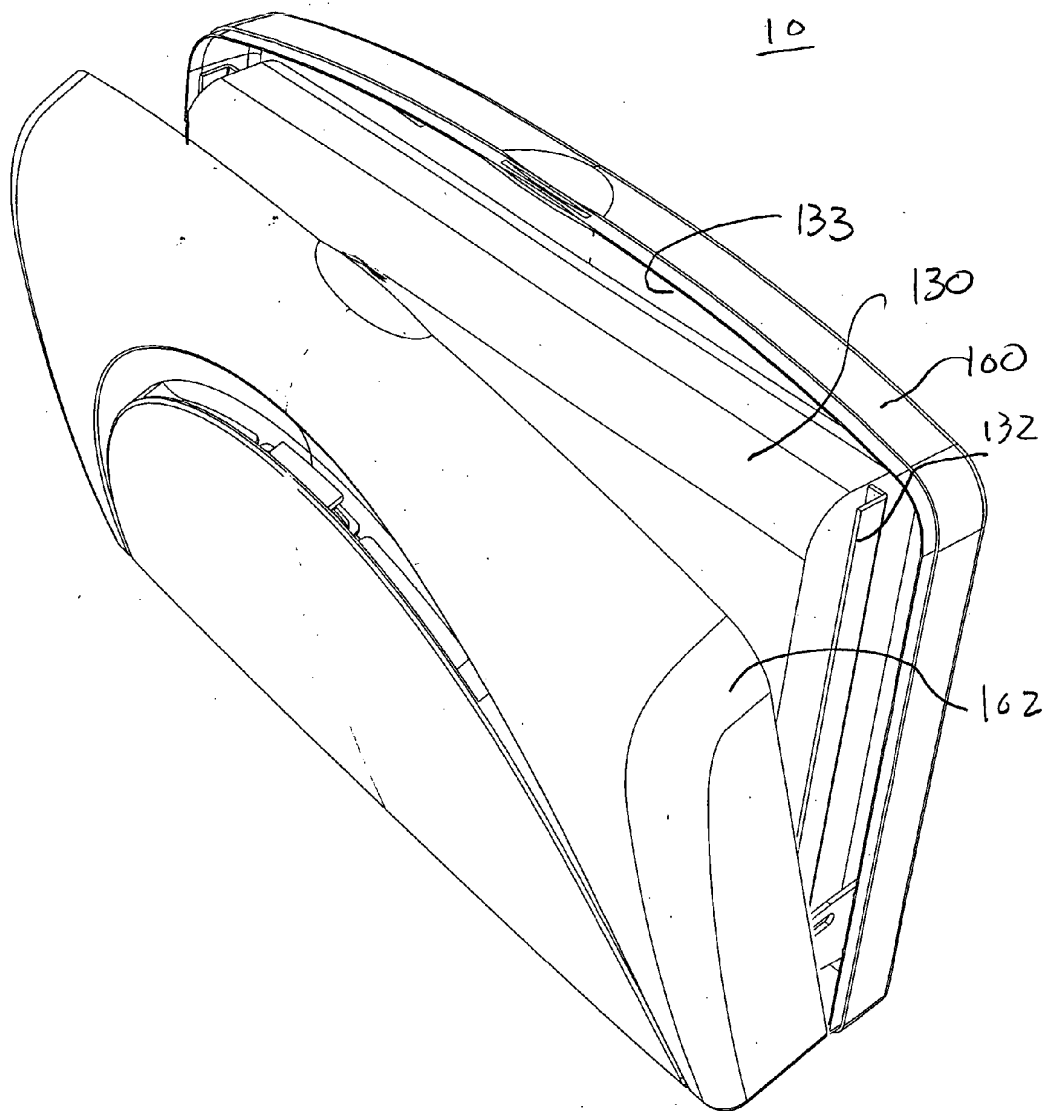
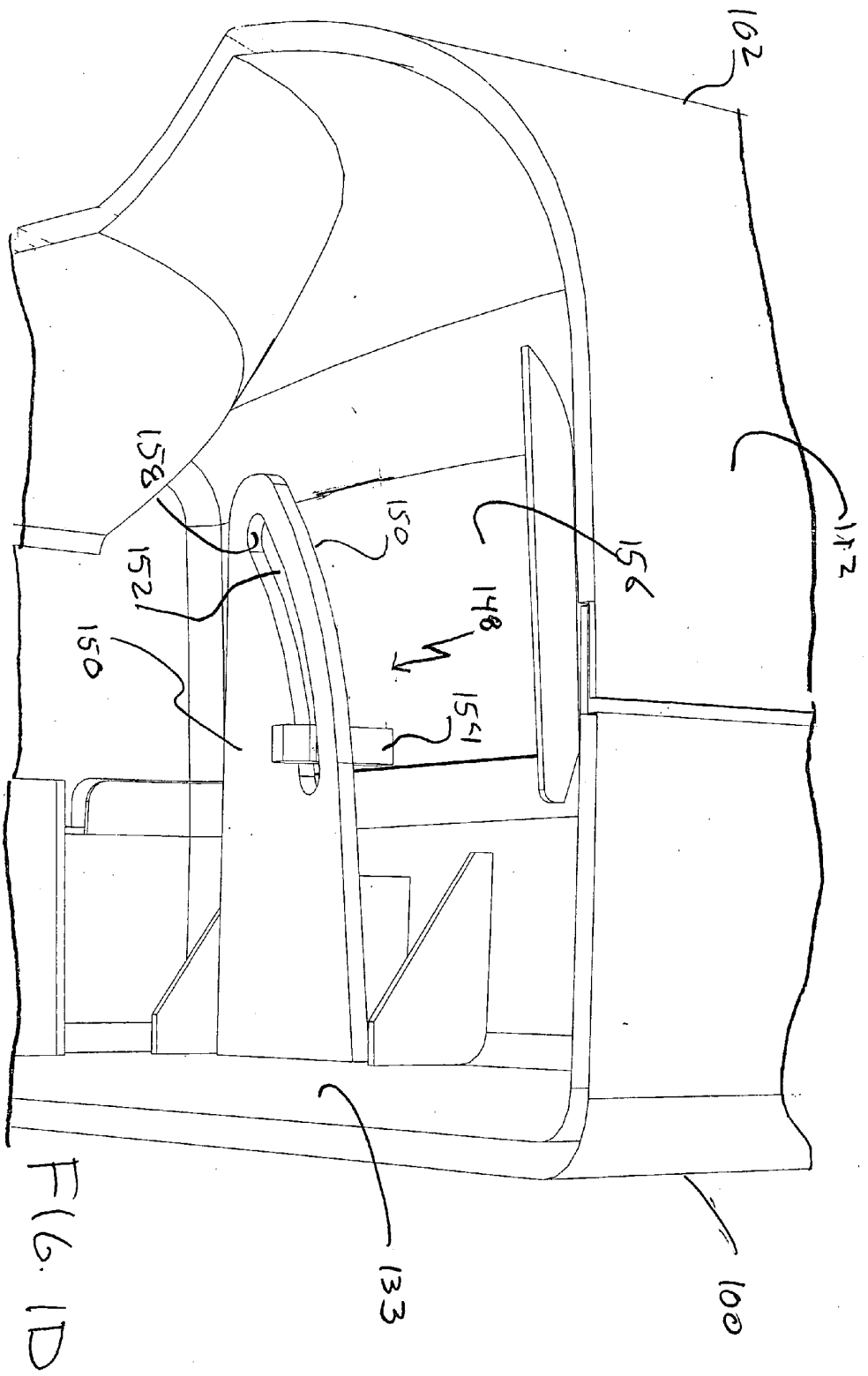


FIG. 1C



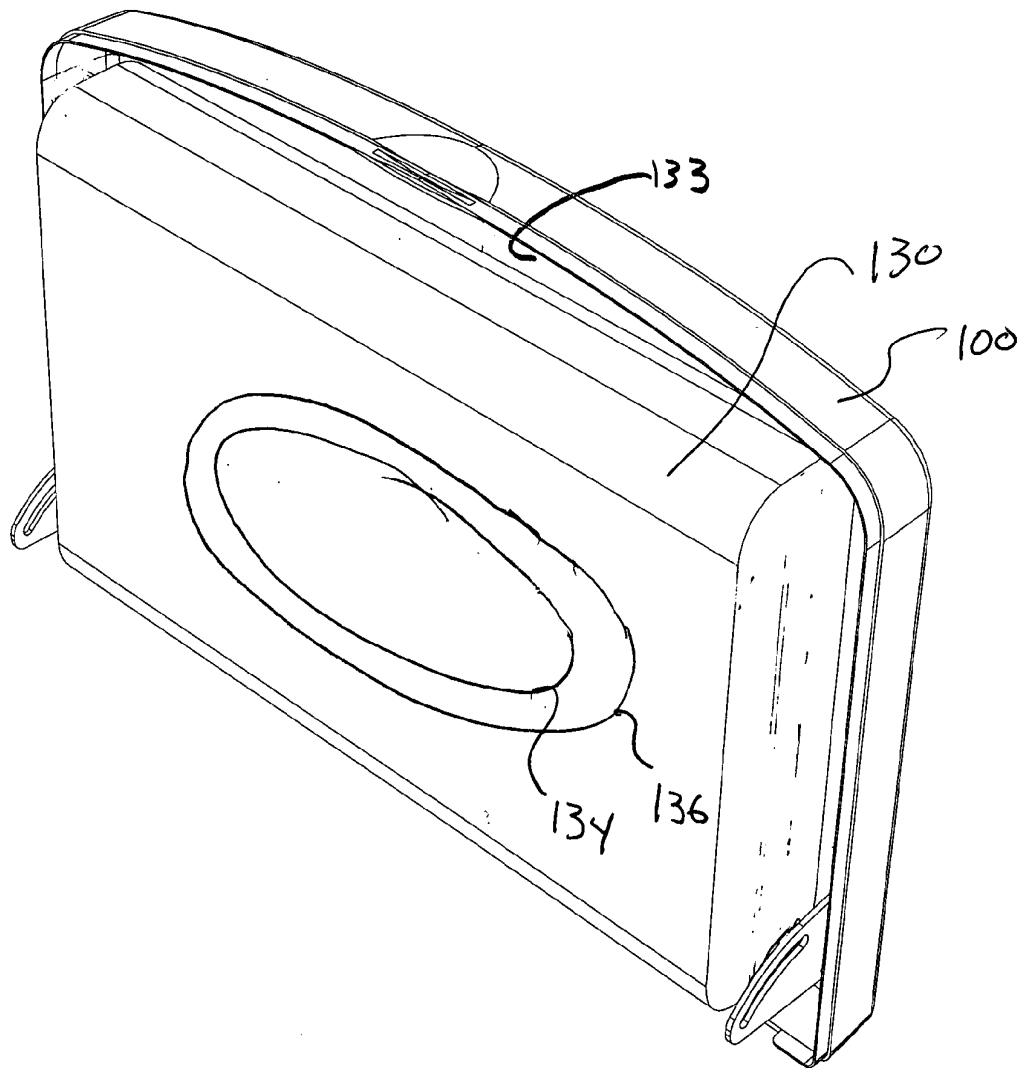


FIG 1E

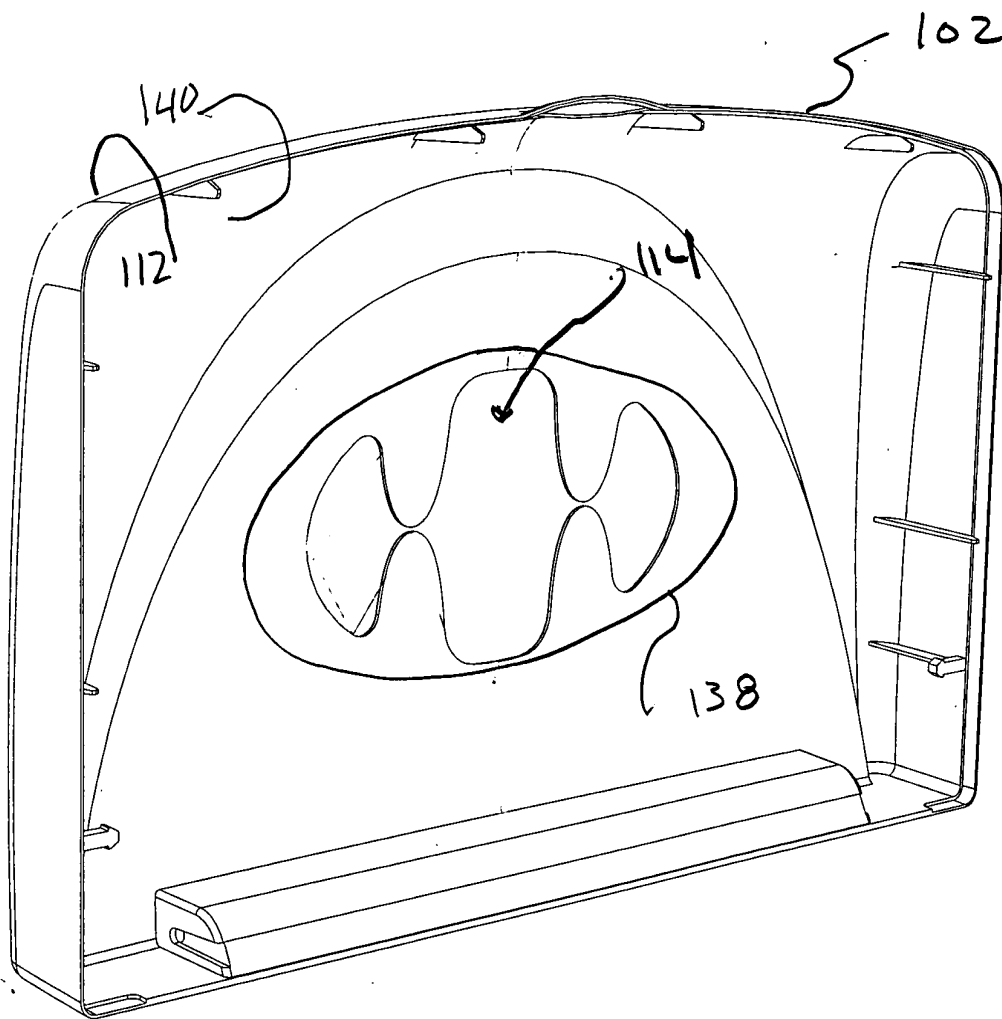
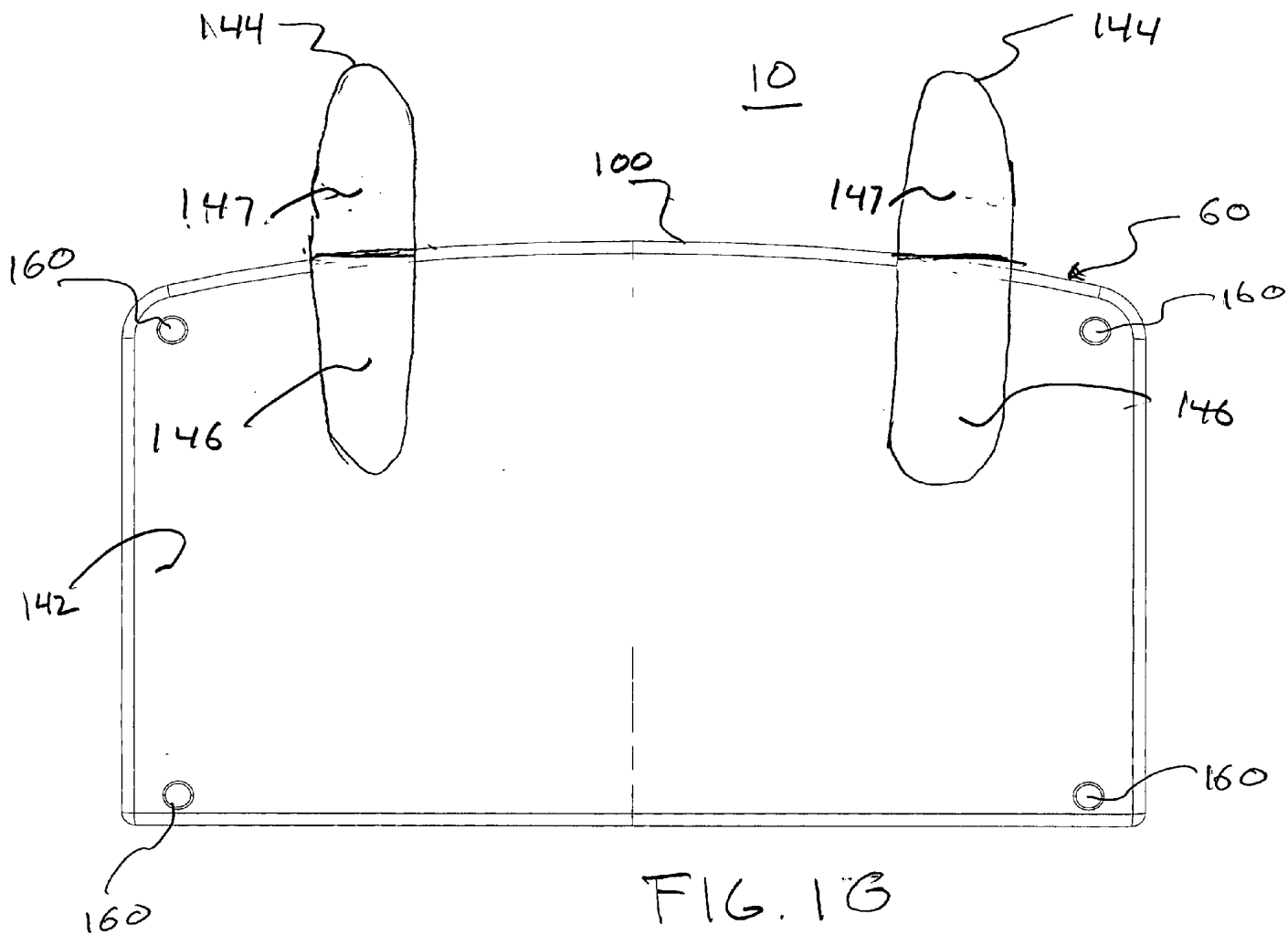
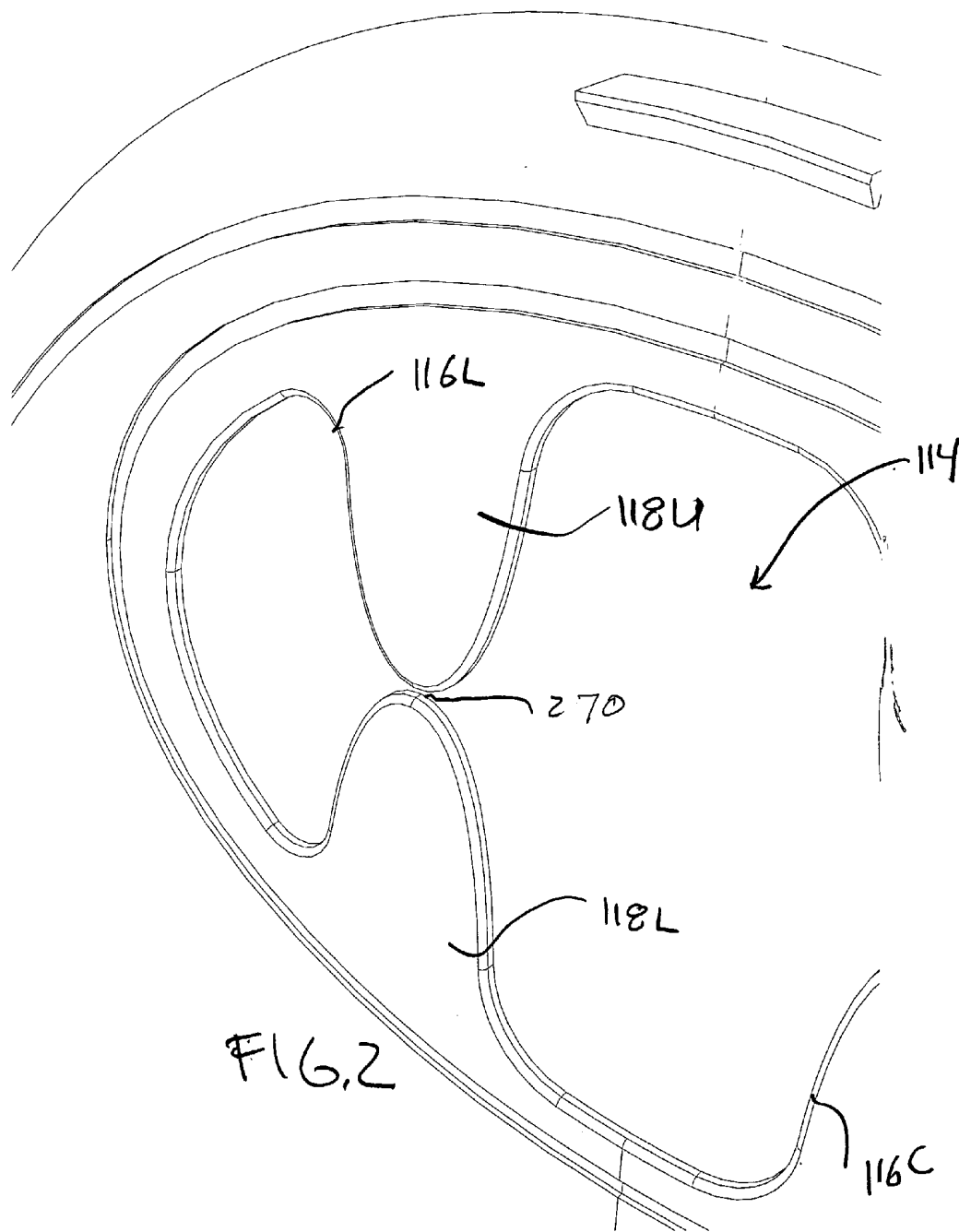


FIG. 1F





WIPES DISPENSING SYSTEM

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention relates generally to wipes dispensers, and, more specifically, to a wipes dispensing system including a mounting element releasably mountable to fixed surface. The wipes dispensing system provides for easy dispensing of wipes in a variety of environments and in various orientations of the dispenser.

[0003] 2. Description of the Related Art

[0004] Dry, wet or partially wetted cleaning wipes are known in the art. Other similar sheet-like substrates such as towels, sponges, pads, napkins, diapers etc are also known in the art.

[0005] Such items have been packaged in a number of different ways. For example cleaning wipes, tissues, napkins, etc. are often packaged in a standard dispenser box, sometimes with a removable or hinged lid. Such packaging, however, raises the problem of locating, grasping and removing the first substrate at the front of the dispenser package from an aperture in the package.

[0006] This problem has been addressed in the prior art by stacking the individual wipes or other substrates horizontally, interweaving each of the substrates with the preceding and subsequent substrate, sometimes referred to as interleaving the wipes. For example, containers or dispensers for wet wipes have been available wherein each of the wet wipes stacked in the container has been arranged in a folded configuration such as a c-folded, z-folded or quarter-folded configuration well known to those skilled in the art. A web of perforated wipes, formed as a roll and separated at the dispenser when needed, has also been used to address this problem.

[0007] By stacking the substrates or by using a perforated roll of wipes, when the user removes a substrate, the next substrate may be made to "pop-up" to be easily grasped the next time a wipe is needed. However, these "pop-up" dispensing systems can only be successfully used when the substrate is sufficiently flexible and where the aperture through which the wipes are dispensed offers sufficient resistance to avoid "roping" of the interleaved wipes or perforated wipes. If the dispensing aperture does not sufficiently resist the removal of a wipe, the interleaving of the wipes causes multiple wipes to be dispensed, i.e. the wipes "rope". Roping in a rolled web of perforated wipes is also possible when insufficient force at the dispenser aperture allows multiple wipes to dispense without singulation of the wipes at the wipes separation perforations.

[0008] In the prior art, dispensing aperture resistance was accomplished by providing the dispensing aperture as a narrow slit. The narrow slit contacted the wipes during dispensing, thus providing a resistance while dispensing a wipe. However, with a narrow slit, a user could not easily grasp the front wipe to thread the wipe through the aperture for dispensing.

[0009] Accordingly, there is a need for improved structures and processes for the dispensing of wipes.

SUMMARY OF THE INVENTION

[0010] In accordance with one aspect of the present invention, a releasably mountable wipes dispensing system is

provided. The wipes dispensing system includes a dispenser which defines an interior space configured to receive a pouch containing a stack or web of wipes. In one embodiment, the stack or web of wipes is disposed within the interior space directly and the pouch containing the wipes is eliminated. The wipes dispenser has a back attachment surface for attaching the dispenser to a mounting element. The mounting element, and thus the wipes dispenser, is attachable in a variety of orientations and to a variety of fixed mounting surfaces, such as, for example, a wall, the door or bottom surface of a cabinet, a mirror surface, the under-counter surface of a counter top, etc. In one embodiment, the wipes dispenser is releasably mounted to a surface by means of stretch release adhesive tape. The stretch release tape may have a range of dimensions as well as a range of adhesive formulations.

[0011] The dispenser includes a dispensing aperture that is oriented substantially parallel to the attachment surface of the dispenser, and which is configured to provide easy and reliable dispensing of single wipes from a stack of wipes contained in the dispenser. The dispensing aperture is covered by a dispensing lid that pivots opens for easy access to the interior of the dispenser.

[0012] In one embodiment, a pop-up stack of wipes, which is typically packaged in a flexible pouch, is placed in a pouch space in the interior of the dispenser. Wipes may also be disposed directly in the interior of the dispenser without the use of a pouch. In one embodiment having a pouch, the pouch includes a pouch aperture cut out through the front of the pouch to the stack of wipes. A removable adhesive label covers the aperture to prevent contamination of the wipes prior to use and to prevent dryout of wet wipes. In other embodiments, the wipes stack can be non-pop-up, or can be provided on a roll, where the wipes are connected consecutively in a perforated web.

[0013] In use, the in one embodiment is inserted into the interior pouch space of the dispenser via a refill door that pivots opens from a base of the dispenser. In one embodiment, this refill door is configured with a refill door holder that limits the extent to which the refill door can open to about 35 degrees. The refill door holder allows a user to place the pouch into the container using only one hand (i.e., there is no need to hold the front face of the door open while placing the pouch into the container).

[0014] A variety of wipe substrates and wet formulations can be used with the dispenser. Wipes may be of a variety of dimensions, substrate densities, folded stack dimensions, wipe-stack counts or stack weights. The dispenser may be used with dry, wet or partially wetted wipes.

[0015] A variety of attachment means is possible. The wipes dispenser of the present invention may be releasably mounted to a fixed surface by mounting elements, such as, for example, velcro tapes, suction cups, magnets, screws, removable double-sided foam or other tapes, micro suction, static cling films or by means of a removable mounting bracket. Further, a variety of dispenser attachment orientations is possible, such as, for example, on a wall, with the longer dispenser dimension oriented either parallel, vertical or slanted to the ground. The dispenser may also be mounted with the dispensing aperture oriented perpendicular to the mounting surface, such that the wipes are dispensing in a

parallel orientation to the mounting surface. The dispenser could also be mounted "upside down", i.e., under an overhead kitchen cabinet.

[0016] The dispenser may be attached to a variety of surfaces, such as, for example, painted surfaces, tile, finished wood, particleboard, etc. The present invention is sufficiently flexible to fit in a variety of environments, including high humidity environments, such as bathrooms or near kitchen sinks, or environments subject to low temperatures, such as garages and outdoor work/tool sheds.

[0017] Thus, by the present invention, a user may conveniently place, load, and extract wipes wherever and whenever generally needed or useful. Further, the wipes dispensing system may be releasably mounted such that wipes may be dispensed from any direction and from a variety of orientations chosen by the user. Finally, the wipes dispenser system may be easily removed or relocated when desired.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] The foregoing aspects and others will be readily appreciated by the skilled artisan from the following description of illustrative embodiments when read in conjunction with the accompanying drawings, wherein:

[0019] **FIG. 1A** shows a perspective view of an embodiment of a wipes dispensing system having a base and a dispensing lid in a closed position;

[0020] **FIG. 1B** shows a perspective view of the embodiment of the wipes dispensing system shown in **FIG. 1A**, but with the dispensing lid pivoted in an open position;

[0021] **FIG. 1C** shows a perspective view of the embodiment of the wipes dispensing system shown in **FIG. 1A**, with a refill door in an open position;

[0022] **FIG. 1D** is a cut-away side view of wipes dispensing system **10** showing a refill door holder;

[0023] **FIG. 1E** shows the wipes dispensing system shown in **FIG. 1C**, with the refill door and dispensing lid removed for a more complete view of a pouch;

[0024] **FIG. 1F** shows a perspective view of the refill door shown in **FIG. 1B**, taken toward the refill door inside, surface;

[0025] **FIG. 1G** shows a back plan view of the wipes dispensing system shown in **FIG. 1A**, taken toward a base outside surface from the back of the base; and

[0026] **FIG. 2** is a close-up view of the portion of **FIG. 1B** circled in dotted line, showing a corresponding upper gripper and lower gripper set.

[0027] Reference will now be made to the drawings wherein like numerals refer to like parts throughout.

DETAILED DESCRIPTION

[0028] In accordance with the principles of the present invention, provided is a wipes dispensing system that releasably mounts to a mounting element, where the mounting element releasably attaches to a mounting surface. The wipes dispensing system provides for convenient and easy dispensing of wipes in a variety of environments and in various orientations of the wipes dispensing system.

[0029] The wipes dispensing system of the present invention includes a dispenser comprising a base and a refill door pivotably coupled to the base. When the refill door is pivoted to a closed position relative to the base, a pouch space is defined by the base and the refill door.

[0030] The wipes dispensing system of the present invention further includes a replaceable pouch, which contains a stack of singulated folded wipes or a web of perforated wipes. In use, the refill door of the dispenser is pivoted to an open position relative to the base. A pouch is placed between the base and the refill door. When the refill door is next pivoted to a closed position relative to the base, the pouch, and web or stack of webs contained therein, is enclosed within the pouch space. When the pouch is properly aligned within the dispenser, a pouch aperture in the pouch is aligned with a refill door aperture in the refill door. Thus, wipes are grasped by a user and are simultaneously withdrawn through the pouch aperture and through the refill door aperture. The refill door aperture on the refill door is large enough to allow threading of the first wipe by grasping the first wipe through the refill door aperture and pouch aperture.

[0031] In one embodiment, a dispensing lid coupled to the refill door is pivoted to a closed position relative to the refill door to seal the refill door aperture when the wipes dispensing system is not in use. When it is desired to access wipes in the pouch or the stack or web of wipes disposed directly within the interior of the dispenser, the dispensing lid is pivoted to an open position relative to the refill door, thereby making wipes in the pouch accessible through the refill door and pouch apertures.

[0032] When all the wipes in the pouch are removed and used, the refill door is pivoted open and the empty pouch removed from the dispenser. A new pouch is placed between the base and the refill door and the refill door is pivoted closed, thereby enclosing the new refill pouch within the pouch space.

[0033] The wipes dispensing system of the present invention may be released from the mounting element when it is no longer desired or when it is to be moved. The mounting element is removed from the mounting surface. The dispensing system may be remounted and reattached to a new mounting surface if desired. In one embodiment, the dispenser includes hooks on each of its lateral ends that hang onto the sides of a paper towel dispenser. The hooks are of sufficient length that the wipes dispenser fits under a full roll of paper towels. In this embodiment, the dispenser may be easily removed when no longer desired. In an alternate embodiment, the wipes dispensing system may be permanently mounted to a mounting surface with, for example, permanent high tack adhesives, screws, permanently attached brackets, and the like.

[0034] More particularly, **FIG. 1A** shows a perspective view of one embodiment of a wipes dispensing system **10**, with a dispensing lid **108** in a closed position. Wipes dispensing system **10** includes a dispenser **60**, a pouch **130** (**FIG. 1C**), and a mounting element such as stretch release tape **144**. Dispenser **60** includes a base **100**. As described more fully below with reference to **FIG. 1C**, a refill door **102** is, in one embodiment, pivotably coupled to base **100** such that refill door **102** may be placed in a closed position relative to base **100** (**FIG. 1A**), or refill door **102** may be placed in an open position relative to base **100** (**FIG. 1C**).

[0035] Coupled to base 100 is a refill door latch hook 104 adapted to abuttingly contact and cooperate with a refill door latch contact 106 coupled to refill door 102, to releasably lock refill door 102 with base 100 whenever refill door 102 is pivoted to establish a closed relationship with base 100. In other embodiments, methods other than the abutting contact between refill door latch contact 106 and refill door latch hook 104 established by pivoting refill door 102 to base 100, may be adapted to releasably lock refill door 102 in a closed relationship with base 100. For example, base 100 and refill door 102 may be separate and uncoupled and may be releasably locked in a closed relationship merely by snapping together base 100 and refill door 102. Any manner of releasable fitment or fastening elements well known to those of skill in the art may be used to releasably lock refill door 102 with base 100.

[0036] As shown in FIG. 1A, dispenser 60 further includes a dispensing lid 108 having a dispensing lid outside surface 110. Dispensing lid 108 is pivotably coupled to a refill door outside surface 112 of refill door 102, such that, dispensing lid 108 may be placed in a closed position relative to refill door 102, or, alternatively, that dispensing lid 108 may be placed in an open position relative to refill door 102. In one embodiment, dispensing lid 108 is pivotably coupled to refill door 102 by means of a pin and hole configuration well known to those of skill in the art. However, it is envisioned that any means of pivotally coupling the dispensing lid 108 to the refill door 102 may be used in the present invention.

[0037] FIG. 1B shows a perspective view of the embodiment of the wipes dispensing system 10 shown in FIG. 1A, but with dispensing lid 108 pivoted in an open position. Refill door 102 defines a refill door aperture 114. Refill door aperture 114 includes a center lobe 116C and two or more side lobes. In communication with 116C at one side of 116C is a left side lobe 116L. In communication with 116C, at an opposite side of 116C from 116L, is a right side lobe 116R. In this embodiment, refill door aperture 114 is advantageously configured such that a user may readily grasp the front wipe closest refill door aperture 114 from a stack or web of wipes (not individually shown) contained in a pouch 130 (FIG. 1C) or directly disposed within the interior of dispenser 60 without the need to thread wipes through refill door aperture 114.

[0038] In other embodiments, refill door aperture 114 may have shapes other than the three-lobe configuration shown in FIG. 1B. For example, refill door 102 may define a single-lobed refill door aperture 114 with an oval, round, rectangular or square shape. The shape of the refill door aperture 114 is configured such that a user may readily grasp the front wipe, of a stack or web of wipes, which is closest to the refill door aperture 114, without the need to thread wipes through refill door aperture 114. Other configurations of refill door aperture 114 will be readily apparent to those of skill in the art, and so are not discussed further to avoid detracting from the presentation of the present invention.

[0039] In one embodiment, refill door 102 further defines a pair of appendages, sometimes called upper, (e.g. first), grippers 118U, projecting inward from the upper outside edges of refill door aperture 114 toward its center. Refill door 102 further defines another-pair of appendages, sometimes called lower, (e.g. second), grippers 118L. Each gripper

118L projects inward from the lower outside edge of refill door aperture 114 toward its center. Each lower gripper 118L is opposite a corresponding one of the pair of upper grippers 118U. As described more fully below with reference to FIG. 2, each corresponding pair of upper grippers 118U and lower grippers 118L defines a gap 270 through which wipes pass when extracted from wipes dispensing system 10.

[0040] As shown in FIG. 1B, circumscribing refill door aperture 114 is a series of one or more grooves. An inner groove 120 is formed as a depression indented into refill door outside surface 112. Also, circumscribing refill door aperture 114, at a distance from refill door aperture 114 greater than the distance where inner groove 120 is formed, is an outer groove 121. Outer groove 121 is likewise formed as a depression indented into refill door outside surface 112. In other embodiments, more or fewer than two depressions or grooves may be formed in refill door outside surface 112.

[0041] One or more interfaces are formed by contacting rings, which are configured as ridges along the dispensing lid inside surface 122, with corresponding grooves. These interfaces, formed from rings and corresponding grooves, seal the refill door aperture 114 and prevent moisture loss from wet or partially wetted wipes whenever dispensing lid 108 is closed on refill door 102. An inner ring 124, is coupled to a dispensing lid inside surface 122 of dispensing lid 108 opposite dispensing lid outside surface 110 (FIG. 1A) of dispensing lid 108. Inner ring 124 is configured as a ridge projecting away from dispensing lid inside surface 122. Inner ring 124 is adapted to abuttingly contact, mate, and cooperate with inner groove 120 to form an inner interface (not shown) whenever dispensing lid 108 is placed in a closed relationship with refill door 102 (as shown in FIG. 1A). This inner interface seals refill door aperture 114 from the outside environment at refill door outside surface 112. An outer ring 125 is coupled to dispensing lid inside surface 122. Outer ring 125 is likewise configured as a ridge projecting from dispensing lid inside surface 122. Outer ring 125 is adapted to abuttingly contact, mate and cooperate with outer groove 121 to form an outer interface (not shown) further sealing refill door aperture 114 from the outside environment at refill door outside surface 112 whenever dispensing lid 108 is placed in a closed relationship with refill door 102.

[0042] In other embodiments, more or fewer than two rings may be coupled to dispensing lid inside surface 122 to abuttingly contact, mate and cooperate with corresponding grooves to form more or fewer than two interfaces sealing refill door aperture 114 from the outside environment at refill door outside surface 112 whenever dispensing lid 108 is placed in a closed relationship with refill door 102. Moreover, it is envisioned in further embodiments that the one or more grooves, e.g. grooves 120, 121, may be formed on the dispensing lid inside surface 122, while the one or more rings, e.g. rings 124, 125, may be formed on the refill door outside surface 112 to create the interfaces sealing refill door aperture 114 from the outside environment at refill door outside surface 112 whenever dispensing lid 108 is placed in a closed relationship with refill door 102.

[0043] Similarly, as described above with reference to refill door latch hook 104 and refill door 102 (and as shown in FIG. 1B.), coupled to dispensing lid 108 is a dispensing lid latch hook 126 adapted to abuttingly contact and coop-

erate with a dispensing lid latch contact 128 coupled to refill door outside surface 112 of refill door 102, to releasably lock dispensing lid 108 closed with refill door 102 whenever dispensing lid 108 is placed in closed relationship with refill door 102.

[0044] FIG. 1C shows a perspective view of the embodiment of wipes dispensing system 10 shown in FIG. 1A, with refill door 102 in an open position. In one embodiment, refill door 102 is pivotable relative to base 100 by means of a living hinge (not shown), well known in the art, thus allowing base 100 and refill door 102 to be integrally formed in one piece. In another embodiment, refill door 102 is pivotable relative to base 100 by any hinged means, such that refill door 102 and base 100 are formed in two or more pieces and joined along the hinge means. Refill door 102 and base 100 may be formed, integrally or separately, from a variety of materials, such as, for example, polypropylene (PP), high density polyethylene (HDPE), polyethylene terephthalate (PET), polystyrene (PS), acrylonitrile—butadiene—styrene (ABS), and other engineered plastics, and may be formed with a variety of fabrication technologies, such as, for example, thermoforming. The other components of dispenser 60 may be similarly formed.

[0045] A pouch 130, containing a web or stack of wipes (not individually shown), is positioned between refill door 102 and base 100. When refill door 102 is next placed in a closed relationship with base 100, pouch 130 is enclosed with the pouch space defined by base 100 and refill door 102. In another embodiment, wipes may be disposed directly within the interior of dispenser 60 without a pouch 130.

[0046] In one pouch embodiment, pouch 130 includes a slider 132 on each of the left and right lateral sides of pouch 130. A pair of tracks (not shown) on a base inside surface 133 of base 100 is adapted to slidably receive pouch 130 at each slider 132. When fully engaged in the tracks, pouch 130 is secured within the pouch space defined by base 100 and refill door 102 when refill door 102 is closed. In this manner, pouch 130 is secured to base 100 and advantageously remains in place, within the pouch space defined by refill door 102 closed to base 100, whenever a user extracts a wipe contained in pouch 130.

[0047] Other means of securing pouch 130 to base 100 will be readily apparent to those of skill in the art. For example, pouch 130 may be secured to base 100 by means of mating fitment elements, velcro tapes, suction cups, magnets, removable double-sided foam or other tapes. Such means of securing pouch 130 may be placed at the left and right lateral edges, top or bottom edges or back surface of pouch 130. In another embodiment, the left and right lateral sides of pouch 130 are formed as gusseted edges, i.e., folded inward upon themselves, to allow a tighter fit of pouch 130 into the pouch space defined when refill door 102 is closed with base 100. The top and bottom edges of pouch 130 may be similarly formed.

[0048] FIG. 1D is a cut-away side view of wipes dispensing system 10 showing a refill door holder 148 within the pouch space defined by base 100 and refill door 102. In one embodiment, refill door holder 148 limits the extent to which refill door 102 can pivot open relative to base 100 to about 35 degrees.

[0049] Refill door holder 148 includes a guide 150 coupled to base inside surface 133 of base 100. Guide 150

is configured generally as a plate-like projection, longitudinally directed away from base inside surface 133 toward refill door 104. Guide 150 includes a slot 152 adapted to cooperated with a pin 154 coupled to a refill door inside surface 156 opposite refill door outside surface 112 (FIG. 1A).

[0050] Slot 152 is configured as an arced, slit-like aperture through guide 150 from one plate surface of guide 150 to the opposite plate surface of guide 150 and having an arc angle of about 35 degrees. Pin 154 is configured as a shaft-like projection longitudinally directed away from refill door inside surface 156 toward guide 150. Pin 154 is positioned on refill door inside surface 156, and the size of pin 154 is selected, such that, pin 154 passes through and beyond slot 152 of guide 150 when refill door 102 is closed against base 100.

[0051] When refill door 102 is pivoted by a user of dispenser system 10, to open refill door 102 and insert pouch 130 (FIG. 1C), pin 154 moves within slot 152 following the arced path of slot 152. As refill door 102 pivots, pin 154 rotates until a slot lower extent 158 of slot 152 is reached. At this point, slot lower extent 158 constrains pin from further rotational motion within slot 152 relative to base 100. Thus, refill door 102, to which pin 154 is coupled, is likewise constrained from further opening by pivotal rotation relative to base 100. In horizontal and vertical mounting configurations, pin 154 rests at slot lower extent 158 of slot 152 when the user releases refill door 102 after opening. Thus, refill door holder 154 allows a user to place the pouch into the container using only one hand (i.e., there is no need to hold the refill door 102 open while placing pouch 130 (FIG. 1C) within the pouch space defined by base 100 and refill door 102.

[0052] In one embodiment two guides 150, one at each side of dispenser system 10, are used to limit the opening of refill door 102. Further, other means of limiting the opening or refill door 102 are possible. For example, the extent of pivotal rotation of refill door 102 may be limited with suitable length straps, elastomeric cords, or coil springs attached at one end to refill door 102 and at the other end to base 102.

[0053] FIG. 1E shows wipes dispensing system 10 shown in FIG. 1C with refill door 102 and dispensing lid 108 removed for a more complete view of pouch 130. FIG. 1F shows a perspective view of refill door 102 taken toward a refill door inside surface 140 of refill door 102 opposite refill door outside surface 112 shown in FIG. 1A. Referring to FIG. 1E, pouch 130 includes a pouch aperture 134 at the front of pouch 130, through which wipes are removed. In one embodiment, pouch aperture 134 is advantageously configured such that a user may readily grasp the front wipe from the web or stack of wipes (not shown) contained in pouch 130 without the need to thread wipes through pouch aperture 134. A removable adhesive label (not shown) may cover pouch aperture 134 to prevent contamination of the wipes prior to use and to prevent dryout of wet or partially wetted wipes. In this embodiment, the adhesive label is removed before placement of pouch 130 between refill door 102 and base 100.

[0054] In one embodiment, pouch 130 includes a pouch fitment element 136 circumscribing pouch aperture 134. In this embodiment, pouch fitment element 136 is adapted to

mate and cooperate with a refill door fitment element 138 (FIG. 1F) coupled to a refill door inside surface 140 opposite refill door outside surface 112 of refill door 102. When loading pouch 130 in this embodiment, a user aligns and abuttingly contacts pouch fitment element 136 on pouch 130 with refill door fitment element 138 on refill door 102 to secure pouch 130 to refill door 102. In this manner pouch 130 advantageously remains in place and substantially unmoved within the pouch space whenever a user extracts a wipe contained in pouch 130.

[0055] FIG. 1G shows a perspective-view of dispenser 60 taken toward a base outside surface 142 opposite base inside surface 133 (FIG. 1C) of base 100. Referring to FIG. 1G together with FIG. 1A, in one embodiment, wipes dispensing system 10 further includes one or more stretch release adhesive tapes 144, well known to those of skill in the art (See, for example, U.S. Pat. No. 6,569,521 B1 by Sheridan et al.) Dispenser 60 is attached to a mounting surface S (FIG. 1A) by means of stretch release adhesive tape 144.

[0056] When mounting dispenser 60 to mounting surface S, a first protective layer (not shown) is removed from stretch release adhesive tape 144 to expose a first adhesive layer (not shown) on one tape face. The first adhesive layer is placed in abutting contact with base outside surface 142 (see FIG. 1G) of base 100 to adhesively secure dispenser 60 to stretch release adhesive tape 144. A second protective layer (not shown) is removed from stretch release adhesive tape 144 to expose a second adhesive layer (not shown) on a second tape face opposite the first tape face of stretch release adhesive tape 144. The second adhesive layer is then placed in abutting contact with mounting surface S to adhesively attach stretch release tape-144 and dispenser 60 to mounting surface S.

[0057] Stretch release adhesive tape 144 may be selected to provide secure attachment of dispenser 60 to mounting surface S under a variety of conditions, such as, in cold, hot or humid environments. Stretch release adhesive tape 144 may also be selected to provide secure attachment of dispenser 60 to a variety of fixed surfaces, such as, painted surfaces, tile, glass, finished wood, drywall, etc. Further, dispenser 60 may be mounted on the top of horizontal surfaces, on vertical or slanted surfaces, or may be mounted to hang from the bottom of horizontal surfaces, such as for example, the under cabinet surfaces of kitchen or bathroom cabinets.

[0058] In one embodiment, a stretch release tab 146 of stretch release adhesive tape 144 extends beyond dispenser 60. Thus, when it is desired that dispenser 60 be removed from attachment to mounting surface S, stretch release tab 146 is pulled to release the second adhesive layer attaching dispenser 60 to mounting surface S. In another embodiment, stretch release tab is placed between base 100 and mounting surface S to hide stretch release tab 146 from view. In this embodiment, cut-outs are supplied in base 100, through which stretch release tabs 146 may be accessed and pulled to release stretch release adhesive tape 144 whenever it is desired to remove dispenser 60 from mounting surface S. Typically, dispenser 60, mounted using stretch release adhesive tape 144, may be removed from mounting surface S without damage to mounting surface S or dispenser 60. A new stretch release adhesive tape 144 may then be used to mount dispenser 60 to another surface. In another embodi-

ment dispenser 60 is releasably mounted to mounting surface S by other means, such as, for example, velcro tapes, suction cups, magnets, screws and removable double-sided foam tapes and the like.

[0059] In one embodiment, base 100 includes one or more pads 160 coupled to the back of base outside surface 142 where stretch release tape 144 is attached the base 100. As shown in FIG. 1G pads 160 are configured as cylindrical projections coupled at one end to base outside surface 142 and axially directed on a course away from base outside surface 142. The length of pads 160 is selected about equal to the thickness of stretch release tape 144. Without pads 160, dispenser 60 may rock about stretch release tape 144 as a pivot point. Pads 160 act as additional points defining back outside surface 142, thereby precluding rocking pivotal motion of dispenser 60 as wipes are dispensed. Other shapes for pads 160 are possible.

[0060] FIG. 2 shows a close-up view of the portion of FIG. 1B circled in dotted line as 2', showing a corresponding upper gripper 118U and lower gripper 118L set. Referring to FIGS. 1B and 2 together, opposing upper gripper 118U and lower gripper 118L define a gap 270. After pouch 130 is placed in the pouch space, the front wipe of pouch 130 is grasped through center lobe 116C of refill door aperture 114. As the wipe is extracted, the wipe threads through gap 270 and contacts one or both of upper gripper 118U and lower gripper 118L. Thus, a frictional force resisting the extraction of the wipe is generated as the wipe is further extracted in contact with upper gripper 118U and lower gripper 118L.

[0061] As described above, stacked wipes may be made to "pop-up" when the resisting frictional force generated by upper gripper 118U and lower gripper 118L is sufficient to avoid "roping" of the interleaved wipes. Further, for a roll of perforated wipes, by threading the web of perforated wipes through gap 270, singulation of wipes at the wipes separation perforations may be accomplished. In one embodiment, the resisting force generated by upper gripper 118U and lower gripper 118L at gap 270 is about 2 pounds force. However, it is envisioned that more or less resisting force may be attained using the present invention and the desired dispensing properties of the wipes, dispenser 60 and the wipes dispensing system 10.

[0062] The embodiments of the wipes dispensing system of the present invention are illustrated in detail in the context of a mountable wipes dispenser and a flexible wipes pouch. The skilled artisan will readily appreciate, however, that the invention can be carried out by different equipment, materials and devices, and that various modifications, both as to the equipment and operating procedures, can be accomplished without departing from the scope of the invention itself. The materials, structures, and methods disclosed herein will have application in a number of other contexts where convenient and easy dispensing of single sheets of substrate material is desirable.

What is claimed is:

1. A wipes dispensing system comprising:
a dispenser comprising:

- a base, said base having a base inside surface, and a base outside surface opposite said base inside surface;

a refill door coupled to said base, said refill door having a refill door inside surface, a refill door outside surface opposite said refill door inside surface, and a refill door aperture through said refill door;

a dispensing lid coupled to said refill door, said dispensing-lid having a dispensing lid inside surface and a dispensing lid outside surface opposite said dispensing lid inside surface; and

wherein said base and said refill door define a pouch space when said refill door is placed in a closed relationship with said base;

a pouch within said pouch space; and

a mounting element coupled to a said base outside surface for attaching said dispenser to a mounting surface.

2. The wipes dispensing system of claim 1 wherein said refill door is pivotably coupled to said base.

3. The wipes dispensing system of claim 2 further comprising a living hinge pivotably coupling said refill door to said base.

4. The wipes dispensing system of claim 3 wherein said refill door, said base, and said living hinge are integrally formed.

5. The wipes dispensing system of claim 1 wherein said dispensing lid is pivotably coupled to said refill door.

6. The wipes dispensing system of claim 1 wherein said dispenser comprises plastic selected from the group consisting of PP, HDPE, PET, PS, ABS, and other engineered plastics.

7. The wipes dispensing system of claim 1 wherein said mounting element comprises stretch release adhesive tape.

8. The wipes dispensing system of claim 7 further comprising a cut-out in said base for accessing a stretch release tab of said stretch release adhesive tape.

9. The wipes dispensing system of claim 7 further comprising one or more pads coupled to said base outside surface, said pads having a length about equal to the thickness of said stretch release adhesive tape.

10. The wipes dispensing system of claim 1 wherein said mounting element is selected from the group consisting of velcro tapes, suction cups, micro suction cups, magnets, screws, removable double-sided foam tapes, static cling films and removable mounting brackets.

11. The wipes dispensing system of claim 1 wherein said pouch comprises one or more wipes.

12. The wipes dispensing system of claim 1 wherein one or more lateral edges of said pouch is gusseted.

13. The wipes dispensing system of claim 1 wherein said one or more wipes comprise a stack of interleaved wipes.

14. The wipes dispensing system of claim 1 wherein said one or more wipes comprises a rolled web of perforated wipes.

15. The wipes dispensing system of claim 1 wherein said pouch further comprises a pouch aperture for accessing said one or more wipes, said pouch aperture being covered by a removable adhesive label for protecting said wipes from the outside environment.

16. The wipes dispensing system of claim 1 wherein said wipes are selected from the group consisting of dry wipes, wet wipes, and partially wetted wipes.

17. The wipes dispensing system of claim 1 further comprising:

a refill door latch hook coupled to said base;

a refill door latch contact coupled to said refill door **102**; and

wherein said refill door latch hook is adapted to abuttingly contact and cooperate with said refill door latch contact to releasably lock said refill door with said base whenever said refill door is positioned in a closed relationship with said base.

18. The wipes dispensing system of claim 1 further comprising:

a dispensing lid latch hook coupled to said refill door;

a dispensing lid latch contact coupled to said dispensing lid; and

wherein said dispensing lid latch hook is adapted to abuttingly contact and cooperate with said dispensing lid latch contact to releasably-lock said-dispensing lid with said refill door whenever said dispensing lid door is positioned to established a closed relationship with said refill door.

19. The wipes dispensing system of claim 1 further comprising:

one or more grooves formed as indentations into said refill door inside surface;

one or more-corresponding rings formed as ridges projecting from said dispensing lid outside surface;

wherein each of said one or more grooves abuttingly contacts, mates and cooperates with a corresponding one of said one or more rings to form one or more interfaces; and

wherein said interfaces seal said refill door aperture from the outside environment when said dispensing lid is in a closed relationship with said refill door.

20. The wipes dispensing system of claim 1 further comprising an refill door holder comprising:

a guide having a slot, said guide being coupled to said base inside surface; and

a pin coupled to said refill door inside surface wherein said pin passes through and beyond said slot of said guide, and;

wherein said refill door holder limits the extent to which said refill door pivots open relative said base.

21. A wipes dispensing system comprising:

a dispenser comprising:

a base;

a refill door coupled to said base;

a dispensing lid coupled to said refill door; and

a pouch space defined by said base and said refill door;

a pouch of wipes disposed within said pouch space; and

a mounting element for attaching said dispenser to a mounting surface.

22. The wipes dispensing system of claim 21 wherein said refill door further comprises a refill door aperture through said refill door;

wherein said pouch further comprises a pouch aperture; and

wherein said refill door aperture and said pouch aperture are aligned within said pouch space such that wipes are dispensed through said refill door aperture and said pouch aperture.

23. The wipes dispensing system of claim 21 wherein said refill door is pivotably coupled to said base.

24. The wipes dispensing system of claim 23 further comprising a living hinge pivotably coupling said refill door to said base.

25. The wipes dispensing system of claim 24 wherein said refill door, said base, and said living hinge are integrally formed.

26. The wipes dispensing system of claim 21 wherein said dispensing lid is pivotably coupled to said refill door.

27. The wipes dispensing system of claim 21 wherein said dispenser comprises plastic selected from the group consisting of PP, HDPE, PET, PS, ABS, and other engineered plastics.

28. The wipes dispensing system of claim 21 wherein said mounting element comprises stretch release adhesive tape.

29. The wipes dispensing system of claim 28 further comprising a cut-out in said base for accessing a stretch release tab of said stretch release adhesive tape.

30. The wipes dispensing system of claim 28 further comprising one or more pads coupled to said base, said pads having a length about equal to the thickness of said stretch release adhesive tape.

31. The wipes dispensing system of claim 21 wherein said mounting element is selected from the group consisting of velcro tapes, suction cups, micro suction cups, magnets, screws, removable double-sided foam tapes, static cling films and removable mounting brackets.

32. The wipes dispensing system of claim 21 wherein said pouch comprises one or more wipes.

33. The wipes dispensing system of claim 21 wherein one or more lateral edges of said pouch is gusseted.

34. The wipes dispensing system of claim 21 wherein said one or more wipes comprise a stack of interleaved wipes.

35. The wipes dispensing system of claim 21 wherein said one or more wipes comprises a rolled web of perforated wipes.

36. The wipes dispensing system of claim 21 wherein said pouch further comprises a pouch aperture for accessing said one or more wipes, said pouch aperture being covered by a removable adhesive label for protecting said wipes from the outside environment.

37. The wipes dispensing system of claim 21 wherein said wipes are selected from the group consisting of dry wipes, wet wipes, and partially wetted wipes.

38. The wipes dispensing system of claim 21 further comprising:

a refill door latch hook coupled to said base;

a refill door latch contact coupled to said refill door; and

wherein said refill door latch hook is adapted to abuttingly contact and cooperate with said refill door latch contact to releasably lock said refill door with said base whenever said refill door is positioned in a closed relationship with said base.

39. The wipes dispensing system of claim 21 further comprising:

a dispensing lid latch hook coupled to said refill door;

a dispensing lid latch contact coupled to said dispensing lid; and

wherein said dispensing lid latch hook is adapted to abuttingly contact and cooperate with said dispensing lid latch contact to releasably lock said dispensing lid with said refill door whenever said dispensing lid door is positioned to established a closed relationship with said refill door.

40. The wipes dispensing system of claim 21 further comprising:

one or more grooves formed as indentations into said refill door inside surface;

one or more corresponding rings formed as ridges projecting from said dispensing lid outside surface;

wherein each of said one or more grooves abuttingly contacts, mates and cooperates with a corresponding one of said one or more rings to form one or more interfaces; and

wherein said interfaces seal said refill door aperture from the outside environment when said dispensing lid is in a closed relationship with said refill door.

41. The wipes dispensing system of claim 21 further comprising an refill door holder comprising:

a guide having a slot, said guide being coupled to said base inside surface; and

a pin coupled to said refill door inside surface wherein said pin passes through and beyond said slot of said guide, and;

wherein said refill door holder limits the extent to which said refill door pivots open relative said base.

42. A wipes dispensing system comprising:

a dispenser;

a pouch disposed within said dispenser, said pouch comprising one or more wipes; and

a mounting element coupled to a said dispenser for attaching said dispenser to a mounting surface.

43. The wipes dispensing system of claim 42 wherein said dispenser comprises plastic selected from the group consisting of PP, HDPE, PET, PS, ABS, and other engineered plastics.

44. The wipes dispensing system of claim 42 wherein said mounting element comprises stretch release adhesive tape.

45. The wipes dispensing system of claim 44 further comprising a cut-out in said dispenser for accessing a stretch release tab of said stretch release adhesive tape.

46. The wipes dispensing system of claim 44 further comprising one or more pads coupled to said dispenser, said pads having a length about equal to the thickness of said stretch release adhesive tape.

47. The wipes dispensing system of claim 42 wherein said mounting element is selected from the group consisting of velcro tapes, suction cups, micro suction cups, magnets, screws, removable double-sided foam tapes, static cling films and removable mounting brackets.

48. The wipes dispensing system of claim 42 wherein said pouch comprises one or more wipes.

49. The wipes dispensing system of claim 42 wherein one or more lateral edges of said pouch is gusseted.

50. The wipes dispensing system of claim 42 wherein said one or more wipes comprise a stack of interleaved wipes.

51. The wipes dispensing system of claim 42 wherein said one or more wipes comprises a rolled web of perforated wipes.

52. The wipes dispensing system of claim 42 wherein said pouch further comprises a pouch aperture for accessing said one or more wipes, said pouch aperture being covered by a removable adhesive label for protecting said wipes from the outside environment.

53. The wipes dispensing system of claim 42 wherein said wipes are selected from the group consisting of dry wipes, wet wipes, and partially wetted wipes.

54. A wipes dispensing system comprising:

a dispenser;

one or more wipes disposed within said dispenser; and

a mounting element coupled to a said dispenser for attaching said dispenser to a mounting surface.

55. The wipes dispensing system of claim 54 wherein said dispenser comprises plastic selected from the group consisting of PP, HDPE, PET, PS, ABS, and other engineered plastics.

56. The wipes dispensing system of claim 54 wherein said mounting element comprises stretch release adhesive tape.

57. The wipes dispensing system of claim 54 further comprising a cut-out in said dispenser for accessing a stretch release tab of said stretch release adhesive tape.

58. The wipes dispensing system of claim 54 further comprising one or more pads coupled to said dispenser, said pads having a length about equal to the thickness of said stretch release adhesive tape.

59. The wipes dispensing system of claim 54 wherein said mounting element is selected from the group consisting of velcro tapes, suction cups, micro suction cups, magnets, screws, removable double-sided foam tapes, static cling films and removable mounting brackets.

60. The wipes dispensing system of claim 54 wherein said one or more wipes comprise a stack of interleaved wipes.

61. The wipes dispensing system of claim 54 wherein said one or more wipes comprises a rolled web of perforated wipes.

62. The wipes dispensing system of claim 54, wherein said one or more wipes are selected from the group consisting of dry wipes, wet wipes, and partially wetted wipes.

* * * * *



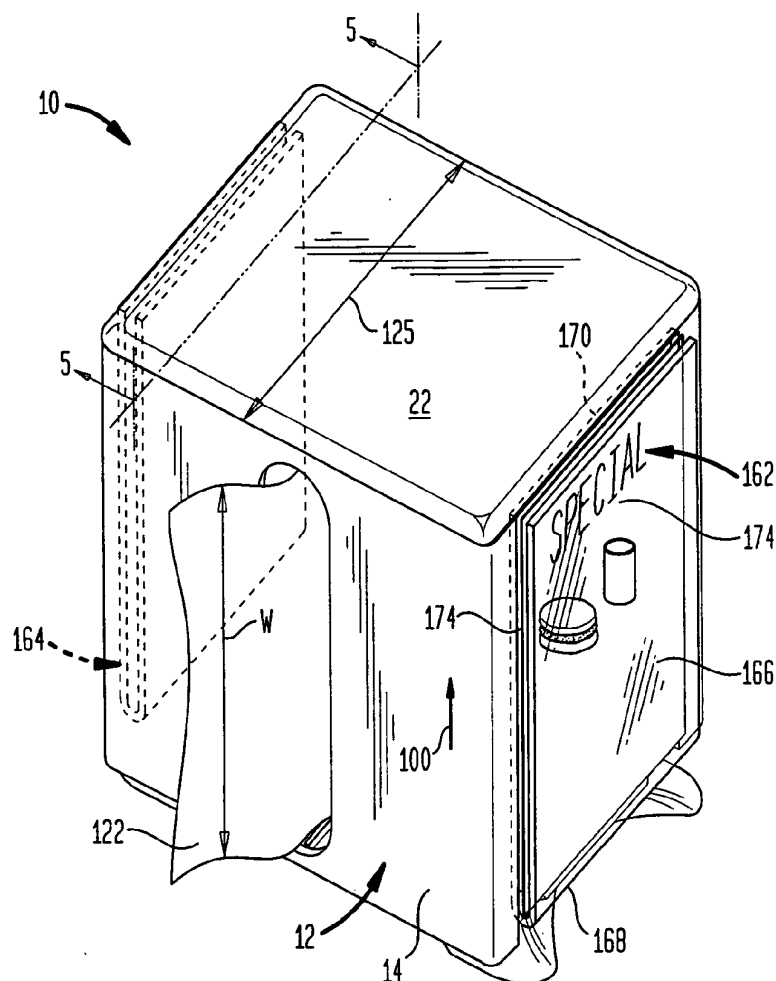
US 20060273100A1

(19) **United States**(12) **Patent Application Publication****Cittadino et al.**(10) **Pub. No.: US 2006/0273100 A1**(43) **Pub. Date: Dec. 7, 2006**(54) **TABLETOP NAPKIN DISPENSER WITH
DISPLAY WINDOW FOR PROMOTIONAL
MATERIAL**(60) Provisional application No. 60/621,915, filed on Oct.
25, 2004.**Publication Classification**(76) Inventors: **Antonio M. Cittadino**, Appleton, WI
(US); **Brent J. Burns**, Sterling Heights,
MI (US); **David R. Maroney**, Cedar,
MN (US); **Joseph P. Kirchberg**, Pine
City, MN (US); **Harold J. Goeking**,
Oshkosh, WI (US)(51) **Int. Cl.**
B65H 1/00 (2006.01)(52) **U.S. Cl.** **221/33**(57) **ABSTRACT**

Correspondence Address:

**PATENT GROUP GA030-43
GEORGIA-PACIFIC CORPORATION
133 PEACHTREE STREET, N.E.
ATLANTA, GA 30303-1847 (US)**(21) Appl. No.: **11/449,308**(22) Filed: **Jun. 8, 2006****Related U.S. Application Data**(63) Continuation-in-part of application No. 11/253,476,
filed on Oct. 19, 2005.

A tabletop dispenser for inter-folded napkins includes a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W , and a folded length, L' , of its lead pane. The dispenser also has an elongate dispensing aperture on its front panel and is further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L' , of the lead panels of the inter-folded napkins. At least one of the sidewalls or back panel is provided with a display window made of a substantially optically clear material suitable for displaying removably mounted promotional material.



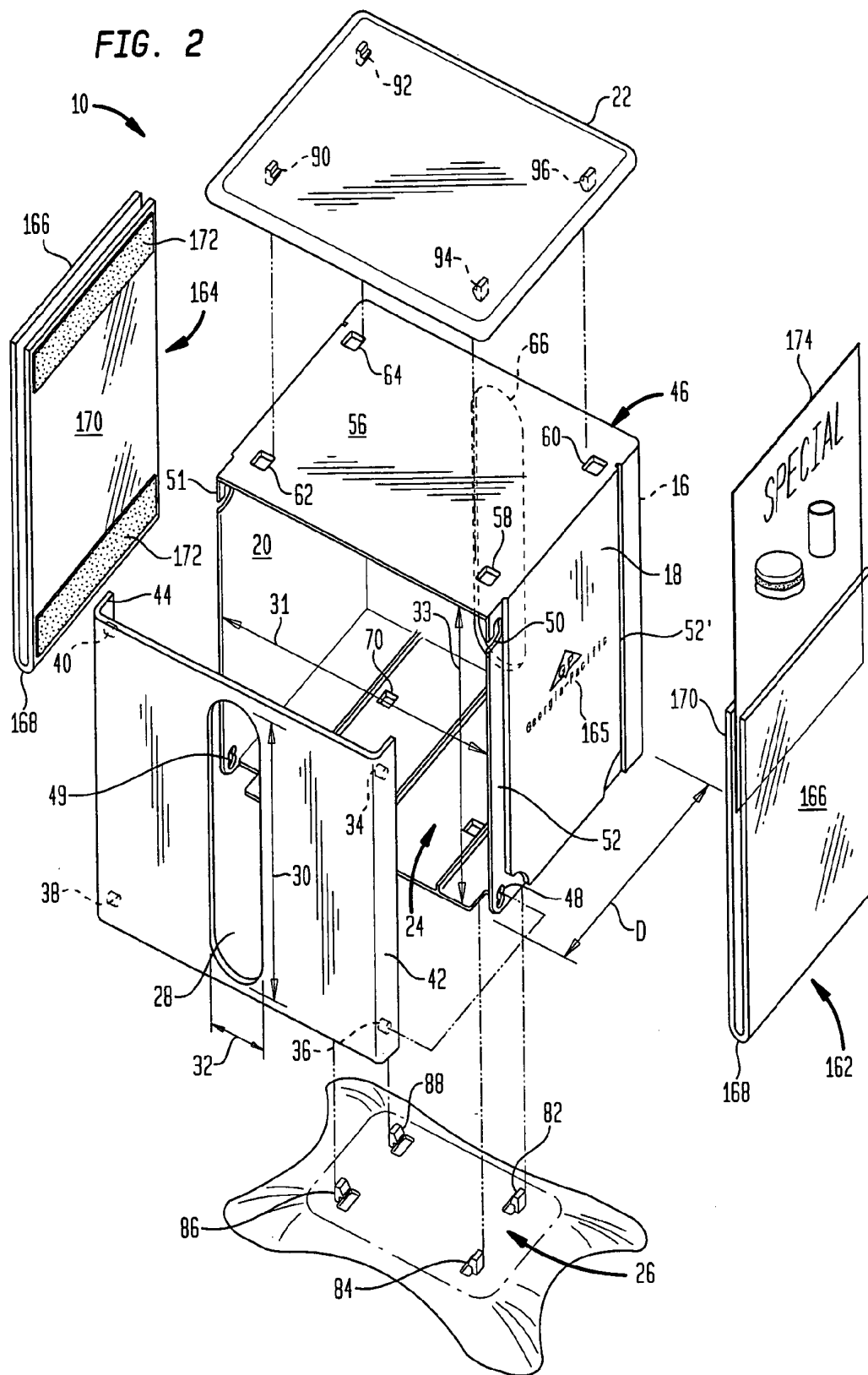


FIG. 3

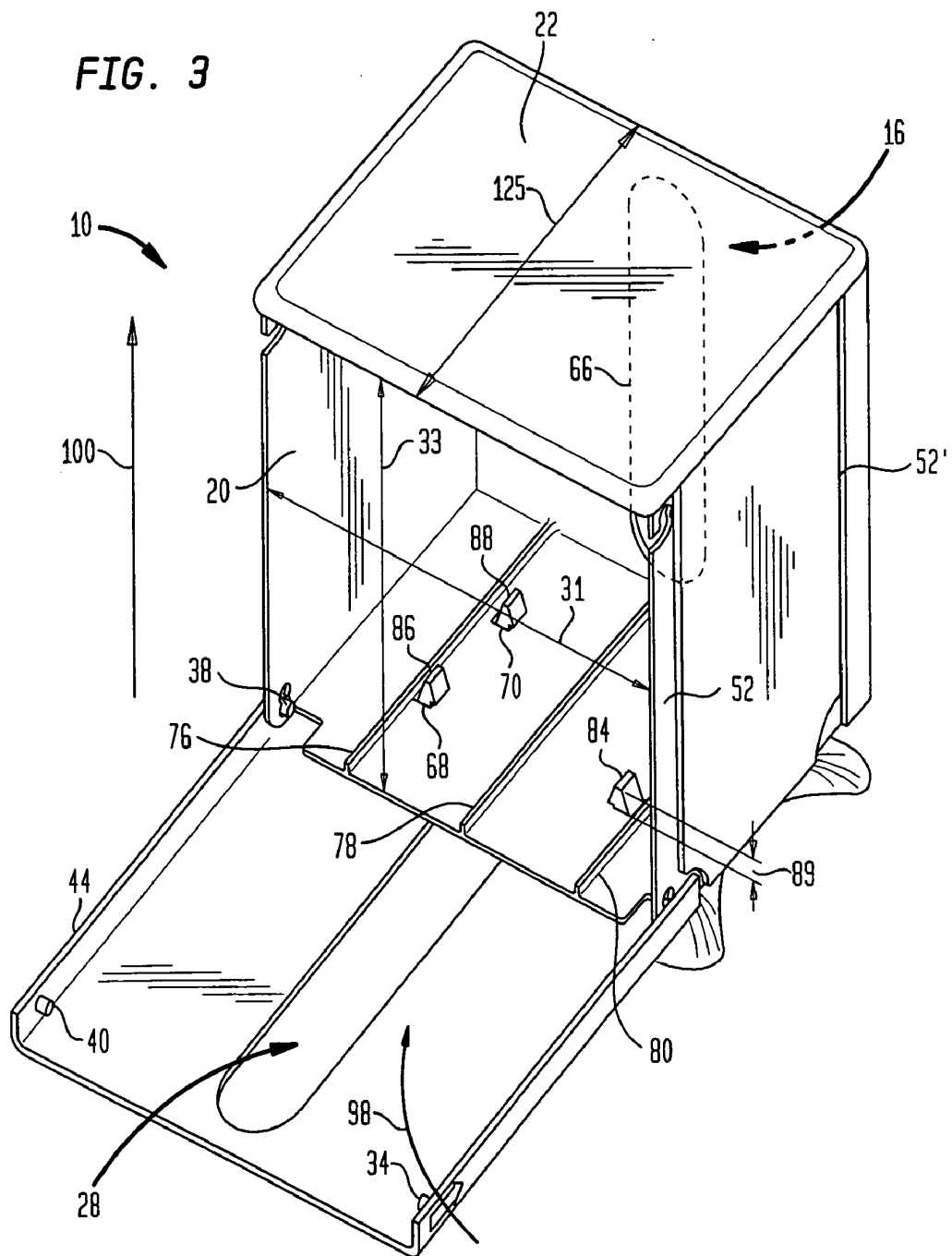


FIG. 4

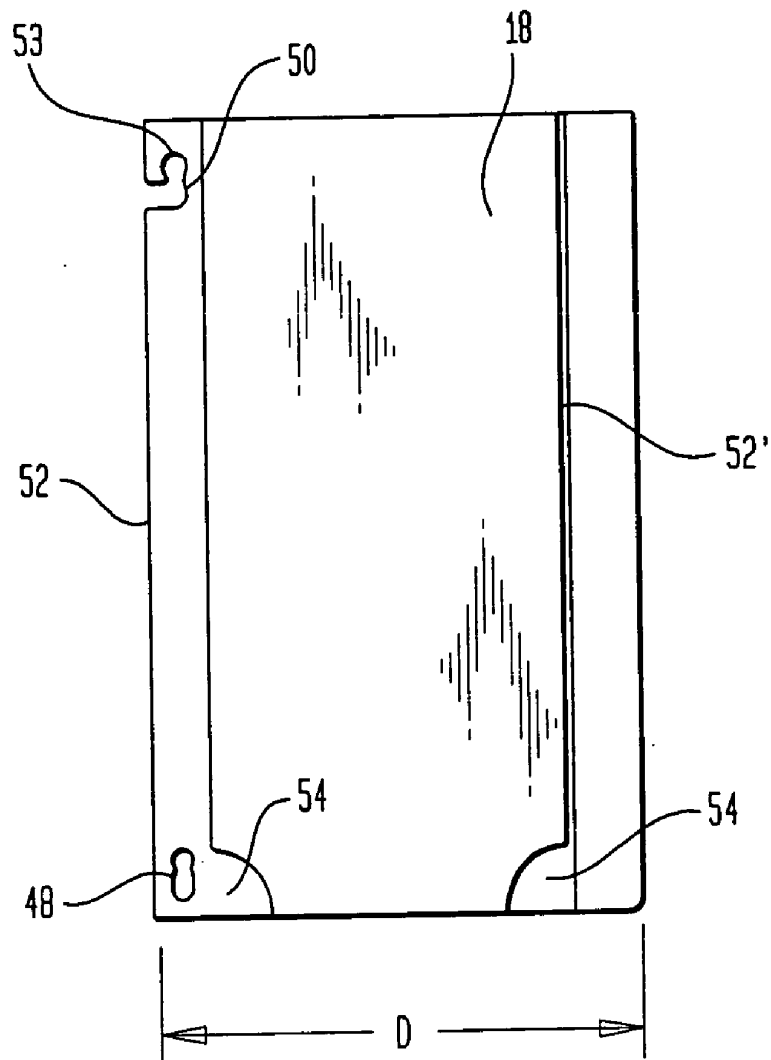


FIG. 5



FIG. 6

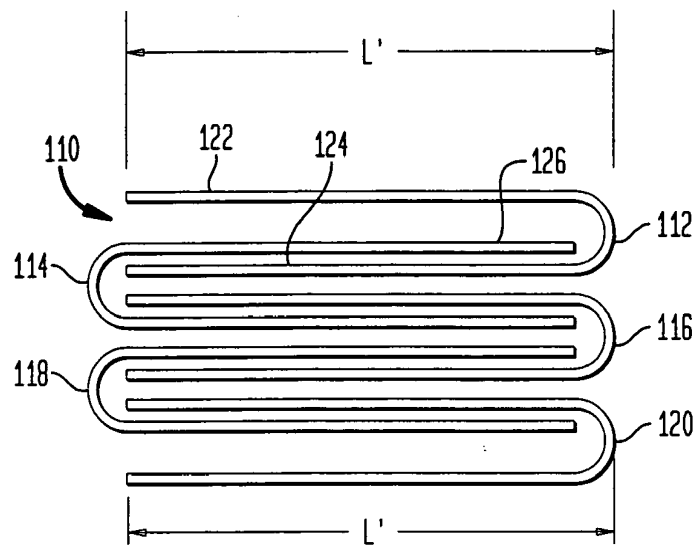


FIG. 7

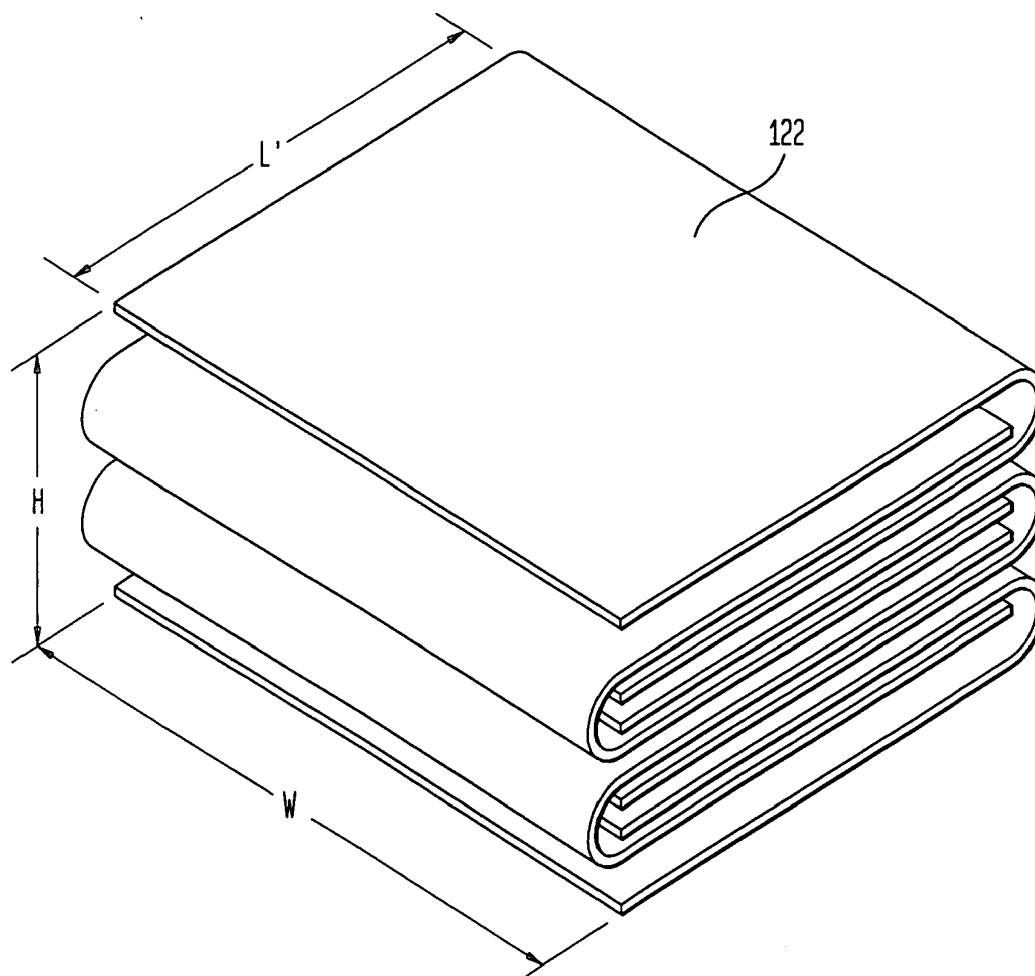


FIG. 8

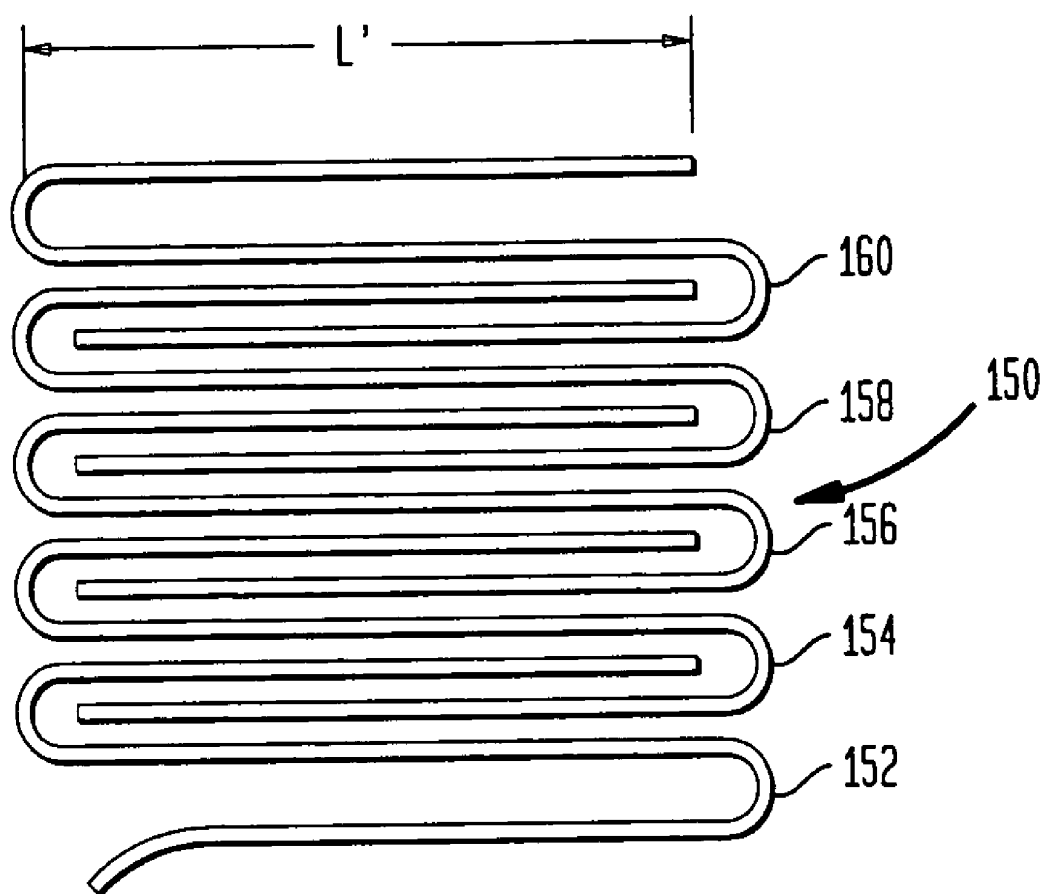


FIG. 9

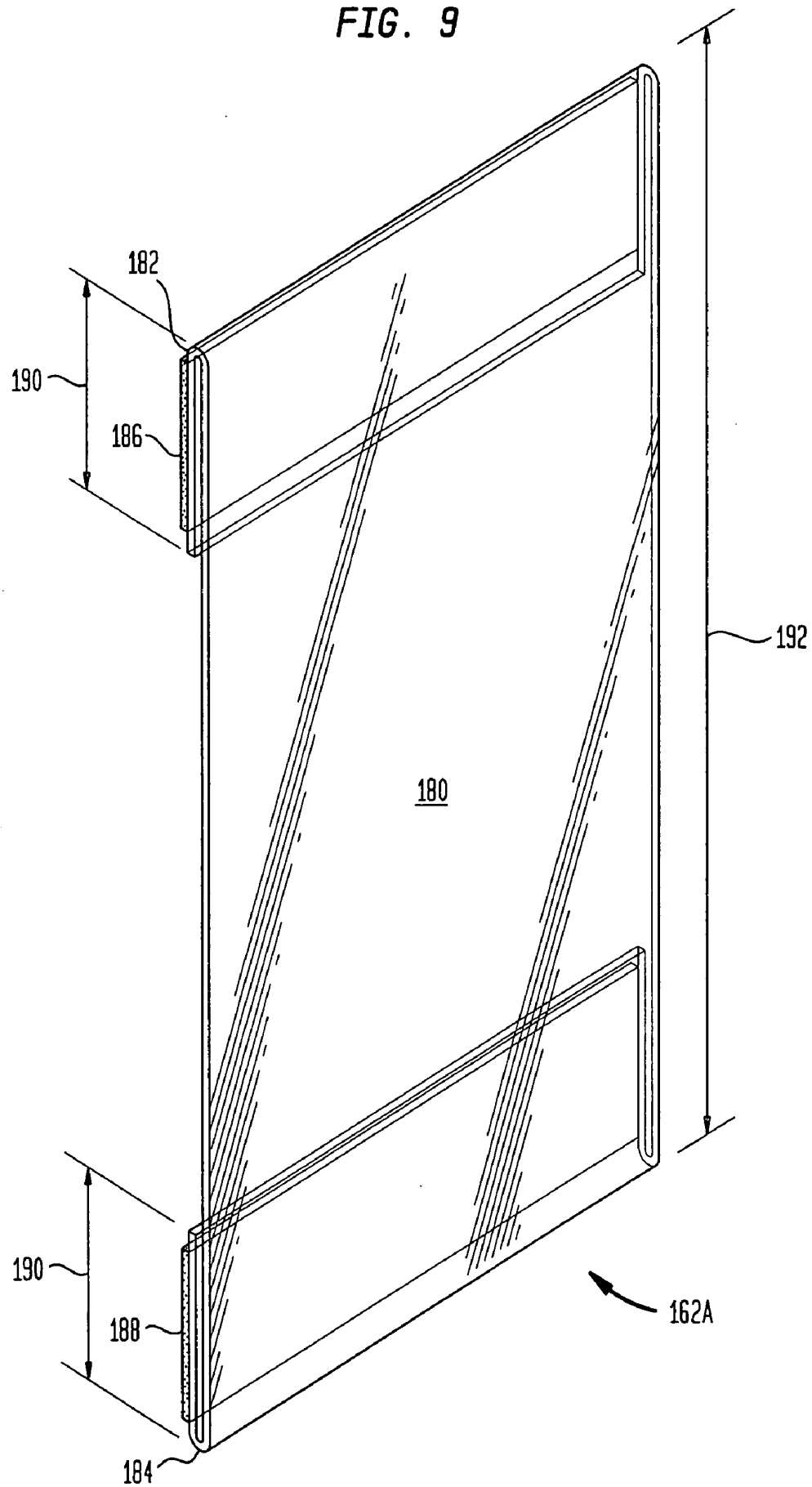


FIG. 10

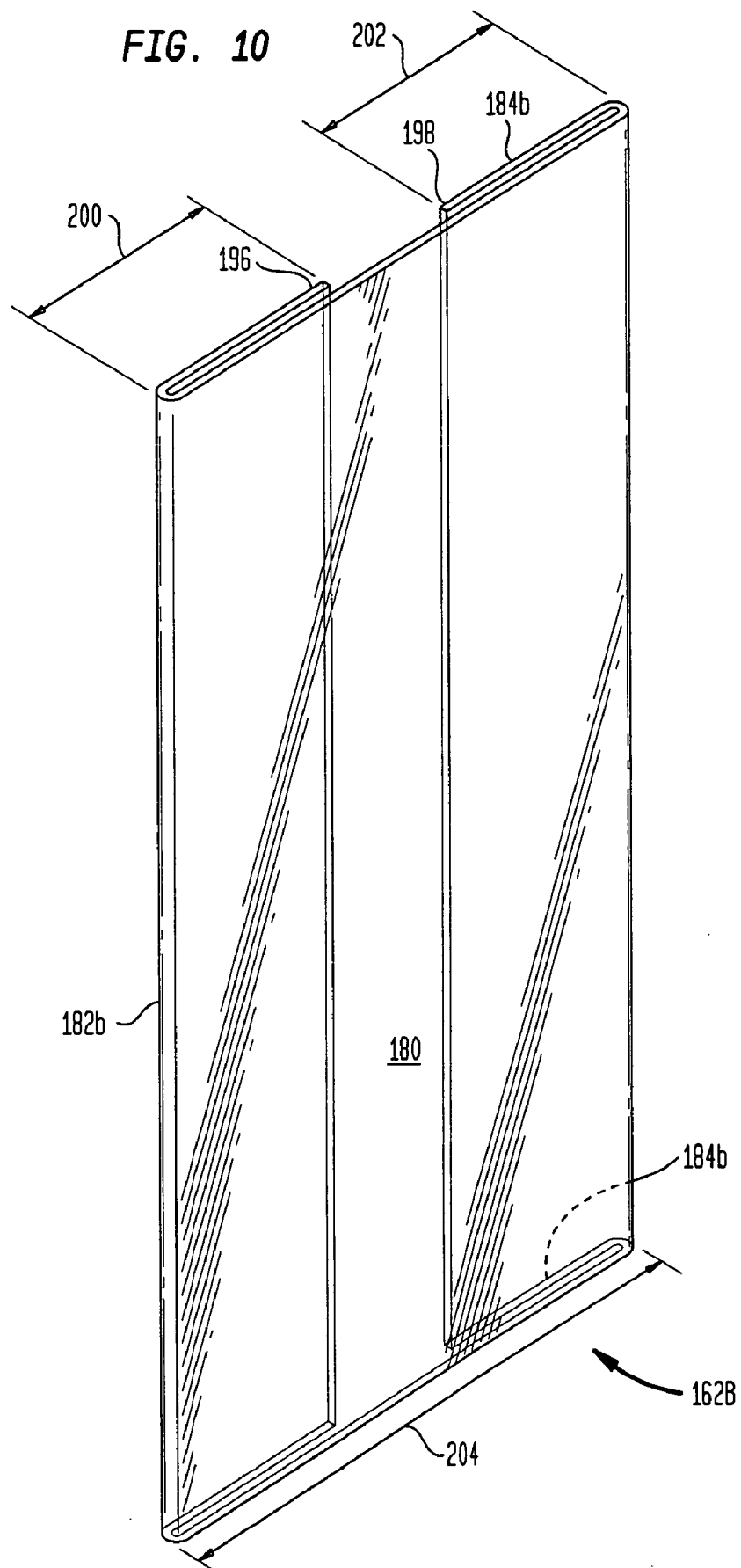
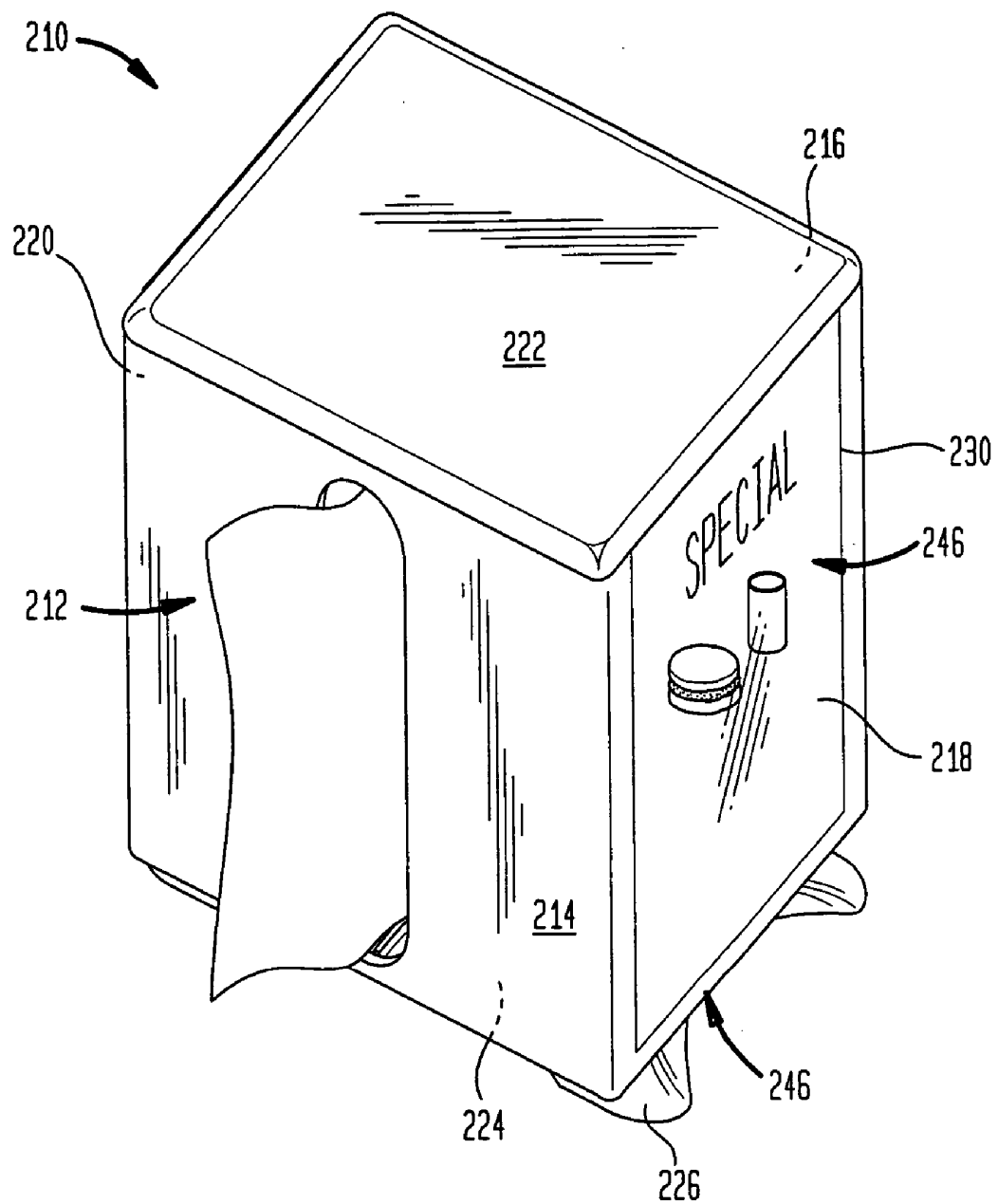


FIG. 11



[0009] In still yet another aspect of the invention, there is provided a tabletop dispenser for inter-folded napkins including a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W, and a folded length, L', of its lead panel, the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L', of the lead panels of the

inter-folded napkins, wherein the housing includes a unitary, injection-molded structure made from a substantially optically clear polymeric material comprising at least four walls selected from the front panel, the back panel, the top wall, the bottom wall and the two sidewalls, and wherein further at least two of the four walls of the unitary injection-molded structure are suitable for removably mounting promotional material for display. One construction is wherein the unitary injection-molded structure comprises the two sidewalls of the dispenser. The injection-molded unitary structure is made from a thermoplastic resin composition as noted above, that is, such as one having a styrene-containing resin, a methyl methacrylate containing resin, or a bisphenol containing resin.

[0010] Still further aspects of the invention will become apparent from the discussion which follows.

BRIEF DESCRIPTION OF DRAWINGS

[0011] The invention is described in detail below with reference to the drawings, wherein like numerals designate similar parts and wherein:

[0012] **FIG. 1** is a perspective view showing a napkin dispenser with a pair of display holders of the present invention;

[0013] **FIG. 2** is an exploded view of the dispenser of **FIG. 1**;

[0014] **FIG. 3** is a partial view in perspective of the inventive dispenser of **FIG. 1**, wherein the front panel is in an open position;

[0015] **FIG. 4** is a side view showing a side panel of the dispenser of **FIG. 1**;

[0016] **FIG. 5** is a view in section along line 5-5 of **FIG. 1** showing the geometry of a top panel of the inventive dispenser as well as the geometry of an assembly post;

[0017] **FIG. 6** is a schematic view showing a stack of single-fold inter-folded napkins from the side of a stack;

[0018] **FIG. 7** is a top view in perspective of a stack of inter-folded napkins such as the single-fold napkins shown in **FIG. 6**;

[0019] **FIG. 8** is a schematic diagram illustrating the geometry of a stack of two-fold inter-folded napkins;

[0020] **FIG. 9** is a perspective view of a first alternate design of the display holder;

[0021] **FIG. 10** is a perspective view of a second alternate design of the display holder; and

[0022] **FIG. 11** is a view in elevation and perspective of a tabletop napkin dispenser made from a substantially optically clear thermoplastic composition having a promotion card taped to the inside of a sidewall of the dispenser.

DETAILED DESCRIPTION

[0023] The invention is described in detail below with reference to the Figures for purposes of illustration only. Modifications within the spirit and scope of the present invention, set forth in the appended claims, will be readily apparent to those of skill in the art.

[0024] Terminology used herein is given its ordinary meaning; for example, "ABS" resin, "ABS" composition and like terminology refers to acrylonitrile-butadiene-styrene copolymers and compositions containing such copolymers.

[0025] A resin composition "consists essentially of" a particular thermoplastic resin when the composition is over about 75% by weight of that resin. Such terminology does not exclude impact modifiers, mold release agents, lubricants and so forth which do not change the basic and novel characteristics of the product and are routinely added to extrudable plastic compositions.

[0026] "Polyacrylic" resins are those polymeric resins prepared from acrylic acid derivatives and related compounds such as methyl methacrylate. Poly(methyl methacrylate) is a suitable optically clear resin for use in connection with the invention. A polyacrylic resin contains at least about 90% acrylate content.

[0027] Polycarbonate resins especially useful in practice of the invention are aromatic polycarbonates produced by reacting di-(monohydroxyaryl)alkanes (bisphenols) or dihydroxybenzenes and substituted dihydroxybenzenes with derivatives of carbonic acid such as carbonic acid diesters, phosgene, bis-chlorocarbonic acid esters of di-(monohydroxyaryl)-alkanes and the bis-chlorocarbonic acid esters of the dihydroxy-benzenes and the substituted dihydroxy-benzenes. Examples of suitable bisphenols are: 4,4'-dihydroxydiphenyl, 2,2-bis-(4-hydroxyphenyl)-propane (bisphenol A; 2,4-bis-(4-hydroxyphenyl)-2-methylbutane; 1,1-bis-(4-hydroxyphenyl)-cyclohexane; α,α -bis-(4-hydroxyphenyl)-p-diisopropyl-benzene; 2,2-bis-(3-methyl-4-hydroxyphenyl)-propane; 2,2-bis-(3-chloro-4-hydroxyphenyl)-propane; bis-(3,5-dimethyl-4-hydroxyphenyl)-methane; 2,2-bis-(3,5-dimethyl-4-hydroxyphenyl)-propane; bis(3,5-dimethyl-4-hydroxyphenyl)-sulphone; 2,4-bis-(3,5-dimethyl-4-hydroxyphenyl)-methylbutane; 1,1-bis-(3,5-dimethyl-4-hydroxyphenyl)-cyclohexane; α,α -bis-(3,5-dimethyl-4-hydroxyphenyl)-p-diisopropyl-benzene; 2,2-bis-(3,5-dichloro-4-hydroxyphenyl)-propane; 2,2-bis-(3,5-dichloro-4-hydroxyphenyl)-propane and 2,2-bis-(3,5-dibromo-4-hydroxyphenyl)-propane (tetrabromo bisphenol A).

[0028] Polystyrene resins when referred to as such means those resins which contain at least about 90 mole % styrene.

[0029] Styrene-acrylic copolymer resins have at least about 90 mole % combined styrene and acrylate content, i.e. 45% each.

[0030] "Substantially optically clear material" is substantially transparent to visible light at the thicknesses employed in connection with the present invention; i.e. typically at $\frac{1}{8}$ " or less thickness. Examples include commercially available clear grades of poly(methyl methacrylate), polycarbonate and so forth.

[0031] Referring to **FIGS. 1 through 5** there is shown a dispenser **10** which includes a housing **12** with a front panel **14**, a rear panel **16**, and two side panels **18** and **20**. There is further provided a top panel **22** as well as a bottom panel **24**. Housing **12** is attached to a pedestal **26**.

[0032] Front panel **14** has a dispensing slot **28**. Slot **28** has a height **30** as well as a width **32**.

[0033] Front panel 14 is also provided with four mounting posts at 34, 36, 38, and 40, as well as outer edges 42, 44, which are generally orthogonal to the front of panel 14. There is also provided a sub-housing 46.

[0034] Sub-housing 46 is a unitary structure, preferably injection-molded, which includes side panels 18 and 20 as well as rear panel 16, a top wall 56 and bottom 24. Side panels 18 and 20 have elongated holes such as hole 48 and L-shaped slots such as slot 50 for receiving the mounting posts 34-40 of front panel 14. There is further provided a recess 52 in each of the side panels for receiving edges 42 and 44 of front panel 14.

[0035] A top wall 56 has a plurality of holes 58, 60, 62, and 64 for purposes of assembling the inventive dispenser. The rear panel has a second dispensing slot, 66 which is in space facing relationship with front slot 28.

[0036] On bottom panel 24 there is provided another plurality of holes 68, 70, 72 and 74 as well as support ribs 76, 78, and 80.

[0037] In order to assemble the inventive dispenser, the various portions thereof are injection-molded, preferably from a substantially amorphous molding resin such as acrylonitrile-butadiene-styrene resin (ABS) resin, polycarbonate or the like. The parts contain assembly features such as holes 58, 60, 62, 64, 68, 70, 72, 74, and so on as well as barbed assembly posts such as posts 82, 84, 86, and 88 on pedestal 26 as well as posts 90, 92, 94, and 96 on top panel 22. The shape of the various barbed assembly posts is perhaps best appreciated from FIG. 5. That is to say, pedestal 26 is secured to sub-housing 46 by way of posts 82, 84, 86 and 88 which are inserted into poles 58, 60, 62, and 64. Likewise, the top panel is secured to unitary structure 46 by way of mounting posts 90, 92, 94 and 96 inserted into holes 62, 64, 58 and 60. The front panel is hingedly secured to the housing by way of posts 34 and 36 inserted into mounting holes 48 and 49. Likewise, posts 36, 34 and 40 are engaged with slots 50 and 51.

[0038] Note that front panel 14 is also mounted for up and down motion with respect to sub-assembly 46. That is to say the lower posts 34 and 36 are mounted in elongated slots 48 and 49 so that the front panel may be opened in order to provide a stack of napkins to the interior of the dispenser. That is, the dispenser is opened as shown in FIG. 3 and loaded with napkins. The front panel is then rotated upwards in the direction shown by arrow 98 (FIG. 3) in order to close the dispenser. The entire panel is then slid upwardly in the direction indicated by arrow 100 so that the front panel is locked in place. In its fully closed position, (FIG. 1), the front panel is lockably engaged by the L-shaped slots wherein the upper posts of the front panel i.e., post 34 and 40 are engaged in the upper part 53 of the L-shaped mounting slots of the side panels when the front panel is slid upwardly in the direction of arrow 100. Note that the edges 42 and 44 rest in sidewall recesses such as recess 52 so that the edges are generally flush with the side panels of the dispenser. It is also noted that edges 44 and 42 are sized to frictionally engage recess 52 so that the panel stays in place when slid upwardly. In order to provide visual symmetry there is optionally provided a groove 52' configured to provide an appearance similar to fully assembled dispenser towards the front panel.

[0039] When loaded with napkins, the dispenser is thus capable of dispensing napkins through slot 28 of front panel

14 as well as slot 66 of rear panel 16. The slots have height such as height 30 which is substantially equal to a width, W, of a single-fold napkin.

[0040] The inventive dispenser is suitably sized such that the depth, D, of the dispenser (i.e., the distance between the front and back walls of the dispenser when closed) is equal or shorter in length than the lead panels (L') of inter-folded napkins to be dispensed thereby as will be appreciated from the discussion which follows. Likewise, the distance between the sidewalls, 31, is preferably equal to the lead panel folded length, L', and the interior height 33 is equal to the width of the napkins when a stack is secured in the "portrait" orientation shown in FIG. 1. An added support feature for a napkin stack so that individual napkins do not "fall over" in the interior of the dispenser is provided in the form of a plurality of retaining surfaces transverse to dispensing direction 125. These surfaces are provided by way of posts 82-86 which project upwardly a distance 89 from bottom 24. Distance 89 may be anywhere from about 1/16" to about 1/4", typically about 1/8" or so.

[0041] Referring to FIGS. 6 and 7, there is shown a stack 110 of single-fold inter-folded napkins which includes, for example, a plurality of napkins such as napkins 112, 114, 116, 118 and 120. Each napkin has a lead panel 122 as well as a tail panel 124. The lead panel is made available through dispensing aperture 28, for example, as is shown in FIG. 1 wherein stack 110 is oriented in the dispenser as shown. When the lead panel is drawn through the dispenser, its tail panel, panel 124, drags the next adjacent lead panel, lead panel 126 of napkin 114 through the aperture. In this way, the napkins are continuously made available for consumption.

[0042] In accordance with the present invention, the stack of napkins has a lead panel folded length, L', which is longer than the depth, D, of the inventive dispenser. Thus when the napkins are oriented such that a stack is aligned along slot 28, that is to say, the width, W, of the stack is along the height 30 of the dispensing slot 28 each napkin may be drawn there through and bring the tail of the next napkin into proximity with the dispensing aperture. Because the lead panel folded length, L', is longer than or equal to the depth, D, of the dispenser, the napkins of the stack are never beyond the reach of a consumer. Thus, unlike the prior art which requires more sophisticated geometry, springs and so forth, the present invention simply uses the relative sizes of the dispenser and napkins to make the napkins available. Note that the dispenser accommodates a stack which may be of a height H up to where H is about equal to the depth, D, of the dispenser. In preferred embodiments, the distance between the top and bottom walls will correspond to the width, W, of the stack, allowing for tolerances of both napkin size and the alignment of stacking. Typically, between about 1/4" and 3/8" of "headroom" will be observable.

[0043] Referring to FIG. 8 there is shown still yet another geometry of a stack 150 of two-fold inter-folded napkins. Two-fold inter-folded napkins have three panels instead of two panels as is the case with single-fold napkins discussed above. Stack 150 includes a plurality of napkins such as napkins 152, 154, 156, 158 and 160 which are inter-folded in the manner shown in FIG. 8. Here again, the lead panel folded length, L', of the stack is selected so that it is greater in length or equal to the depth, D, of inventive napkin dispenser 10 such that the napkins are always accessible.

[0044] The dispenser of FIGS. 1-5 is advantageously provided with a pair of display holders 162, 164 affixed to sidewall panels 18, 20 by adhesive or any other suitable means. Each of the display holders is a unitary, generally U-shaped structure having a generally planar display window panel 166, a U-transition 168 and a generally planar back mounting panel 170. Holders 162, 164 are conveniently fabricated from a thermoplastic resin composition such as a poly(methyl methacrylate) containing composition noted above. Compositions based on polystyrene, styrene-acrylic copolymers, or polycarbonates are likewise suitable.

[0045] One convenient way of forming holders 162, 164 is by thermoforming a generally planar sheet of thermoplastic material around a heated wire or rod as is known in the art. Back panel 170 is then secured to the sidewalls as is shown in FIG. 1 by adhesive or other suitable means. One particularly convenient method of attachment is to use a plurality of double sided tape strips 172 which are of the same color as the wall of the dispenser upon which the holder is mounted. The sidewall upon which the holder is mounted optionally includes a logo 165. The tape should be placed on the holder so that logo 165 is visible when there is no card placed in the holder.

[0046] It is seen that back panel 170 is thus adapted to removably support a removable card 174 which is viewed through window panel 166. Card 174 may be used to promote specials at a restaurant, for example, without the need for additional display units on the table.

[0047] Panels 166, 170 and transition 168 may be configured such that panel 166 is urged toward panel 170 in order to grip card 174 when it is placed therebetween. Card 174 may thus be made of relatively lightweight 20 lb per 3000 square foot ream) paper or heavier card stock or a laminate if so desired. The promotional material may include text, images and so forth as is known and shown in the various Figures appended hereto.

[0048] There are shown in FIGS. 9 and 10 alternate constructions of the display holders; FIG. 9 having U-shaped edges at the top and bottom and FIG. 10 having U-shaped lateral edges. These holders are stronger, more durable and use less material than other designs.

[0049] Referring to FIG. 9, there is shown a first alternate construction of display holders 162, 164 in the form of a unitary display holder 162A defining a front display window 180, on upper U-shaped portion 182 and a lower U-shaped portion 184. The U-shaped portions of display holder 162A are likewise sized to retain a removable card such as card 174. Holder 162A is fabricated from 2 mm thick acrylic sheet and thermoformed into shape as noted in connection with holders 162, 164 and is affixed to sidewalls 18, 20 of dispenser 10 with double-sided tape as is seen at 186, 188, such that the U-shaped edges are at the top and bottom of window 180.

[0050] Holder 162A utilizes less thermoplastic sheet than holders 162, 164 and may be made from the same materials. Less material is used because the inner portions of the U-shaped ends extend a vertical distance 190 which is less than 50% of the height 192 of the holder. Preferably, each of the inner or terminal portions of the U-shaped ends extend a distance which is less than 30% of height 192.

[0051] Referring to FIG. 10, there is shown a second alternate construction of display holders such as holders

162, 164 in the form of a display holder 162B likewise formed from a sheet of optically clear material. Holder 162B has a display window 180, a first lateral U-shaped portion 182b and a second lateral U-shaped portion 184b which are sized to retain a promotional card such as card 174. Holder 162B is affixed to sidewalls 18, 20 of dispenser 10 with double-sided tape such that the U-shape edges are on the sides of display window 180. Inner portions 196, 198 extend inwardly distances 200, 202 which are less than 30% of the width 204 of the holder.

[0052] Referring to FIG. 11, there is shown yet another dispenser 210 which includes a housing 212 with a front panel 214, a rear panel 216 and two side panels 218 and 220. There is further provided a top panel 222 as well as a bottom panel 224. Housing 212 is attached to a pedestal 226. There is also provided a sub-housing 246 substantially identical to sub-housing 46 of FIG. 2.

[0053] Sub-housing 246 is a unitary structure, preferably injection-molded, which includes side panels 218 and 220 as well as rear panel 216, a top wall (not shown) and bottom 224. Side panels 218 and 220 have elongated holes and L-shaped slots for receiving mounting posts of front panel 214 as discussed in connection with the dispenser of FIGS. 1-5. Dispenser 210 is substantially identical to dispenser 10 of FIGS. 1-5 except that sub-housing 246 is fabricated of substantially optically clear material; typically from a thermoplastic resin composition consisting essentially of a resin selected from: polyacrylic resins; polycarbonate resins; polystyrene resins, and styrene-acrylic copolymer resins. Suitable resins thus include styrene-containing resin, a methyl methacrylate containing resin, or a bisphenol containing resin.

[0054] Front panel 214 may be injection molded from this material if so desired.

[0055] Because side panels 218 and 220 are transparent, a promotional card 230 may be removably taped or otherwise removably affixed to an interior wall such as the internal surface of panel 218 as shown for display. Thus, additional structure for holding the promotional card is not required; providing an even more highly cost effective advertising surface.

[0056] Still other features of the inventive dispenser are noted briefly below.

Alternative Embodiments

[0057] In general, there is provided in a first aspect of the invention a tabletop dispenser for inter-folded napkins including a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W, and a folded length, L', of its lead panel, the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L', of the lead panels of the inter-folded napkins. Preferably, the back panel of the dispenser has a second elongate dispensing aperture corresponding in size and orientation to the elongate dispensing aperture of the front wall. In one preferred embodiment, the elongate dispensing apertures on the front and rear walls of the dispenser are vertically oriented and another preferred

feature is wherein the dispenser consists essentially of the apertured housing and the distance between sidewalls of the housing corresponds to the folded length, L' , of the lead panels of the folded napkins and the distance between the top and bottom wall of the housing corresponds to the width, W , of the napkins of the inter-folded napkin stack.

[0058] Typically, at least one of the top wall, bottom wall, sidewalls, front panel or back panels is hinged to the housing by way of hinge means such that it pivots between a closed position for dispensing napkins and an open position for reloading. Preferably there is further provided locking means adapted to require movement of the hinged wall or panel along a plane defined thereby in a closed and locked position prior to pivotal motion to its open position. This may be achieved, for example, wherein the hinge means includes two elongate slots and the locking means include two L-shaped slots. A preferred construction is wherein the sidewalls each include an elongate hinge slot and an L-shaped locking slot and the front panel includes two hinge posts for mounting in the elongate hinge slots and two locking posts for engaging with the locking slots, the posts and slots being configured such that the front panel is hinged to the housing when the hinge posts of the front panel are mounted in the elongate hinge slots and is thereby pivotable between a closed position for dispensing inter-folded napkins and an open position for reloading, the locking posts of the front panel and the L-shaped locking slots of the sidewalls are configured such that when the front wall is in a closed and locked position, the locking posts and L-shaped locking slots cooperate to prevent pivotal motion of the front panel and wherein the front panel is movable between a closed and locked position and an unlocked position by movement of the front panel in a plane defined thereby in its closed and locked position, the front panel being movable to the open position from the unlocked position.

[0059] Another preferred feature is wherein the front panel has a pair of opposed edge sections generally orthogonal to its front surface adapted to reside in a pair of corresponding recesses in the sidewalls of the dispenser when the dispenser is in a closed position, such that the edge sections are generally flush with the sidewalls of the dispenser. In such cases, the edge sections may be provided with hinge posts adapted to fit with corresponding slots in the sidewalls of the dispenser so as to mount the front panel for pivotal motion with respect to the sidewalls, and wherein the recesses in the sidewalls may have arcuate portions configured to accommodate pivotal motion of the front panel with respect to the sidewalls of the dispenser.

[0060] The bottom wall optionally has a plurality of retaining surfaces projecting upwardly therefrom, the retaining surfaces being transverse to a dispensing direction; the retaining surfaces are conveniently defined by a plurality of assembly posts projecting into the interior of the dispenser upwardly a distance of from about $1/16$ " to about $1/4$ " from an interior surface of the bottom wall.

[0061] The housing includes a unitary, injection-molded structure in a preferred construction comprising at least four walls selected from the front panel, the back panel, the top wall, the bottom wall and the two sidewalls. The injection-molded structure may be formed from a polymeric composition comprising a resin selected from ABS resins and

polycarbonate resins, mixtures thereof. Most preferably all of the parts are made of ABS resin injection molding composition.

[0062] Another aspect of the invention is an improved method for dispensing inter-folded napkins, each of which has a width, W , and a folded length, L' , of its lead panel, comprising:

[0063] disposing a stack of the inter-folded napkins in a dispenser comprising a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall,

[0064] the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L' , of the lead panels of the inter-folded napkins; and

[0065] withdrawing inter-folded napkins through the dispensing aperture; wherein the stack of inter-folded napkins is a stack of single-fold inter-folded napkins. A preferred size napkin is wherein the lead panels and tail panels each have a folded length, L' , of about 5 inches and a width, W , of about 6.5 inches.

[0066] While the invention has been described in connection with several examples, modifications to those examples within the spirit and scope of the invention will be readily apparent to those of skill in the art. In view of the foregoing discussion, relevant knowledge in the art and references discussed above, further description is deemed unnecessary.

What is claimed is:

1. A tabletop dispenser for inter-folded napkins comprising a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W , and a folded length, L' , of its lead panel, the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L' , of the lead panels of the inter-folded napkins, wherein at least one of the sidewalls or back panel is provided with a display window made of a substantially optically clear material suitable for displaying removably mounted promotional material.

2. The tabletop napkin dispenser according to claim 1, wherein the display window is made from a thermoplastic resin composition.

3. The tabletop napkin dispenser according to claim 1, wherein the thermoplastic resin composition consists essentially of a thermoplastic resin selected from the group consisting of: polyacrylic resins; polycarbonate resins; polystyrene resins; and styrene-acrylic copolymer resins.

4. The tabletop napkin dispenser according to claim 3, wherein the thermoplastic resin is poly(methylmethacrylate).

5. The tabletop napkin dispenser according to claim 3, wherein the thermoplastic resin is a bisphenol A containing polycarbonate.

6. The tabletop napkin dispenser according to claim 3, wherein the thermoplastic resin is a polystyrene.

7. The tabletop napkin dispenser according to claim 3, wherein the thermoplastic resin is a styrene-methyl methacrylate copolymer.

8. The tabletop napkin dispenser according to claim 1, wherein the display window is mounted on a sidewall of the dispenser.

9. The tabletop napkin dispenser according to claim 1, wherein a display window is mounted on each sidewall of the dispenser.

10. The tabletop napkin dispenser according to claim 1, wherein the sidewalls of the dispenser are injection-molded from a substantially optically clear material, thereby providing a pair of display windows.

11. A tabletop dispenser for inter-folded napkins comprising a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W, and a folded length, L', of its lead panel, the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L', of the lead panels of the inter-folded napkins, wherein at least one of the sidewalls or back panel is provided with a unitary display holder having at least one U-shaped edge formed from a substantially optically clear material.

12. The tabletop napkin dispenser according to claim 11, wherein the unitary display holder is made from a thermoplastic resin composition.

13. The tabletop napkin dispenser according to claim 11, wherein the thermoplastic resin composition consists essentially of a thermoplastic resin selected from the group consisting of: polyacrylic resins; polycarbonate resins; polystyrene resins; and styrene-acrylic copolymer resins.

14. The tabletop napkin dispenser according to claim 11, wherein a unitary display holder with at least one U-shaped edge is mounted on each sidewall of the dispenser.

15. The tabletop napkin dispenser according to claim 11, wherein the unitary display holder is thermoformed from a generally planar, substantially optically clear polymeric sheet.

16. The tabletop napkin dispenser according to claim 11, wherein the unitary display holder has two U-shaped edges.

17. The tabletop napkin dispenser according to claim 16, wherein the unitary display holder has upper and lower U-shaped edges.

18. The tabletop napkin dispenser according to claim 17, wherein terminal portions of the U-shaped edges each extend vertically a distance which is less than 30% of the height of the display holder.

19. The tabletop napkin dispenser according to claim 16, wherein the display holder has two U-shaped lateral edges.

20. The tabletop napkin dispenser according to claim 19, wherein the terminal portions of the U-shaped edges each extend horizontally a distance which is less than 30% of the width of the display holder.

21. A tabletop dispenser for inter-folded napkins comprising a housing with a front panel, a back panel, a pair of sidewalls, a top wall and a bottom wall for dispensing a stack of inter-folded napkins each of which napkins has a width, W, and a folded length, L', of its lead panel, the dispenser having an elongate dispensing aperture on its front panel and further characterized in that the distance between the front and back panels of the dispenser is equal to or less than about the folded length, L', of the lead panels of the inter-folded napkins, wherein the housing includes a unitary, injection-molded structure made from a substantially optically clear polymeric material comprising at least four walls selected from the front panel, the back panel, the top wall, the bottom wall and the two sidewalls, and wherein further at least two of the four walls of the unitary injection-molded structure are suitable for removably mounting promotional material for display.

22. The tabletop napkin dispenser according to claim 21, wherein the unitary injection-molded structure comprises the two sidewalls of the dispenser.

23. The tabletop napkin dispenser according to claim 21, wherein the injection-molded unitary structure is made from a thermoplastic resin composition.

24. The tabletop napkin dispenser according to claim 23, wherein the thermoplastic resin composition consists essentially of a thermoplastic resin selected from the group consisting of: polyacrylic resins; polycarbonate resins; polystyrene resins; and styrene-acrylic copolymer resins.

25. The tabletop napkin dispenser according to claim 24, wherein the thermoplastic resin is a styrene-containing resin, a methyl methacrylate containing resin, or a bisphenol containing resin.

* * * * *



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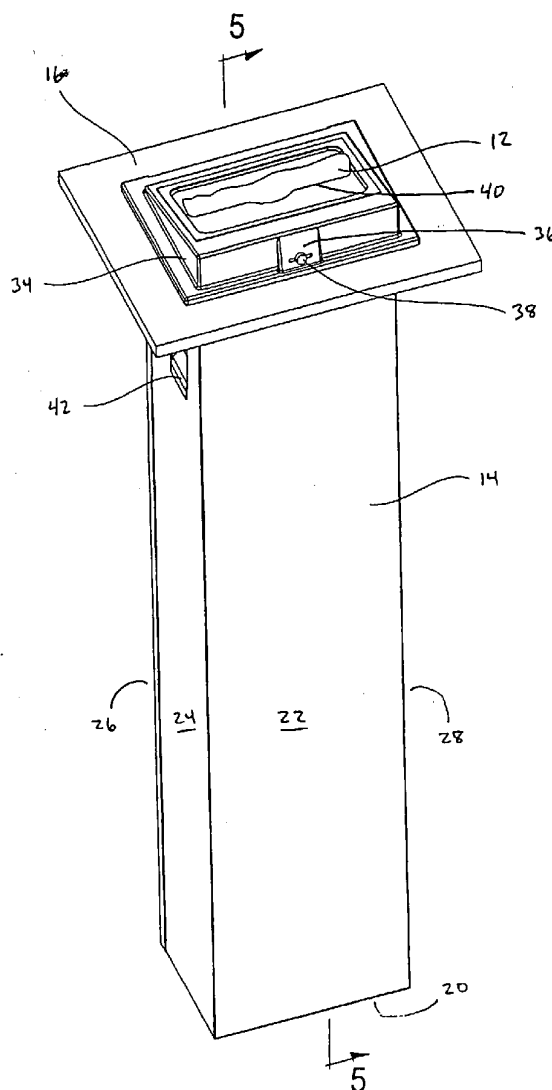
(19) **United States**(12) **Patent Application Publication****Sanders et al.**(10) **Pub. No.: US 2004/0206769 A1**(43) **Pub. Date: Oct. 21, 2004**(54) **CONTAINER AND CARTRIDGE FOR DISPENSING PAPER PRODUCTS****Publication Classification**(51) **Int. Cl.⁷** **B65H 1/00**(52) **U.S. Cl.** **221/59; 221/61; 221/63**(75) Inventors: **Richard Lee Sanders**, Hattiesburg, MS (US); **James J. Lee**, Hattiesburg, MS (US)(57) **ABSTRACT**

Correspondence Address:

KIMBERLY-CLARK WORLDWIDE, INC.
401 NORTH LAKE STREET
NEENAH, WI 54956(73) Assignee: **Kimberly-Clark Worldwide, Inc.**(21) Appl. No.: **10/657,621**(22) Filed: **Sep. 8, 2003****Related U.S. Application Data**

(60) Provisional application No. 60/463,212, filed on Apr. 16, 2003.

The present invention provides a container for dispensing individual paper products that includes a housing, a cover hingedly or removably attached to the housing wherein the cover defines a dispensing opening, a means for elevating paper products, and a plunger disposed in the interior area of the housing. The plunger is urged toward the dispensing opening by the means for elevating paper products. The container may be included in a system for dispensing paper products that further includes a cartridge containing paper products. The cartridge defines a dispensing opening and a second opening wherein the means for elevating paper products extends through the second opening into the interior area of the cartridge to contact the paper products and urge the paper products toward the dispensing opening.



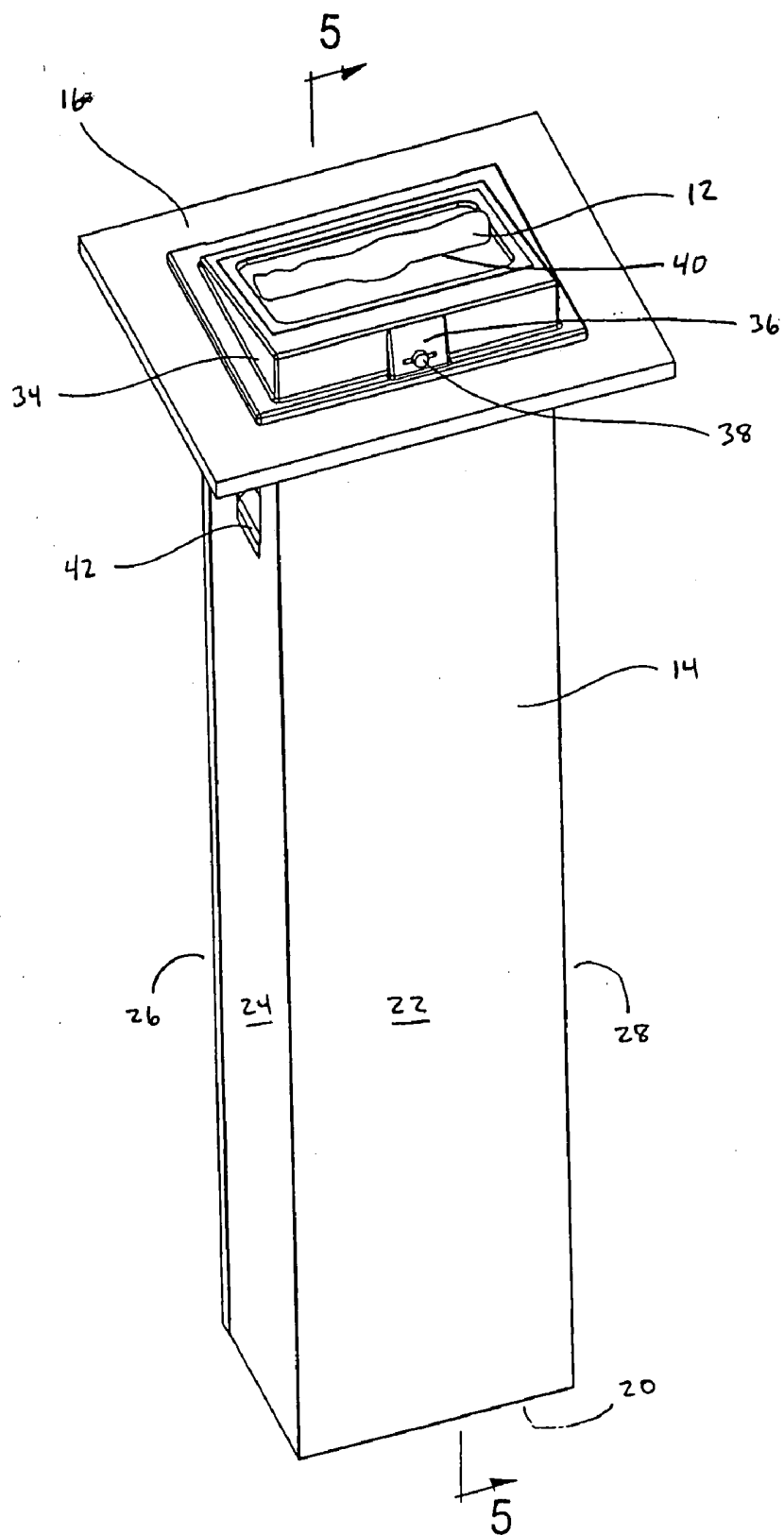


FIG. 1

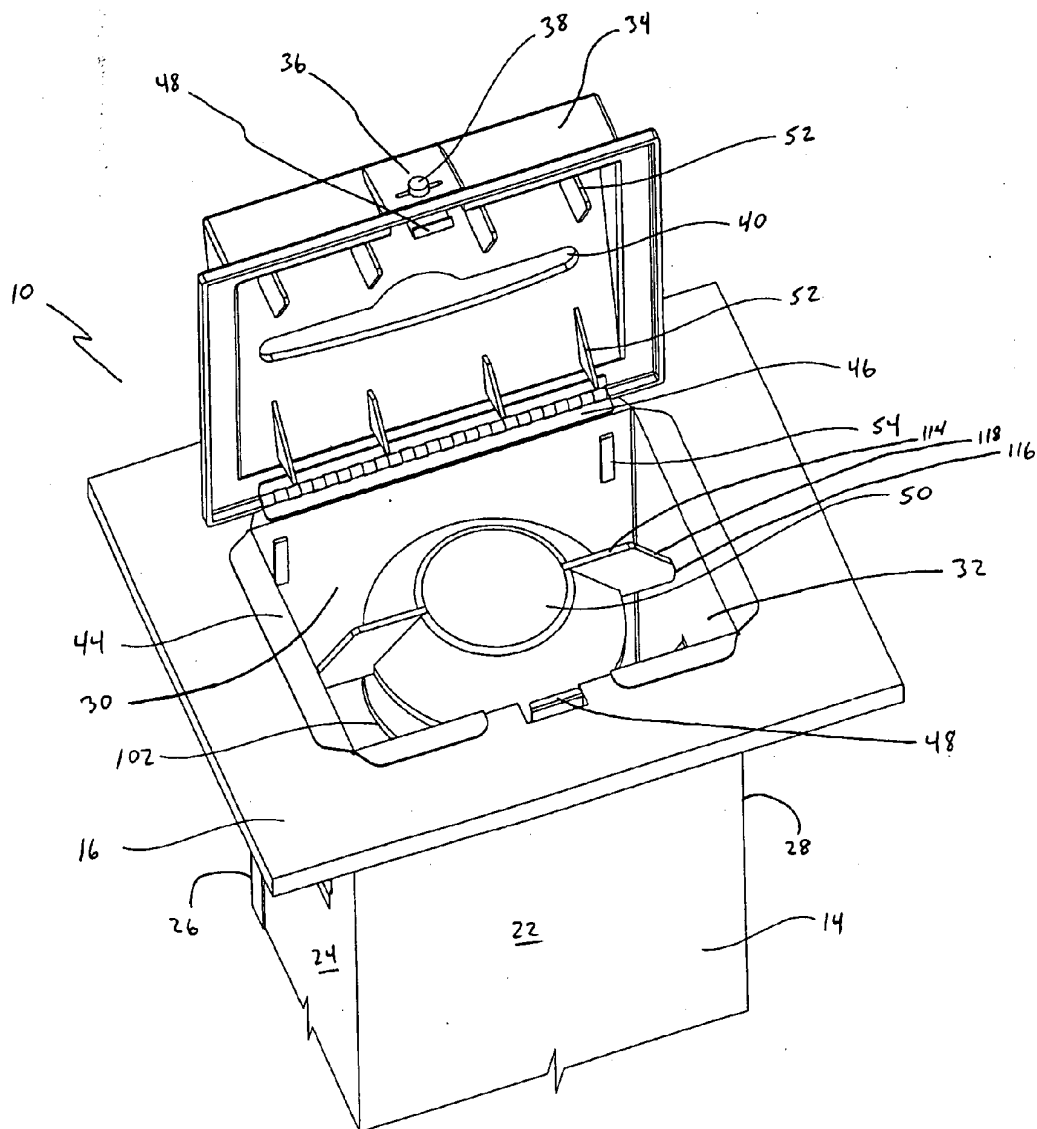


FIG. 2

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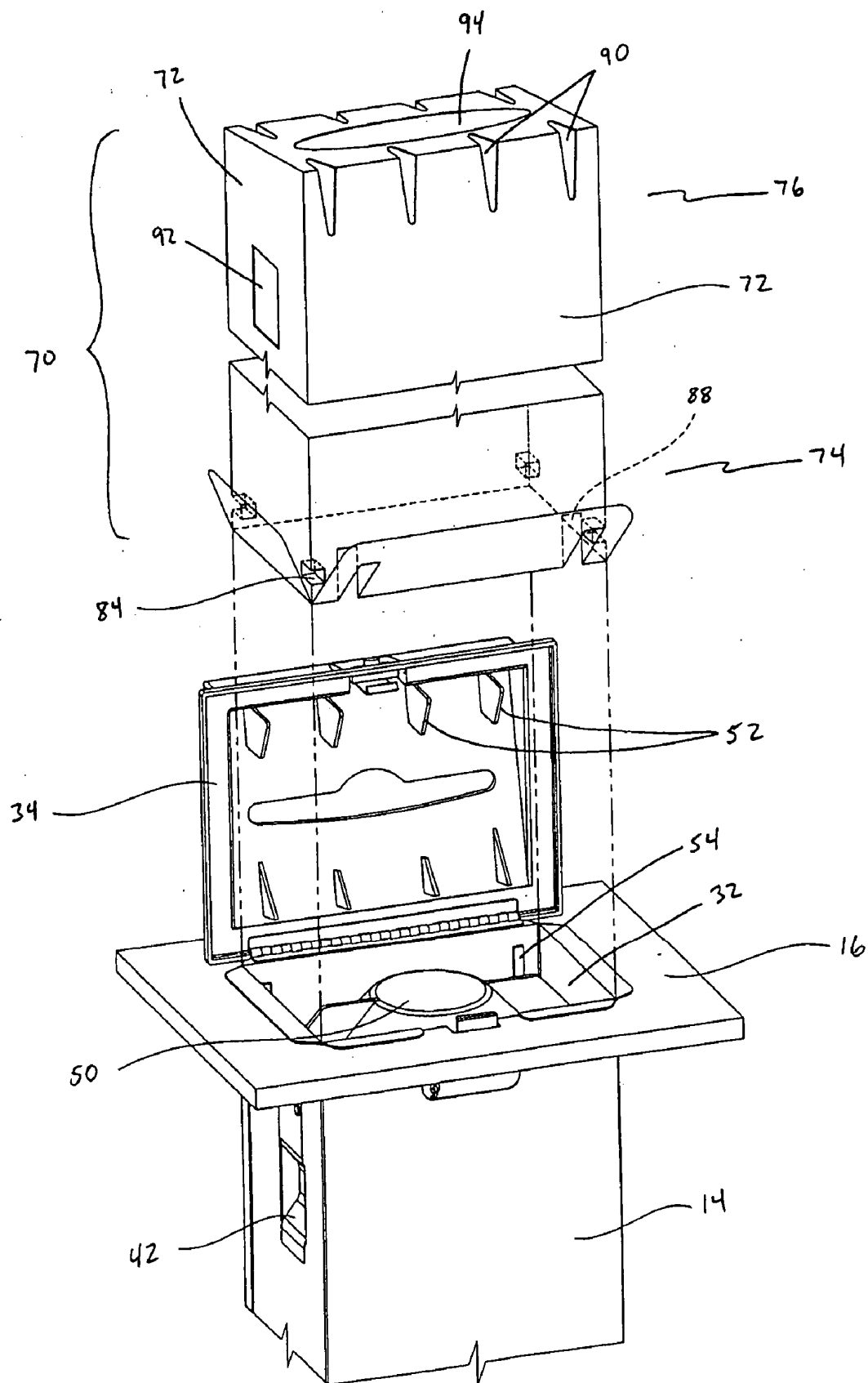


FIG. 3

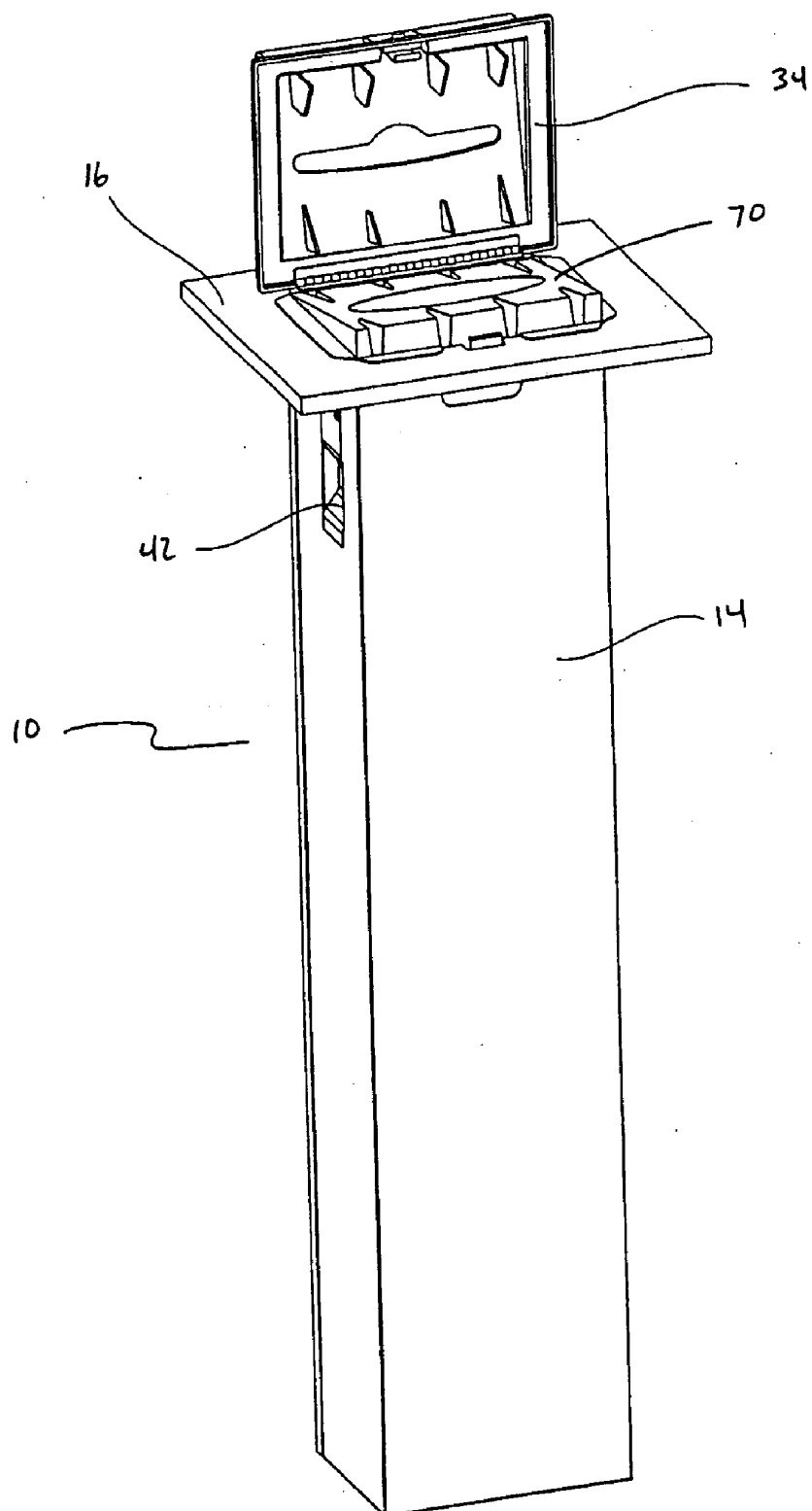


FIG. 4

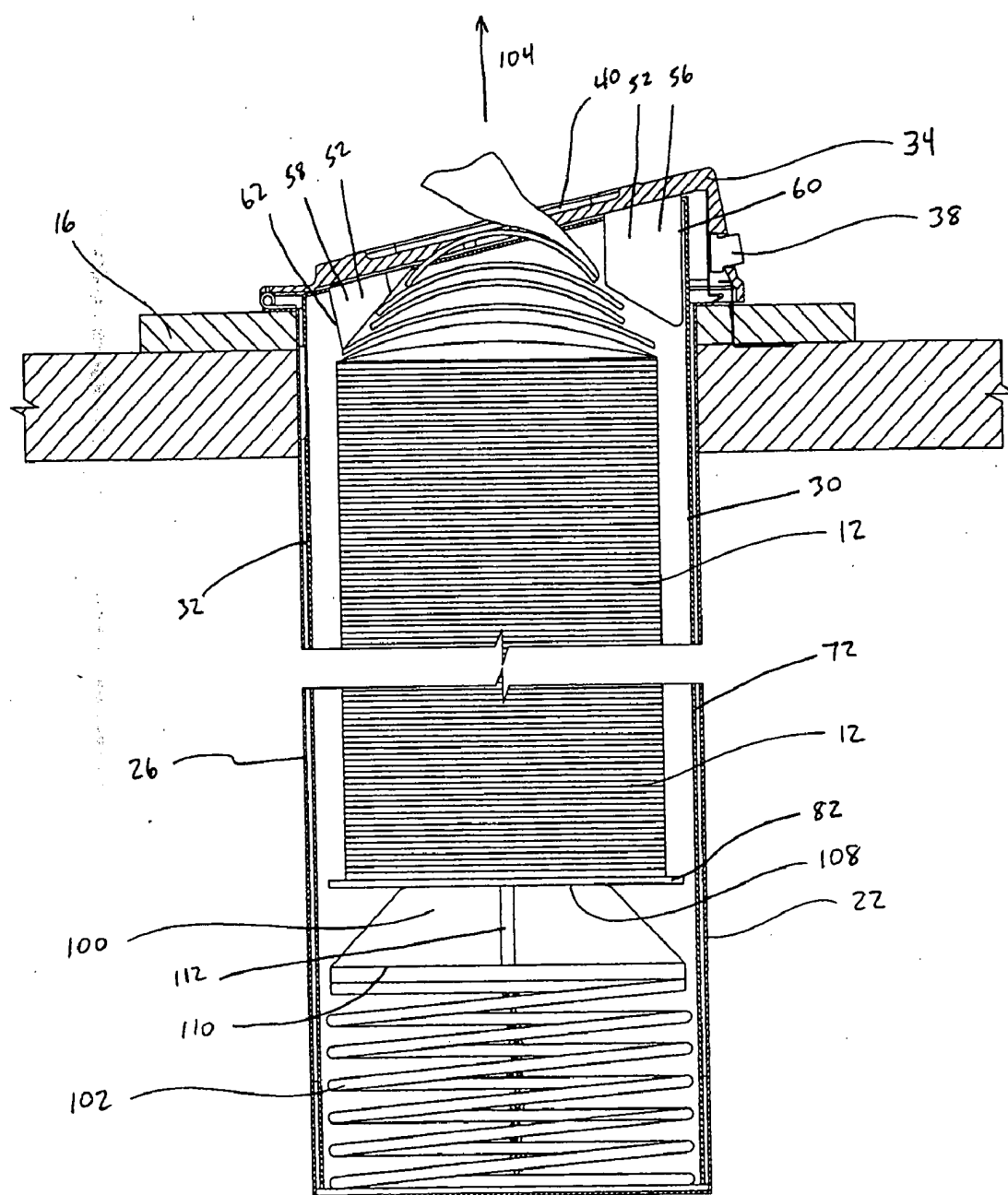


FIG. 5

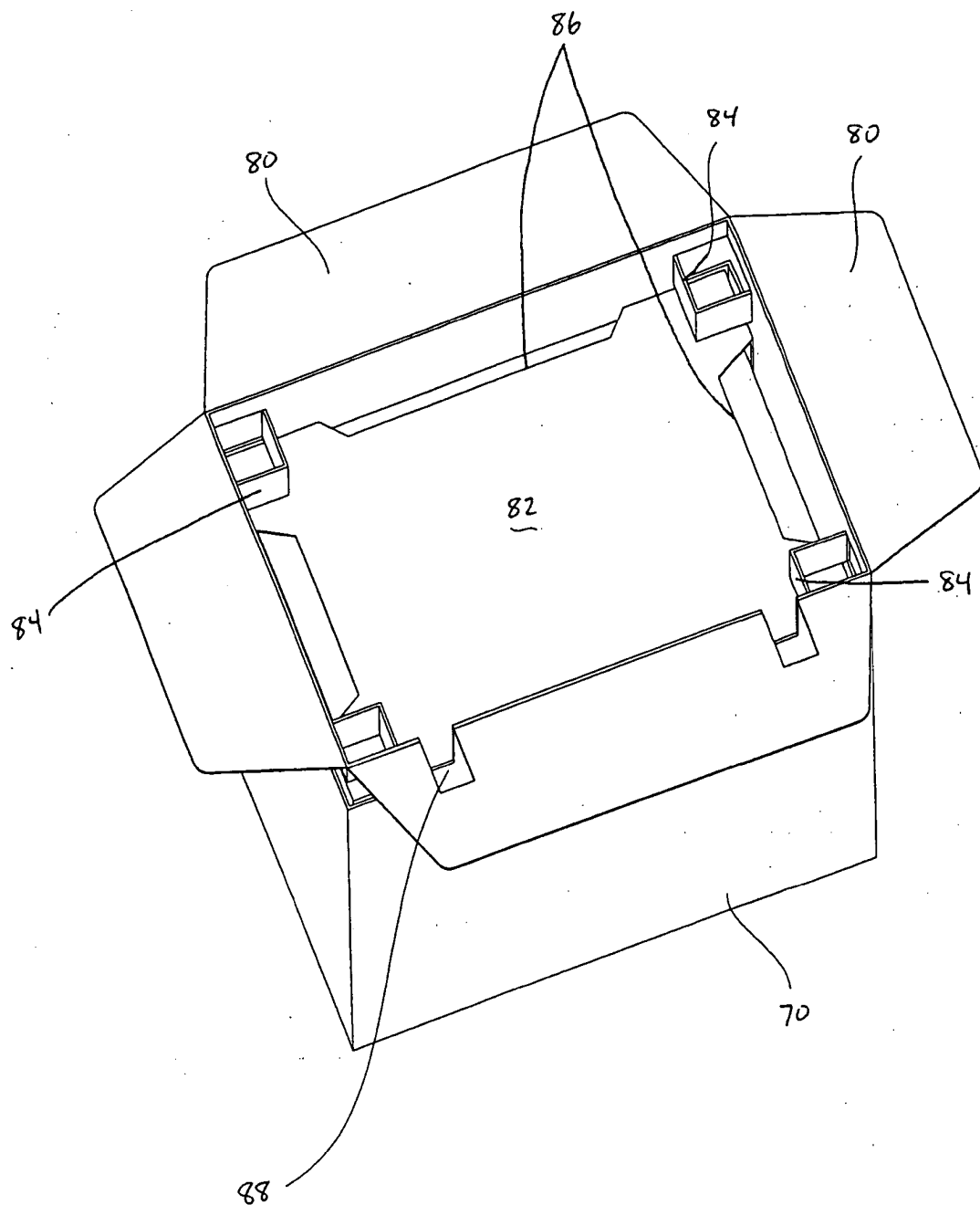


FIG. 6

CONTAINER AND CARTRIDGE FOR DISPENSING PAPER PRODUCTS

RELATED APPLICATIONS

[0001] The present application claims priority to U.S. Provisional Application Serial No. 60/463,209, filed on April. 16, 2003.

BACKGROUND OF THE INVENTION

[0002] Various types of dispensers for paper products have been developed to provide ready availability of the paper products to users. Such dispensers are often provided in public places such as restaurants or rest rooms where customers remove from the dispenser a desired amount of paper products for personal use. In some high traffic areas, such as fast food restaurants, a large number of customers may use a paper product dispenser such as a napkin dispenser in a short period of time. Therefore, dispensers have been developed that hold a large number of paper products for use by a large number of consumers.

[0003] For many applications, it is desirable to have a large dispenser that is embedded in a countertop. This is particularly desirable when open counter space above the countertop is needed for visibility or other reasons. Unfortunately, large recessed dispensers are subject to a number of drawbacks. First, because access to the body of the dispenser is limited by the structure supporting the countertop, it can be difficult to load large quantities of napkins into a recessed dispenser. Second, if paper products are not properly loaded into the dispenser, the paper products may jam as they are removed thereby preventing further removal of paper products by users. Third, a person refilling a large dispenser is more likely, due to the larger number of paper products involved, to drop some of the paper products onto a floor. Any dropped paper products are then unsanitary and must be discarded, thereby creating more waste and defeating certain benefits of the larger dispenser.

[0004] Therefore, there is a need for large inverted and/or recessed dispensers that reduce the incidence of waste of paper products due to dropping of the paper products during refilling of the container. There is likewise a need for such dispensers that reduce the incidence of jamming of paper products and the resultant inability to dispense further paper products, and further that supports the weight of paper products and moves the paper products toward the dispenser opening so that individual paper products are readily removed.

SUMMARY OF THE INVENTION

[0005] The aforesaid needs are fulfilled and the problems experienced by those skilled in the art overcome by the container for dispensing individual paper products of the present invention. In one embodiment, the container includes a housing having side walls and a bottom wall defining an interior surface and an interior area within the interior surface. The container further includes a cover hingedly or removably attached to the housing wherein the cover defines a dispensing opening. Within the interior area of the housing there is a spring and a plunger. The spring is compressed between the plunger and at least one of the walls. The plunger is urged toward the dispensing opening by the spring.

[0006] In one aspect, the plunger may have the shape of a truncated cone. Desirably, the truncated cone may include a bottom surface having a diameter substantially equivalent to the diameter of the spring.

[0007] In a further aspect, the plunger may include at least one stabilizing wing. Desirably, the stabilizing wing has an outer edge that contacts the inside surface of the housing to prevent the plunger from binding in the housing.

[0008] In one aspect, the container may include an internal platform in contact with the plunger. The internal platform may be positioned between the plunger and paper products in the container and acts to urge the paper products toward the dispensing opening. Desirably, the internal platform applies substantially constant pressure against the paper products. In a further aspect, the internal platform may include notches to minimize contact of the internal platform with the internal surface of the housing.

[0009] In another embodiment, a system for dispensing individual paper products includes the container described above and a cartridge containing paper products within the container. The cartridge defines a second opening adapted for receiving the plunger wherein the plunger extends through the second opening into the interior area of the cartridge to contact the paper products and urge the paper products toward the dispensing opening. The cartridge may include cartridge side walls, a first end wall defining a dispensing opening for dispensing the paper products, and a second end wall opposing the first end wall, wherein the second opening is defined by the second end wall. In one aspect, the cartridge may further include a removable portion, removal of the removable portion creating the second opening. In a further aspect, the removable portion may include at least one flap.

[0010] In one aspect, the cartridge may further include an internal platform that engages the plunger. In a further aspect, the cartridge may further include platform supports that support the internal platform within the cartridge when the cartridge is being inserted in the housing.

[0011] In another aspect, the container may include tabs positioned on the interior surface of the housing. Further, the cartridge may define slots positioned to engage the tabs to prevent insertion of the cartridge when the cartridge is improperly oriented. In one embodiment, the slots are defined within a side wall of the cartridge. In an alternate embodiment, the slots are defined within flaps that open to receive the plunger. When the flaps are open, the slots are positioned to engage the tabs when the cartridge is improperly oriented.

[0012] In another embodiment, the container described above may be positioned within a supporting structure. Desirably, the container may be supported within the supporting structure by flanges intersecting the side walls at the edges farthest from the bottom wall. Even more desirably, the container is oriented such that paper products are urged toward the dispensing opening in a substantially vertical direction. In one aspect, the cover is flush with the supporting structure. Alternatively, the cover may extend slightly from the supporting structure.

[0013] In another embodiment, a container for dispensing individual paper products includes a housing including side walls and a bottom wall defining an interior surface and an

interior area within the interior surface for receiving a plurality of the paper products. The container further includes a cover hingedly or removably attached to the housing wherein the cover defines a dispensing opening, a means for elevating paper products, and a plunger disposed in the interior area of the housing wherein the means for elevating paper products is positioned between the plunger and at least one of the walls, and further wherein the plunger is urged toward the dispensing opening. In one aspect, the container may be included in a system for dispensing paper products that further includes a cartridge containing paper products. The cartridge defines a dispensing opening and a second opening wherein the means for elevating paper products extends through the second opening into the interior area of the cartridge to contact the paper products and urge the paper products toward the dispensing opening.

[0014] Other features and aspects of the present invention are discussed in greater detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The present invention will be more fully understood from the following detailed description, taken in conjunction with the accompanying drawings (not to scale), wherein like reference numerals refer to like parts, and in which:

[0016] FIG. 1 is a perspective view of an exemplary container for dispensing paper products;

[0017] FIG. 2 is a perspective view of the open container of FIG. 1;

[0018] FIG. 3 is an exploded perspective view of the container and cartridge of FIG. 2 with the cartridge inserted into the container;

[0019] FIG. 4 is a perspective view of the container shown in FIG. 1 showing the cartridge in the container;

[0020] FIG. 5 is a cross-sectional view of the container of FIG. 1 taken along line 1-1 of FIG. 1; and

[0021] FIG. 6 is a perspective view of the open bottom portion of a cartridge for use with the container of FIG. 1.

DETAILED DESCRIPTION

[0022] Reference will now be made in detail to various embodiments of the invention, one or more examples of which are illustrated in the drawings (not to scale). Each example is provided by way of explanation of the invention and not meant as a limitation of the invention. For example, features illustrated or described as part of one embodiment or figure can be used on another embodiment or figure to yield yet another embodiment. It is intended that the present invention include such modifications and variations.

[0023] The present invention is directed to a container for dispensing sheet-like materials. Various sheet-like materials can be dispensed from the container of the present invention such as, for example, paper, nonwoven, and other products. Exemplary sheet-like products include, but are not limited to, facial tissue, towels, bathroom tissue, wipers, napkins, seat covers and so forth. The specific composition of the sheet materials dispensed can vary as desired. Exemplary sheet-like materials and methods of making the same include, but are not limited to, those described in U.S. Pat.

Nos. 3,301,746; 3,322,617; 3,650,882; 4,100,324; 4,436,780; 4,659,609; 4,737,393; 5,048,589; 5,284,703; 5,399,412; 5,494,554; 5,607,551; 5,672,248; 5,716,691; 5,772,845; 5,776,306; 6,077,590; 6,273,996; 6,096,152 and so forth. While paper products are generally discussed with regard to the embodiments described herein below, it will be understood that various other products could be substituted therefore.

[0024] The container of the present invention can hold and dispense significant numbers of individual sheets. Desirably, the container is sized to hold and dispense at least about 250 sheets. By way of example, the container can contain between about 400 and about 1000 sheets. In certain embodiments, the container can contain and dispense between about 700 and about 900 sheets.

[0025] Referring to FIG. 1, a container 10 is disclosed for dispensing paper products 12. The container 10 includes a housing 14 in which the paper products 12 are placed and from which the paper products 12 are dispensed. Optionally, the paper products 12 may be contained within a cartridge which is placed within the housing 14. The container can be positioned in a vertical or horizontal orientation either alone or within a supporting structure or surface. In one embodiment, the container is installed in a countertop 16 or other suitable substantially planar surface.

[0026] The housing 14 includes a bottom wall 20 and a number of side walls including a first side wall 22, a second side wall 24, a third side wall 26, and a fourth side wall 28 for housing the paper products 12. The side walls 22, 24, 26, 28 intersect the bottom wall to define an interior surface 30 (see FIG. 2) of housing 14, within which an interior area 32 (see FIG. 2) is located. The side walls 22, 24, 26, 28 and the bottom wall 20 may each, if desired, be made of two or more planar portions. Such construction strengthens the housing 14 and is useful in locations where the housing might be vandalized. The outer portions of the side walls 22, 24, 26, 28 help withstand any blow or impact to the housing 14 to prevent destruction of the housing, removal of the housing from its mounting, or removal of paper products 12 from the housing.

[0027] The container 10 further includes a cover 34 which is removably or hingedly attached to one of the side walls 22, 24, 26, 28. The cover 34 may be flush with or extend slightly from the countertop 16 or other surface in which the container 10 is installed. The cover 34 is openable for insertion of paper products 12 into the interior area of the housing 14 when the supply of paper products 12 is depleted and/or runs low. Desirably, the cover 34 includes one or more fasteners 36 that hold the cover closed. As used herein, the term "fasteners" means devices that fasten, join, connect, secure, hold, or clamp components together. Fasteners include, but are not limited to, hooks, hook and eye fasteners, latches, snaps, snap-fits, clips, clasps, loop fasteners, interlocking male/female connectors, fishhook connectors, and so forth. The fastener 36 is openable when desired to reopen the cover 34. In one embodiment, the fastener 36 is openable by pressing a button 38. The cover 34 defines a dispensing opening 40 through which the paper products 12 pass as they are dispensed.

[0028] Desirably, at least one protrusion extends into the interior area of the housing. In one embodiment, as partially shown in FIG. 1, the second side wall 24 and the fourth side

wall **28** include protrusions **42** extending into the interior area of the housing **14**. However, the protrusions **42** could be disposed on any of the walls and one wall can have multiple protrusions. In those embodiments wherein pairs of protrusions are disposed on opposing walls of the housing **14**, they can be disposed at the same height or different heights (i.e., staggered). The protrusions **42** desirably comprise a generally downwardly angled structure and can have a geometric and/or curvilinear structure. By way of example only, the protrusions can comprise curved bumpers that may include a plurality of ridges extending across the curved bumpers perpendicular to the dispensing direction. The protrusions **42** extend into the interior area **32** to contact paper products **12** and thereby oppose the movement of paper products **12** in the dispensing direction. By extending into the interior area **32** to contact paper products **12**, the protrusions **42** impede the movement of paper products **12** toward the dispensing opening, but do not prohibit such movement. The use of protrusions to control dispensing is described, for example, in U.S. Pat. No. 6,241,118 to Tramontina and U.S. Pat. No. 6,378,726 to Chan et al., the entire contents of which are incorporated herein by reference thereto.

[0029] Referring now to **FIG. 2**, the housing **14** is supported within the countertop **16** by flanges **44** that extend outwardly from the side walls **22**, **24**, **26**, **28**. When the housing **14** is inserted in an opening in the countertop **16** slightly larger than the cross-section of the housing **14**, the housing is supported within the countertop by the flanges **44**. Desirably, the flanges **44** intersect the side walls **22**, **24**, **26**, **28** at the edges farthest from the bottom wall **20**. This allows the container **10** to be seated substantially flush with the surface of the countertop **16**. The flanges may be fastened to the countertop or other surface by suitable fastening devices. Suitable fastening devices include, but are not limited to, screws, nuts and bolts, rivets, snap-fits, tacks, nails, adhesives, and so forth.

[0030] As noted above, the cover **34** may be hingedly attached to one of the side walls **22**, **24**, **26**, **28** by a hinge **46**. As used herein, the term "hinge" refers to a jointed or flexible device that connects and permits pivoting or turning of a part to a stationary component. Hinges include, but are not limited to, pivotable connectors, such as those used to fasten a door to frame, and living hinges. Living hinges may be constructed from plastic and formed integrally between two members. A living hinge permits pivotable movement of one member in relation to another connected member. The cover **34** is openable for insertion of paper products **12** into the interior area **32** of the housing **14** when the supply of paper products is depleted and/or runs low. The fastener **36** that holds the cover **34** closed may, for example, include interlocking tabs **48**. At least one of the interlocking tabs **48** is movable when desired to reopen the cover **34** by pressing the button **38**. Any other type of fastener **36** known to those skilled in the art for reopenably securing the cover **34** may be used.

[0031] Desirably, the cover **34** further includes a group of control ribs **52** that extend into the interior area **32** to contact paper products when the cover is in the closed position. The control ribs **52** space, slow, align, and/or support paper products as the same are moved toward the cover **34** and through the dispensing opening **40**. Size, shape, and spacing of the control ribs can be used to control dispensing of the paper products. Referring now to **FIG. 5**, the control ribs **52**

may have different dimensions to properly support and guide the paper products into the dispensing opening **40**. For example, a tall rib member **56** extends into the interior area **32** by a greater amount than a short rib member **58**. The tall rib members **56** and short rib members **58** are illustrated to show an exemplary dispensing configuration. Additionally, a side surface **60** of the tall rib member **56** closest to the interior surface **30** may be configured so there is little or no offset from the interior surface. A side surface **62** of the short rib member **58** may be offset from the interior surface **30** by a greater amount.

[0032] As one example, the tall rib member **56** may have a height ranging from about 1 to about 2 inches at the location where it intersects with the first side wall **22** and an offset or height ranging from about 0.1 to about 0.5 inch adjacent the dispensing opening **40**. The short rib member **58** may have a height ranging from about 0.5 to about 1.5 inch at the location where it intersects with the third side wall **26** and an offset or height ranging from 0 to about 0.25 inch adjacent the dispensing opening **40**. The rib members may have various widths or thicknesses and the width of a rib member may vary along any dimension or dimensions. Desirably, the portion of the rib member contacting the paper product will be relatively thin and smooth to minimize friction. The use of rib members is further described in U.S. Pat. No. 6,241,118 to Tramontina and PCT Publication WO 99/30601, the entire contents of which are incorporated herein by reference.

[0033] Referring again to **FIG. 2**, the container **10** further includes a means for elevating paper products **50** toward the dispensing opening **40** in the cover **34**. Various alternatives are possible within the scope of the invention to elevate paper products toward the cover **34**. The means for elevating paper products **50** may comprise any structure that allows paper products to be urged toward and dispensed from the dispensing opening **40** in the cover **34**. The means for elevating paper products **50** is discussed more fully below in conjunction with **FIG. 5**.

[0034] The dispensing opening **40** may have many shapes within the scope of the present invention, as long as the opening provides easy access for a user. Optionally, the dispensing opening may also be configured to provide metered delivery of individual paper products. Desirably, the paper products **12** are interfolded, tabbed, or tab interfolded to provide metered feeding of individual paper products one at a time. Folding devices, such as boards or plates, have long been used to longitudinally fold webs and other sheet-like materials in order to form a stack of folded sheets. The sheets are, generally speaking, drawn over the folding device wherein the shape and configuration of the device causes the sheet to twist and bend thereby producing the desired fold. Folding devices have heretofore been provided in a variety of shapes and configurations in order to achieve the desired fold lines and folding patterns. Folding devices have been used to form a number of different folds including, for example, half-folds, quarter folds, c-folds, v-folds, j-folds, w-folds, z-folds, and so forth.

[0035] In addition, for more complex folds requiring multiple fold lines, it is known to form the necessary fold lines using two or more folding devices in series. In this regard, folding boards have also been used in series to achieve inter-folded or inter-leafed sheets, that is to say sheets folded

such that they partially envelope portions of another sheet. Inter-leafed sheets are commonly employed in stacks as a mechanism to facilitate removal of the individual sheets from a dispenser. Withdrawal of a first sheet through a dispenser opening pulls the enveloped portion of a second sheet through the dispenser opening such that it extends out of the dispenser opening and is exposed. Having a portion of the subsequent sheet extending out of the dispenser opening greatly facilitates removal of the same from the dispenser by the user. By way of example only, various folding devices, folding patterns and inter-folding schemes are described in the following U.S. Pat. Nos. 3,401,928; 3,679,094; 3,817,514; 3,841,620; 4,131,271; 4,502,675; 5,868,276; 6,045,002; and 6,168,848. However, the present invention does not require the use of interfolded paper products.

[0036] Optionally, the housing 14 may include one or more tabs 54 attached to the interior surface 30 near the opening in the housing 14 through which paper products are loaded. The tabs 54 are dimensioned such that they inhibit a cartridge containing paper products from being loaded in an improper orientation. The tabs 54 align with slots in a cartridge such that the slots will catch on the tabs 54 if the cartridge is not oriented properly prior to loading the cartridge into the housing 14. When the cartridge is aligned properly, there are no slots to catch on the tabs 54 and the cartridge will slide into the housing 14 unimpeded.

[0037] The housing 14 may be made from numerous materials and by numerous methods known to those skilled in the art. The housing 14 may be made of plastic such as polyethylene, nylon, and so forth. However, other suitable materials, such as other plastics or metals, may be provided for any or all of the parts of the housing 14. As one example, the housing 14 may be made of an injection-molded plastic. The protrusions 42, control ribs 52, and tabs 54 are desirably formed integral with the housing 14. However, the protrusions 42, control ribs 52, and tabs 54 may be formed separately from the housing 14 and attached later. Also, the protrusions 42, control ribs 52, and tabs 54 may be made of 11 different material from the housing 14 if desired. For example, the protrusions 42, control ribs 52, and tabs 54 may be made of a more resilient material than the materials described above, such as an elastomer or rubber.

[0038] Desirably, as mentioned above, a cartridge may be provided for holding paper products to be dispensed to a user. As shown in FIG. 3, a cartridge 70 having outside walls 72 is provided for insertion into the interior area 32 of the housing 14 for containing paper products 12 to be dispensed. The cartridge has a bottom end 74 that is adapted to receive the means for elevating paper products 50 and a top end 76 adapted to dispense paper products 12. The cartridge 70 is sized to fit within the interior area 32 of the housing 14. Desirably, the cartridge 70 is sized to be only slightly smaller than the housing 14 to maximize the number of paper products 12 contained within the cartridge.

[0039] The cartridge 70 can hold and dispense significant numbers of individual sheets. Desirably, the cartridge 70 is sized to hold and dispense at least about 250 sheets. By way of example, the cartridge 70 can contain between about 400 and about 1000 sheets. In certain embodiments, the cartridge 70 can contain and dispense between about 700 and about 900 sheets.

[0040] Desirably, the cartridge includes a plurality of removable portions, the removal of which creates openings

through the cartridge. One such removable portion may be disposed at the bottom end of the cartridge. Removal of the removable portion at the bottom end of the cartridge allows the cartridge to receive the means for elevating paper products when the cartridge is loaded into the housing. Alternatively, the removable portion may be flaps which can be folded back to create an opening. As shown in FIG. 3, the cartridge 70 includes one or more flaps 80 disposed in the bottom wall of the cartridge 70. The flaps 80 are folded back prior to loading the cartridge 70 into the housing 14. Folding back the flaps 80 allows the cartridge 70 to receive the means for elevating paper products 50.

[0041] Desirably, the cartridge includes at least one removable portion that can be removed to create a slot 88 that, as discussed above, will prevent misalignment of the cartridge in the housing. The slots 88 are positioned such that when the cartridge is improperly oriented, the slots will catch on tabs 54 positioned on the interior surface of the housing. The slots 88 may be positioned in one of the outside walls 72 of the cartridge 70. Alternatively, the slots 88 may be positioned in the flaps 80 that are opened prior to insertion of the cartridge 70 in the housing 14. When the flaps 80 are opened, they fold back against the outside walls 72 of the cartridge 70 where the slots 88 would be in position to engage the tabs 54 if the cartridge is not oriented correctly.

[0042] The cartridge 70 may include at least one of another removable portion at the top end 76 of the cartridge 70 so that paper products 12 can be supported and aligned by the control ribs 52 for dispensing through the dispensing opening 40. Removal of the removable portions creates openings 90 through which the control ribs 52 extend.

[0043] The cartridge 70 may include at least one of another removable portion that corresponds to the protrusions 42 in the housing 14. The removable portions are disposed in the outside walls 72 of the cartridge 70 so that, once the removable portions are removed, openings 92 can encompass and receive the protrusions 42 extending from the interior surface 30 of the housing 14. Thus, upon removal of the removable portions and placement of the cartridge 70 in the housing 14, the protrusions 42 and rib members 58 contact the paper products 12 within the cartridge 70 and act upon the paper products as described above.

[0044] The top end 76 of the cartridge 70 may be formed having a removable portion corresponding to the dispensing opening 40. Removal of this removable portion creates an opening 94 through which the paper products are dispensed.

[0045] The removable portions may either be removed (or simply not formed) during manufacture of the cartridge or removed just prior to installation of the cartridge in the housing. If the removable portions are to be removed as part of the manufacturing process, the cartridge should be shipped to the user wrapped, for example in a polyethylene bag, to preserve the sterility of the paper products in the cartridge. If the removable portions are to be removed as part of the installation process, the edges of the removable portions should be weakened, scored, etc. for easy removal. If a removable portion is used to provide access for the means for elevating the paper products, it should not be removed as part of the manufacturing process to ensure that the paper products remain properly loaded in the cartridge 70 until the time at which the cartridge is to be inserted in the housing 14.

[0046] The cartridge 70 is desirably made of heavy paper or cardboard, but may be made of any other suitable material known to those skilled in the art.

[0047] FIG. 4 is a perspective view showing the cartridge 70 fully inserted into the housing 14 mounted in the countertop 16.

[0048] Referring now to FIG. 5, a plunger 100 is disposed within the interior area 32 of the housing 14 along with at least one spring 102. When the spring 102 is compressed by the plunger 100, the spring 102 urges the plunger 100 in the dispensing direction 104. Thus, when paper products 12 are placed in the container 10 and the plunger 100 is depressed thereby compressing the spring 102, the plunger 100 and the spring 102 urge the paper products 12 toward the dispensing opening 40. Use of a plunger and spring mechanism allows the container 10 to be used in situations where paper products are to be dispensed in a substantially vertical direction.

[0049] The plunger 100 is shaped to provide support and lift the paper products 12 through the housing 14 without becoming stuck such that the paper products would no longer be elevated toward the dispensing opening 40. The plunger can have any one of various shapes. In one embodiment, the plunger 100 can take the shape of a truncated cone having a top surface 108 and a bottom surface 110. The top surface 108 engages and lifts an internal platform 82 against the paper products 12. The bottom surface 110 is engaged by the spring 102. The diameter of the bottom surface 110 is desirably substantially equivalent to the diameter of the spring 102. Desirably, the bottom surface 110 of the plunger is attached to the spring 102 to prevent disengagement of the spring from the bottom surface of the plunger.

[0050] Desirably, one or more stabilizing wings 112 extend from the plunger 100. The wings 112 act to distribute the force from the spring 102 to the outer edges of the internal platform 82. As shown in FIG. 2, the force is applied by the upper edge 114 of the wing 112 that contacts the internal platform 82. The wings 112 also act to prevent the plunger 100 and spring 102 from tipping over inside the cartridge. If the plunger 100 and spring 102 begin to tip over, the outer edge 116 of the wing 112 contacts the inside surface of the cartridge 70 before the plunger can get stuck. Thus, the surface area of the outer edge 116 is desirably minimized to prevent the outer edge from binding against the inside surface of the cartridge 70. The bevel 118 between the upper edge 114 and the outer edge 116 is configured to transition between the upper edge 114 and the outer edge 116. The wings 112 may have various thicknesses and the thickness of the wing may vary along any dimension or dimensions. Desirably, the outer edge 116 of the wing 112 will be relatively thin and smooth to minimize friction against the inside surface of the cartridge 70.

[0051] Referring again to FIG. 5, the spring 102 is sized to provide sufficient force to urge and/or elevate the paper products 12 to the dispensing opening 40. Desirably, the spring applies substantially constant pressure against the paper products at all positions of travel. Application of substantially constant pressure helps to prevent over application of force when the plunger is toward the bottom of the dispenser and under application of force when the plunger is toward the top of the dispenser.

[0052] As discussed above, prior to insertion of the cartridge into the housing, the bottom of the cartridge is opened

to enable the contents of the cartridge to be engaged by the means for elevating the paper products. To prevent the paper products from falling out of the opening during the insertion process, the cartridge may contain an internal platform. The internal platform is prevented from falling out of the cartridge by platform supports attached to the internal surface of the cartridge. The platform rests unattached above the platform supports so that it will move with the means for urging and/or elevating the paper products as discussed above. The largest dimensions of the platform are slightly smaller than the internal dimensions of the cartridge so that the platform can move through the cartridge as paper products are dispensed without binding against the internal surface of the cartridge. Desirably, the largest dimensions of the platform are substantially equal to or slightly larger than the paper products to provide uniform dispensing of the paper products.

[0053] FIG. 6 depicts a perspective view of the bottom end 74 of the cartridge 70. The flaps 80 are shown open, exposing the interior area of the cartridge 70. Platform supports 84 are depicted in FIG. 6 above the platform 82. Optionally, notches 86 are present in the sides of the platform to reduce contact of the platform 82 against the inside of the cartridge walls.

[0054] The platform supports may take any form, so long as the platform supports are large enough and sufficiently well attached to the interior surface of the cartridge to adequately support the weight of the paper products as the cartridge is being inserted into the housing. As one example, the platform supports may be separate components that are attached to the interior surface of the cartridge. As another example, the platform supports may be formed from partially removable portions in the side walls of the cartridge. At any time after the paper products and internal platform are loaded into the cartridge and before inserting the cartridge into the housing, the partially removable portions may be pressed into the interior of the cartridge to create the platform supports. At least a portion of the platform supports remain attached to the cartridge wall, thereby preventing the platform and paper products from falling from the cartridge when the cartridge is inverted to be loaded into the housing of the container. It will be apparent to those skilled in the art that various modifications and variations can be made in the present invention without departing from the scope and spirit of the invention. It is intended that the present invention include such modifications and variations as come within the scope of the appended claims and their equivalents.

We claim:

1. A container for dispensing individual paper products, the container comprising:

- a housing including side walls and a bottom wall defining an interior surface and an interior area within the interior surface;
- a cover hingedly or removably attached to the housing wherein the cover defines a dispensing opening;
- a spring disposed in the interior area of the housing; and
- a plunger disposed in the interior area of the housing wherein the spring is compressed between the plunger

and at least one of the walls, and further wherein the plunger is urged toward the dispensing opening by the spring.

2. The container of claim 1 wherein the plunger comprises a truncated cone.

3. The container of claim 2 wherein the truncated cone comprises a bottom surface having a diameter substantially equivalent to the diameter of the spring.

4. The container of claim 2 further wherein the plunger comprises at least one stabilizing wing.

5. The container of claim 4 wherein the at least one stabilizing wing has an outer edge that contacts the inside surface of the housing to prevent the plunger from binding in the housing.

6. The container of claim 1 further comprising an internal platform in contact with the plunger.

7. The container of claim 6 wherein the internal platform comprises notches to minimize contact of the internal platform with the internal surface of the housing.

8. The container of claim 6 further comprising paper products contained within the housing wherein the paper products are urged toward the dispensing opening by the internal platform.

9. The container of claim 8 wherein the internal platform applies substantially constant pressure against the paper products.

10. A system for dispensing individual paper products, the system comprising:

the container of claim 1; and

a cartridge containing paper products, the cartridge defining a second opening, the second opening being adapted for receiving the plunger wherein the plunger extends through the second opening into the interior area of the cartridge to contact the paper products and urge the paper products toward the dispensing opening.

11. The system of claim 10 wherein the cartridge comprises cartridge side walls, a first end wall defining a third opening for dispensing the paper products, and a second end wall opposing the first end wall, wherein the second opening is defined by the second end wall.

12. The system of claim 11 wherein the cartridge further comprises an internal platform that engages the plunger.

13. The system of claim 12 wherein the cartridge further comprises platform supports, wherein the platform supports support the internal platform within the cartridge when the cartridge is being inserted in the housing.

14. The system of claim 10 wherein the cartridge further comprises a removable portion, removal of the removable portion creating the second opening.

15. The system of claim 14 wherein the removable portion comprises at least one flap.

16. The system of claim 10 wherein the container comprises tabs positioned on the interior surface of the housing, and further wherein the cartridge defines slots positioned to engage the tabs to prevent insertion of the cartridge when the cartridge is improperly oriented.

17. The system of claim 16 wherein the slots are defined within a side wall of the cartridge.

18. The system of claim 16 wherein the cartridge comprises flaps, wherein the flaps open to receive the plunger, and further wherein the flaps define the slots, and even further wherein the slots are positioned to engage the tabs

when the flaps are open to receive the plunger and when the cartridge is improperly oriented.

19. The system of claim 10 wherein the spring applies substantially constant pressure against the paper products.

20. The system of claim 10 wherein the container is positioned within a supporting structure.

21. The system of claim 20 wherein the cover is flush with the supporting structure.

22. The system of claim 20 wherein the cover extends slightly from the supporting structure.

23. The system of claim 20 wherein the container is supported within the supporting structure by flanges intersecting the side walls at the edges farthest from the bottom wall.

24. The system of claim 20 wherein the paper products are urged toward the dispensing opening in a substantially vertical direction.

25. A container for dispensing individual paper products, the container comprising:

a housing including side walls and a bottom wall defining an interior surface and an interior area within the interior surface for receiving a plurality of the paper products;

a cover hingedly or removably attached to the housing wherein the cover defines a dispensing opening;

a means for elevating paper products; and

a plunger disposed in the interior area of the housing wherein the means for elevating paper products is positioned between the plunger and at least one of the walls, and further wherein the plunger is urged toward the dispensing opening.

26. A system for dispensing individual paper products, the system comprising:

the container of claim 25; and

a cartridge containing paper products, the cartridge defining a dispensing opening and a second opening wherein the means for elevating paper products extends through the second opening into the interior area of the cartridge to contact the paper products and urge the paper products toward the dispensing opening.

27. A container for dispensing individual paper products, the container comprising:

a housing including side walls and a bottom wall defining an interior surface and an interior area within the interior surface for receiving a plurality of the paper products, and a cover defining a dispensing opening for removal of paper products from the interior area,

a spring-loaded plunger disposed in the interior area of the housing for elevating the paper products toward the dispensing opening.

28. The container of claim 27, wherein the container contains a cartridge having an interior area containing paper products, the cartridge having a first end and a second end, the first end having a first opening for dispensing of paper products, the second end having a second opening through which the spring-loaded plunger extends into the interior area of the cartridge.