



PCT

Industria y Comercio

SUPERINTENDENCIA

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
INVENTARIO

SOLICITUD PATENTE DE INVENCION

10-10616

21. EXPEDIENTE N°

54. TÍTULO BASE PARA CONTENEDOR METALICO.

51. CLASIFICACIÓN INTERNACIONAL B65D 1/16

71. SOLICITANTE CROWN PACKAGING TECHNOLOGY, INC.

DOMICILIO Alsip, Illinois, Estados Unidos de América

74. APODERADO DILIA MARIA RODRIGUEZ D'ALEMAN

22. BOGOTÁ, D.C.



No. 10-010616- -00000-0000

Fecha: 2010-02-02 15:22:18 Dep. 2020 DIR.NUEVASCR
Tra 11 PATENTEIVII Eve 378 FASENACIONALI
Act. 411 PRESENTACION Folios: 48

**FORMULARIO ÚNICO DE SOLICITUD DE PATENTE
PCT
ENTRADA EN FASE NACIONAL**

1 SOLICITUD DE:

☒ Patente de Invención ☐ Patente de Modelo de Utilidad

☒ Capítulo I. ☐ Capítulo II.

2
SOLICITANTE
(71)

Nombre: CROWN PACKAGING
TECHNOLOGY, INC.
Dirección: 11535 South Central Avenue,
Alsip, Illinois 60803, Estados Unidos de América
Nacionalidad o domicilio: Alsip, Illinois,
Estados Unidos de América
Lugar de Constitución: Illinois, Estados
Unidos de América.
Teléfono: **Fax:**
E-mail

IDENTIFICACIÓN

C.C. ☐ **NIT** ☐
C.E. ☐ **Otro** ☐
Número

3
REPRESENTANTE
O APODERADO
(74)

Nombre: DILIA MARÍA RODRÍGUEZ
D'ALEMAN
Dirección: Carrera 11 No. 86-53, piso 6
Teléfono: 6 181088 **Fax:** 6350824
E-mail: clarkemodet@clarkemodet.com.co

IDENTIFICACIÓN

C.C. ☒ **NIT** ☐
C.E. ☐ **Otro** ☐
Número 41.654.882
TP 20824 CSJ

4
INVENTOR (ES)
(72)

Nombre: YUAN, Sherry
GRABOWSKI, Marion.
Dirección: 7840 Brookside Glen Drive, Tinley Park, Illinois 60487, Estados Unidos y
1033 Coach Lane, Lemont, Illinois 60439, Estados Unidos de América
Nacionalidad o domicilio: Estadounidenses.

5 PCT (86)

Solicitud Internacional No. PCT/US2008/070735 Fecha 22 de julio de 2008
Publicación Internacional No. WO 2009/015131 A1 Fecha 29 de enero de 2009

6 TÍTULO (54) BASE PARA CONTENEDOR METALICO.

7 Clasificación Internacional (51) B65D 1/16

8 Prioridad

SI ☒ NO ☐

(33) País de Origen
Estados Unidos de América

(32) Fecha
25 de julio de 2007

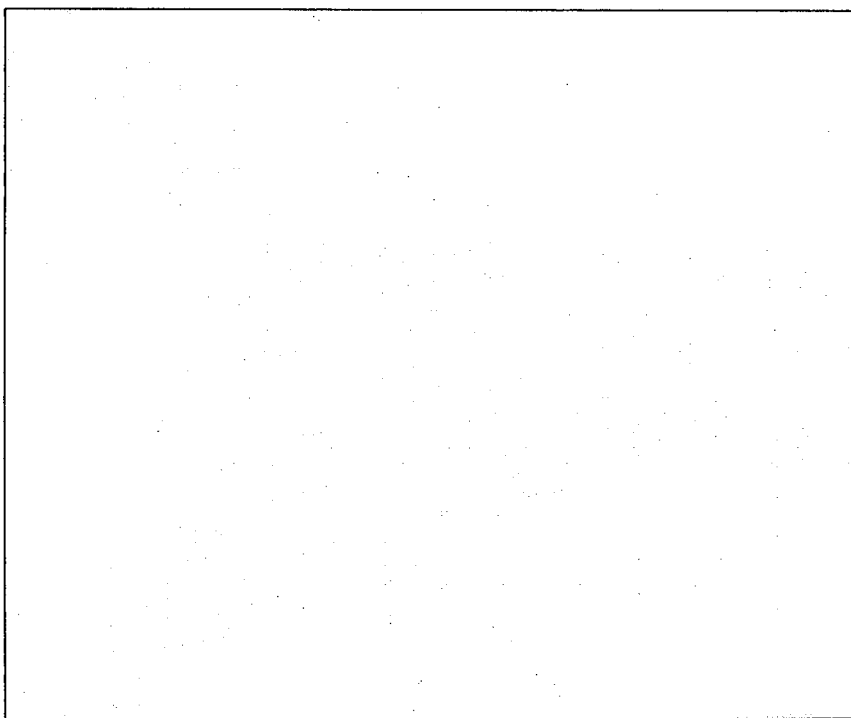
(31) Número de Solicitud
11/782,749

9 Comprobante de pago No. 10-1,450 // 10-1,471 // 10-1,658

Fecha 06 de enero de 2010

- ☐ Comprobante de pago de la tasa de presentación de la solicitud
- ☐ Documento que acredita la existencia y representación legal cuando el solicitante sea persona jurídica
- ☐ Poderes si fuere el caso
- ☐ Documento de cesión del inventor al solicitante o a su causante
- ☐ Declaraciones
- ☐ Copia de la solicitud internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☐ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☐ Copia del examen preliminar internacional efectuado por la Autoridad Internacional de Examen Preliminar (IPEA).
- ☐ Traducción del examen preliminar internacional efectuado por la IPEA
- ☐ De ser el caso copia de contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas
- ☐ De ser el caso, certificado de deposito del material biológico
- ☐ Arte final 12 X 12 .
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☐ De ser el caso, modificaciones efectuadas a la solicitud internacional
- ☐ Otros Opinión Escrita.

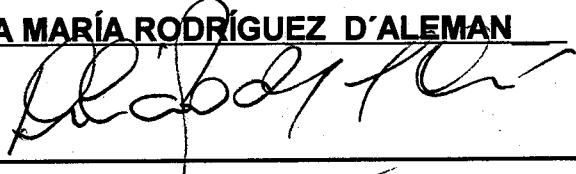
11 FIGURA CARACTERÍSTICA



12 Solicito la concesión de la patente

NOMBRE : DILIA MARÍA RODRÍGUEZ D'ALEMAN

FIRMA:


C.C. 41.654.882

T.P. 20824

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 10 - 1,450
FECHA : ENERO 6 DE 2010

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 10-010616- -00000-0000

Fecha: 2010-02-02 15:22:18
Tra. 11 PATENTEIYII
Act. 411 PRESENTACION

Dep. 2020 DIR.NUEVASCR
Eve: 378 FASENACIONALI
Folios: 48

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	Nº. PAGO	FECHA PGO	Vr. PAGO
CLARKE MODET Y CO. COLOMB	CONSIGNACION	BANCO DE BOGOTA	062754387	175684121	06/01/2010	100.325.000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	85 EXAMEN DE PATENTABILIDAD DE INVEN	464.000.00
TOTAL :			464.000.00

SON: CUATROCIENTOS SESENTA Y CUATRO MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

8-2455
2

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

CERTIFICACION DE EXCEDENTE : 10 - 1,471
FECHA : ENERO 6 DE 2010

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 10-010616- -00000-0000

Fecha: 2010-02-02 15:22:18 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 411 PRESENTACION Folios: 48

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PAGO	Vr. PAGO
CLARKE MODET Y CO. COLOMB	CONSIGNACION	BANCO DE BOGOTA	062754387	175684121	06/01/2010	100,325,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-09	OTROS SERVICIOS DE PROPIEDAD I	
		99 OTROS SERVICIOS ADMINISTRATIVOS	325,000.00
		TOTAL :	\$ 325,000.00

SON: TRESCIENTOS VEINTICINCO MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

ESTA CERTIFICACION DE EXCEDENTE DE PAGO SOLO PODRA SER UTILIZADA
COMO PARTE DE LA CANCELACION DE UNA TARIFA VIGENTE Y NO PODRA SER
SUSTITUIDA POR NINGUN RECIBO.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

CERTIFICACION DE EXCEDENTE : 10 - 1,658
FECHA : ENERO 6 DE 2010

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 10-010616- -00000-0000

Fecha: 2010-02-02 15:22:18 Dep. 2020 DIR NULVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 411 PRESENTACION Folios: 48

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PAGO	Vr. PAGO
CLARKE MODET Y CO. COLOMBIA	CONSIGNACION	BANCO DE BOGOTA	062754387	175684121	06/01/2010	100.325.000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-09	OTROS SERVICIOS DE PROPIEDAD I	
		99 OTROS SERVICIOS ADMINISTRATIVOS	5.000.00
		TOTAL :	\$ 5.000.00

SON: CINCO MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

ESTA CERTIFICACION DE EXCEDENTE DE PAGO SOLO PODRA SER UTILIZADA
COMO PARTE DE LA CANCELACION DE UNA TARIFA VIGENTE Y NO PODRA SER
SUSTITUIDA POR NINGUN RECIBO.

C/36/13

P6284 20436000
12/22 141/442,443

Clarke, Modet & C^o

COLOMBIA

Carrera 11 n° 93-42, Of. 404 Bogotá Colombia Tel: (57 1) 6350813 Fax: (57 1) 6350824 Email: clarkemodet@clarkemodet.com.co

PODER

Yo (nosotros), abajo firmante(s)

en mi (nuestro) carácter de representante(s) legales de

una sociedad organizada y existente de acuerdo con las leyes de

y en actual cumplimiento de su objeto social, con domicilio en

por el presente instrumento confiero (conferimos) poder especial a favor de DILIA MARIA RODRIGUEZ D'ALEMARI, con Cédula de Ciudadanía No. 41.654.882 de Bogotá, y tp. 20824 y CLAUDIA LUCIA CARO RAMIREZ, con Cédula de Ciudadanía No. 40.017.374 de Tunja, y tp. 36448, con domicilio en Bogotá, Colombia, para que actuando en su orden en nombre del (de la) o/organice lo (la) representen ante cualquier entidad, autoridad y/o persona, especialmente ante las del orden Administrativo, Contencioso Administrativo, Judicial, Tribunales de Arbitramento y/o cualquier otro en lo referente a los siguientes asuntos:

- 1) Solicitar, tramitar, obtener y/o registrar cualquiera de las modalidades de Propiedad Industrial, tales como: patentes de invención, modelos de utilidad, diseños industriales, variedades vegetales, marcas, lemas, nombres y ensñas comerciales y denominaciones de origen; así como sus renovaciones, prórrogas, transferencias, cambios de nombre y/o domicilio, contratos y licencias.
- 2) Solicitar, tramitar, obtener y/o registrar derechos de autor, en cualquiera de sus presentaciones así como la protección de secretos industriales y know-how.
- 3) Solicitar, tramitar, obtener y/o registrar registros sanitarios, permisos y/o licencias de funcionamiento, así como sus renovaciones o prórrogas, transferencias, cambios de nombre y/o domicilio, contratos y licencias.
- 4) Ejercer acciones de oposición, observación, reclamos, reconsideración, reposición, apelación, cancelación administrativa o judicial, nulidad, protección al consumidor, concesión de licencias, protección de secretos industriales y demás acciones y recursos relacionados con derechos derivados de los asuntos arriba indicados y en contra de la competencia desleal; acciones derivadas de la obtención o explotación de licencias, acciones de indemnización de perjuicios. También podrá(n) intervenir en juicios civiles, comerciales, penales, contencioso-administrativos, tutelac y de policía; en acciones o juicios promovidos por el (la) mandante o en contra el (ella).
- 5) Registrar nombres de dominio ante la entidad competente.
- 6) En el ejercicio de este mandato los mandatarios arriba mencionados quedan facultados para: conciliar, cancelar, transigir, comprometer en árbitros, desistir, recibir y tomar posesión de la cosa objeto de litigio y renunciar o desistir a derechos concedidos o en curso de concesión, admitir los hechos del proceso.
- 7) Ratificar o no la agencia oficiosa.
- 8) Así mismo faculio (facultamos) a los mencionados apoderados para recibir notificaciones y designar apoderados judiciales o extrajudiciales, sustituir el presente poder y revocar las sustituciones que hicieron.

Dado y firmado en

a los días de

POWER OF ATTORNEY

I (we), the undersigned

DEEPA JANE CLAPE SMITH

legal representative(s) of CROWN Packaging Technology, Inc.

an organization existing under the laws of

and in present execution of its business activity, domiciled at 11535 S. Central Avenue, Alsip, Illinois 60803-2599, USA

do hereby grant POWER OF ATTORNEY to DILIA MARIA RODRIGUEZ D'ALEMARI, identification card No. 41.654.882 of Bogotá, and tp. 20824 and CLAUDIA LUCIA CARO RAMIREZ, tp. 36448, identification card No. 40.017.374 of Tunja, residing in Bogotá, Colombia, to act in the order of their appointment in behalf of grantor before any entity, authority and/or natural or juridical person, specially before those Administrative, Administrative-Contentious, Judicial, arbitration courts, and/or any other, in all matters concerning the following:

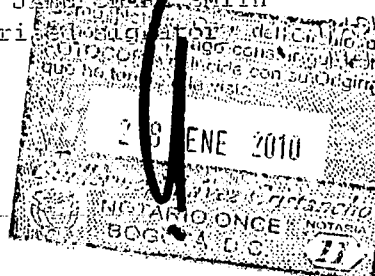
- 1) To apply, process, obtain and/or register any of the modalities of Industrial Property, such as: Patents of Invention, Utility Models, Design, plant varieties, Marks, Slogans, Trade Names and emblems and appellations of Origin, as well as their renewals, extensions, assignments, changes of name and/or domicile, agreements and licences.
- 2) To apply, process, obtain and/or register copyrights of any kind as well as protection of industrial secrets or know-how.
- 3) To apply, process, obtain and/or register sanitary registrations, operating authorizations and/or licences; as well as their renewals or extensions, assignments, changes of name and/or domicile, agreements and licences.
- 4) To bring actions of opposition, observations, claims, reconsideration, appeal or legal remedies, cancellations, nullity, protection to the consumer, granting of licences, protection of trade secrets and other actions related with rights derived from the above-mentioned matters and against the unfair competition, actions resulting from the obtaining or exploitation of licences, recovering damages actions. They can also intervene or participate in Civil, Commercial, Criminal or Contentious-Administrative Trials; the actions for writ mandamus, police actions; in actions, lawsuits or litigations instituted by the grantor or against him.
- 5) To register domain names before the competent entity.
- 6) To the effect of this mandate the above-named proxy are empowered to: conciliate, cancel, settle, submit to arbitration, withdraw and to receive and take possession of the litigation related object and waive or renounce the rights granted or in process of granting, admit the facts of the case.
- 7) To ratify or not the officious agency.
- 8) I (we) hereby appoint the afore mentioned attorneys with power to receive notifications and to designate judicial and extra-judicial attorneys, substitute this Power of Attorney and to revoke such substitutions.

Granted and signed at WANTAGE, OXFORDSHIRE, UK

on this day of on behalf of CROWN Packaging Technology, Inc.

Firma / signature DEEPA JANE CLAPE SMITH

STUART P. B. CAPEL
SOLICITOR & NOTARY PUBLIC
6 EAST SAINT HELEN STREET
ABINGDON, OXON, OX14 5EW
TEL: 01235 - 523411
FAX: 01235 - 533293



05/18/05
SUCCION. OFICIAL No. 05/18/05
ABLO. D. ANITA AGUILERA
DUCCION. OFICIAL No. 05/18/05
RES. 112 DE MAYO 2003
FOL. 1114. INTERIOR Y DE JUSTICIA.

17th February 2005.

AD4360aw

CERTIFICADO NOTARIAL

(Cuando el solicitante es SOCIEDAD)

(Poderes otorgados en: El Salvador, Estados Unidos, México y Venezuela)

A los _____ días del mes de _____ de _____, el Notario que suscribe DA FE de que:

1. _____
(nombre de la persona que firma el poder)

mayor de edad y domiciliado en _____
_____ firmó de su puño
y letra el documento que antecede.

2. Conoce al (a la) otorgante y que este (a) está legalmente capacitado para el otorgamiento.

3. El otorgante ha firmado el referido documento en su carácter de _____
de la persona jurídica _____

4. La citada persona jurídica con sede en _____ está legalmente constituida, que tiene actualmente existencia legal y que el acto para el cual se ha otorgado este poder está comprendido entre los que constituyen su objeto social.
5. El otorgante tiene efectivamente la representación que ostenta, que esta es legítima y que está facultado para otorgar este poder.
6. las anteriores certificaciones de los puntos 3, 4 y 5, me constan porque he tenido a la vista los documentos auténticos

Notario Público

NOTA: A continuación de lo anterior, el Cónsul de Colombia debe autenticar la firma del Notario Público.

CERTIFICADO NOTARIAL (Cuando el solicitante es INDIVIDUO)

A los _____ días del mes de _____ de _____, el Notario que suscribe DA FE de que:

1. _____
(nombre de la persona que firma el poder)

mayor de edad y domiciliado en _____
_____ firmó en su presencia
el documento que antecede, conoce al otorgante y que este está legalmente capacitado para el otorgamiento.

Notario Público

NOTA: A continuación de lo anterior, el Cónsul de Colombia debe autenticar la firma del Notario Público.

Para todos los demás países el Señor Cónsul de Colombia o ante quien se otorgue, debe expedir una certificación dejando constancia 1) de la existencia legal de la sociedad, 2) de que esta ejerce actualmente su objeto social, y 3) de que la persona o personas que otorgan el poder están facultadas para hacerlo, dejando constancia así mismo de que tuvo a la vista las pruebas que acrediten tales circunstancias.

LEGALIZACIÓN POR EL CONSUL DE COLOMBIA
O POR APOSTILLA

STUART P. B. CAPEL
SOLICITOR & NOTARY PUBLIC
6 EAST SAINT HELEN STREET
ABINGDON, OXON, OX14 5EW
TEL: 01235 - 523411
FAX: 01235 - 533283

NOTARIAL CERTIFICATE

(When the applicant is a CORPORATION)

(Powers of attorney granted in: El Salvador, Mexico, U.S.A. and Venezuela)

This 17th day of February, 2005,
the undersigned Notary CERTIFIES that:

1. DEBRA JANE CLARE SMITH
(name of the person who signs the power of attorney)

of legal age and domiciled in G.B.
_____ set his hand on the
foregoing document.

2. The grantor is to him personally known and that he/she has legal capacity to execute the document.

3. The grantor has executed the foregoing document in his capacity of **EMPOWERED MEMBER**
of the juridical person CROWN Packaging Technology, Inc.

4. The mentioned juridical person with place of business in USA is duly organized, has actual legal existence and that the purposes for which the power of attorney is granted are within the scope of its corporate purposes.

5. The grantor has in fact the referred quality and that his/her representation is legal and that he/she is empowered to grant this power of attorney.
6. I have based the above certifications 3, 4 and 5, on the authentic documents which for such purpose were exhibited to me.

Edmundo Carbó
Notary Public

NOTA: Then the Colombian Consul must legalize the signature of the Notary Public.

NOTARIAL CERTIFICATE (When the applicant is an INDIVIDUALS)

On this _____ day of _____
the undersigned Notary CERTIFIES that:

1. _____
(name of the person who signs the Power of Attorney)

of legal age and domiciled at _____
_____ signed in his presence the foregoing document, the grantor is to him personally known and that he/she has legal capacity to execute the document.

Notary Public

NOTA: Then the Colombian Consul must legalize the signature of the Notary Public.

For all other countries the Colombian Consul or before who it is granted must issue a certification stating 1) the legal existence of the corporation, 2) that the corporate purposes are actually being accomplished, 3) that the person or persons who grant this Power of Attorney are empowered to do it. The Consul will certify also that the documents and circumstances were exhibited to him.

LEGALIZATION BY THE COLOMBIAN
APOSTILLE.



APOSTILLE
(Hague Convention of 5 October 1961 / Convention de La Haye du 5 octobre 1961)

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

1. Country: United Kingdom of Great Britain and Northern Ireland
Pays: Royaume-Uni de Grande-Bretagne et d'Irlande du Nord

This public document / Le présent acte public

2. Has been signed by **S P B Capel**
a été signé par
3. Acting in the capacity of **Notary Public**
agissant en qualité de
4. Bears the seal/stamp of **The Said Notary Public**
est revêtu du sceau/timbre de

5. at London/à Londres

Certified/Attesté
6. the/le **05 March 2005**

7. by Her Majesty's Principal Secretary of State for Foreign and Commonwealth Affairs /
par le Secrétaire d'Etat Principal de Sa Majesté aux Affaires Etrangères et du Commonwealth.

8. Number/sous No **G639750**

9. Stamp:
timbre:

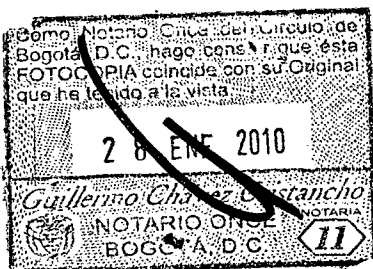
10. Signature: **S. Gardiner**



For the Secretary of State / Pour le Secrétaire d'Etat

If this document is to be used in a country which is not party to the Hague Convention of 5 October 1961, it should be presented to the consular section of the mission representing that country. An apostille or legalisation certificate only confirms that the signature, seal or stamp on the document is genuine. It does not mean that the contents of the document are correct or that the Foreign & Commonwealth Office approves of the contents.

05798
TRADUCCION OFICIAL No.
JUAN PABLO PIEDRAHITA AGUILERA
TRADUCTOR E INTERPRETE OFICIAL
RES. 713 de 14-10-2003
DEL MIN. INTERIOR Y DE JUSTICIA



4) La mencionada persona jurídica con domicilio comercial en Estados Unidos de América, está debidamente constituida, tiene actualmente existencia legal y el fin para el cual se otorga este poder se encuentra dentro de su objeto social.

5) El otorgante tiene en efecto la capacidad referida y su representación es legal y está autorizado para otorgar este poder.

6) Fundamento las certificaciones 3), 4) y 5) en los documentos auténticos que para tal fin me fueron exhibidos.

(Firmado) Stuart B.P. Capel

Notario Público

(Sello Notarial Redondo de Oblea Verde en Relieve)

(Sello Notarial a tinta: Stuart B.P. Capel, Abogado y Notario Público, 6 East Saint Helen Street, Abingdon, Oxon, OX145EW, Tel: 01235-523411, Fax: 01235-533283)

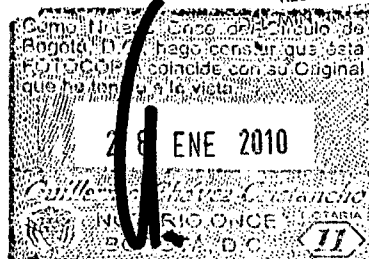
Nota: El Consulado de Colombia debe autenticar la firma del Notario Público.

Para todos los demás países el Señor Cónsul de Colombia o ante quien se otorgue, debe expedir una certificación dejando constancia de: 1) la existencia legal de la sociedad, 2) que cumple actualmente con su objeto social, y 3) que la persona o personas que otorgan este poder están facultadas para hacerlo. El Cónsul también certificará que los tuvo a la vista los documentos que prueban y acreditan tales circunstancias.

LEGALIZACIÓN POR EL CÓNSUL DE COLOMBIA A O POR APOSTILLA

2

TRADUCCION OFICIAL No. 05 / 183
JUAN PABLO PIEDRAHITA AGUILERA
TRADUCTOR E INTERPRETE OFICIAL.
RES. 716 DE MAYO 2003
INTERIOR Y DE JUSTICIA



APOSTILLA

(Convención de la Haya de Octubre 5 de 1961)

REINO UNIDO DE LA GRAN BRETAÑA E IRLANDA DEL NORTE

1. País: Reino Unido de la Gran Bretaña e Irlanda del Norte
Este documento público
2. Ha sido firmado por S P B Capel
3. Obrando en calidad de Notario Público
4. Lleva el sello/estampilla de dicho Notario Público

CERTIFICADA

5. En Londres
6. Hoy 5 de Marzo, 2005
7. Por El Secretario de Estado Principal de Su Majestad para Relaciones Exteriores y de la Mancomunidad
8. Certificado Número G639750
9. Sello (Sello Redondo en Relieve) (Sello Pre-impreso)
10. Firma (Firmado)

S. Gardiner

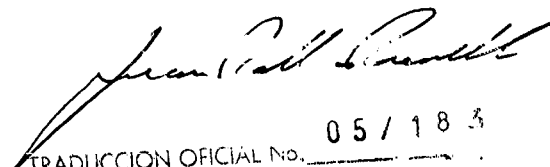
Por el Secretario de Estado

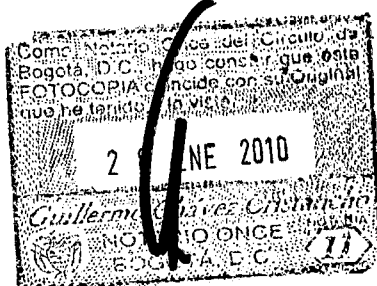
Si este documento se usare en un país que no sea parte de la Convención de la Haya del 5 de octubre de 1961, debe presentarse a la sección consular de la misión que representa dicho país. La Apostilla o el certificado de legalización solamente confirma que la firma, el sello y/o estampilla sobre el documento son auténticos. No significa que el contenido del documento sea correcto ni que la Oficina de Asuntos Exteriores de la Mancomunidad apruebe el contenido.

ES TRADUCCIÓN FIEL Y COMPLETA de la cual se deja copia en los archivos de esta oficina para su confrontación y a la cual me remito.

Bogotá, Abril 20, 2005.

3


TRADUCCION OFICIAL No. 05 / 183
JUAN PABLO PIEDRAHITA AGUILERA
TRADUCTOR E INTERPRETE OFICIAL
RES. 718 DE MAYO 2003
DEL MIN. INTERIOR Y DE JUSTICIA



RESUMEN

Una lata metálica mejorada tiene una base integral que define un anillo de pie que es más resistente a los dobleces que los diseños convencionales. Este incluye una pared lateral cilíndrica orientada verticalmente (12) y una pared de extremo unitaria (14) que tiene una porción central hundida (16) y una porción de borde con rebordes hacia abajo (18) que define el anillo de pie (20). La porción de borde con rebordes hacia abajo preferiblemente incluye una primera superficie externa anular curvada de forma convexa que cuando es vista en la sección transversal vertical tiene un primer radio de curvatura $R1$, una segunda superficie baja anular curvada en forma convexa que cuando es vista en la sección transversal vertical tiene un segundo radio de curvatura $R2$, y una tercera superficie interna anular curvada en forma convexa que cuando es vista en la sección transversal vertical tiene un tercer radio de curvatura $R3$. De forma ventajosa, el primer, segundo y tercero radios de curvatura $R1$, $R2$ y $R3$ son diferentes el uno del otro.

BASE PARA CONTENEDOR METALICO

ANTECEDENTES DE LA INVENCION

1. Campo de la Invención

[0001] Esta invención se relaciona generalmente con contenedores metálicos y más específicamente con contenedores metálicos de bajo peso que son formados mediante el dibujo y el proceso de planchado de modo tal que se obtiene una pared lateral sustancialmente cilíndrica que se levanta verticalmente y una base integral que define un anillo de pie.

2. Descripción de la Tecnología Relacionada

[0002] Las latas metálicas convencionales que son fabricadas utilizando el proceso de dibujo y planchado son típicamente hechas de aluminio, aunque otros metales tales como acero podrían ser alternativamente usados. El aluminio posee características de ductilidad y puede ser fácilmente estirado en una configuración cilíndrica y planchado a un grosor de pared comparativamente delgado.

[0003] Un diseño de base popular convencional para dichas latas metálicas está caracterizado por una pared de extremo abombado que tiene un reborde periférico orientado hacia abajo que define un anillo de pie sobre el cual la lata puede estar soportada sobre una superficie horizontal subyacente.

[0004] La industria del empaque es muy competitiva, y la habilidad para reducir los costos de material a través de la reducción de peso es extremadamente importante. De acuerdo con esto, existe competencia considerable dentro de la industria del diseño de configuraciones de latas metálicas que poseen las características de desempeño necesarias al mismo tiempo que utilizan un mínimo de material. Sin embargo, entre más delgada sea fabricada la pared de extremo abombado del contenedor mayor es la probabilidad que ésta se doble hacia afuera bajo presiones elevadas, tal como con las presiones que se pueden encontrar durante la pasteurización y el manejo subsecuente de las bebidas carbonatadas tales como la cerveza.

[0005] Típicamente, los rebordes del anillo de pie que se extienden hacia abajo de los diseños convencionales de las latas de aluminio fueron caracterizados por un radio relativamente constante en el área que definía el anillo de pie. Mientras que dichos diseños suministraban características de desempeño adecuadas en ciertos grosores de pared, existe un deseo continuo en la industria para reducir dichos grosores de pared con el fin de ahorrar costos de material.

[0006] En consecuencia, existe una necesidad en la industria por un diseño mejorado de base para contenedores metálicos que suministre resistencia mejorada contra el dobléz y otras deformaciones así como la minimización de costos de material.

RESUMEN DE LA INVENCION

[0007] De acuerdo con lo anterior, es un objeto de la invención suministrar un diseño mejorado de base para contenedores metálicos que proporciona resistencia mejorada contra el doblado y otras deformaciones así como la minimización de costos de material.

[0008] Con el fin de lograr lo anterior y otros objetos de la invención, una lata metálica de acuerdo con un primer aspecto de la invención incluye una pared lateral cilíndrica orientada verticalmente y una pared de extremo que es unitaria con la pared lateral cilíndrica, la pared de extremo incluye una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y donde la porción de borde con rebordes hacia abajo incluye una primera superficie externa anular curvada de forma convexa que cuando es vista en una sección transversal vertical tiene un primer radio de curvatura R_1 , una segunda superficie baja anular curvada de forma convexa que cuando es vista en una sección transversal vertical tiene un segundo radio de curvatura R_2 , y una tercera superficie interna anular curvada de forma convexa que cuando es vista en una sección cruzada vertical tiene un tercer radio de curvatura R_3 , y en donde el primer, segundo y tercer radio de curvatura R_1 , R_2 y R_3 son cada uno diferente del otro.

[0009] Una lata metálica de acuerdo con un segundo aspecto de la invención incluye una pared lateral cilíndrica orientada verticalmente; y una pared de extremo que es unitaria con la pared lateral cilíndrica, la pared de extremo comprende una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y en donde la porción de borde con rebordes hacia abajo incluye una primera superficie externa anular curvada de forma convexa que tiene una primera curvatura, la primera superficie externa anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un primer ángulo; una segunda superficie baja anular curvada de forma convexa que tiene una segunda curvatura, la segunda superficie baja anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un segundo ángulo; una tercera superficie interna anular curvada de forma convexa que tiene una tercera curvatura, la tercera superficie interna anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un tercer ángulo, y en donde el primer, segundo y tercer ángulos son diferentes el uno del otro.

[0010] Una lata metálica que es construida de acuerdo con un tercer aspecto de la invención incluye una pared lateral cilíndrica orientada verticalmente; y una pared de extremo que es unitaria con la pared lateral cilíndrica, la pared de extremo comprende una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y en donde la

porción de borde con rebordes hacia abajo comprende una primera superficie anular curvada de forma convexa que tiene un primer radio de curvatura, una segunda superficie anular curvada de forma convexa que está ubicada hacia adentro de la primera superficie anular curvada de forma convexa y que tiene un segundo radio de curvatura, y en donde el segundo radio de curvatura es mayor que el primer radio de curvatura.

[0011] Estas y varias ventajas y características de novedad que caracterizan la invención son mencionadas con particularidad en las reivindicaciones acá adjuntas y que forman una parte de la misma. Sin embargo, para un mejor entendimiento de la invención, sus ventajas, y los objetos obtenidos por medio de su uso, la referencia deberá ser realizada a las figuras las cuales forman una parte adicional de la misma, y a la descripción acompañante, en la cual se ilustra y describe una modalidad preferida de la invención.

BREVE DESCRIPCION DE LAS FIGURAS

[0012] La FIGURA 1 es una visa plana superior esquemática de una lata metálica que es construida de acuerdo con una modalidad preferida de la invención.

[0013] La FIGURA 2 es una vista transversal seccional tomada a lo largo de las líneas 2-2 en la FIGURA 1; y

[0014] La FIGURA 3 es una vista transversal seccional agrandada del área que está señalada en el círculo 3-3 en la FIGURA 2.

DESCRIPCION DETALLADA DE LAS MODALIDADES PREFERIDAS

[0015] Con referencia ahora a las figuras, en donde los números de referencia similares designados corresponden a la estructura a lo largo de las vistas, y con referencia en particular a la FIGURA 1, una lata metálica 10 que es construida de acuerdo con una modalidad preferida de la invención incluye una pared lateral cilíndrica 12 orientada generalmente de forma vertical y una pared de extremo inferior 14 que incluye preferiblemente una porción central abombada o hundida 16. La pared de extremo inferior 14 además incluye una porción de borde 18 con rebordes hacia abajo que define un anillo de pie sustancialmente circular 20.

[0016] La lata metálica 10 es preferiblemente fabricada a partir de aluminio, pero podría alternativamente ser fabricada a partir de acero o cualquier otro material metálico adecuado. La lata metálica 10 es preferiblemente formada utilizando el proceso de estirado plancha de pared el cual es conocido y es familiar para una persona versada en la materia.

[0017] En la modalidad preferida, la porción de borde 18 con rebordes hacia abajo incluye una primera superficie externa anular curvada de forma convexa 22 que cuando es vista en una sección transversal vertical, como se muestra en la FIGURA 3, tiene un primer radio de curvatura $R1$ y subtiende un ángulo $a1$. La primera superficie externa anular curvada de forma convexa 22 es posicionada

hacia afuera con respecto al anillo de pie circular 20, como se ilustra de mejor forma en la FIGURA 3.

[0018] La porción de borde 18 con rebordes hacia abajo también además incluye una segunda superficie baja anular curvada de forma convexa 24 que cuando es vista en la sección transversal vertical como se muestra en la FIGURA 3 tiene un segundo radio de curvatura $R2$, y subtiende un ángulo $a2$. En la modalidad preferida, la segunda superficie baja anular curvada de forma convexa 24 está ubicada de forma tal que es sustancialmente simétrica con respecto al eje vertical que se extiende a través de la porción más inferior del anillo de pie circular 20. En consecuencia, la porción del anillo de pie circular 20 que es adaptada para entrar en contacto con una superficie horizontal subyacente será definida por la segunda superficie baja anular curvada de forma convexa 24.

[0019] La porción de borde 18 con rebordes hacia abajo también incluye preferiblemente una tercera superficie interna anular curvada de forma convexa 26 que cuando es vista en la sección transversal vertical como se muestra en la FIGURA 3 tiene un tercer radio de curvatura $R3$, y subtiende un ángulo $a3$. La tercera superficie interna anular curvada de forma convexa 26 es posicionada Radialmente hacia adentro del anillo de pie sustancialmente circular 20, como se muestra en la FIGURA 3.

[0020] Preferiblemente, el primer, segundo y tercer radio de curvatura R1, R2 y R3 son diferentes cada uno del otro. Más específicamente, el tercer radio de curvatura R3 es preferiblemente mayor que el segundo radio de curvatura R2, el cual a su vez, es preferiblemente mayor que el primer radio de curvatura R1. En consecuencia, el tercer radio de curvatura R3 es preferiblemente mayor que dicho primer radio de curvatura R1.

[0021] Preferiblemente, el anillo de pie sustancialmente circular tiene un diámetro que se encuentra dentro de un rango de aproximadamente 1.2 pulgadas a aproximadamente 2.0 pulgadas.

[0022] Por medio de la formación de la porción de borde 18 con rebordes hacia abajo como una forma compleja que tiene una cantidad de curvas de compuesto como se ve en la sección transversal vertical, la fuerza de la porción de borde 18 con rebordes hacia abajo es aumentada con relación a diseños anteriores conocidos que son utilizados en un radio simple de curvatura. Esto mejora significativamente la fuerza de la porción de borde 18 y aumenta la resistencia a los dobleces, lo cual permite que la fuerza comparable sea lograda en un grosor de pared mucho más delgado, lo cual permite una reducción significativa en costos de material y una ventaja competitiva económica. Mientras que en la modalidad preferida la porción de borde 18 con rebordes hacia abajo es formada de tres áreas separadas que tienen diferente radio de curvatura, las ventajas similares podrían ser logradas con un diseño que tiene dos áreas separadas que

tienen diferente radio de curvatura, o cuatro o más áreas separadas que tienen diferente radio de curvatura, y dichas modalidades alternativas deberán ser consideradas dentro del ámbito de la invención.

[0023] En la modalidad preferida, el primer radio de curvatura R1 se encuentra dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.090 pulgadas, y es aún más preferible dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.070 pulgadas. El segundo radio de curvatura R2 se encuentra preferiblemente dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.080 pulgadas, y es más preferible dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.065 pulgadas. El tercer radio de curvatura R3 se encuentra preferiblemente dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.090 pulgadas, y es más preferible dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.070 pulgadas.

[0024] El primer radio de curvatura R1 preferiblemente subtiende un primer ángulo α_1 que se encuentra dentro del rango de aproximadamente 5° a aproximadamente 80° . El segundo radio de curvatura R2 subtiende un segundo ángulo α_2 que se encuentra preferiblemente dentro del rango de aproximadamente 5° a aproximadamente 50° . El tercer radio de curvatura R3 preferiblemente subtiende un tercer ángulo α_3 que se encuentra dentro del rango de aproximadamente 5° a

aproximadamente 80°. Los tres ángulos diferentes a1, a2 y a3 son preferiblemente diferentes uno del otro.

[0025] El extremo más interno de la tercera superficie interna anular curvada de forma convexa 26 es unitario con una superficie de transición 28 que se extiende hacia adentro de la porción central abombada o hundida 16 de la pared de extremo inferior 14. La superficie de transición 28 en su interfaz con la tercera superficie interna anular curvada de forma convexa 26 preferiblemente se extiende en un ángulo B con respecto al plano horizontal que se encuentra dentro del rango de aproximadamente 50° a aproximadamente 90°.

[0026] La resistencia mejorada contra los dobleces que se logra por medio de la invención permite que el grosor de pared de la porción de borde 18 con rebordes hacia abajo sea 0.0108 pulgadas o menos. Más preferiblemente, el grosor de pared de la porción de borde 18 con rebordes hacia abajo es 0.0107 pulgadas o menos. Más preferiblemente, el grosor de pared de la porción de borde 18 con rebordes hacia abajo es 0.0106 pulgadas o menos. Los diseños convencionales típicamente experimentan problemas de dobleces en grosores de pared comparable.

[0027] Se entenderá, sin embargo, que aunque numerosas características y ventajas de la presente invención han sido establecidas en la anterior descripción, junto con los detalles de la estructura y función de la invención, la divulgación es

únicamente ilustrativa, y los cambios pueden ser realizados en detalle, especialmente en asuntos de forma, tamaño y arreglo de las partes dentro de los principios de la invención a la extensión completa por medio del significado general amplio de los términos en los cuales se encuentran expresadas las reivindicaciones adjuntas.

LO QUE SE REIVINDICA ES:

1. Una lata metálica, que comprende:

una pared lateral cilíndrica orientada verticalmente; y

una pared de extremo que es unitaria con dicha pared lateral cilíndrica, dicha pared de extremo comprende una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y donde dicha porción de borde con rebordes hacia abajo comprende

una primera superficie externa anular curvada de forma convexa que cuando es vista en la sección transversal vertical tiene un primer radio de curvatura R_1 ,

una segunda superficie baja anular curvada de forma convexa que cuando es vista en la sección transversal vertical tiene un segundo radio de curvatura R_2 , y

una tercera superficie interna anular curvada de forma convexa que cuando es vista en la sección transversal vertical tiene un tercer radio de curvatura R_3 , y en donde

dichos primer, segundo y tercer radios de curvatura R_1 , R_2 y R_3 son diferentes uno del otro.

2. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho tercer radio de curvatura R3 es mayor que dicho segundo radio de curvatura R2.
3. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho segundo radio de curvatura R2 es mayor que dicho primer radio de curvatura R1.
4. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho tercer radio de curvatura R3 es mayor que dicho primer radio de curvatura R1.
5. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho primer radio de curvatura R1 se encuentra dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.090 pulgadas.
6. Una lata metálica de acuerdo con la reivindicación 5, en donde dicho primer radio de curvatura R1 se encuentra dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.070 pulgadas.
7. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho segundo radio de curvatura R2 se encuentra dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.080 pulgadas.
8. Una lata metálica de acuerdo con la reivindicación 7, en donde dicho segundo radio de curvatura R2 se encuentra dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.065 pulgadas.

9. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho tercer radio de curvatura R3 se encuentra dentro del rango de aproximadamente 0.015 pulgadas a aproximadamente 0.090 pulgadas.
10. Una lata metálica de acuerdo con la reivindicación 9, en donde dicho tercer radio de curvatura R3 se encuentra dentro del rango de aproximadamente 0.025 pulgadas a aproximadamente 0.070 pulgadas.
11. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho primer radio de curvatura R1 subtiende un primer ángulo que se encuentra dentro del rango de aproximadamente 5° a aproximadamente 80°.
12. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho segundo radio de curvatura R2 subtiende un segundo ángulo que se encuentra dentro del rango de aproximadamente 5° a aproximadamente 50°.
13. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho tercer radio de curvatura R3 subtiende un tercer ángulo que se encuentra dentro del rango de aproximadamente 5° a aproximadamente 80°.
14. Una lata metálica de acuerdo con la reivindicación 1, en donde un extremo más interno de dicha tercer superficie interna anular curvada de forma convexa se extiende en un ángulo con respecto a un plano horizontal que se encuentra dentro del rango de aproximadamente 50° a aproximadamente 90°.

15. Una lata metálica de acuerdo con la reivindicación 1, en donde dicho anillo de pie sustancialmente circular tiene un diámetro que se encuentra dentro del rango de aproximadamente 1.2 pulgadas a aproximadamente 2.0 pulgadas.

16. Una lata metálica, que comprende:

una pared lateral cilíndrica orientada verticalmente; y

una pared de extremo que es unitaria con dicha pared lateral cilíndrica, dicha pared de extremo comprende una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y donde dicha porción de borde con rebordes hacia abajo comprende

una primera superficie externa anular curvada de forma convexa, dicha primera superficie externa anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un primer ángulo;

una segunda superficie baja anular curvada de forma convexa, dicha segunda superficie baja anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un segundo ángulo; y

una tercera superficie interna anular curvada de forma convexa, dicha tercera superficie interna anular curvada de forma convexa cuando es vista en la sección transversal vertical subtiende un tercer ángulo, y en donde

dichos primer, segundo y tercer ángulos son diferentes uno del otro.

17. Una lata metálica de acuerdo con la reivindicación 16, en donde dicho primer ángulo se encuentra dentro del rango de aproximadamente 5° a aproximadamente 80°.

18. Una lata metálica de acuerdo con la reivindicación 16, en donde dicho segundo ángulo se encuentra dentro del rango de aproximadamente 5° a aproximadamente 50°.

19. Una lata metálica de acuerdo con la reivindicación 16, en donde dicho tercer ángulo se encuentra dentro del rango de aproximadamente 5° a aproximadamente 80°.

20. Una lata metálica, que comprende:

una pared lateral cilíndrica orientada verticalmente; y

una pared de extremo que es unitaria con dicha pared lateral cilíndrica, dicha pared de extremo comprende una porción central hundida y una porción de borde con rebordes hacia abajo que define un anillo de pie sustancialmente circular, y donde dicha porción de borde con rebordes hacia abajo comprende

una primera superficie anular curvada de forma convexa que tiene un primer radio de curvatura,

una segunda superficie anular curvada de forma convexa que se encuentra ubicada hacia adentro de dicha primera superficie anular curvada de forma convexa y que tiene un segundo radio de curvatura, y en donde

dicho segundo radio de curvatura es mayor que dicho primer radio de curvatura.

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

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PCT/US08/70735

International Application No.

22 JUL 2008 (22.07.08)

International Filing Date

PCT INTERNATIONAL APPLICATION RO/US

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference (if desired) (12 characters maximum) CCK-0269WO

Box No. I	TITLE OF INVENTION	
BASE FOR METALLIC CONTAINER		
Box No. II	APPLICANT ☐ This person is also inventor	
Name and address: (Family name followed by given name, for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)		Telephone No.
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The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:		☒ agent ☐ common representative
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KNOBLE, John L. Knoble Yoshida & Dunleavy, LLC 1628 John F. Kennedy Boulevard Eight Penn Center, Suite 1350 Philadelphia, PA 19103 United States of America		215-599-0600
		Facsimile No.
		215-599-0601
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		jknoable@patentwise.com
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Name and address: (Family name followed by given name, for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.) YUAN, Sherry 7840 Brookside Glen Drive Tinley Park, IL 60487 United States of America	This person is: ☐ applicant only ☒ applicant and inventor ☐ inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office
State (that is, country) of nationality: CN	State (that is, country) of residence: US
This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box	
Name and address: (Family name followed by given name, for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.) GRABOWSKI, Marion 7033 Coach Lane Lemont, IL 60439 United States of America	This person is: ☐ applicant only ☒ applicant and inventor ☐ inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office
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Name and address: (Family name followed by given name, for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	This person is: ☐ applicant only ☐ applicant and inventor ☐ inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office
State (that is, country) of nationality:	State (that is, country) of residence:
This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box	
Name and address: (Family name followed by given name, for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	This person is: ☐ applicant only ☐ applicant and inventor ☐ inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office
State (that is, country) of nationality:	State (that is, country) of residence:
This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box	
☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.	

Box No. VDESIGNATIONS

The filing of this request constitutes under Rule 4.9(a) the designation of all Contracting States bound by the ECT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.

However,

☐ DE Germany is not designated for any kind of national protection
 ☐ JP Japan is not designated for any kind of national protection
 ☐ KP Republic of Korea is not designated for any kind of national protection
 ☐ RU Russian Federation is not designated for any kind of national protection

(The check-boxes above may only be used to exclude (irrevocably) the designations concerned if, at the time of filing or subsequently under Rule 26bis.1, the international application contains in Box No. VI a priority claim to an earlier national application filed in the particular State concerned, in order to avoid the ceasing of the effect, under the national law, of this earlier national application)

Box No. VIPRIORITY CLAIM

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country or Member of WTO	regional application: regional Office	international application: receiving Office
item (1) 25/07/2007 25 July 2007	11/782,749	US		
item (2)				
item (3)				
item (4)				

☐ Further priority claims are indicated in the Supplemental Box.

Transmit certified copy: the receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

☐ all items
 ☒ item (1)
 ☐ item (2)
 ☐ item (3)
 ☐ item (4)
 ☐ other, see Supplemental Box

Restore the right of priority: the receiving Office is requested to restore the right of priority for the earlier application(s) identified above or in the Supplemental Box as item(s) (). (See also the Notes to Box No. VI, further information must be provided to support a request to restore the right of priority)

Incorporation by reference: where an element of the international application referred to in Article 11(1)(iii)(d) or (e) or a part of the description, claims or drawings referred to in Rule 20.5(a) is not otherwise contained in this international application but is completely contained in an earlier application whose priority is claimed on the date on which one or more elements referred to in Article 11(1)(iii) were first received by the receiving Office, that element or part is, subject to confirmation under Rule 20.6, incorporated by reference in this international application for the purposes of Rule 20.6.

Box No. VIIINTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if more than one International Searching Authority is competent to carry out the international search, indicate the Authority chosen, the two-letter code may be used):

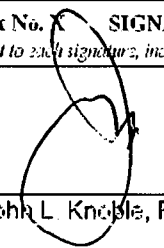
ISA/ EP

Form PCT/EO/101 (second sheet) (July 2008)

See Notes to the request form

30
4

Continuation of Box No. VII USE OF RESULTS OF EARLIER SEARCH, REFERENCE TO THAT SEARCH		
☐ The ISA indicated in Box No. VII is requested to take into account the results of the earlier search(es) indicated below (see also Notes to Box VII; use of results of more than two earlier searches).		
Filing date (day/month/year)	Application Number	Country (or regional Office)
☐ Statement (Rule 4.12(ii)): this international application is the same, or substantially the same, as the application in respect of which the earlier search was carried out except, where applicable, that it is filed in a different language.		
☐ Availability of documents: the following documents are available to the ISA in a form and manner acceptable to it and therefore do not need to be submitted by the applicant to the ISA (Rule 12bis.1(f)): ☐ a copy of the results of the earlier search,* ☐ a copy of the earlier application, ☐ a translation of the earlier application into a language which is accepted by the ISA, ☐ a translation of the results of the earlier search into a language which is accepted by the ISA, ☐ a copy of any document cited in the results of the earlier search. (If known, please indicate below the document(s) available to the ISA).		
☐ Transmit copy of results of earlier search and other documents (where the earlier search was not carried out by the ISA indicated above but by the same Office as that which is acting as the receiving Office): the receiving Office is requested to prepare and transmit to the ISA (Rule 12bis.1(c)): ☐ a copy of the results of the earlier search,* ☐ a copy of the earlier application, ☐ a copy of any document cited in the results of the earlier search.		
* Where the results of the earlier search are neither available from a digital library nor transmitted by the receiving Office, the applicant is required to submit them to the receiving Office (Rule 12bis.1(a)) (See item 11 in the check-list and also Notes to Box No. VII).		
Filing date (day/month/year)	Application Number	Country (or regional Office)
☐ Statement (Rule 4.12(ii)): this international application is the same, or substantially the same, as the application in respect of which the earlier search was carried out except, where applicable, that it is filed in a different language.		
☐ Availability of documents: the following documents are available to the ISA in a form and manner acceptable to it and therefore do not need to be submitted by the applicant to the ISA (Rule 12bis.1(f)): ☐ a copy of the results of the earlier search,* ☐ a copy of the earlier application, ☐ a translation of the earlier application into a language which is accepted by the ISA, ☐ a translation of the results of the earlier search into a language which is accepted by the ISA, ☐ a copy of any document cited in the results of the earlier search. (If known, please indicate below the document(s) available to the ISA).		
☐ Transmit copy of results of earlier search and other documents (where the earlier search was not carried out by the ISA indicated above but by the same Office as that which is acting as the receiving Office): the receiving Office is requested to prepare and transmit to the ISA (Rule 12bis.1(c)): ☐ a copy of the results of the earlier search,* ☐ a copy of the earlier application, ☐ a copy of any document cited in the results of the earlier search.		
* Where the results of the earlier search are neither available from a digital library nor transmitted by the receiving Office, the applicant is required to submit them to the receiving Office (Rule 12bis.1(a)) (See item 11 in the check-list and also Notes to Box No. VII).		
☐ Further earlier searches are indicated on a continuation sheet.		
Box No. VIII DECLARATIONS		
The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):		Number of declarations
☐ Box No. VIII (i)	Declaration as to the identity of the inventor :	
☒ Box No. VIII (ii)	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent :	1
☒ Box No. VIII (iii)	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application :	1
☐ Box No. VIII (iv)	Declaration of inventorship (only for the purposes of the designation of the United States of America) :	
☐ Box No. VIII (v)	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty :	

Box No. IX CHECK LIST; LANGUAGE OF FILING		
This international application contains: (a) on paper, the following number of sheets: request (including declaration and supplemental sheets) : 7 description (excluding sequence listing and/or tables related thereto) : 7 claims : 4 abstract : 1 drawings : 2 Sub-total number of sheets : 21 sequence listing : _____ tables related thereto : _____ <i>(for both, actual number of sheets if filed on paper, whether or not also filed in electronic form, see (c) below)</i> Total number of sheets : 21 (b) ☐ only in electronic form (Section 801(a)(i)) (i) ☐ sequence listing (ii) ☐ tables related thereto (c) ☐ also in electronic form (Section 801(a)(ii)) (i) ☐ sequence listing (ii) ☐ tables related thereto Type and number of carriers (diskette, CD-ROM, CD-R or other) on which are contained the ☐ sequence listing: _____ ☐ tables related thereto: _____ <i>(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)</i>	This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item): 1 ☒ fee calculation sheet : 1 2 ☐ original separate power of attorney : _____ 3 ☐ original general power of attorney : _____ 4 ☒ copy of general power of attorney; reference number, if any: _____ : 1 5 ☐ statement explaining lack of signature : _____ 6 ☐ priority document(s) identified in Box No. VI as item(s): _____ : _____ 7 ☐ translation of international application into (language): _____ : _____ 8 ☐ separate indications concerning deposited microorganism or other biological material : _____ 9 ☐ sequence listing in electronic form (indicate type and number of carriers): (i) ☐ copy submitted for the purposes of international search under Rule 12ter only (and not as part of the international application) : _____ (ii) ☐ (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter : _____ (iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing mentioned in left column : _____ 10 ☐ tables in electronic form related to sequence listing (indicate type and number of carriers) (i) ☐ copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application) : _____ (ii) ☐ (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater) : _____ (iii) ☐ together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column : _____ 11 ☐ copy of results of earlier search(es) (Rule 12bis.1(a)) : _____ 12 ☐ other (specify): _____ : _____	Number of items
Figure of the drawings which should accompany the abstract: 3	Language of filing of the international application: EN	
Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE <i>Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).</i>		
 John L. Knoble, Reg. No. 32,387 22.07.08		

For receiving Office use only		
1. Date of actual receipt of the purported international application: 22 JUL 2008	2. Drawings: ☐ received: ☐ not received:	
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	6. ☐ Transmittal of search copy delayed until search fee is paid	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	5. International Searching Authority (if two or more are competent): ISA / EP	
For International Bureau use only		
Date of receipt of the record copy by the International Bureau:		

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 January 2009 (29.01.2009)

(10) International Publication Number
WO 2009/015131 A1

(51) International Patent Classification:
B65D 1/16 (2006.01)

60437 (US). GRABOWSKI, Marion [US/US]; 1033
Coach Lane, Lemont, IL 60439 (US).

(21) International Application Number:
PCT/US2008/070735

(74) Agent: KNOBLE, John, L.; Knoble Yoshida & Dunleavy,
LLC, 1628 John F. Kennedy Boulevard, Eight Penn Center,
Suite 1350, Philadelphia, PA 19103 (US).

(22) International Filing Date: 22 July 2008 (22.07.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/782,749 25 July 2007 (25.07.2007) US

(71) Applicant (for all designated States except US): CROWN
PACKAGING TECHNOLOGY, INC. [US/US]; 11535
South Central Avenue, Alsip, IL 60303 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BE, BG, BH, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE,
EG, ES, FI, GE, GR, GU, HK, HN, HU, ID, IL, IN, IS, JP,
KE, KG, KH, KM, KN, KP, KR, KZ, LA, LC, LK, LP, LS,
LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, QA, RO,
RU, RW, SA, SC, SD, SE, SG, SH, SI, SK, SL, SM, SN, SV,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA,
ZM, ZW.

(72) Inventors; and

(75) Inventors/Applicants (for US only): YUAN, Sheery
[CN/US]; 7840 Brookside Glen Drive, Tinley Park, IL

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, HE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: BASE FOR METALLIC CONTAINER

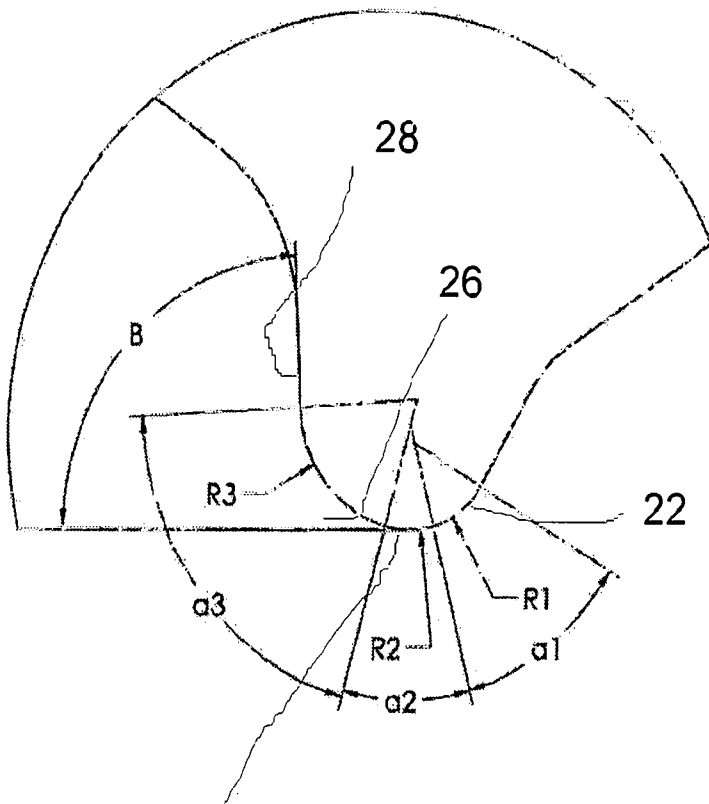


FIG. 3

(57) Abstract: An improved metallic can has an integral base that defines a standing ring that is more resistant to buckling than conventional designs. It includes a vertically oriented cylindrical sidewall (12) and a unitary end wall (14) having a recessed central portion (16) and a downwardly flanged rim portion (18) that defines the standing ring (20). The downwardly flanged rim portion preferably includes a first outer convexly curved annular surface that when viewed in vertical cross-section has a first radius of curvature R1, a second, lower convexly curved annular surface that when viewed in vertical cross-section has a second radius of curvature R2, and a third, inner convexly curved annular surface that when viewed in vertical cross-section has a third radius of curvature R3. Advantageously, the first, second and third radii of curvature R1, R2 and R3 are each different from each other.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GE, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, ME, NE, SN, TD, TG).

— *as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))*

Published:

— *with international search report*

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))*

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/070735

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D1/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 412 627 A (HOUGHTON TIMOTHY J [US] ET AL) 1 November 1983 (1983-11-01) claim 7; figure 2; table 1	1-20
A	EP 0 482 586 A (BALL CORP [US]) 29 April 1992 (1992-04-29) column 9, lines 16-23; figure 10	1-20
A	US 6 220 073 B1 (CHENG GIN-FUNG [US] ET AL) 24 April 2001 (2001-04-24) column 4, lines 51-59; figure 2	1-20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

18 September 2008

Date of mailing of the international search report

29/09/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5010 Patentplan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 540-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Cazacu, Corneliu

35
36

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/070735

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4412627	A	01-11-1983	NONE	
EP 0482586	A	29-04-1992	AT 135313 T	15-03-1996
			AU 655205 B2	08-12-1994
			AU 8599391 A	30-04-1992
			CA 2053591 A1	23-04-1992
			CN 1060821 A	06-05-1992
			DE 69117863 D1	18-04-1996
			DE 69117863 T2	14-11-1996
			MX 9101633 A1	05-06-1992
			US 5105973 A	21-04-1992
US 6220073	B1	24-04-2001	NONE	

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CCK-0269WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2008/070735	International filing date (day/month/year) 22/07/2008	(Earliest) Priority Date (day/month/year) 25/07/2007
Applicant CROWN PACKAGING TECHNOLOGY, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 13.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☐ the text is approved as submitted by the applicant
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 3
☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention
b. ☐ none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

PCT/US2008/070735

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

An improved metallic can has an integral base that defines a standing ring that is more resistant to buckling than conventional designs. It includes a vertically oriented cylindrical sidewall (12) and a unitary end wall (14) having a recessed central portion (16) and a downwardly flanged rim portion (18) that defines the standing ring (20). The downwardly flanged rim portion preferably includes a first outer convexly curved annular surface that when viewed in vertical cross-section has a first radius of curvature R1, a second, lower convexly curved annular surface that when viewed in vertical cross-section has a second radius of curvature R2, and a third, inner convexly curved annular surface that when viewed in vertical cross-section has a third radius of curvature R3. Advantageously, the first, second and third radii of curvature R1, R2 and R3 are each different from each other.

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B65D1/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 Minimum documentation searched (classification system followed by classification symbols)
 B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 412 627 A (HOUGHTON TIMOTHY J [US] ET AL) 1 November 1983 (1983-11-01) claim 7; figure 2; table 1	1-20
A	EP 0 482 586 A (BALL CORP [US]) 29 April 1992 (1992-04-29) column 9, lines 16-23; figure 10	1-20
A	US 6 220 073 B1 (CHENG GIN-FUNG [US] ET AL) 24 April 2001 (2001-04-24) column 4, lines 51-59; figure 2	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- ** document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *** document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *a* document member of the same patent family

Date of the actual completion of the international search

18 September 2008

Date of mailing of the international search report

29/09/2008

Name and mailing address of the ISA/

 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Cazacu, Corneliu

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4412627	A	01-11-1983	NONE	
EP 0482586	A	29-04-1992	AT 135313 T	15-03-1996
			AU 655205 B2	08-12-1994
			AU 8599391 A	30-04-1992
			CA 2053591 A1	23-04-1992
			CN 1060821 A	06-05-1992
			DE 69117863 D1	18-04-1996
			DE 69117863 T2	14-11-1996
			MX 9101633 A1	05-06-1992
			US 5105973 A	21-04-1992
US 6220073	B1	24-04-2001	NONE	

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference CCK-0269WO	FOR FURTHER ACTION		See item 4 below
International application No. PCT/US2008/070735	International filing date (<i>day/month/year</i>) 22 July 2008 (22.07.2008)	Priority date (<i>day/month/year</i>) 25 July 2007 (25.07.2007)	
International Patent Classification (3th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant CROWN PACKAGING TECHNOLOGY, INC.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| ☒ | Box No. I | Basis of the report |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| ☐ | Box No. VI | Certain documents cited |
| ☒ | Box No. VII | Certain defects in the international application |
| ☐ | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Officer in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 32 70	Date of issuance of this report 26 January 2010 (26.01.2010)
	Authorized officer Athina Nickitas-Etienne e-mail: pt04.pct@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IS2008/070735

International filing date (day/month/year)
22.07.2008

Priority date (day/month/year)
25.07.2007

International Patent Classification (IPC) or both national classification and IPC
INV. B65D1/16

Applicant
CROWN PACKAGING TECHNOLOGY, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 23692 - 0 Fax: 523652 epmu d
Fax: +49 89 23692 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Gazacu, Corneliu

Telephone No. +49 65 2363-2645



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2008/070735

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material:

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material:

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing:

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2008/070735

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	<u>2-15, 17-19</u>
	No: Claims	<u>1, 16, 20</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-20</u>
Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2008/070735

V.

1. The present application does not meet the requirements of Article 33(2) PCT, because the subject-matter of claim 20 is not new, document US-A-4 412 627 (D1) disclosing all the features of claim 20 (see Fig. 2, Table in col. 7, radius f larger than d , radius f being located inwardly of the convexly annular surface with radius d).

2. A similar remark applies to claim 1, where the three radiuses are d , f and h or k (the second, convexly annular surface of claim 1 is described only as "lower", which corresponds to the position of " f " in respect of " d ").

A similar argumentation applies to claim 16.

3. The features of dependent claims 2-15 and 17-19 appear to relate to minor constructional features which, insofar as not directly disclosed in the prior art, appear to relate to obvious modifications thereof. Such features will be selected and used by the man skilled in the art as and when he needs them, without any inventive thought being required.

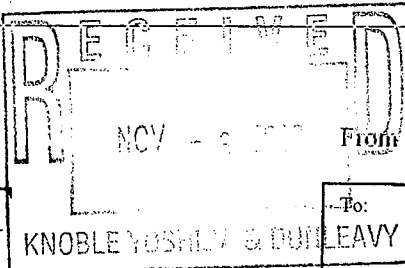
Therefore, the subject-matter of said claims appears to be lacking inventive step.
(Article 33(3) PCT)

VII.

1. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

RECEIVED

PCT



From the INTERNATIONAL BUREAU

-To:
KNOBLE YOSHIDA & DUNLEAVY

NOTIFICATION CONCERNING
SUEMISSION OF TRANSMITTAL
OF PRIORITY DOCUMENT

KNOBLE, John, L.
Knoble Yoshida & Dunleavy, LLC
1628 John F. Kennedy Boulevard
Eight Penn Center, Suite 1350
Philadelphia, PA 19103
ETATS-UNIS D'AMERIQUE

(PCT Administrative Instructions, Section 411)

Date of mailing (day/month/year) 14 October 2008 (14.10.2008)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference CCF-0289WO	
International application No. PCT/US2008/070735	International filing date (day/month/year) 22 July 2008 (22.07.2008)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 25 July 2007 (25.07.2007)
Applicant CROWN PACKAGING TECHNOLOGY, INC. et al	

- 1 By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "IF", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- 2 (If applicable) The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
3. (If applicable) An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(e) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
25 July 2007 (25.07.2007)	11/782,749	US	09 October 2008 (09.10.2008)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. +41 22 338 82 70

Authorized officer

Athina Nickitas-Etienne

e-mail PT04.PCT@WIPO.INT

Telephone No. +41 22 338 74 04

PCT

**SECOND AND SUPPLEMENTARY NOTICE
INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION (TO DESIGNATED OFFICES
WHICH APPLY THE 30 MONTH TIME
LIMIT UNDER ARTICLE 22(1))**

(PCT Rule 47.1(c))

To:

KNOBLE, John, L.
Knoble Yoshida & Dunleavy, LLC
1628 John F. Kennedy Boulevard
Eight Penn Center, Suite 1350
Philadelphia, PA 19103
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)

26 November 2009 (26.11.2009)

Applicant's or agent's file reference

CCK-0269WQ

IMPORTANT NOTICE

International application No.

PCT/US2008/070735

International filing date (day/month/year)

22 July 2008 (22.07.2008)

Priority date (day/month/year)

25 July 2007 (25.07.2007)

Applicant

CROWN PACKAGING TECHNOLOGY, INC. et al

- ATTENTION:** For any designated Office(s), for which the time limit under Article 22(1), as in force from 1 April 2002 (30 months from the priority date), **does not apply**, please see Form PCT/IB/308(First Notice) issued previously.
- Notice is hereby given that the following designated Office(s), for which the time limit under Article 22(1), as in force from 1 April 2002, **does apply**, has/have requested that the communication of the international application, as provided for in Article 20, be effected under Rule 93bis.1. The International Bureau has effected that communication on the date indicated below:
29 January 2009 (29.01.2009)

AU, AZ, BY, CH, CO, DZ, EP, HU, IG, JP, KR, MD, ME, MY, NZ, PA, PG, RU, SY, TM, US

In accordance with Rule 47.1(c-bis)(i), those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

- The following designated Office(s), for which the time limit under Article 22(1), as in force from 1 April 2002, **does apply**, have not requested, as at the time of mailing of the present notice, that the communication of the international application be effected under Rule 93bis.1:

AE, AG, AL, AM, AO, AP, AT, BA, BE, BG, BH, BR, BW, BZ, CA, CH, CR, CU, CZ, DE, DK, DM, DO, EA, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, ID, IL, IN, IS, JP, KE, KM, KU, KZ, LA, LC, LI, LR, LS, LT, LU, MA, ME, MG, MH, MW, MX, NI, NO, NZ, OA, OM, PH, PL, PT, RO, RS, SC, SD, SE, SG, SH, SI, SM, ST, SV, TJ, TH, TR, TT, UA, UZ, VC, VN, ZA, ZM, ZW

In accordance with Rule 47.1(c-bis)(ii), those Offices accept the present notice as conclusive evidence that the Contracting State for which that Office acts as a designated Office does not require the furnishing, under Article 22, by the applicant of a copy of the international application.

4. TIME LIMITS for entry into the national phase

For the designated or elected Office(s) listed above, the applicable time limit for entering the national phase will, subject to what is said in the following paragraph, be **30 MONTHS** from the priority date.

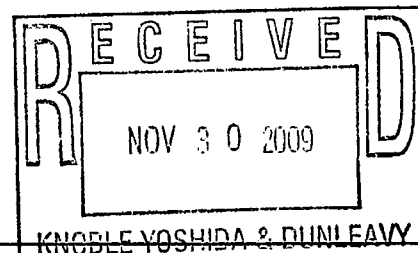
In practice, time limits other than the 30-month time limit will continue to apply, for various periods of time, in respect of certain of the designated or elected Office(s) listed above. For regular updates on the applicable time limits (30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

It is the applicant's sole responsibility to monitor all these time limits.

DOCKETED

11/30/09

CR



The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. +41 22 338 82 70

Authorized officer

Athina Nickitas-Etienne

e-mail: pt04.pct@wipo.int

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ADVANCE E-MAIL

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

KNOBLE, John, L.
Knoble Yoshida & Dunleavy, LLC
1628 John F. Kennedy Boulevard
Eight Penn Center, Suite 1350
Philadelphia, PA 19103
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)

05 November 2008 (05.11.2008)

Applicant's or agent's file reference

CCK-0269WO

IMPORTANT NOTIFICATION

International application No.

PCT/US2008/070735

International filing date (day/month/year)

22 July 2008 (22.07.2008)

1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

GRABOWSKI, Marion
7033 Coach Lane
Lemont, IL 60439
United States of America

State of Nationality

US

State of Residence

US

Telephone No.

Facsimile No.

E-mail address

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address

GRABOWSKI, Marion
1033 Coach Lane
Lemont, IL 60439
United States of America

State of Nationality

US

State of Residence

US

Telephone No.

Facsimile No.

E-mail address

☐ Notifications by e-mail authorized

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☐ the elected Offices concerned
☐ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Ruby Serge

Facsimile No. +41 22 338 39 93

e-mail pt04.pct@wipo.int

Telephone No. +41 22 338 74 04

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PATENTE DE INVENCION ☐

MODELO DE UTILIDAD ☐

Art 33 Decisión 486/00

☐
☐
☐
☐
☐

Indicación que se solicita una patente.

Datos de identificación del solicitante o de la persona que presenta la solicitud

Descripción de la invención

Dibujos, de ser estos pertinentes

Comprobante de pago de las tasas establecidas (De ser el caso formato de descuento)

Completa ☐ Incompleta ☐

PATENTE DE INVENCION PCT ☒

MODELO DE UTILIDAD PCT ☐

Art.33 Decisión 486/00, Circular Única

☒
☒
☐
☒

Indicación que se solicita una PCT

Copia de la solicitud en español, tal como fue presentada inicialmente (capítulo descriptivo, reivindicatorio, resumen)

Dibujos de ser estos pertinentes

Comprobante de pago de las tasas establecidas (de ser el caso formato de descuento)

Completa ☐ Incompleta ☐

DISEÑO INDUSTRIAL ☐

(Art. 119 Decisión 486/00)

☐
☐
☐
☐

Indicación que se solicita Diseño Industrial

Datos de identificación del solicitante o de la persona que presenta la solicitud

Representación gráfica y fotográfica del Diseño Industrial o muestra del material que incorpora el diseño

Comprobante de pago de las tasas establecidas

Completa ☐ Incompleta ☐

ESQUEMA DE TRAZADO ☐

(Art. 92 Decisión 486/00)

☐
☐
☐
☐

Indicación que se solicita un esquema de trazado

Datos de identificación del solicitante o de la persona que presenta la solicitud

Representación gráfica de un esquema de trazado

Comprobante de pago de las tasas establecidas

Completa ☐ Incompleta ☐