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| APPLICATION NO.                                                                              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|----------------------------------------------------------------------------------------------|-------------|----------------------|---------------------------|------------------|
| 29/824,813                                                                                   | 01/27/2022  | Merrilee Kick        | 58822.US03                | 7973             |
| 27683                                                                                        | 7590        | 01/11/2024           |                           |                  |
| Haynes and Boone, LLP<br>IP Section<br>2801 N. Harwood St.<br>Suite 2300<br>Dallas, TX 75201 |             |                      | EXAMINER<br>HILL, KELI L. |                  |
|                                                                                              |             |                      | ART UNIT                  | PAPER NUMBER     |
|                                                                                              |             |                      | 2922                      |                  |
|                                                                                              |             |                      | NOTIFICATION DATE         | DELIVERY MODE    |
|                                                                                              |             |                      | 01/11/2024                | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocketing@haynesboone.com

|                              |                                                                                                               |                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <b>Notice of Abandonment</b> | <b>Application No.</b><br>29/824,813                                                                          | <b>Applicant(s)</b><br>Kick, Merrilee |
|                              | <b>Examiner</b><br>KELI L HILL                                                                                | <b>Art Unit</b><br>2922               |
|                              | <b>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--</b> |                                       |

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 20 June 2023.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) if this is utility or plant application, a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. Note that RCEs are not permitted in design applications.)
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a *bona fide* attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 8 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$ \_\_\_\_\_ is insufficient. A balance of \$ \_\_\_\_\_ is due.  
 The issue fee required by 37CFR 1.18 is \$ \_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$ \_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record or other party authorized under 37 CFR 1.33 (b). See 37 CFR 1.138(b).
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34) upon the filing of a continuing application.
6. ☐ The decision by the Patent Trial and Appeal Board rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The dismissal of the appeal in an application having no allowed claims. (When an appeal is dismissed in an application having no allowed claims the application stands abandoned. See MPEP 1215.04 subsections I-V for an explanation of the reasons why an appeal is dismissed.)
8. ☐ The reason(s) below:  
 \_\_\_\_\_  
 \_\_\_\_\_

|                                                  |  |
|--------------------------------------------------|--|
| /KELI L HILL/<br>Primary Examiner, Art Unit 2922 |  |
|--------------------------------------------------|--|

Petitions to revive under 37 CFR 1.137, or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



## ELECTRONIC PAYMENT RECEIPT

APPLICATION #  
**29/824,813**

RECEIPT DATE / TIME  
**10/23/2023 04:46:58 PM ET**

ATTORNEY DOCKET #  
**58822.5US03**

### Title of Invention

Container

### Application Information

APPLICATION TYPE Design - Nonprovisional Application  
under 35 USC 171

PATENT # -

CONFIRMATION # 7973

FILED BY Q Dismuke

PATENT CENTER # 63059606

AUTHORIZED BY Alan Herda

CUSTOMER # 27683

FILING DATE 01/27/2022

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Merrilee Kick

### Payment Information

PAYMENT METHOD  
CARD / 1103

PAYMENT TRANSACTION ID  
E20230MG48258849

PAYMENT AUTHORIZED BY  
Q Dismuke

| FEE CODE         | DESCRIPTION                                  | ITEM PRICE(\$) | QUANTITY | ITEM TOTAL(\$) |
|------------------|----------------------------------------------|----------------|----------|----------------|
| 1253             | EXTENSION FOR RESPONSE<br>WITHIN THIRD MONTH | 1480.00        | 1        | 1480.00        |
| TOTAL<br>AMOUNT: |                                              |                |          | \$1,480.00     |

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



## ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #  
**29/824,813**

RECEIPT DATE / TIME  
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FILED BY Q Dismuke

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CUSTOMER # 27683

FIRST NAMED  
INVENTOR Merrilee Kick

CORRESPONDENCE  
ADDRESS -

AUTHORIZED BY Alan Herda

### Documents

**TOTAL DOCUMENTS: 1**

| DOCUMENT                                         | PAGES | DESCRIPTION       | SIZE (KB) |
|--------------------------------------------------|-------|-------------------|-----------|
| 58822.5US03 Request for<br>Extension of Time.pdf | 1     | Extension of Time | 318 KB    |

### Digest

| DOCUMENT                                         | MESSAGE DIGEST(SHA-512)                                                                                                                  |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 58822.5US03 Request for<br>Extension of Time.pdf | 8EBFAB11A6E4B097412C3B8582128D119FB2B1109A72B872C<br>681659C0FA6FDF788701475680C494C59E8FEF056C899B9264<br>6D855F728A9F74D2516D89003147A |

by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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| APPLICATION NUMBER | FILING OR 371(C) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE | REQUEST ID |
|--------------------|-----------------------|-----------------------|------------------------|------------|
| 29/824,813         | 01/27/2022            | Merrilee Kick         | 58822.5US03            | 196929     |

## Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 10/23/2023 has been accepted.

### CERTIFICATIONS:

#### Change of Entity Status:

☒ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

|                      |                 |
|----------------------|-----------------|
| Signature:           | /Alan N. Herda/ |
| Name:                | Alan N. Herda   |
| Registration Number: | 50426           |



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27683 7590 06/20/2023  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue  
Suite 700  
Dallas, TX 75219

|          |
|----------|
| EXAMINER |
|----------|

HILL, KELI L.

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2922

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

06/20/2023

ELECTRONIC

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ipdocketing@haynesboone.com

|                              |                                      |                                       |                                |
|------------------------------|--------------------------------------|---------------------------------------|--------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b><br>29/824,813 | <b>Applicant(s)</b><br>Kick, Merrilee |                                |
|                              | <b>Examiner</b><br>KELI L HILL       | <b>Art Unit</b><br>2922               | <b>AIA (FITF) Status</b><br>No |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on FILINGS THROUGH 05/15/2023.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All      b) ☐ Some\*\*      c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date \_\_\_\_.
- 3) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Other: \_\_\_\_.

***Notice of Pre-AIA or AIA Status***

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

***Amendment Acknowledgement***

Acknowledgement is made of the response submitted by the applicant on May 15, 2023, including a CPA, remarks and replacement drawings.

***Application Status Acknowledgement***

The request filed on 05/15/2023 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 29/824813 is acceptable and a CPA has been established. An action on the CPA follows.

**DETAILED ACTION**

**REJECTION(S)**

**1. Rejection under 35 U.S.C. 112(a) and (b)**

The claim is rejected under 35 U.S.C. 112(a) and (b), as the claimed invention is not described in such full, clear, concise and exact terms to enable any person skilled in the art to make and use the same, and fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is indefinite and nonenabling because the disclosure is unclear, as the exact shape and appearance of the design cannot be determined due to the reasons set forth below:

The exact appearance, depth and contour of the pop-top feature seen in Fig. 2 (and all details/features shown within and around it) cannot be fully understood (see **Annotated Drawing Letter A**). It is unclear how the various parts of the pop-top relate to each other and what parts are higher or lower in depth than others. From this single view understanding, the contour, thickness and planar relationship of the various parts of the pop-top is open to multiple interpretations and cannot be determined without resorting to conjecture. While the varied line weights between elements has been removed from the pop-top feature in the new drawing view, the general appearance of the pop-top still asserts differences in

Art Unit: 2922

depth and/or contour changes between features that cannot be fully understood. This includes variations asserted between the pulltab portion and the features shown surrounding (tear line/tear strip, etc) and within it (rivet, etc).

Additionally, the planar relationship of the popstop feature relative to the understood outer rim of the container neck remains unclear, as there is no way to determine whether the popstop is on a surface that is even with or depressed (and at what depth) into the container body (see **Annotated Drawing Letter B**).

**A: Exact shape, contour, depth and planar relationship of the various popstop features cannot be fully understood.**

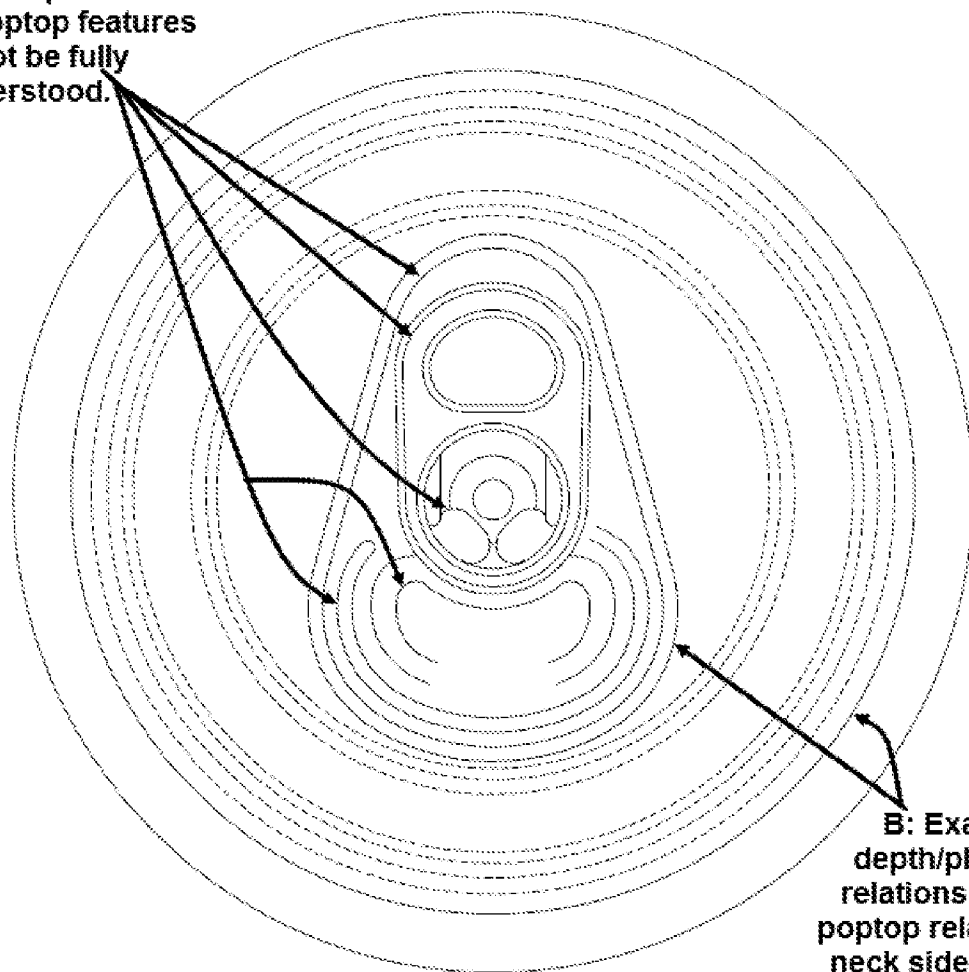


FIG. 2

In order to overcome the rejection under 35 U.S.C. 112(a) and (b), it is suggested that Applicant:

- Disclaim the pop top feature seen in the Fig. 2 top view (and any/all details shown within it) which are considered indefinite and nonenabling by converting it to broken lines.

It is suggested that Applicant submit large, clear drawings which show the details of the design clearly and accurately without the addition of new matter (35 U.S.C. 132, 37 CFR 1.121). Applicant is reminded that if the surface shape is not evident from the disclosure as filed, the addition of surface shading or additional views after filing may constitute new matter (37 CFR 1.152(II)).

## **2. Examiner's Comments to Applicant's Remarks**

Applicant has made the following arguments regarding the merits of the above rejection:

**A)** Applicant asserts that “The pop top feature itself aligns with the facts of *In re Maatita*...” because “...while the rest of the container arguably includes three- dimensionality, Applicant has amended the drawings (by removing the varied line weights) to clarify that the pop top feature itself is claimed two-dimensionally.” (Remarks, p. 4).

Based on these remarks, Applicant has attempted to describe the claim as two separate ‘parts’ ((1)– the pop top; and, (2)– the container body), denoting the pop top as two-dimensional and the container body as three-dimensional. The Examiner respectfully disagrees with this assessment. A design is directed to the claim of a single article. The instant application discloses a design claim illustrating three dimensional characteristics of a **whole** Container, from both elevation and plan views, including the various contours and features of the Container as seen from top and bottom surfaces, the curved surfaces of the claimed body, neck and lip portions, in addition to height and width. While the scope of the design has been broadened through the use of broken lines to disclaim some portions of the article, the scope is still directed to a fully three-dimensional article whose features include a pop top and container body.

**B)** Applicant argues that the Fig. 2 top plan view clearly demonstrates the two-dimensional perspective ‘...from which the pop top feature should be viewed.’, noting that this makes it no different than understanding the single plan view of a shoe bottom in *Maatita*. Applicant further argues that the claim meets the requirements for definiteness and enablement in view of rationale set forth in *In re Maatita*, 900 F.3d 1369 (Fed. Cir. 2018). Applicant cites to statements appearing in *Maatita*, asserting

that they apply equally to the present case, noting that “While a pop-top is typically three-dimensional, that does not change the fact that its ornamental design is capable of being disclosed and judged from a two-dimensional plan or planar-view perspective;” that “a potential infringer would not be left in doubt as to how to determine infringement;” and that “Applicant’s decision not to disclose all possible depth, shape, contour or planar relationship choices would not preclude an ordinary observer from understanding the claimed design...” (Remarks, p. 6-7).

The examiner disagrees because the comparison is flawed, as the facts of *In re Maatita* are differentiated from the facts of the present application. *Maatita* shows ONLY a single, plan view that discloses the exact configuration of the bottom of the shoe. One cannot compare what is shown in a fully rendered three-dimensional article to what is disclosed in a single, two-dimensional plan view. If, for example, the claim was directed to only a pop-top shown in a single, plan view, then, an understanding of *that* claim as a two-dimensional article would have to be taken into consideration during evaluation of the application. However, the claimed Container is an article of depth and dimension, clearly indicated by ALL of the features shown in solid lines throughout the multiple views of the drawing disclosure. The purpose of the disclosure is to show said depth and dimension in relation to plan and elevation views, thus, the three-dimensional appearance of the full article is relevant to enablement. The full drawing disclosure asserts that the design is applied to a three-dimensional article, therefore, the drawing and specification must be commensurate with the protection sought. *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 131 USPQ 413 (D. Del. 1961).

C) Applicant goes on to assert that in light of the incorporation by reference of parent applications 16/800195 and 12/762934 (“’934 Application”), the depth/spatial relationship of the pop-top feature relative to the outer rim of the container neck as seen in Fig. 2 of the instant application, does meet the requirement for definiteness and enablement. This position relies on details seen in FIG. 5 of the ‘934 Application (“FIG. 5”) and language in its’ specification, noting “the container lid 113 ... include[s] a weakened or scored area 135 which deforms and provides an opening when the ‘pull top’ arm 133 ... [is] pivoted by the user.” (Remarks, p. 8-10).

The Examiner respectfully disagrees. In the FIG. 5 drawing view, it is clearly noted that the lip and lid portions are shown enlarged as compared to the remaining features of the Container (reproduced below). Taking this into consideration, the information relayed in FIG. 5 cannot be relied upon as explanation of any specific understanding as to the spatial relationship of the various structural elements as seen in the views of the claimed design disclosure.

The relationship of the enlarged lip and lid relative to the size and positioning of the Container sidewall/body is clearly distorted in the FIG. 5 drawing view. These details are inconsistent with the disclosure as shown in Figs. 1, 2 and 4 of the '934 Application and in all views of the instant design application. Examples of this distortion include the outermost edge of the lip is shown to stick out further than the container body sidewall (**Annotation 'C1'**) and the width of the lip is not scaled equally to the height of neck (**Annotation 'C2'**). Additionally, the enlarged scale of the lip and lid portions in FIG. 5 also means that it is highly unlikely that the visible portion of the lid extends to show the area of the lid that is claimed/shown in solid lines in the Fig. 2 views of the '934 Application/instant application (**Annotation 'C3'**). This means there is not enough information disclosed in FIG. 5 to determine if there are any further variations in plane in the area of the innermost contour lines/poptop. The noted distortion makes any attempt at comparing and relying on FIG. 5 to define any specific understanding as to the depth/contour changes seen in the design claim indefinite and non-enabling, as it is unclear and open to multiple interpretations.

## Side View - Lid & Lip of Container

(Note: The lip and lid are enlarged to show hook)

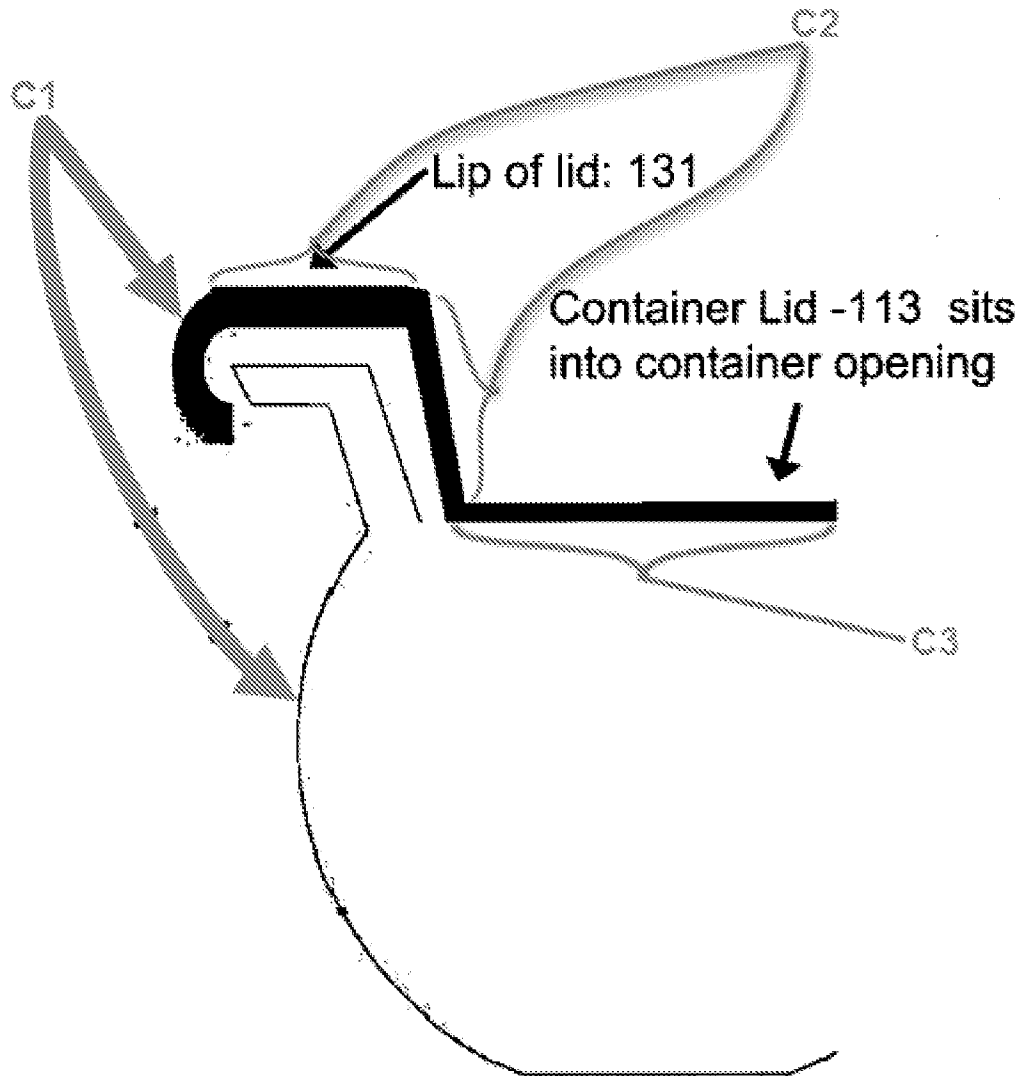


**Figure 5**  
(Of App. #12/762935)

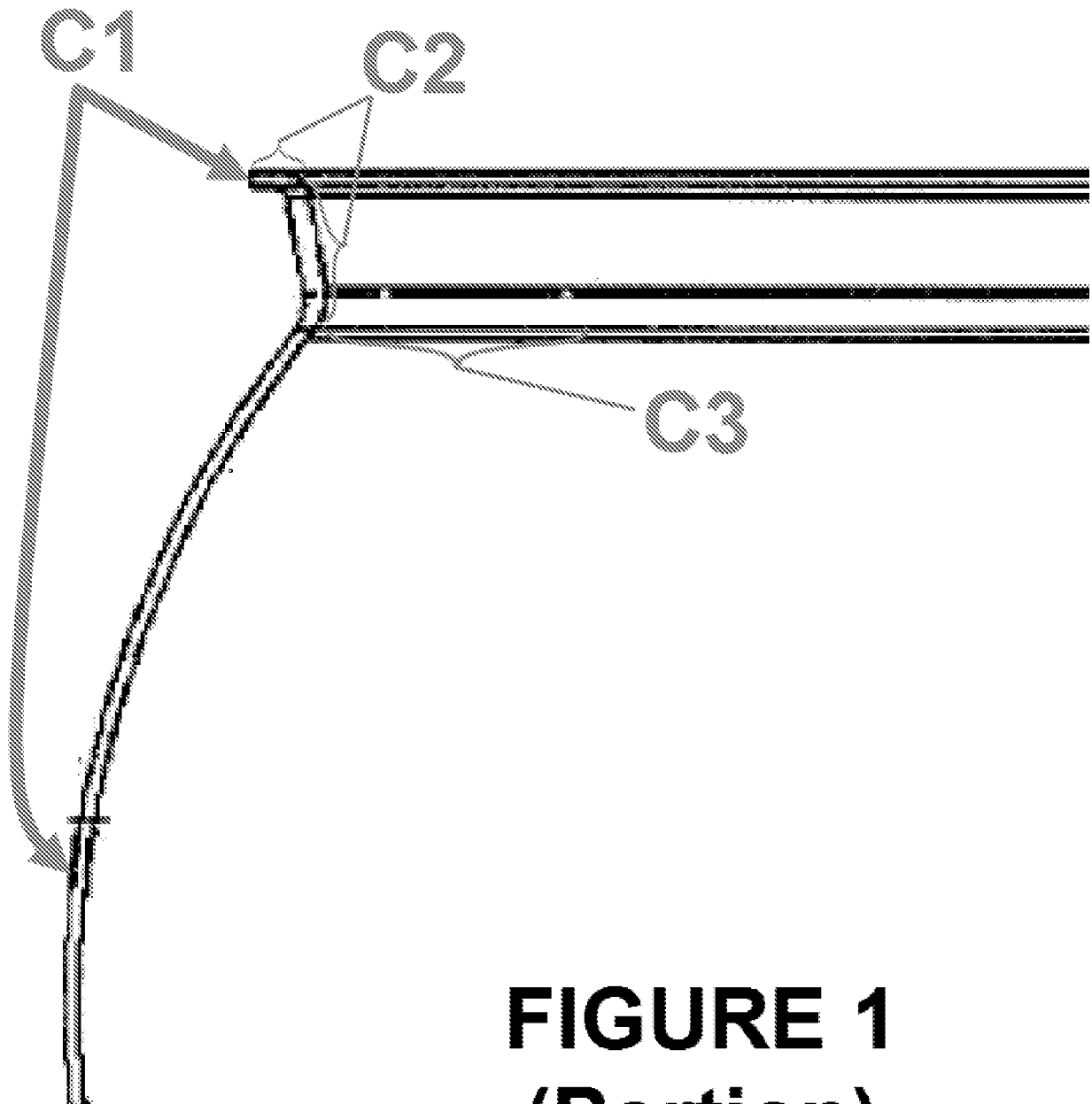


**FIGURE 1**  
**(Portion)**  
(Of App. #12/762934)  
**FULLY ENLARGED to**  
**Match Neck Height seen in FIG. 5**

### **3. Conclusion**

The claimed design is patentable over the references cited. However, a final determination of patentability will be made upon resolution of the above rejection.

**The claim stands rejected under 35 U.S.C. 112(a) and (b).**

### **4. Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELI L. HILL whose telephone number is (571)272-4375. The examiner can normally be reached on M-Th: 6a-4p. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Garth Rademaker, can be reached at (303) 297.4274. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

**General questions regarding patent examining policy, assistance with filling out forms, or general information concerning rules, procedures and fees, should be directed to the Inventors Assistance Center (IAC).** The IAC is staffed by former Supervisory Patent Examiners and experienced Primary Examiners who answer general questions concerning patent examining policy and procedure. **Assistance is available at the IAC Monday – Friday, 8:30am - 5:00pm (EST) at (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer

Art Unit: 2922

Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/KELI L HILL/

Primary Examiner, Art Unit 2922

|                                                                                                                 |                                              |                                                                  |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                 | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

| CPC - Searched*                                                                                                                                                 |      |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|
| Symbol                                                                                                                                                          | Date | Examiner |
| B21D: 51/26,383                                                                                                                                                 |      |          |
| B29C: 66/71                                                                                                                                                     |      |          |
| B65D: 1/00,02,12,14,40,44,023,0223,165,238,246,253; 7/04; 21/0209, 0233; 25/00,28; 41/0457,17; 53/06; 75/56; 2501/0036; 2543/0064,00074,00083,00092,00101,00111 |      |          |
| Y10T: 29/49826                                                                                                                                                  |      |          |

| CPC Combination Sets - Searched* |      |          |
|----------------------------------|------|----------|
| Symbol                           | Date | Examiner |
|                                  |      |          |

| US Classification - Searched* |                                     |          |          |
|-------------------------------|-------------------------------------|----------|----------|
| Class                         | Subclass                            | Date     | Examiner |
| D9                            | 500,503,516,519,520,549,574,763-783 | 11/29/14 | /KLH/    |
| 215                           | 381-385                             |          |          |
| 220                           | 660,662,669                         |          |          |
|                               |                                     |          |          |

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

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|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                 | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

| <b>Search Notes</b>                                                                           |             |                 |
|-----------------------------------------------------------------------------------------------|-------------|-----------------|
| <b>Search Notes</b>                                                                           | <b>Date</b> | <b>Examiner</b> |
| Searched Inventor and Assignee Name in PALM and Pe2e SEARCH                                   | 11/29/14    | /KLH/           |
| SEARCH: word search/narrowing; backwards/forward search of patents (See SEARCH history sheet) |             |                 |
| NPL Search: Google Images: www.images.google.com – Bottle, container, can                     |             |                 |
| Buzzballz LLC: www.buzzballz.com                                                              |             |                 |
| Orbit: (CONTAINER OR BOTTLE)/TI AND (09-01)/CL AND (ALL COUNTRIES EXCEPT US)                  |             |                 |
| UPDATED ORIGINAL SEARCH                                                                       | 09/29/2022  | /KLH/           |
| UPDATED ORIGINAL SEARCH                                                                       | 02/09/2023  | /KLH/           |
| UPDATED ORIGINAL SEARCH                                                                       | 06/10/2023  | KLH/            |

| <b>Interference Search</b> |                              |             |                 |
|----------------------------|------------------------------|-------------|-----------------|
| <b>US Class/CPC Symbol</b> | <b>US Subclass/CPC Group</b> | <b>Date</b> | <b>Examiner</b> |
| D9                         | 776                          | 11/19/14    | /KLH/           |

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## PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query                                                                                                                          | DBs                      | Default Operator | Plurals | British Equivalents | Time Stamp          |
|-------|------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|---------|---------------------|---------------------|
| L391  | 0    | /---refresh-5-824813-for-CPA-NF-/                                                                                                     | (US-PGPUB; USPAT; USOCR) | OR               | OFF     | OFF                 | 2023/06/10 07:32 PM |
| L392  | 80   | ((L344 OR L345 OR L346 OR L347 OR L348 OR L349) AND @PD>="20230209")                                                                  | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 07:32 PM |
| L393  | 138  | ((L353 OR L355 OR L358 OR L370 OR L362 OR L364 OR L370 OR L369 OR L373 OR L374 OR L375 OR L376 OR L377 OR L378 ) AND @PD>="20230209") | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 07:32 PM |
| L394  | 0    | d9/438.clas.                                                                                                                          | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 07:59 PM |
| L395  | 787  | d9/438.ccls.                                                                                                                          | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 07:59 PM |
| L396  | 645  | L395 AND @PD<="20100419"                                                                                                              | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 08:00 PM |
| L397  | 2    | L396 AND sole                                                                                                                         | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 08:01 PM |
| L398  | 0    | L396 AND (the ADJ figure)                                                                                                             | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 08:01 PM |
| L399  | 0    | L396 AND (sole ADJ figure)                                                                                                            | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 08:02 PM |
| L400  | 5    | L395 AND (sole ADJ figure)                                                                                                            | (US-PGPUB; USPAT)        | OR               | ON      | ON                  | 2023/06/10 08:02 PM |

## PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

**FOR DESIGN APPLICATIONS ONLY:  
CONTINUED PROSECUTION APPLICATION (CPA) REQUEST TRANSMITTAL**

(Only for Continuation or Divisional applications under 37 CFR 1.53(d))

CHECK BOX, if applicable:

☐

DUPLICATE

Address to:

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**Attorney Docket No.  
of Prior Application

58822.5US03

First Named Inventor

Merrilee Kick

Examiner Name

Keli L. Hill

Art Unit

2922

Priority Mail Express® Label No.

This is a request for a ☒ continuation or ☐ Divisional application under 37 CFR 1.53(d),  
(continued prosecution application (CPA)) of prior application number 29/824,813,filed on January 27, 2022, entitled Container.**NOTES**

A CPA may **only** be filed in a **design** application but not in an international design application. A CPA **cannot** be filed in a utility or plant application. See "Elimination of Continued Prosecution Application Practice as to Utility and Plant Applications; Final Rule," 68 FR 32376 (May 30, 2003). Applicant may consider filing a Request for Continued Examination (RCE) under 37 CFR 1.114 in utility or plant applications. See MPEP 706.07(h) and form PTO/SB/30.

**Filing Qualifications:** The prior application identified above must be a design application that is complete as defined by 37 CFR 1.51(b).

**C-I-P NOT PERMITTED:** A continuation-in-part application cannot be filed as a CPA under 37 CFR 1.53(d), but must be filed under 37 CFR 1.53(b).

**EXPRESS ABANDONMENT OF PRIOR APPLICATION:** The filing of this CPA is a request to expressly abandon the prior application as of the filing date of the request for a CPA. 37 CFR 1.53(b) must be used to file a continuation, divisional, or continuation-in-part of an application that is not to be abandoned.

**ACCESS TO PRIOR APPLICATION:** The filing of this CPA will be construed to include a waiver of confidentiality by the applicant under 35 U.S.C. 122 to the extent that any member of the public who is entitled under the provisions of 37 CFR 1.14 to access to, copies of, or information concerning, the prior application may be given similar access to, copies of, or similar information concerning, the other application or applications in the file.

**35 U.S.C. 120 STATEMENT:** In a CPA, no reference to the prior application is needed in the Application Data Sheet (ADS). A request for a CPA is the specific reference required by 35 U.S.C. 120 and to every application assigned the application number identified in such request, 37 CFR 1.78(d)(4).

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

1. ☐ Enter the unentered amendment previously filed on \_\_\_\_\_  
under 37 CFR 1.116 in the prior design application.
2. ☒ A preliminary amendment is enclosed.
3. This application is filed by fewer than all the inventor(s) named in the prior application, 37 CFR 1.53(d)(4).
  - a. ☐ **DELETE** the following inventor(s) named in the prior design application:  
\_\_\_\_\_  
\_\_\_\_\_
  - b. ☐ The inventor(s) to be deleted are set forth on a separate sheet attached hereto.
4. ☐ A new power of attorney (PTO/AIA/82) is enclosed.
5. Information Disclosure Statement (IDS) is enclosed;
  - a. ☐ PTO/SB/08, PTO-1449 or equivalent
  - b. ☐ Copies of IDS Citations

Page 1 of 2

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0032. Public burden for this form is estimated to average 24 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

6. ☒ Small entity status: Applicant claims small entity status. See 37 CFR 1.27.
7. The Director is hereby authorized to credit overpayments or change the following fees to Deposit Account No. 08-1394:
- a. ☐ Fees required under 37 CFR 1.16.
- b. ☐ Fees required under 37 CFR 1.17.
- c. ☐ Fees required under 37 CFR 1.18.
8. ☐ A check in the amount of \$ \_\_\_\_\_ is enclosed.
9. ☐ Payment by credit card. Form PTO-2038 is attached.
10. ☒ Payment made via USPTO's patent electronic filing system (Patent Center or EFS-Web).
11. ☐ Applicant requests suspension of action under 37 CFR 1.103(b) for a period of \_\_\_\_\_ months (not to exceed 3 months) and the fee under 37 CFR 1.17(i) is enclosed.
12. ☐ New Attorney Docket Number, if desired \_\_\_\_\_  
[Prior application Attorney Docket Number will carry over to this CPA unless a new Attorney Docket Number has been provided herein.]
13. a. ☐ Receipt For Facsimile Transmitted CPA (PTO/SB/29A)
- b. ☐ Return Receipt Postcard (Should be specifically itemized. See MPEP 503)
14. ☐ Other:

**NOTE: The prior application's correspondence address will carry over to this CPA UNLESS a new correspondence address is provided below.**

#### 14. NEW CORRESPONDENCE ADDRESS

☐

The address associated with Customer Number:

OR

☐

New correspondence address below

Name

Address

City

State

Zip Code

Country

Email

#### 15. SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature

/Braden J. Davies/

Name (Print/Type)

Braden J. Davies

Registration No. (Attorney/Agent)

79,960

Date

May 15, 2023

Telephone Number

214-651-5381

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

## Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections, or an issued patent, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

|                               |   |                                  |
|-------------------------------|---|----------------------------------|
| In re application of:         | § |                                  |
| Merrilee Kick                 | § | Group Art Unit: 2922             |
|                               | § |                                  |
| Application No.: 29/824,813   | § | Examiner: Keli L. Hill           |
|                               | § |                                  |
| Filing Date: January 27, 2022 | § | Confirmation No.: 7973           |
|                               | § |                                  |
| For: Container                | § | Attorney Docket No.: 58822.5US03 |

**PRELIMINARY AMENDMENT**

**Mail Stop Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**I. Introductory Comments**

This document accompanies a request for a Continued Prosecution Application (“CPA”), filed concurrently herewith under 37 C.F.R. § 1.53(d) in response to a Final Office Action received in the referenced application on February 15, 2023 (the “Office Action”). Prior to the initial examination of the CPA, please amend the application as shown in the accompanying sections and reconsider the referenced application in light of the amendments.

No fees, including extension of time fees, are believed necessary for consideration of this document. However, if any fees, including extension-of-time fees, are necessary, the extension of time is hereby requested, and the Commissioner is hereby authorized to charge any fees, including those for the extension of time, to Haynes and Boone, LLP’s Deposit Account No. 08-1394.

**Amendments to the Drawings** begin on page 2 of this document.

**Remarks** begin on page 3 of this document.

## **II. Amendments to the Drawings**

The attached Replacement Sheets including FIGS. 1-3 replace all previous sheets including FIGS. 1-3.

### III. Remarks

#### A. Rejection Under 35 U.S.C. § 112(a) and (b)

Previously, the Non-Final Rejection mailed October 6, 2022 (“Non-Final Rejection”) rejected the design claim under 35 U.S.C. § 112(a) and (b) as being allegedly indefinite and nonenabling. In response, Replacement Sheets including FIGS. 1-3 were previously submitted with the Amendment filed January 5, 2023 (“Amendment”), removing all surface shading from the figures.

Nevertheless, the previous rejection has been maintained in the Final Rejection mailed February 15, 2023 (“Final Rejection”); as a result, the design claim currently stands finally rejected under 35 U.S.C. § 112(a) and (b) for allegedly remaining indefinite and nonenabling. This rejection is respectfully traversed.

Specifically, on page 5 of the Final Rejection, the Examiner states:

It is the Examiner’s position that the facts of *In re Maatita* are differentiated from the facts of the present application. As noted earlier in these comments, the application presents a different set of facts from *Maatita*, in that the claimed Container has contour, height, width, and variations in line weight depicting three-dimensionality. Therefore, the indicated depth and form in the single view understanding of the pop-top feature seen in Fig. 2 cannot be determined without resorting to conjecture. The claimed Container is understood to be a three-dimensional article with mass and form, unlike a shoe bottom, which could be seen as flat or two-dimensional.

Applicant respectfully disagrees for reasons set forth below, noting that the pending design claim includes: **(1) the pop-top feature itself** and **(2) the rest of the container**, including the spatial relationship of the outer rim of the container neck relative to the pop-top feature.

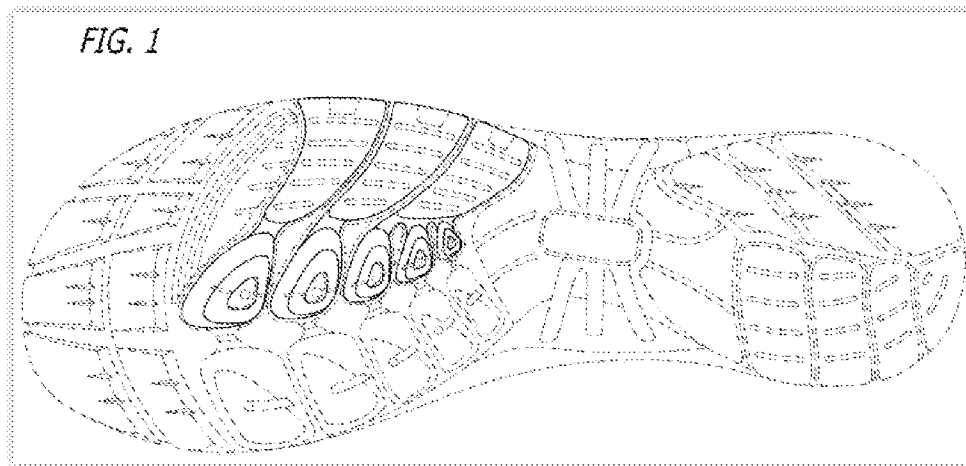
In traversing the rejection under 35 U.S.C. § 112(a) and (b) below, these two (2) features of the pending design claim are addressed in turn.

**1. The popstop feature itself aligns with the facts of *In re Maatita*, thus satisfying the requirements for definiteness and enablement.**

On page 2 of the Final Rejection, the Examiner alleges that the claim is indefinite and nonenabling because “[t]he exact appearance, depth and contour of the popstop feature seen in Fig. 2 ... cannot be fully understood.” The Final Rejection further states that “[i]t is unclear how the various parts of the popstop relate to each other and what parts are higher or lower in depth than others. From this single view understanding, the contour, thickness and planar relationship of the various parts of the popstop is open to multiple interpretations and cannot be determined without resorting to conjecture.” *Id.*, page 3. In this regard, the Final Rejection specifically alleges that, although “the shading has been removed from the popstop feature in the new drawing view, the varied line weights between elements still asserts differences in depth and/or contour changes between features that cannot fully be understood.” *Id.*

Applicant notes that the Replacement Sheets attached herewith, including FIGS. 1-3, have been amended to remove the varied line weights between elements of the popstop feature in FIG. 2 so that all of the elements of the popstop feature are shown with identical line weights. Thus, while the rest of the container arguably includes three-dimensionality, Applicant has amended the drawings (by removing the varied line weights) to clarify that the popstop feature itself is claimed two-dimensionally.

As a result, Applicant respectfully submits that the popstop feature *itself* satisfies the requirements for definiteness and enablement in view of Federal Circuit case *In re Maatita*, 900 F.3d 1369 (Fed. Cir. 2018). In *Maatita*, the applicant filed Design Patent Application No. 29/404,677 (“the ’677 Application”) covering the design of an athletic shoe bottom. The ’677 Application contained only two figures, both showing a plan view of the shoe bottom. Figure 1 of the ’677 Application is reproduced below for reference.



Similarly to the Examiner's rejection of the pop-top feature claimed in the present case, the examiner of the '677 Application rejected the design claim as nonenabled and indefinite under 35 U.S.C. § 112 "because it used a single, two-dimensional plan-view drawing to disclose a shoe bottom design and thereby left the design open to multiple interpretations regarding the depth and contour of the claimed elements." *Id.* On appeal to the Patent Trial and Appeal Board, this rejection was upheld. However, on appeal to the Court of Appeals for the Federal Circuit, **the rejection was reversed.**

In deciding *Maatita*, the Court first discussed the enablement and definiteness requirements with respect to design patent applications. The Court acknowledged that "[b]ecause design patent claims are limited to what is shown in the application drawings ... there is often little difference in the design patent context between the concepts of definiteness ... and enablement," concluding that indefiniteness and enablement could be assessed together. *Id.*

Before making a determination with respect to the '677 Application, the Court first defined the test for indefiniteness and enablement. The Court stated:

The purpose of § 112's definiteness requirement, then, is to ensure that the disclosure is clear enough to give potential competitors (who are skilled in the art) **notice of what design is claimed—and therefore what would infringe.** See *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437 (1902)....

Given that the purpose of indefiniteness is to give notice of what would infringe, we believe that in the design patent context, one skilled in the art

would assess indefiniteness from the perspective of an ordinary observer. **Thus, a design patent is indefinite under § 112 if one skilled in the art, viewing the design as would an ordinary observer, would not understand the scope of the design with reasonable certainty based on the claim and visual disclosure.** *Id.* (emphasis added).

Under this test, the government (*i.e.*, the USPTO) in *Maatita* argued that the scope of the design claim was indefinite because the design, as disclosed in the single, two-dimensional plan or planar view, could be applied to a three-dimensional shoe bottom in a number of ways. The Court disagreed. More particularly, in holding the design claim of the '677 Application to have met the requirements for enablement and definiteness, the Court in *Maatita* concluded:

The government is correct that a shoe sole is typically three-dimensional, with treads that may be convex or concave. And, indeed, many shoe bottom designers choose to claim their designs in a three-dimensional fashion. **But the fact that shoe bottoms can have three-dimensional aspects does not change the fact that their ornamental design is capable of being disclosed and judged from a two-dimensional, plan- or planar-view perspective—and that Maatita's two-dimensional drawing clearly demonstrates the perspective from which the shoe bottom should be viewed. A potential infringer is not left in doubt as to how to determine infringement. In this case, Maatita's decision not to disclose all possible depth choices would not preclude an ordinary observer from understanding the claimed design, since the design is capable of being understood from the two-dimensional, plan- or planar-view perspective shown in the drawing.** See *Asano*, 201 U.S.P.Q. at 317....

Because **a designer of ordinary skill in the art, judging Maatita's design as would an ordinary observer, could make comparisons for infringement purposes based on the provided, two-dimensional depiction**, Maatita's claim meets the enablement and definiteness requirements of § 112. We therefore reverse the decision of the Board. *Id.* (emphasis added).

**Here**, a similar issue is presented with regard to the pop-top feature of the claimed design. Specifically, while a pop-top is typically three-dimensional, that does not change the fact that its ornamental design is capable of being disclosed and judged from a two-dimensional, plan- or planar-view perspective. Indeed, where, as here, the pop-top feature

itself is illustrated using a single, two-dimensional plan-view perspective, just like the shoe bottom in *Maatida*, the pop-top feature itself is not inherently three-dimensional as *claimed*. Moreover, since the pop-top feature is illustrated without surface shading, and with all of the elements of the pop-top feature having identical line weights, no three-dimensionality has been claimed with respect to the pop-top feature itself.

The two-dimensional top plan-view depicted in FIG. 2 clearly demonstrates the perspective from which the pop-top feature should be viewed. Thus, a potential infringer would not be left in doubt as to how to determine infringement, and Applicant's decision not to disclose all possible depth, shape, contour, or planar relationship choices would not preclude an ordinary observer from understanding the claimed design, because the design is capable of being understood from the two-dimensional, plan- or planar-view perspective shown in FIG. 2, which is reproduced below for reference.

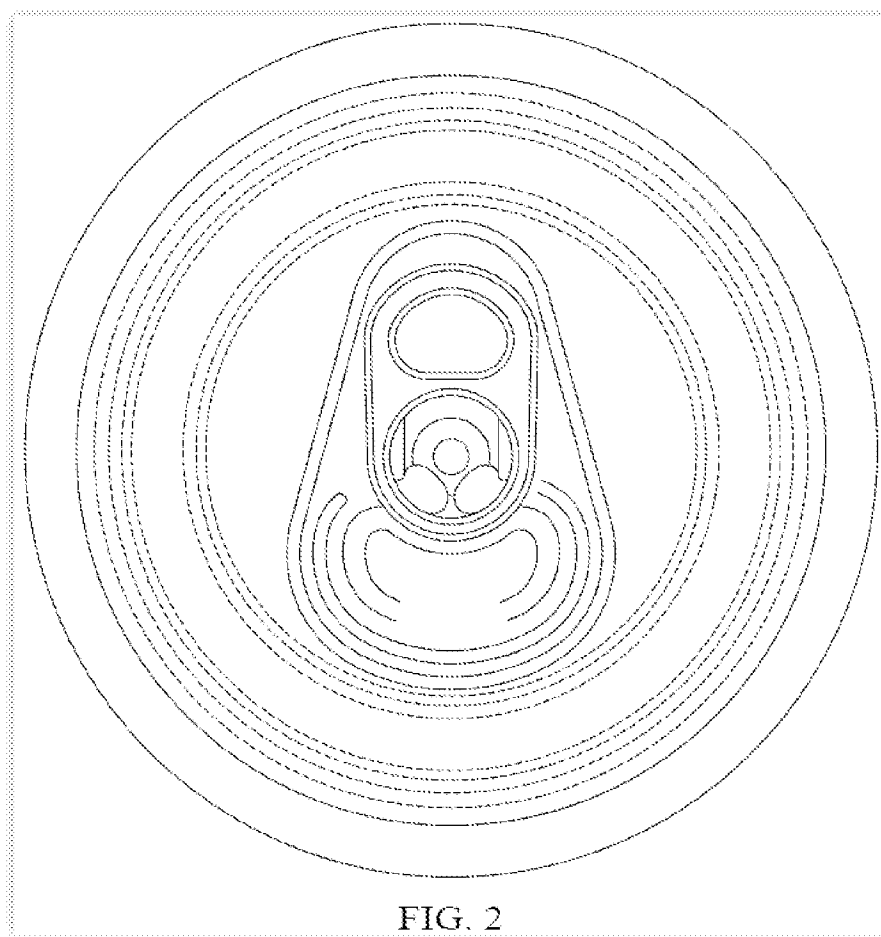


FIG. 2

Indeed, as shown above, a designer of ordinary skill in the art, judging Applicant's design as would an ordinary observer, could make comparisons for infringement purposes based on the provided, two-dimensional depiction of the pop-top feature in FIG. 2. To illustrate this point, an entirely hypothetical claim chart is provided hereinbelow (on page 12). Therefore, Applicant respectfully submits that the pop-top feature of the pending design claim satisfies the requirements for definiteness and enablement.

**2. The rest of the container, including the spatial relationship of the outer rim of the container neck relative to the pop-top feature, also satisfies the requirements for definiteness and enablement.**

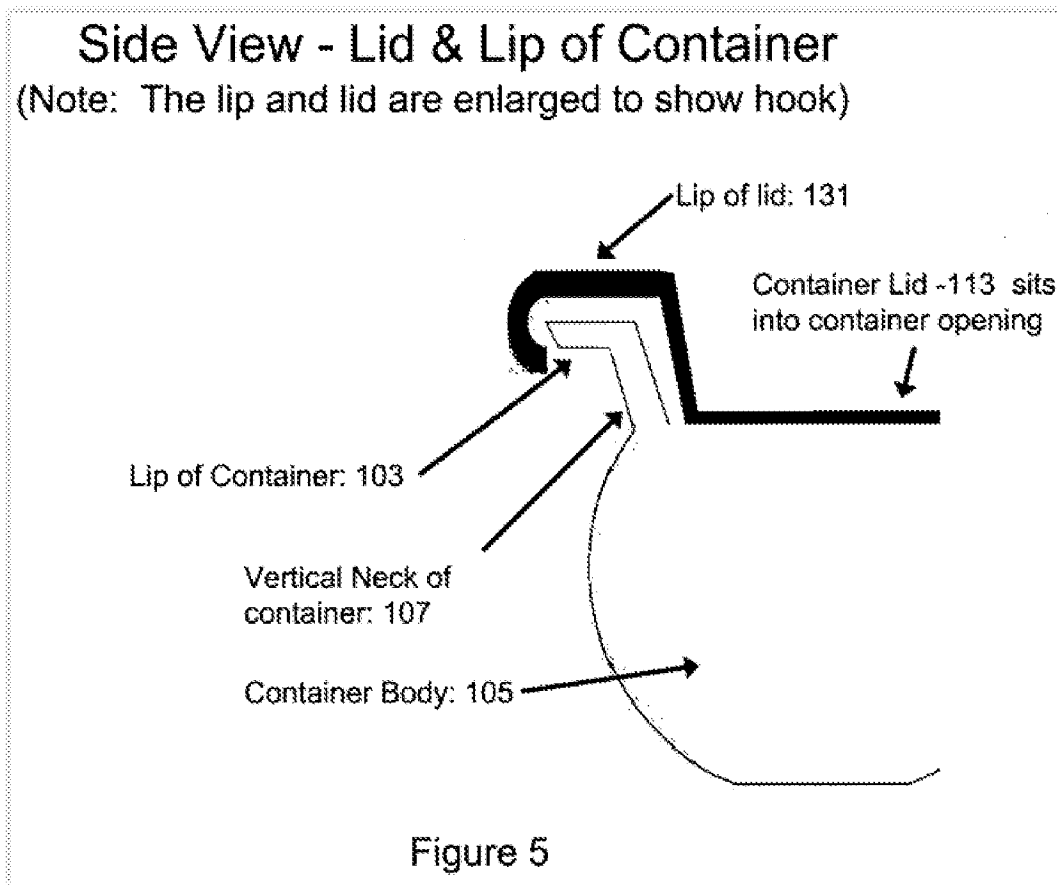
On page 3 of the Final Rejection, the Examiner further alleges that "the planar relationship of the pop-top feature relative to the understood outer rim of the container neck remains unclear, as there is no way to determine whether the pop-top is on a surface that is even with or depressed (and at what depth) into the container body."

As discussed above, the Court in *In re Maatita* concluded that indefiniteness and enablement can be evaluated together in the context of design patents, defining the test for indefiniteness (and enablement) as whether one skilled in the art, viewing the design as would an ordinary observer, would understand the scope of the design with reasonable certainty based on the claim and visual disclosure.

In so keeping, the MPEP provides that "since the drawing disclosure and any narrative description in the specification are incorporated into the claim by the use of the language 'as shown and described,' any determination of the scope of protection sought by the claim is also a determination of the subject matter that must be enabled by the disclosure." MPEP § 1504.04. In this regard, "[a]n evaluation of the scope of the claim under 35 U.S.C. 112(b) ..., to determine whether the disclosure of the design meets the enablement requirement of 35 U.S.C. 112(a) ..., **cannot be based on the drawings alone.**" *Id.* (emphasis added). Rather, "[t]he scope of a claimed design is understood to be limited to those surfaces or portions of the article shown in the drawing in full lines **in combination with any additional written description in the specification.**" *Id.* (emphasis added). For example, "**a narrative description in the specification can supplement the drawing disclosure**" because "such description is incorporated into the

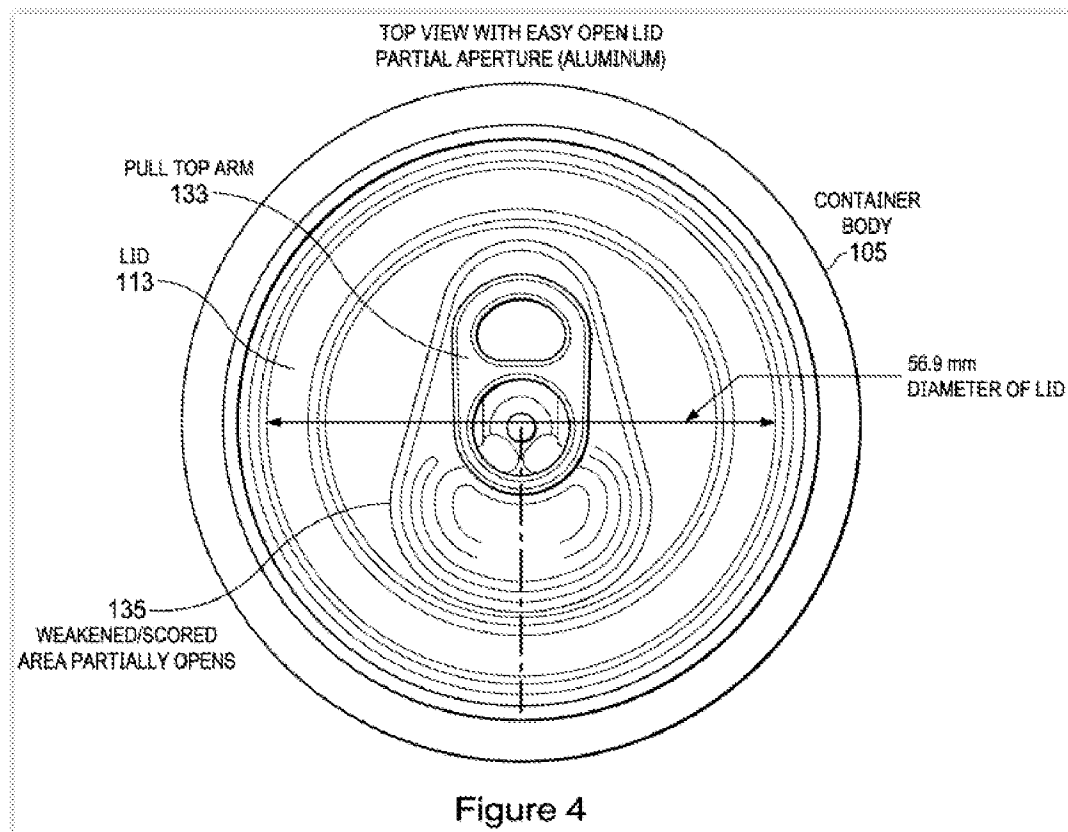
claim by the use of the language ‘and described’ therein.” *Id.* (emphasis added). Moreover, **any “illustrations” in the specification, “whatever form they may take,” can also supplement the drawing disclosure.**<sup>1</sup>

**Here**, the “Cross-Reference to Related Applications” section of the application incorporates U.S. Patent Application Nos. 16/800,195 and 12/762,934 (“’934 Application”) by reference into the specification. Figure 5 of the ’934 Application, which clearly illustrates (and describes) the spatial relationship of the pop-top feature (“Container Lid - 113 sits into container opening”) relative to the outer rim (“Lip of Container 103”) of the container neck (“Vertical Neck of [C]ontainer: 107”), is reproduced below.



<sup>1</sup> *Id.* (emphasis added) (citing *Racing Strollers Inc. v. TRI Industries Inc.*, 878 F.2d 1418, 1420, 11 USPQ2d 1300, 1301 (Fed. Cir. 1989) (en banc) (stating that “[a]s a practical matter, meeting the [written description] requirement of § 112 is, in the case of an ornamental design, simply a question of whether the earlier application contains illustrations, whatever form they may take, depicting the ornamental design illustrated in the later application and claimed therein”)).

In addition, Figure 4 of the '934 Application, which clearly illustrates the spatial relationship of the pop top feature relative to the container lid, namely by showing that "the container lid 113 ... include[s] a weakened or scored area 135 which deforms and provides an opening when the 'pull top' arm 133 ... [is] pivoted by the user," is reproduced below. See *a/s/o* ¶ [0024] of the '934 Application.



Applicant respectfully submits that one skilled in the art, viewing the design as would an ordinary observer, would understand the scope of the design with reasonable certainty, including the spatial relationship of the pop top feature relative to the container lid (as shown in Figure 4 and described in ¶ [0024] of the '934 Application), and thus relative to the outer rim of the container neck (as shown and described in Figure 5 of the '934 Application), thereby enabling such a person to make the claimed design.

**Additionally**, Applicant respectfully submits that the three-dimensionality of the container is clearly represented by FIGS. 1-3 showing side elevational, top plan, and

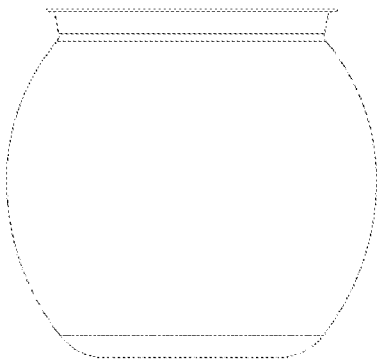
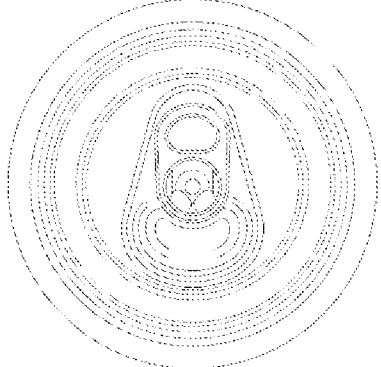
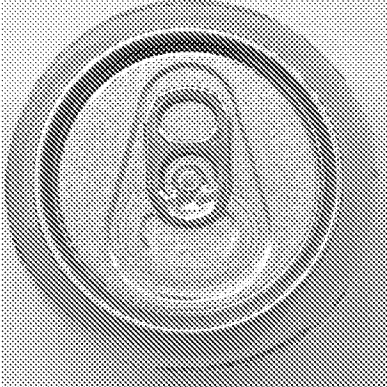
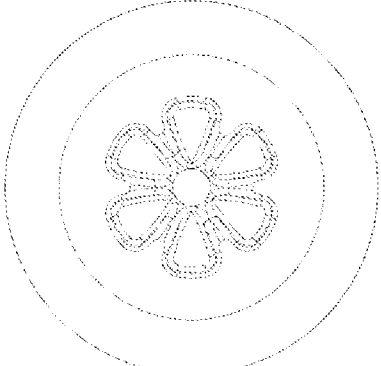
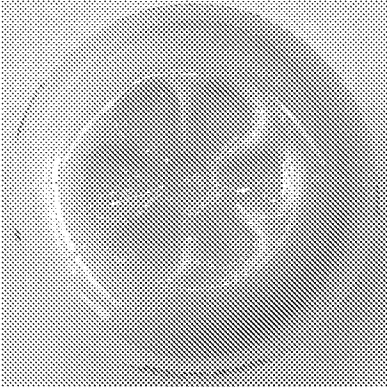
bottom plan views, respectively, of the container; as a result, these three-dimensional aspects are fully defined and enabled.

Therefore, Applicant respectfully submits that the rest of the container, including the spatial relationship of the outer rim of the container neck relative to the pop top feature, also satisfies the requirements for definiteness and enablement.

\* \* \* \* \*

Accordingly, a designer of ordinary skill in the art, judging Applicant's design as would an ordinary observer, could make comparisons for infringement purposes based on: **(i)** the provided, two-dimensional depiction of the pop top feature in FIG. 2, **(ii)** the additional description and illustrations provided in ¶ [0024] and Figures 4-5 of the '934 Application, and **(iii)** the provided, three-dimensional depictions of the container in FIGS. 1-3.

To illustrate this point, an entirely hypothetical claim chart is provided below. This claim chart clearly shows that a designer of ordinary skill in the art, judging Applicant's design as would an ordinary observer, could easily make comparisons between the claimed design and another product for the purpose of determining whether the product infringes the claimed design. The claimed design clearly shows the view from which the pop top feature is to be considered for determining infringement. As a result, one can clearly evaluate the three-dimensional features of the container in FIGS. 1-3, and can also evaluate whether an accused pop top feature infringes the claimed design when viewed from the single, two-dimensional view provided in FIG. 2. The relative depths and heights of the various portions of the pop top feature are merely unclaimed portions of the design and do not affect this analysis.

| Pending Design Claim –<br>U.S. App. No. 29/824,813                                                | BuzzBallz<br>(Covered by Claim)                                                      | Soda Can<br>( <i>NOT</i> covered by Claim)                                            |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  <p>FIG. 1</p>   |    |    |
|  <p>FIG. 2</p>  |   |   |
|  <p>FIG. 3</p> |  |  |

In summary, Applicant has claimed a new, original design for a CONTAINER, including (1) a pop-top feature and (2) the rest of the container, including the spatial relationship of the outer rim of the container neck relative to the pop-top feature.

The pop-top feature itself, which is illustrated in a single, two-dimensional view provided in FIG. 2, aligns with the facts of *In re Maatita*, thus satisfying the requirements for definiteness and enablement. The rest of the container, including the spatial relationship of the outer rim of the container neck relative to the pop-top feature, also satisfies the requirements for definiteness and enablement. Specifically, because the drawings must be viewed in light of the specification, the spatial relationship of the outer rim of the container neck relative to the pop-top feature is defined and enabled by reference to the specification, which incorporates the '934 Application by reference; Figures 4-5 and ¶ [0024] of the '934 Application clearly define and enable the aforementioned spatial relationship of the outer rim of the container neck relative to the pop-top feature, as discussed above. Moreover, any additional three-dimensionality of the container is clearly defined and enabled by the side elevational, top plan, and bottom plan views shown in FIGS. 1-3, respectively.

Therefore, a potential infringer would not be left in doubt as to how to determine infringement, nor would an ordinary observer be precluded from understanding the claimed design.

**Conclusion**

In view of the foregoing amendments and remarks, an early action on the merits is respectfully requested.

The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

/Braden J. Davies/

Braden J. Davies  
Registration No. 79,960

Date: May 15, 2023

HAYNES AND BOONE, LLP  
Attn: IP Docketing  
2323 Victory Avenue, Suite 700  
Dallas, Texas 75219  
Customer No. 27683  
Telephone: (214) 651-5381  
IP Facsimile: (214) 200-0853

*1/3*

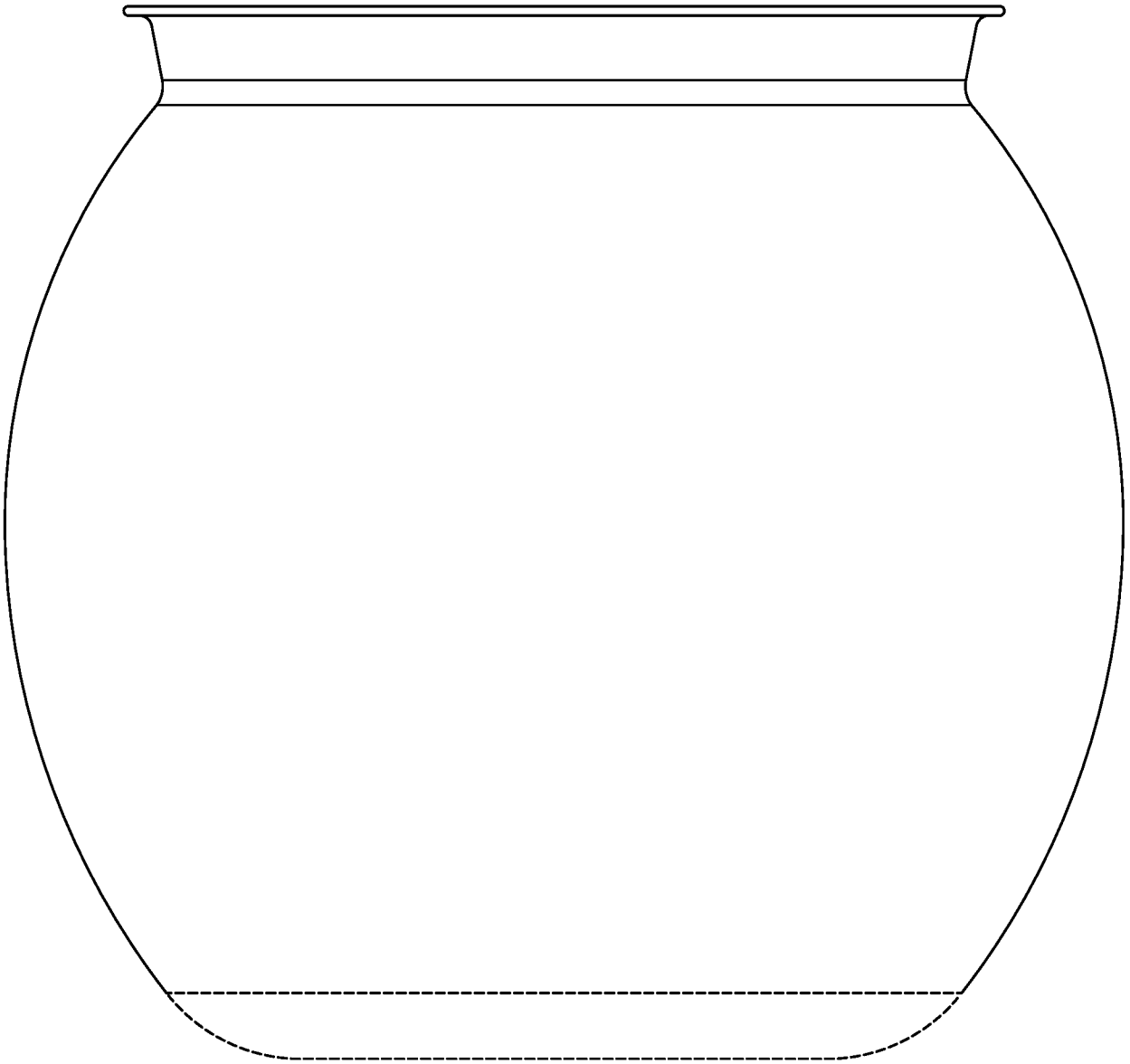


FIG. 1

2/3

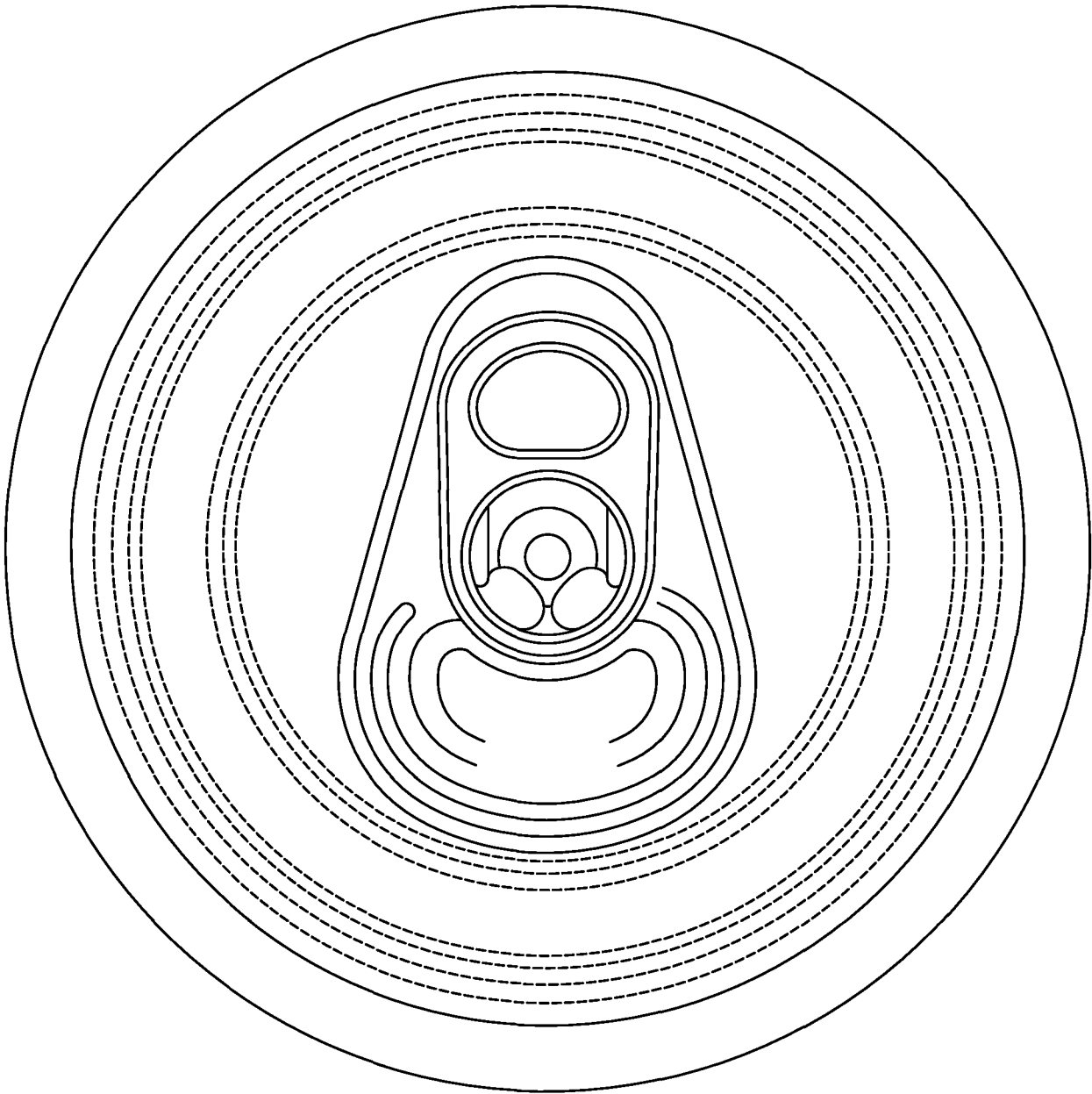


FIG. 2

3/3

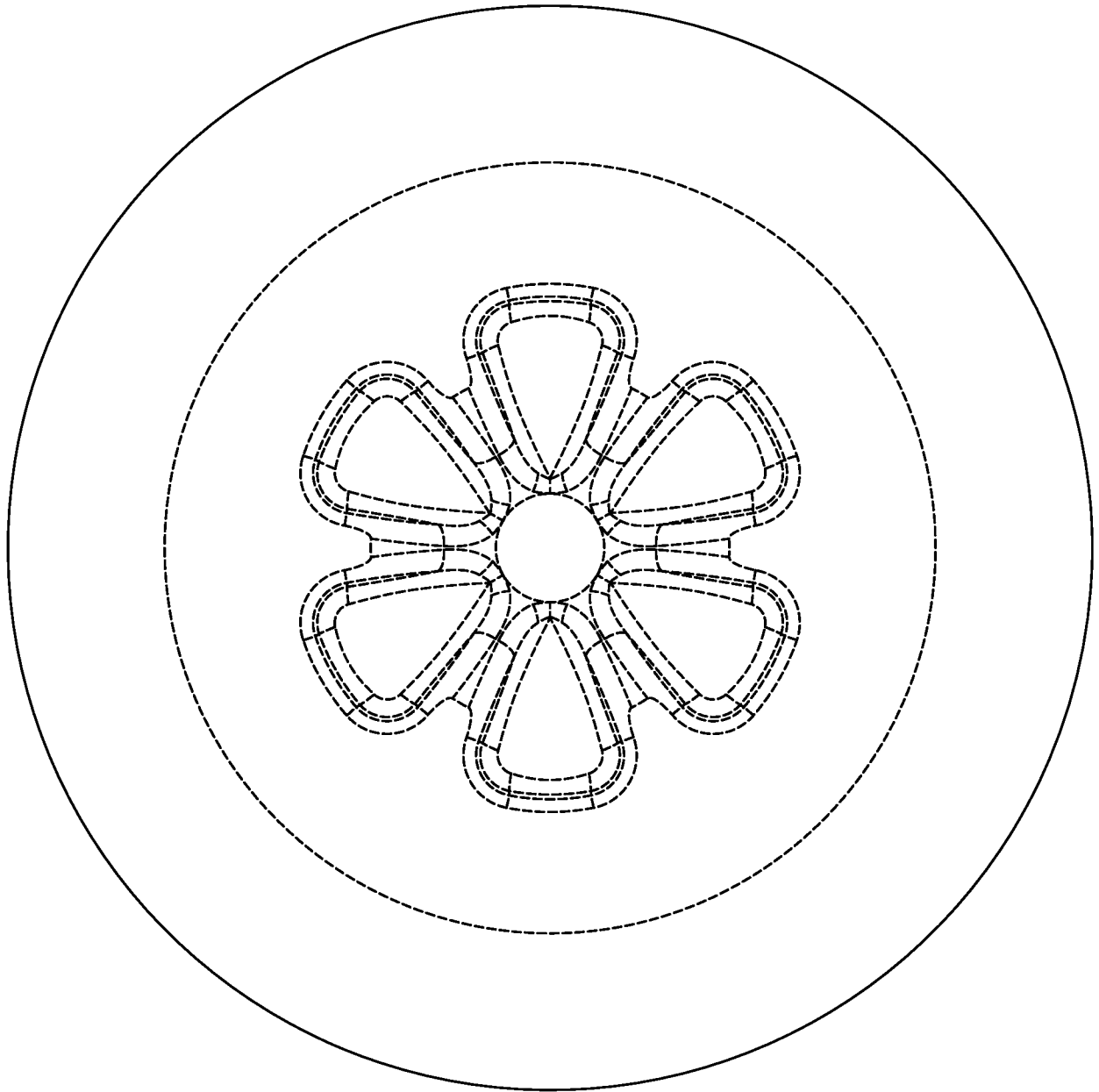


FIG. 3

## Electronic Patent Application Fee Transmittal

|                                             |                                   |                 |               |                             |
|---------------------------------------------|-----------------------------------|-----------------|---------------|-----------------------------|
| <b>Application Number:</b>                  | 29824813                          |                 |               |                             |
| <b>Filing Date:</b>                         | 27-Jan-2022                       |                 |               |                             |
| <b>Title of Invention:</b>                  | Container                         |                 |               |                             |
| <b>First Named Inventor/Applicant Name:</b> | Merrilee Kick                     |                 |               |                             |
| <b>Filer:</b>                               | Braden James Davies/Candy Sanders |                 |               |                             |
| <b>Attorney Docket Number:</b>              | 58822.5US03                       |                 |               |                             |
| Filed as Small Entity                       |                                   |                 |               |                             |
| <b>Filing Fees for Design</b>               |                                   |                 |               |                             |
| <b>Description</b>                          | <b>Fee Code</b>                   | <b>Quantity</b> | <b>Amount</b> | <b>Sub-Total in USD(\$)</b> |
| <b>Basic Filing:</b>                        |                                   |                 |               |                             |
| DESIGN APPLICATION FILING                   | 2012                              | 1               | 88            | 88                          |
| DESIGN OR DESIGN CPA SEARCH FEE             | 2112                              | 1               | 64            | 64                          |
| DESIGN OR DESIGN CPA EXAMINATION FEE        | 2312                              | 1               | 256           | 256                         |
| BASIC FILING FEE- DESIGN CPA                | 2017                              | 1               | 88            | 88                          |
| <b>Pages:</b>                               |                                   |                 |               |                             |
| <b>Claims:</b>                              |                                   |                 |               |                             |
| <b>Miscellaneous-Filing:</b>                |                                   |                 |               |                             |
| <b>Petition:</b>                            |                                   |                 |               |                             |

| Description                       | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|-----------------------------------|----------|----------|--------|----------------------|
| Patent-Appeals-and-Interference:  |          |          |        |                      |
| Post-Allowance-and-Post-Issuance: |          |          |        |                      |
| Extension-of-Time:                |          |          |        |                      |
| Miscellaneous:                    |          |          |        |                      |
| Total in USD (\$)                 |          |          |        | 496                  |

## Electronic Acknowledgement Receipt

|                                             |                                   |
|---------------------------------------------|-----------------------------------|
| <b>EFS ID:</b>                              | 48005037                          |
| <b>Application Number:</b>                  | 29824813                          |
| <b>International Application Number:</b>    |                                   |
| <b>Confirmation Number:</b>                 | 7973                              |
| <b>Title of Invention:</b>                  | Container                         |
| <b>First Named Inventor/Applicant Name:</b> | Merrilee Kick                     |
| <b>Customer Number:</b>                     | 27683                             |
| <b>Filer:</b>                               | Braden James Davies/Candy Sanders |
| <b>Filer Authorized By:</b>                 | Braden James Davies               |
| <b>Attorney Docket Number:</b>              | 58822.5US03                       |
| <b>Receipt Date:</b>                        | 15-MAY-2023                       |
| <b>Filing Date:</b>                         | 27-JAN-2022                       |
| <b>Time Stamp:</b>                          | 18:28:11                          |
| <b>Application Type:</b>                    | Design                            |

### Payment information:

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| Submitted with Payment                   | yes              |
| Payment Type                             | CARD             |
| Payment was successfully received in RAM | \$496            |
| RAM confirmation Number                  | E20235EI29315205 |
| Deposit Account                          | 081394           |
| Authorized User                          | Candy Sanders    |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

**File Listing:**

| Document Number              | Document Description                                                                                                      | File Name                                             | File Size(Bytes)/<br>Message Digest      | Multi Part /.zip | Pages (if appl.) |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------|------------------|------------------|
| 1                            | Continued Prosecution Application - Continuation (Amendment CPA)                                                          | 58822-5US03_CPA_Transmittal.pdf                       | 528872                                   | no               | 3                |
|                              |                                                                                                                           |                                                       | 0c88e4e8d03798226e53a1720152481ad6e91665 |                  |                  |
| Warnings:                    |                                                                                                                           |                                                       |                                          |                  |                  |
| Information:                 |                                                                                                                           |                                                       |                                          |                  |                  |
| 2                            |                                                                                                                           | Amendment_in_Response_to_FOA1_our_ref_58822-5US03.pdf | 972768                                   | yes              | 14               |
|                              |                                                                                                                           |                                                       | 72c3f371565e8f9ceffa06c79533489311ef2230 |                  |                  |
|                              | Multipart Description/PDF files in .zip description                                                                       |                                                       |                                          |                  |                  |
|                              | Document Description                                                                                                      |                                                       | Start                                    | End              |                  |
|                              | Amendment Submitted/Entered with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE) |                                                       | 1                                        | 1                |                  |
|                              | Drawings-only black and white line drawings                                                                               |                                                       | 2                                        | 2                |                  |
|                              | Applicant Arguments/Remarks Made in an Amendment                                                                          |                                                       | 3                                        | 14               |                  |
| Warnings:                    |                                                                                                                           |                                                       |                                          |                  |                  |
| Information:                 |                                                                                                                           |                                                       |                                          |                  |                  |
| 3                            | Drawings-only black and white line drawings                                                                               | 58822-5US03_CPA_Forma1_Dra<br>wings.pdf               | 113999                                   | no               | 3                |
|                              |                                                                                                                           |                                                       | 44c758b8ec8ed48dc423df5212c8707b25f3e57e |                  |                  |
| Warnings:                    |                                                                                                                           |                                                       |                                          |                  |                  |
| Information:                 |                                                                                                                           |                                                       |                                          |                  |                  |
| 4                            | Fee Worksheet (SB06)                                                                                                      | fee-info.pdf                                          | 46165                                    | no               | 2                |
|                              |                                                                                                                           |                                                       | 1bb29e2583f8441c3a13d99bfc60e875bf24b7ca |                  |                  |
| Warnings:                    |                                                                                                                           |                                                       |                                          |                  |                  |
| Information:                 |                                                                                                                           |                                                       |                                          |                  |                  |
| Total Files Size (in bytes): |                                                                                                                           |                                                       | 1661804                                  |                  |                  |

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

## **SCORE Placeholder Sheet for IFW Content**

Application Number: 29824813

Document Date: 05/15/2023

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 29/824,813      | 01/27/2022  | Merrilee Kick        | 58822.US03          | 7973             |

27683 7590 02/15/2023  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue  
Suite 700  
Dallas, TX 75219

|          |
|----------|
| EXAMINER |
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HILL, KELI L.

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2922

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

02/15/2023

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocketing@haynesboone.com



*Notice of Pre-AIA or AIA Status*

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

*Amendment Acknowledgement*

Applicant's response, received January 5, 2023, including replacement drawings and amendments to the claim, is acknowledged.

**DETAILED ACTION**

In view of the newly submitted replacement drawing sheets of January 5, 2023, which converts the appearance of the tear strip portion of the pop top feature to one consistent with that disclosed in the parent application, the application status objection has been overcome and is now withdrawn.

Applicant's arguments and the newly submitted replacement drawing sheets of January 5, 2023, have been fully considered; however, they have not overcome the rejection under 35 U.S.C. 112(a) and (b). Therefore, the rejection is made again and the claim stands **FINALLY REJECTED** under 35 U.S.C. 112(a) and (b).

**REJECTION(S)**

**1. Rejection under 35 U.S.C. 112(a) and (b)**

The claim is again and **FINALLY REJECTED** under 35 U.S.C. 112(a) and (b), as the claimed invention is not described in such full, clear, concise and exact terms to enable any person skilled in the art to make and use the same, and fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim remains indefinite and nonenabling because the disclosure is unclear, as the exact shape and appearance of the design cannot be determined due to the reasons set forth below:

The exact appearance, depth and contour of the pop top feature seen in Fig. 2 (and all details/features shown within and around it) cannot be fully understood (see **Annotated Drawing Letter**

Art Unit: 2922

A). It is unclear how the various parts of the pop top relate to each other and what parts are higher or lower in depth than others. From this single view understanding, the contour, thickness and planar relationship of the various parts of the pop top is open to multiple interpretations and cannot be determined without resorting to conjecture. While the shading has been removed from the pop top feature in the new drawing view, the varied line weights between elements still asserts differences in depth and/or contour changes between features that cannot be fully understood. This includes variations asserted within the pulltab portion itself (What is the difference between the surface shown between the lighter weight interior lines (A1) vs. the surfaces seen between a lighter weight interior line and heavier weight edge line? (A2)); and, the difference between the pulltab portion and the features shown surrounding (tear line/tear strip, etc) and within it (rivet, etc).

Additionally, the planar relationship of the pop top feature relative to the understood outer rim of the container neck remains unclear, as there is no way to determine whether the pop top is on a surface that is even with or depressed (and at what depth) into the container body (see **Annotated Drawing Letter B**).

In order to overcome the rejection under 35 U.S.C. 112(a) and (b), it is suggested that Applicant:

- Disclaim the pop top feature seen in the Fig. 2 top view (and any/all details shown within it) which are considered indefinite and nonenabling by converting it to broken lines.

It is suggested that Applicant submit large, clear drawings which show the details of the design clearly and accurately without the addition of new matter (35 U.S.C. 132, 37 CFR 1.121). Applicant is reminded that if the surface shape is not evident from the disclosure as filed, the addition of surface shading or additional views after filing may constitute new matter (37 CFR 1.152(II)).

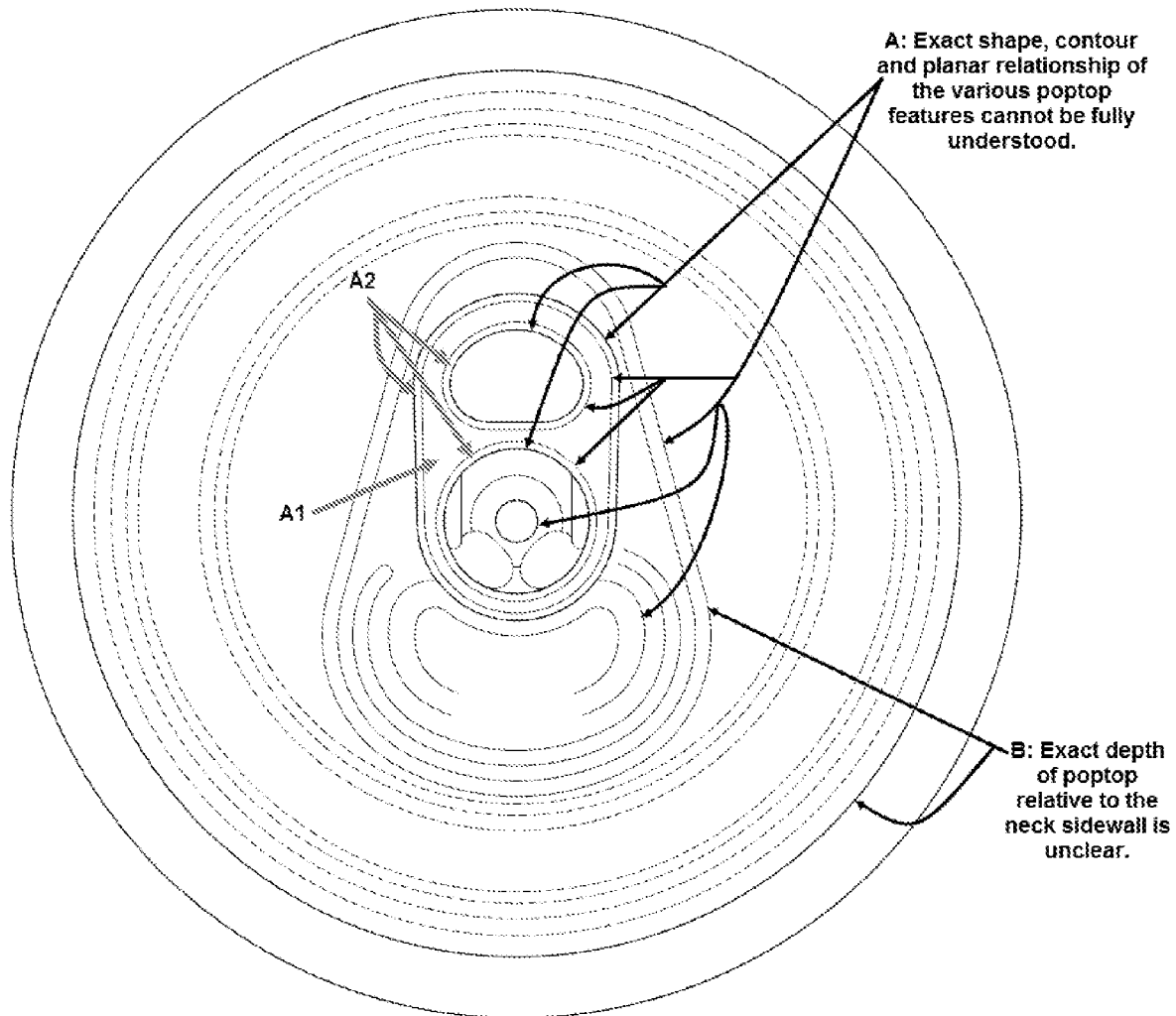


FIG. 2

**2. Examiner's Comments to Applicant's Remarks**

Applicant has made the following arguments regarding the merits of the above rejection:

Applicant asserts that as the surface shading has been removed from the drawing views, the drawings now clarify that "...three-dimensional perspectives are not part of the claimed design."

(Remarks, p. 4).

The Examiner respectfully disagrees. The removal of surface shading does not negate the inherent three-dimensionality of the claimed Container. The drawing disclosure includes multiple figures disclosing a design illustrating three dimensional characteristics from elevation and plan views, including

Art Unit: 2922

the contour of the curved surfaces of the claimed body, neck and lip portions of the Container, in addition to height and width.

Additionally, as noted in the rejection above, Fig. 2 also discloses a pop-top feature seen within the top surface whose various elements also assert changes in depth and/or contour, of which, the exact appearance/aspects thereof, are unclear. Thus, a fully disclosed Container evidencing three-dimensional aspects of the design is clearly presented in the disclosure. The design must be represented by a drawing that complies with the requirements of 37 CFR 1.84 and must contain a sufficient number of views to constitute a complete disclosure of the appearance of the design (MPEP 1503.02; 37 CFR 1.152). In this case, the current disclosure of the three-dimensional article does not provide a complete disclosure of the appearance of the design.

Applicant further argues that the claim meets the requirements for definiteness and enablement in view of rationale set forth in *In re Maatita*, 900 F.3d 1369 (Fed. Cir. 2018). Applicant cites to statements appearing in *Maatita*, asserting that they apply equally to the present case, noting that “While a pop-top is typically three-dimensional, that does not change the fact that its ornamental design is capable of being disclosed and judged from a two-dimensional plan or planar-view perspective;” that “a potential infringer would not be left in doubt as to how to determine infringement;” and that “Applicant’s decision not to disclose all possible depth, shape, contour or planar relationship choices would not preclude an ordinary observer from understanding the claimed design...” (Remarks, p. 6-7).

It is the Examiner’s position that the facts of *In re Maatita* are differentiated from the facts of the present application. As noted earlier in these comments, the application presents a different set of facts from *Maatita*, in that the claimed Container has contour, height, width and variations in line weight depicting three-dimensionality. Therefore, the indicated depth and form in the single view understanding of the pop-top feature seen in Fig. 2 cannot be determined without resorting to conjecture. The claimed Container is understood to be a three-dimensional article with mass and form, unlike a shoe bottom, which could be seen as flat or two-dimensional.

In this case, Applicant's decision not to clearly disclose the various depths and contours of the pop-top feature precludes an ordinary observer from understanding this aspect of the claimed design, since the pop-top feature is not capable of being understood by the single plan view in which it is disclosed. When an applicant asserts the design is applied to a three-dimensional article, the drawing and specification must be commensurate with the protection sought. *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 131 USPQ 413 (D. Del. 1961).

### **3. Conclusion**

The cited art of record is considered cumulative art related to the claimed design.

**The claim stands AGAIN AND FINALLY REJECTED under 35 U.S.C. 112(a) and (b).**

### **4. Contact Information**

Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELI L. HILL whose telephone number is (571)272-4375. The examiner can normally be reached on M-Th: 6a-4p. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant

Art Unit: 2922

is encouraged to use the USPTO Automated Interview Request (AIR) at

<http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Garth Rademaker, can be reached at 303.297.4274. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

**General questions regarding patent examining policy, assistance with filling out forms, or general information concerning rules, procedures and fees, should be directed to the Inventors Assistance Center (IAC).** The IAC is staffed by former Supervisory Patent Examiners and experienced Primary Examiners who answer general questions concerning patent examining policy and procedure. **Assistance is available at the IAC Monday – Friday, 8:30am - 5:00pm (EST) at (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/KELI L HILL/

Primary Examiner, Art Unit 2922

|                                   |                                       |  |                                                              |             |
|-----------------------------------|---------------------------------------|--|--------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>29/824,813 |  | Applicant(s)/Patent Under<br>Reexamination<br>Kick, Merrilee |             |
|                                   | Examiner<br>KELI L HILL               |  | Art Unit<br>2922                                             | Page 1 of 1 |

| U.S. PATENT DOCUMENTS |   |                                                  |                 |                           |                    |                   |
|-----------------------|---|--------------------------------------------------|-----------------|---------------------------|--------------------|-------------------|
| *                     |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name                      | CPC Classification | US Classification |
| *                     | A | US-11484152-B2                                   | 11-2022         | Kick; Merrilee            | A47J42/50          | 1/1               |
| *                     | B | US-D976704-S                                     | 01-2023         | Stammen; Dennis Cornelius | A47J42/50          | D9/438            |
|                       | C |                                                  |                 |                           |                    |                   |
|                       | D |                                                  |                 |                           |                    |                   |
|                       | E |                                                  |                 |                           |                    |                   |
|                       | F |                                                  |                 |                           |                    |                   |
|                       | G |                                                  |                 |                           |                    |                   |
|                       | H |                                                  |                 |                           |                    |                   |
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|                       | J |                                                  |                 |                           |                    |                   |
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|                       | L |                                                  |                 |                           |                    |                   |
|                       | M |                                                  |                 |                           |                    |                   |

| FOREIGN PATENT DOCUMENTS |   |                                                  |                 |         |      |                    |
|--------------------------|---|--------------------------------------------------|-----------------|---------|------|--------------------|
| *                        |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | CPC Classification |
|                          | N |                                                  |                 |         |      |                    |
|                          | O |                                                  |                 |         |      |                    |
|                          | P |                                                  |                 |         |      |                    |
|                          | Q |                                                  |                 |         |      |                    |
|                          | R |                                                  |                 |         |      |                    |
|                          | S |                                                  |                 |         |      |                    |
|                          | T |                                                  |                 |         |      |                    |

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| *                    |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|                      | U |                                                                                           |
|                      | V |                                                                                           |
|                      | W |                                                                                           |
|                      | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

|                                                                                                                 |                                              |                                                                  |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                 | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

| CPC - Searched*                                                                                                                                                 |      |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|
| Symbol                                                                                                                                                          | Date | Examiner |
| B21D: 51/26,383                                                                                                                                                 |      |          |
| B29C: 66/71                                                                                                                                                     |      |          |
| B65D: 1/00,02,12,14,40,44,023,0223,165,238,246,253; 7/04; 21/0209, 0233; 25/00,28; 41/0457,17; 53/06; 75/56; 2501/0036; 2543/0064,00074,00083,00092,00101,00111 |      |          |
| Y10T: 29/49826                                                                                                                                                  |      |          |

| CPC Combination Sets - Searched* |      |          |
|----------------------------------|------|----------|
| Symbol                           | Date | Examiner |
|                                  |      |          |

| US Classification - Searched* |                                     |          |          |
|-------------------------------|-------------------------------------|----------|----------|
| Class                         | Subclass                            | Date     | Examiner |
| D9                            | 500,503,516,519,520,549,574,763-783 | 11/29/14 | /KLH/    |
| 215                           | 381-385                             |          |          |
| 220                           | 660,662,669                         |          |          |
|                               |                                     |          |          |

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

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|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                 | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

| <b>Search Notes</b>                                                                           |             |                 |
|-----------------------------------------------------------------------------------------------|-------------|-----------------|
| <b>Search Notes</b>                                                                           | <b>Date</b> | <b>Examiner</b> |
| Searched Inventor and Assignee Name in PALM and Pe2e SEARCH                                   | 11/29/14    | /KLH/           |
| SEARCH: word search/narrowing; backwards/forward search of patents (See SEARCH history sheet) |             |                 |
| NPL Search: Google Images: www.images.google.com – Bottle, container, can                     |             |                 |
| Buzzballz LLC: www.buzzballz.com                                                              |             |                 |
| Orbit: (CONTAINER OR BOTTLE)/TI AND (09-01)/CL AND (ALL COUNTRIES EXCEPT US)                  |             |                 |
| UPDATED ORIGINAL SEARCH                                                                       | 09/29/2022  | /KLH/           |
| UPDATED ORIGINAL SEARCH                                                                       | 02/09/2023  | /KLH/           |

| <b>Interference Search</b> |                              |             |                 |
|----------------------------|------------------------------|-------------|-----------------|
| <b>US Class/CPC Symbol</b> | <b>US Subclass/CPC Group</b> | <b>Date</b> | <b>Examiner</b> |
| D9                         | 776                          | 11/19/14    | /KLH/           |

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## PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DBs                         | Default Operator | Plurals | British Equivalents | Time Stamp             |
|-------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------|---------|---------------------|------------------------|
| L384  | 0    | /---refresh-5-824813-for<br>FINAL-/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (US-PGPUB; USPAT;<br>USOCR) | OR               | OFF     | OFF                 | 2023/02/09<br>11:24 PM |
| L385  | 83   | ((L344 OR L345 OR<br>L346 OR L347 OR<br>L348 OR L349) AND<br>@PD>="20220929")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT)           | OR               | ON      | ON                  | 2023/02/09<br>11:28 PM |
| L386  | 112  | ("D212595"   "D224963"<br>  "D263802"  <br>"D263803"   "D265463"<br>  "D371073"  <br>"D382481"   "D387666"<br>  "D387987"  <br>"D397296"   "D402555"<br>  "D406236"  <br>"D415425"   "D424438"<br>  "D476889"  <br>"D565406"   "D600116"<br>  "D650278"   "8109405"<br>  "D688553"  <br>"D715647"   "8893913"  <br>"9016504"   "D749415"  <br>"9254945"   "D770895"  <br>"D956555"   "D959981"<br>  "20130292382"  <br>"20160052667"  <br>"20170043903"  <br>"20190112096"  <br>"20190256247"  <br>"0795746"   "0D49555"  <br>"D106034"   "D168471"<br>  "2745642"   "3179036"<br>  "3281024"   "3314569"<br>  "D224516"  <br>"D254716"   "4936482"  <br>"D321319"   "D325697"<br>  "D340077"  <br>"D352898"   "5407086"  <br>"5638982"   "D383646"  <br>"D400400"   "D435794"<br>  "D437226"  <br>"D448666"   "D449990"<br>  "6517018"   "6574883"<br>  "D479995"   "6793094"<br>  "6834817"   "6945486"<br>  "D512917"   "7051892"<br>  "D562134"  <br>"D562685"   "D565413"<br>  "D596489"  <br>"D606404"   "D606405"<br>  "D612732"  <br>"D614971"   "7731053"  <br>"7886999"   "D634635" | (US-PGPUB; USPAT;<br>USOCR) | OR               | ON      | ON                  | 2023/02/09<br>11:30 PM |

|      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |    |    |    |                        |
|------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L387 | 175 | "D648217"   "D650280"<br>  "D658061"  <br>"D663619"   "8220732"  <br>"D668919"   "D675528"<br>  "D699578"  <br>"D701767"   "D703068"<br>  "8695906"   "D704567"<br>  "D705077"  <br>"D710153"   "D711247"<br>  "D721585"  <br>"D732978"   "D739267"<br>  "9392908"   "D772709"<br>  "D772722"   "9730554"<br>  "9873125"  <br>"20030015611"  <br>"20110253720"  <br>"20140061328"  <br>"20150344177"  <br>"20180271327").pn. OR<br>("D976704"  <br>"11484152").urpn. AND<br>(PGPB   USPT  <br>USOC).dbnm.<br><br>((L353 OR L355 OR<br>L358 OR L370 OR<br>L362 OR L364 OR<br>L370 OR L369 OR<br>L373 OR L374 OR<br>L375 OR L376 OR<br>L377 OR L378 ) AND<br>@PD>="20220929") | (US-PGPUB; USPAT) | OR | ON | ON | 2023/02/09<br>11:41 PM |
|------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|

## PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** ( Not for submission under 37 CFR 1.99)

|                        |               |
|------------------------|---------------|
| Application Number     | 29824813      |
| Filing Date            | 2022-01-27    |
| First Named Inventor   | Merrilee Kick |
| Art Unit               | 2922          |
| Examiner Name          | Keli L. Hill  |
| Attorney Docket Number | 58822.5US03   |

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|-------------------|---------|--------------------------------------|----------------------------|------------------------|------------------|-------------------------------------------------|------------------------------------------------------------------------|----------------|
|                   | 1       | D1608809                             | JP                         | S                      | 2021-07-05       | TAKEMOTO CONTAINER CO., LTD.                    |                                                                        |                |
|                   | 2       | B006720360000                        | KR                         | S                      | 2014-01-22       | AMOREPACIFIC CORPORATION                        |                                                                        |                |
|                   | 3       | D180616                              | TW                         | S                      | 2017-01-11       | FANNING                                         |                                                                        |                |

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |               |
|------------------------|---------------|
| Application Number     | 29824813      |
| Filing Date            | 2022-01-27    |
| First Named Inventor   | Merrilee Kick |
| Art Unit               | 2922          |
| Examiner Name          | Keli L. Hill  |
| Attorney Docket Number | 58822.5US03   |

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|-----------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                       | 1          | Translation of Office Action with Search Report for Taiwanese Design Patent Application No. 111301016, issued August 31, 2022; 3 pages.                                                                                                                         |                |

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|                                                                                                     |                        |               |            |
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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     |               | 29824813   |
|                                                                                                     | Filing Date            |               | 2022-01-27 |
|                                                                                                     | First Named Inventor   | Merrilee Kick |            |
|                                                                                                     | Art Unit               | 2922          |            |
|                                                                                                     | Examiner Name          | Keli L. Hill  |            |
|                                                                                                     | Attorney Docket Number | 58822.5US03   |            |

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**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

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A certification statement is not submitted herewith.

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|            |                    |                     |            |
|------------|--------------------|---------------------|------------|
| Signature  | /Braden J. Davies/ | Date (YYYY-MM-DD)   | 2023-01-05 |
| Name/Print | Braden J. Davies   | Registration Number | 79,960     |

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|                                                                                                     | Filing Date            | 2022-01-27    |
|                                                                                                     | First Named Inventor   | Merrilee Kick |
|                                                                                                     | Art Unit               | 2922          |
|                                                                                                     | Examiner Name          | Keli L. Hill  |
|                                                                                                     | Attorney Docket Number | 58822.5US03   |

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|                          | 1       | D1608809                             | JP                         | S                      | 2021-07-05       | TAKEMOTO<br>CONTAINER CO., LTD.                 |                                                                        |                |
|                          | 2       | B006720360000                        | KR                         | S                      | 2014-01-22       | AMOREPACIFIC<br>CORPORATION                     |                                                                        |                |
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|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                    | 1       | Translation of Office Action with Search Report for Taiwanese Design Patent Application No. 111301016, issued August 31, 2022; 3 pages.                                                                                                                         |                |

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<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

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|                                                                                                     | Filing Date            |               | 2022-01-27 |
|                                                                                                     | First Named Inventor   | Merrilee Kick |            |
|                                                                                                     | Art Unit               | 2922          |            |
|                                                                                                     | Examiner Name          | Keli L. Hill  |            |
|                                                                                                     | Attorney Docket Number | 58822.5US03   |            |

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See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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|            |                    |                     |            |
|------------|--------------------|---------------------|------------|
| Signature  | /Braden J. Davies/ | Date (YYYY-MM-DD)   | 2023-01-05 |
| Name/Print | Braden J. Davies   | Registration Number | 79,960     |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

### **III. Remarks**

#### **A. Application Status Objection**

The status of the application as a continuation of U.S. Application No. 16/800,195 (“the ‘195 Application”) stands objected to under 35 U.S.C. § 112. It is alleged in the Office Action dated October 6, 2022 (“the Office Action”) that the disclosure of the ‘195 Application “fails to provide adequate written description support...for the claim of this application.” This objection is respectfully traversed.

On page 2 of the Office Action, the Examiner alleges that the “[s]hape of the bottom contour of [the] tear strip portion of [the] pop top has been changed.” In response, Applicant has submitted Replacement Sheets herewith that include an amended FIG. 2, which addresses this objection.

Applicant submits that the ‘195 Application provides adequate written description support for the claim of the pending application. Applicant respectfully requests that the application status objection be reconsidered and withdrawn.

#### **B. Rejection Under 35 U.S.C. § 112(a)/(b)**

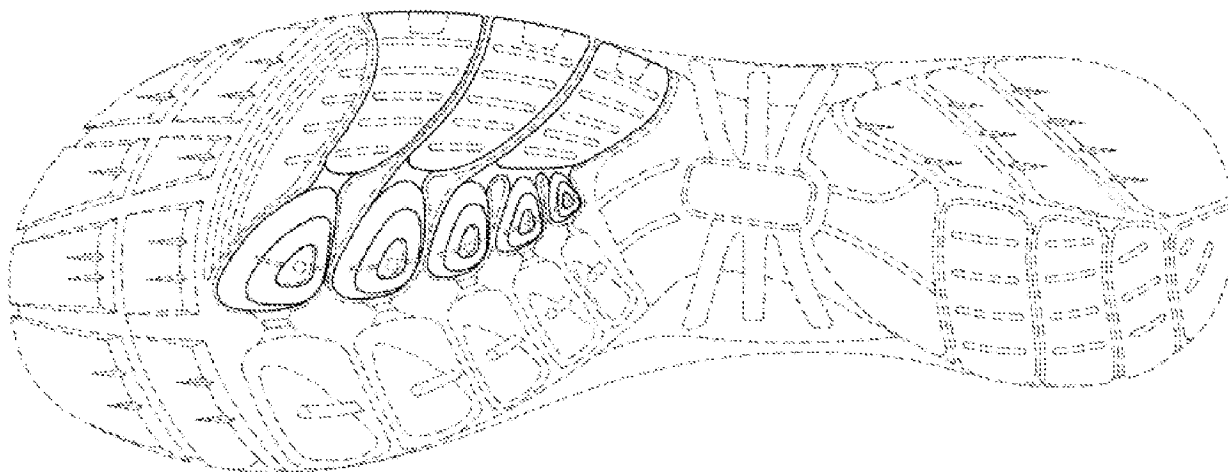
The design claim stands rejected under 35 U.S.C. § 112(a) and (b) as indefinite and nonenabling. This rejection is respectfully traversed.

On page 4 of the Office Action, the Examiner alleges that the claim is indefinite and nonenabling because “the exact appearance, depth, and contour of the pop top feature seen in FIG. 2...cannot fully be understood.” *Id.* The Office Action further states that “[i]t is unclear how the various parts of the pop top relate to each other and what parts are higher or lower in depth than others. From this single view, the contour, thickness and planar relationship of the various parts of the pop top is open to multiple interpretations and cannot be determined without resorting to conjecture.” *Id.*

**First**, Applicant notes that the Replacement Sheets attached herewith, including FIGS. 1-3, have been amended to remove all surface shading. In the Office Action, the Examiner states that “shade lines that change direction or do not cross contour lines on adjacent surfaces indicate a change in plane and/or appearance that cannot be defined without additional views.” *Id.* Applicant has amended the drawings to remove all surface shading to clarify that three-dimensional perspectives are not part of the claimed design.

**Second**, Applicant respectfully submits that the design claim meets the requirements for definiteness and enablement in view of Federal Circuit case *In re Maatita*, 900 F.3d 1369 (Fed. Cir. 2018). In *Maatita*, the applicant filed Design Patent Application No. 29/404,677 (“the ‘677 Application”) covering the design of an athletic shoe bottom. The ‘677 Application contained only two figures, both showing a plan view of the shoe bottom. Figure 1 of the ‘677 Application is reproduced below for reference.

***FIG. 1***



Similar to the Examiner’s rejection in the present case, the examiner of the ‘677 Application rejected the design claim as nonenabled and indefinite under 35 U.S.C. § 112 “because it used a single, two-dimensional plan-view drawing to disclose a shoe bottom design and thereby left the design open to multiple interpretations regarding the depth and contour of the claimed elements.” *Id.* On appeal to the Patent Trial and Appeal Board, this rejection was upheld. On appeal to the Court of Appeals for the Federal Circuit, however, **the rejection was reversed**.

In deciding *Maatita*, the Court first discussed the enablement and definiteness requirements with respect to design patent applications. The Court acknowledged that “[b]ecause design patent claims are limited to what is shown in the application drawings...there is often little difference in the design patent context between the concepts of definiteness...and enablement” and concluded that indefiniteness and enablement could be assessed together in *Maatita*. *Id.*

Before making a determination with respect to the ‘677 Application, the Court first defined the test for indefiniteness and enablement. The Court stated:

The purpose of § 112’s definiteness requirement, then, is to ensure that the disclosure is clear enough to give potential competitors (who are skilled in the art) **notice of what design is claimed—and therefore what would infringe**. See *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437 (1902)...

Given that the purpose of indefiniteness is to give notice of what would infringe, we believe that in the design patent context, one skilled in the art would assess indefiniteness from the perspective of an ordinary observer. **Thus, a design patent is indefinite under § 112 if one skilled in the art, viewing the design as would an ordinary observer, would not understand the scope of the design with reasonable certainty based on the claim and visual disclosure**. *Id.* (Emphasis added).

Under this test, the government (i.e., the USPTO) in *Maatita* argued that the scope of the design claim was indefinite because the design, as disclosed in the single, two-dimensional plan or planar view, could be applied to a three-dimensional shoe bottom in a number of ways. The Court disagreed.

In holding the design claim of the '677 Application to have met the requirements for enablement and definiteness, the Court in *Maatita* concluded:

The government is correct that a shoe sole is typically three-dimensional, with treads that may be convex or concave. And, indeed, many shoe bottom designers choose to claim their designs in a three-dimensional fashion. **But the fact that shoe bottoms can have three-dimensional aspects does not change the fact that their ornamental design is capable of being disclosed and judged from a two-dimensional, plan- or planar-view perspective—and that Maatita's two-dimensional drawing clearly demonstrates the perspective from which the shoe bottom should be viewed. A potential infringer is not left in doubt as to how to determine infringement. In this case, Maatita's decision not to disclose all possible depth choices would not preclude an ordinary observer from understanding the claimed design, since the design is capable of being understood from the two-dimensional, plan- or planar-view perspective shown in the drawing.** See *Asano*, 201 U.S.P.Q. at 317...

Because a designer of ordinary skill in the art, judging Maatita's design as would an ordinary observer, could make comparisons for infringement purposes based on the provided, two-dimensional depiction, Maatita's claim meets the enablement and definiteness requirements of § 112. We therefore reverse the decision of the Board. *Id.* (Emphasis added).

**Here**, a similar issue is presented with regard to the poptop element of the claimed design. While a poptop is typically three-dimensional, that does not change the fact that its ornamental design is capable of being disclosed and judged from a two-dimensional, plan- or planar-view perspective. FIG. 2 of the pending application is reproduced below for reference.

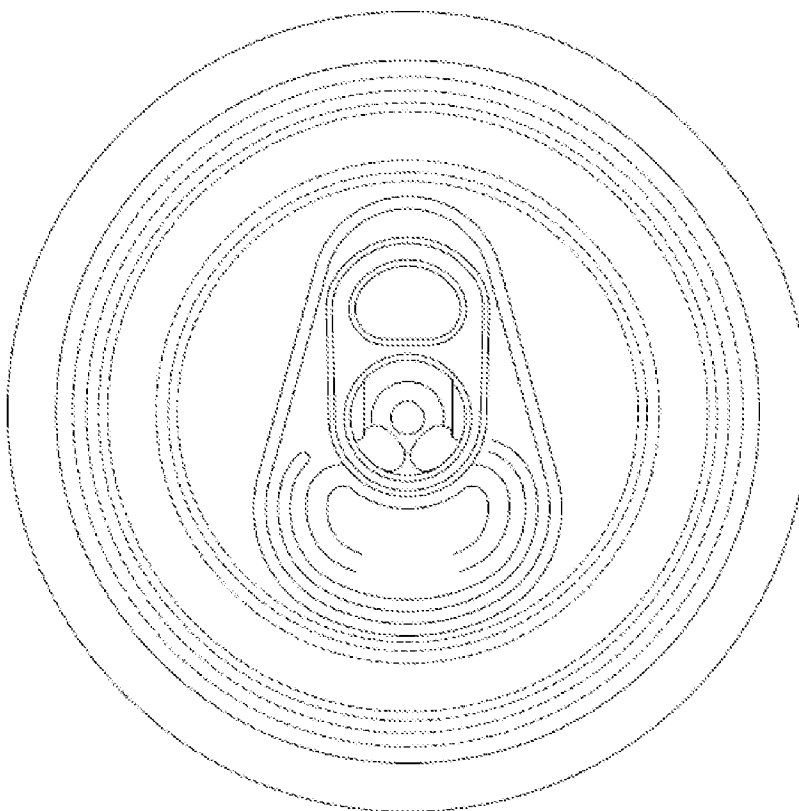


FIG. 2

The two-dimensional top plan-view depicted in FIG. 2 clearly demonstrates the perspective from which the pop-top should be viewed. A potential infringer would not be left in doubt as to how to determine infringement. Applicant's decision not to disclose all possible depth, shape, contour, or planar relationship choices would not preclude an ordinary observer from understanding the claimed design, since the design is capable of being understood from the two-dimensional, plan- or planar-view perspective shown in the drawing. Therefore, Applicant respectfully submits that the pending design claim satisfies the requirements for definiteness and enablement. Thus, the design claim is allowable.

For at least the foregoing reasons, it is respectfully requested that the rejection under 35 U.S.C. § 112(a) and (b) be reconsidered and withdrawn.

### **Conclusion**

It is believed that all matters set forth in the Office Action dated October 6, 2022 have been addressed. Applicant has made a diligent effort to advance the prosecution of this application by amending the drawings and submitting arguments in support of the patentability of the design claim.

In view of all of the above, the allowance of the design claim is respectfully requested.

The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

/Braden J. Davies/

Braden J. Davies  
Registration No. 79,960

Date: January 5, 2023

HAYNES AND BOONE, LLP  
Attn: IP Docketing  
2323 Victory Avenue, Suite 700  
Dallas, Texas 75219  
Customer No. 27683  
Telephone: (214) 651-5381  
IP Facsimile: (214) 200-0853

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|                               |   |                                  |
|-------------------------------|---|----------------------------------|
| In re application of:         | § |                                  |
| Merrilee Kick                 | § | Group Art Unit: 2922             |
|                               | § |                                  |
| Application No.: 29/824,813   | § | Examiner: Keli L. Hill           |
|                               | § |                                  |
| Filing Date: January 27, 2022 | § | Confirmation No.: 7973           |
|                               | § |                                  |
| For: Container                | § | Attorney Docket No.: 58822.5US03 |

**AMENDMENT IN RESPONSE TO OFFICE ACTION**  
**DATED OCTOBER 6, 2022**

**Mail Stop Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**I. Introductory Comments**

This document is submitted in response to the Office Action dated October 6, 2022.

No fees, including extension of time fees, are believed necessary for consideration of this document. However, if any fees, including extension-of-time fees, are necessary, the extension of time is hereby requested, and the Commissioner is hereby authorized to charge any fees, including those for the extension of time, to Haynes and Boone, LLP's Deposit Account No. 08-1394.

**Amendments to the Drawings** begin on page 2 of this document.

**Remarks** begin on page 3 of this document.

## **II. Amendments to the Drawings**

The attached Replacement Sheets including FIGS. 1-3 replace the original sheets including FIGS. 1-3.



(19)中華民國智慧財產局

(12)設計說明書公告本

(11)證書號數：TW D180616 S

(45)公告日：中華民國 106 (2017) 年 01 月 11 日

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(21)申請案號：105303478

(22)申請日：中華民國 105 (2016) 年 06 月 17 日

(51)LOC.(9)Cl.：09-01

(71)申請人：范寧(中華民國) (TW)

臺中市南屯區五權西路 2 段 660 號 10 樓之 3

(72)設計人：范寧(TW)

(56)參考文獻：

TW D141109

TW D164058

審查人員：吳珀昭

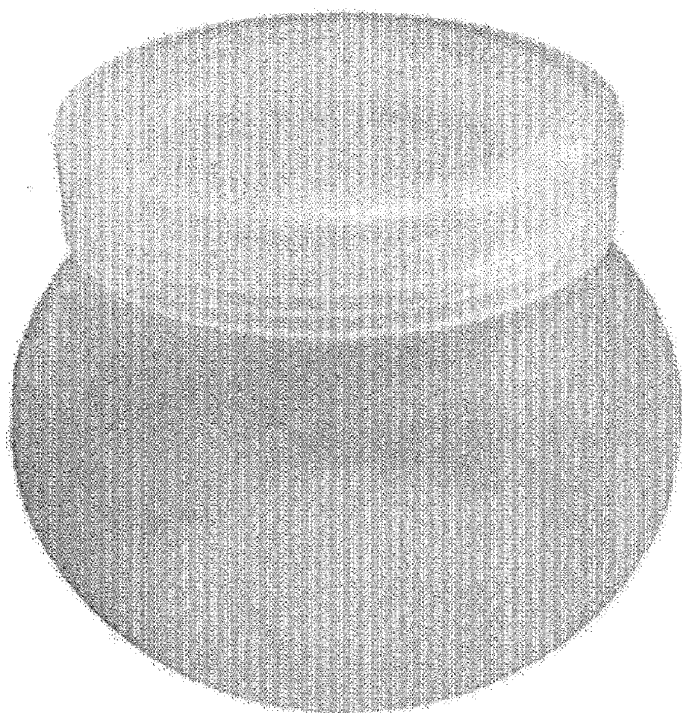
圖式數：4 共 5 頁

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(54)名稱

容器瓶

代表圖：



立體圖(代表圖)

## 設計專利說明書

(本說明書格式、順序，請勿任意更動，※記號部分請勿填寫)

※ 申請案號： 105 303478

※LOC分類：0901 B0421

※ 申請日： 105. 6. 17

**【設計名稱】(中文/英文)**

容器瓶

**【物品用途】**

【0001】 本設計係一種用於包裝食品之「容器瓶」。

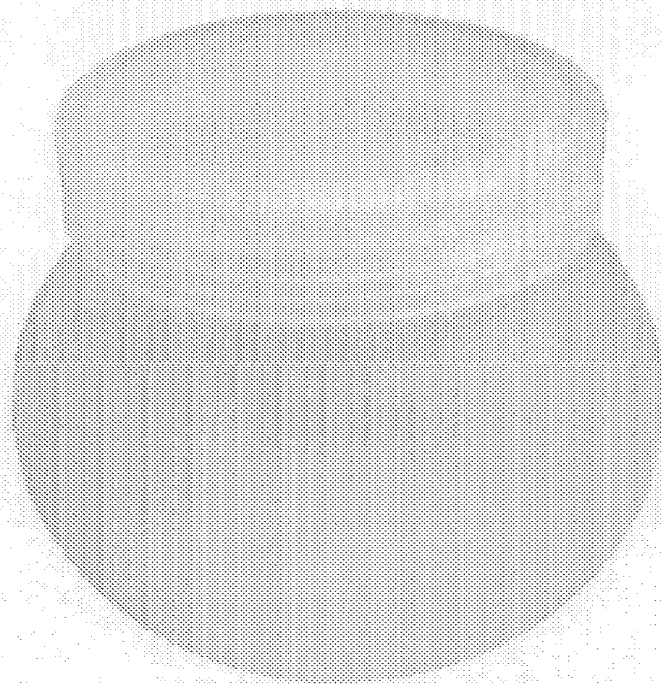
**【設計說明】**

【0001】 本設計包括一個球型的瓶體，瓶體底部切平並向內側中心凸起，讓瓶子可以穩定站立；瓶體上方以自然弧度向上延伸為瓶頸，瓶頸外側增加螺牙設計；及一個扁短的圓柱型蓋子，覆設在與瓶體共軛的瓶頸外側，能兼具瓶子之使用功能，如上述「容器瓶」化解上表面大面積的單調感，整體外觀保有渾圓的球形外觀和線條美感，呈現出一種圓融樸實的視覺感受，完全不同於以往之造形設計，擺脫現有者之設計限制，除能顯現創作人獨具之創意與構思外，亦能予人以自然順暢、簡潔大方之特別感受。

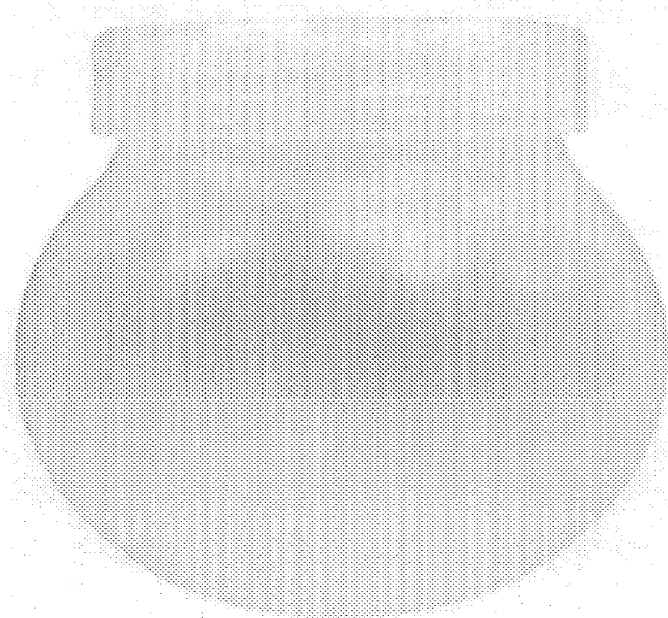
【0002】 後視圖、左側視圖、右側視圖與前視圖相同省略後視圖、左側視圖及右側視圖。

# 圖式

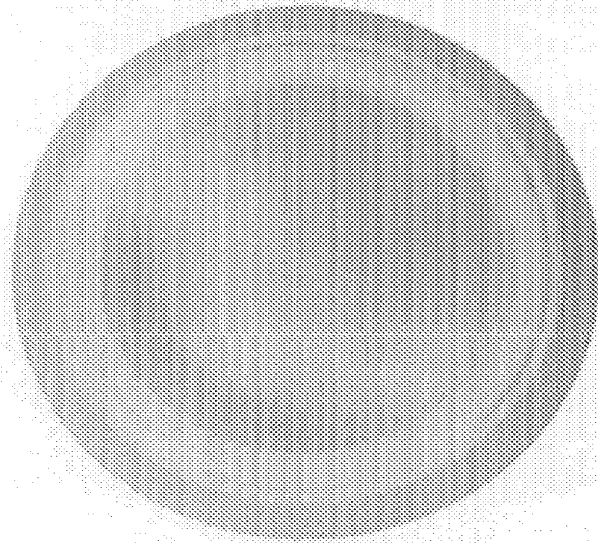
(指定之代表圖・請填寫於圖式第1頁)



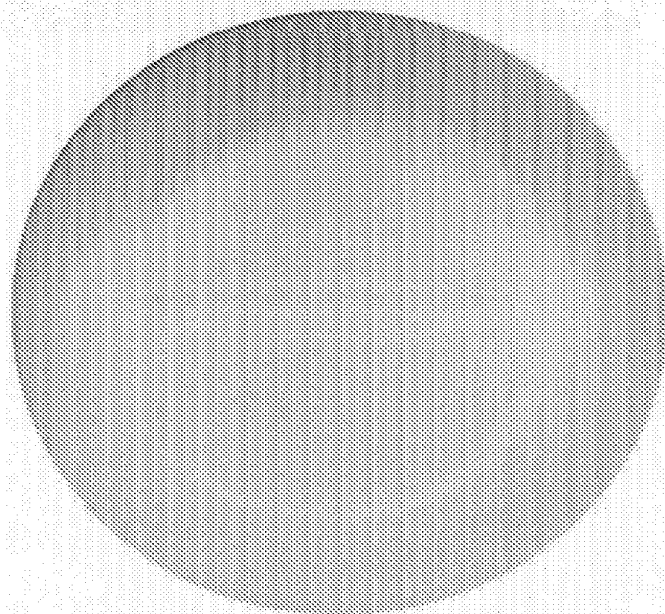
立體圖(代表圖)



前視圖



俯视图



(仰視圖)



## ELECTRONIC PAYMENT RECEIPT

APPLICATION #  
29/824,813

RECEIPT DATE / TIME  
01/05/2023 02:16:00 PM ET

ATTORNEY DOCKET #  
58822.5US03

### Title of Invention

Container

### Application Information

APPLICATION TYPE Design - Nonprovisional Application  
under 35 USC 171

PATENT # -

CONFIRMATION # 7973

FILED BY Candy Sanders

PATENT CENTER # 61392796

AUTHORIZED BY Braden Davies

CUSTOMER # 27683

FILING DATE 01/27/2022

CORRESPONDENCE  
ADDRESS -

FIRST NAMED  
INVENTOR Merrilee Kick

### Payment Information

PAYMENT METHOD  
CARD / 1103

PAYMENT TRANSACTION ID  
E202315E17120863

PAYMENT AUTHORIZED BY  
Candy Sanders

PRE-AUTHORIZED ACCOUNT  
081394

PRE-AUTHORIZED CATEGORY  
37 CFR 1.21 (Miscellaneous fees and charges)

| FEE CODE         | DESCRIPTION                                          | ITEM PRICE(\$) | QUANTITY | ITEM TOTAL(\$) |
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| 2806             | SUBMISSION OF AN INFORMATION<br>DISCLOSURE STATEMENT | 104.00         | 1        | 104.00         |
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#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



## ELECTRONIC ACKNOWLEDGEMENT RECEIPT

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CUSTOMER # 27683

FIRST NAMED  
INVENTOR Merrilee Kick

CORRESPONDENCE  
ADDRESS -

AUTHORIZED BY Braden Davies

### Documents

**TOTAL DOCUMENTS: 9**

| DOCUMENT                            | PAGES | DESCRIPTION                                           | SIZE (KB) |
|-------------------------------------|-------|-------------------------------------------------------|-----------|
| 58822.5US03 IDS - C1 01-05-2023.pdf | 5     | Foreign Reference                                     | 447 KB    |
| 58822.5US03 IDS - C2 01-05-2023.pdf | 6     | Foreign Reference                                     | 510 KB    |
| 58822.5US03 IDS - C3 01-05-2023.pdf | 7     | Foreign Reference                                     | 1954 KB   |
| 58822.5US03 IDS - D1 01-05-2023.pdf | 3     | Non Patent Literature                                 | 212 KB    |
| 58822.5US03 IDS3 01-05-2023.pdf     | 4     | Information Disclosure<br>Statement (IDS) Form (SB08) | 1234 KB   |

|                                                                              |       |   |   |                                                                        |        |
|------------------------------------------------------------------------------|-------|---|---|------------------------------------------------------------------------|--------|
| 58822.5US03 - Amendment<br>in Response to NFOA1 01-<br>05-2023.pdf           |       | 8 | - |                                                                        | 189 KB |
| 58822.5US03 - Amendment<br>in Response to NFOA1 01-<br>05-2023-A....pdf      | (1-1) | 1 |   | Amendment/Request for<br>Reconsideration-After Non-<br>Final Rejection | 67 KB  |
| 58822.5US03 - Amendment<br>in Response to NFOA1 01-<br>05-2023-DRW.NONBW.pdf | (2-2) | 1 |   | Drawings-other than black and<br>white line drawings                   | 66 KB  |
| 58822.5US03 - Amendment<br>in Response to NFOA1 01-<br>05-2023-REM.pdf       | (3-8) | 6 |   | Applicant Arguments/Remarks<br>Made in an Amendment                    | 182 KB |
| 58822.5US03 - Replacement<br>Sheets 01-05-2023.pdf                           |       | 3 |   | Drawings-only black and white<br>line drawings                         | 657 KB |

## Digest

| DOCUMENT                                | MESSAGE DIGEST(SHA-512)                                                                                                                  |
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| 58822.5US03 - Amendment in Response to NFOA1 01-05-2023.pdf           | 23244835069B756DC36C6E908FCA8A7BFCC298C92F76E911C9219A5BEBA6ACC3C71D95173ED1ECB131FD93E04E6F452CF216E40FBF229A2AC77F8C1041C6F2AC |
| 58822.5US03 - Amendment in Response to NFOA1 01-05-2023-A....pdf      | 913A33FD1C6907849CD8970E571B01E8C09888C68DBB827A0F830C59BA30F8791FF4211FEB619F84BED63B05F33ABE0B0811A7B2A0E60E37145C120EB75FA042 |
| 58822.5US03 - Amendment in Response to NFOA1 01-05-2023-DRW.NONBW.pdf | AA78DB794587E654304931D702141CBA9C99B99ABB50DE9EE9F3F8AF227DAB1A935656D570BD3874CB4A28D268A83EF659BBC282C76F49373F171D55F792B4C6 |
| 58822.5US03 - Amendment in Response to NFOA1 01-05-2023-REM.pdf       | 166D3204A77AB7B133C6C65C37D018885A1439EAA52B45EEF90C57DF0459A1C30FF7995174BA57926C521E0B8B100AD9DA8F9BFA5524237EA569B2D2B7B7556A |
| 58822.5US03 - Replacement Sheets 01-05-2023.pdf                       | E35B6A70AB6C8D320511CD8FC3B241965F2B077DBAFD38853A6E24E94AFDBF13FC9C482BAAB4FBE453320EAB919A8E3B0F4EACA066F34EC36A42DE0DC594B3AF |

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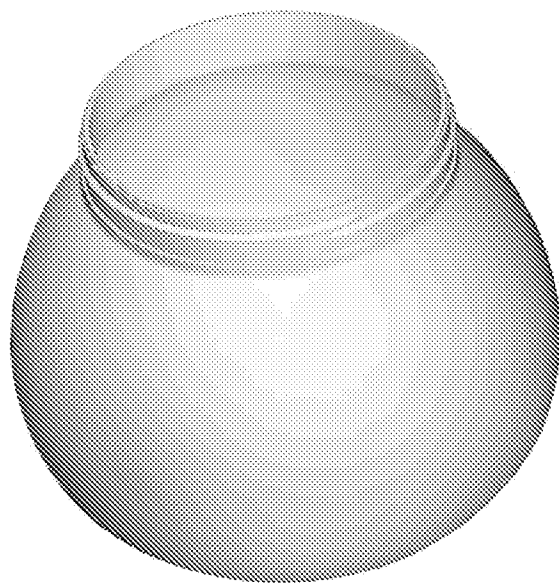
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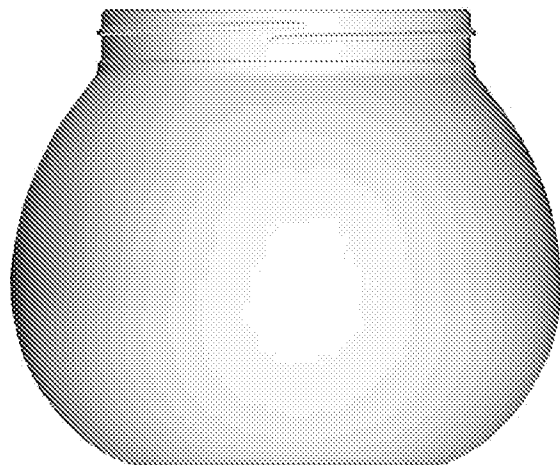
#### **New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

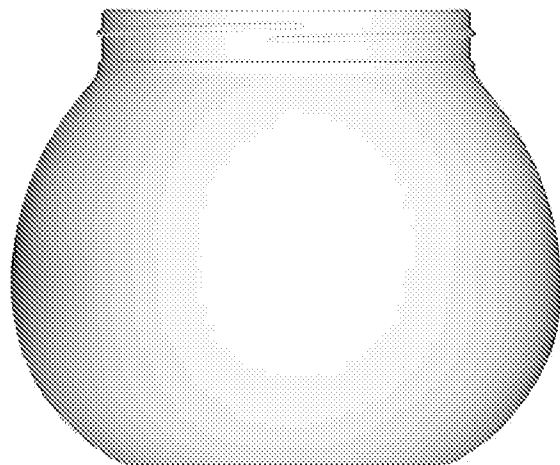
(19) 【発行国・地域】日本国特許庁(JP)  
(45) 【発行日】令和3年7月5日(2021. 7. 5)  
(12) 【公報種別】意匠公報(S)  
(11) 【登録番号】意匠登録第1608809号(D1608809)  
(24) 【登録日】平成30年6月15日(2018. 6. 15)  
(54) 【意匠に係る物品】包装用容器  
【本意匠の意匠登録番号】意匠登録第1607656号(D1607656)  
(52) 【意匠分類】F4-710  
(51) 【国際意匠分類】Loc(11)Cl. 9-01  
【Dターム】F4-710BA  
(21) 【出願番号】意願2017-29538(D2017-29538)  
(22) 【出願日】平成29年12月28日(2017. 12. 28)  
(72) 【創作者】  
【氏名】飯島 博樹  
【住所又は居所】東京都台東区西浅草一丁目5番15号 竹本容器株式会社内  
(73) 【意匠権者】  
【識別番号】390024372  
【氏名又は名称】竹本容器株式会社  
【住所又は居所】東京都台東区西浅草1丁目5番15号  
【審査官】坂田 麻智  
(55) 【意匠に係る物品の説明】本意匠は、食品類や小物を収容する包装用容器である。  
(55) 【意匠の説明】本意匠において、各図に表される濃淡は、立体表面の形状、陰影などを表す濃淡である。  
。【図面】  
【斜視図】



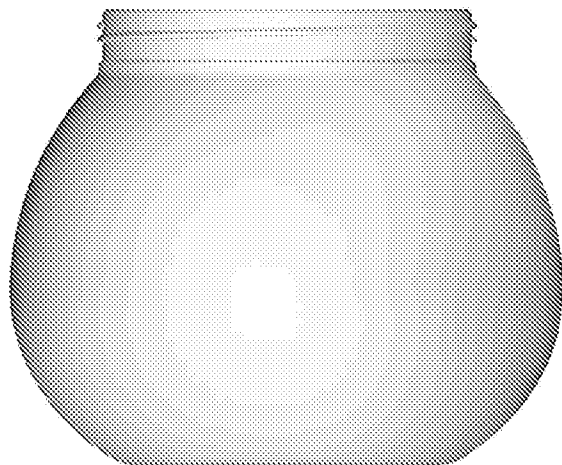
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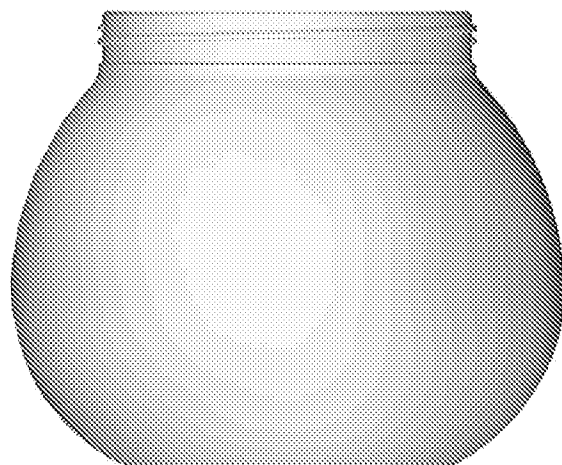
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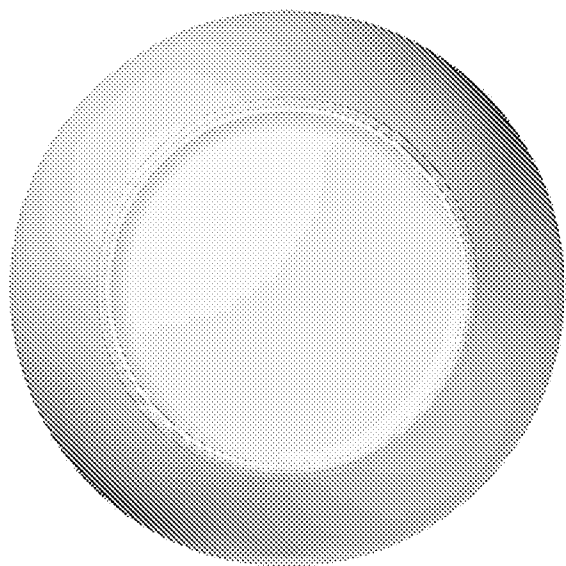
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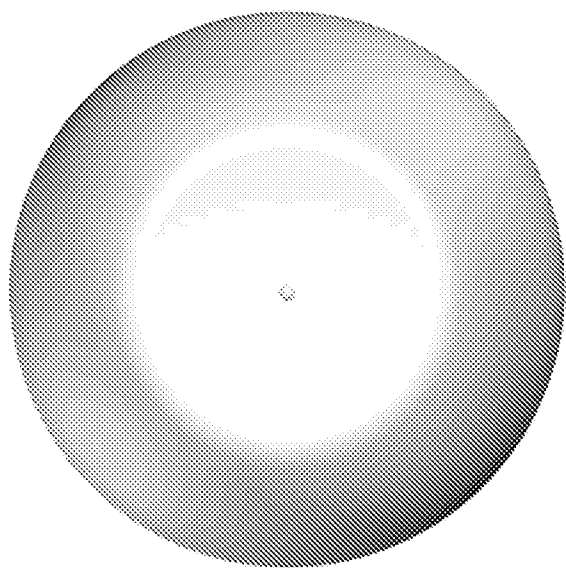
【左側面図】



【平面図】



【底面図】



(56) 【参考文献】 意登1356170 大韓民国意匠商標公報、2001-09、(2001-5-15)

、30-0275288、(特許庁意匠課公知資料番号HH14607244)

Details

Publ. Full Text

Registr. Details

Administrative Actions

Details

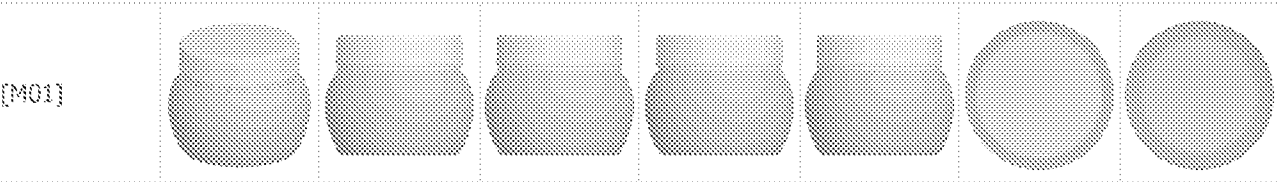
Biographical Information

Essentials of creation

Legal Status

Multiple Design Info.

All Images View



|                            |                                         |               |
|----------------------------|-----------------------------------------|---------------|
| (21) Application No(Date)  | 3020120043233(2012.09.07)               |               |
| (71) Applicant             | AMOREPACIFIC CORPORATION                |               |
| (11) Publication No(Date)  | (2014.01.22)                            | Full-doc Down |
| (65) Open Pub. No(Date)    |                                         |               |
| (11) Registration No(Date) | 3006720360000(2012.12.05)               |               |
| (30) Priority No.(Date)    |                                         |               |
| Legal Status               | Ended(등록료불납)                            |               |
| Examination Status(Date)   | Decision to grant (General)(2012.12.01) |               |
| Retroacted Section(Date)   | (2012.09.07)                            |               |
| Trial Info                 |                                         |               |
| Original Application No.   |                                         |               |
| Related Application No.    |                                         |               |
| Design Type                | Basic Single Public                     |               |
| (52) Design Class.         | F45108                                  |               |
| (51) Locarno Class.        | 09-01                                   |               |

|                                                                                   |                                          |           |             |
|-----------------------------------------------------------------------------------|------------------------------------------|-----------|-------------|
|  | (19) 대한민국특허청(KR)                         | (45) 공고일자 | 2014년01월22일 |
|                                                                                   | (12) 등록디자인공보(S)                          | (11) 등록번호 | 30-0672036  |
|                                                                                   |                                          | (24) 등록일자 | 2012년12월05일 |
| <hr/>                                                                             |                                          |           |             |
| (52) 분류                                                                           | F4-510B무심사등록                             |           |             |
| (51) 국제분류                                                                         | 09-01                                    |           |             |
| (21) 출원번호                                                                         | 30-2012-0043233                          |           |             |
| (22) 출원일자                                                                         | 2012년09월07일                              |           |             |
| <hr/>                                                                             |                                          |           |             |
| (73) 디자인권자                                                                        | (주)아모레퍼시픽                                |           |             |
|                                                                                   | 서울특별시 중구 청계천로 100 (수표동)                  |           |             |
| (72) 창작자                                                                          | 박경미                                      |           |             |
|                                                                                   | 서울특별시 광진구 아차산로 552 (광장동, 극동아파트) 5동 1002호 |           |             |
| (74) 대리인                                                                          | 임희택, 김 순 영, 김영철                          |           |             |
| 담당심사관 : 이희중                                                                       |                                          |           |             |
| <hr/>                                                                             |                                          |           |             |
| (54) 명칭                                                                           | 화장품 포장용기                                 |           |             |

#### 디자인도면

디자인의 대상이 되는 물품

화장품 포장용기

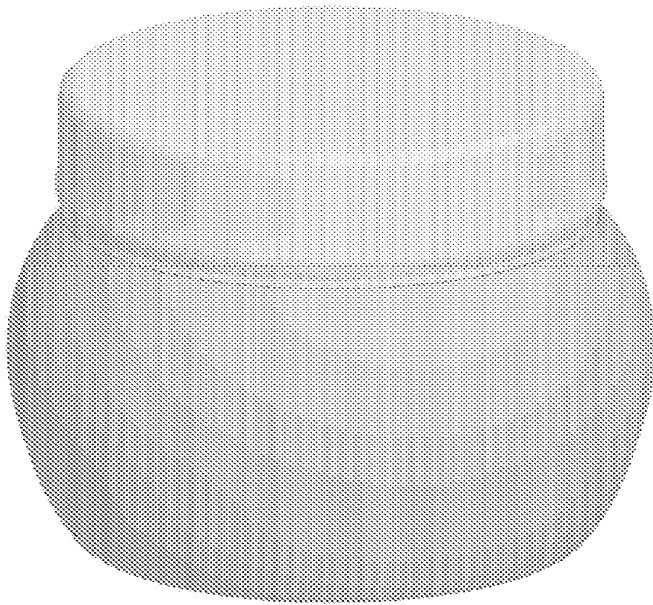
#### 디자인의 설명

1. [도면 1.1]은 디자인의 전체적인 형태를 표현한 것임.
2. [도면 1.2]는 디자인의 정면부분을 표현한 것임.
3. [도면 1.3]은 디자인의 배면부분을 표현한 것임.
4. [도면 1.4]는 디자인의 좌측부분을 표현한 것임.
5. [도면 1.5]는 디자인의 우측부분을 표현한 것임.
6. [도면 1.6]은 디자인의 평면부분을 표현한 것임.
7. [도면 1.7]은 디자인의 저면부분을 표현한 것임.
8. 재질은 합성수지재임.
9. 본 디자인은 화장용 크림형태의 내용물을 담는 포장용기임.

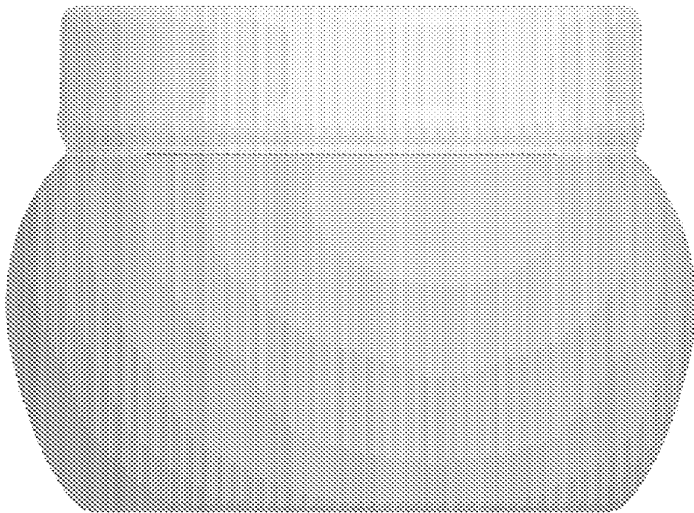
#### 디자인 창작 내용의 요점

"화장품 포장용기"의 형상과 모양의 결합을 디자인의 창작내용의 요점으로 함.

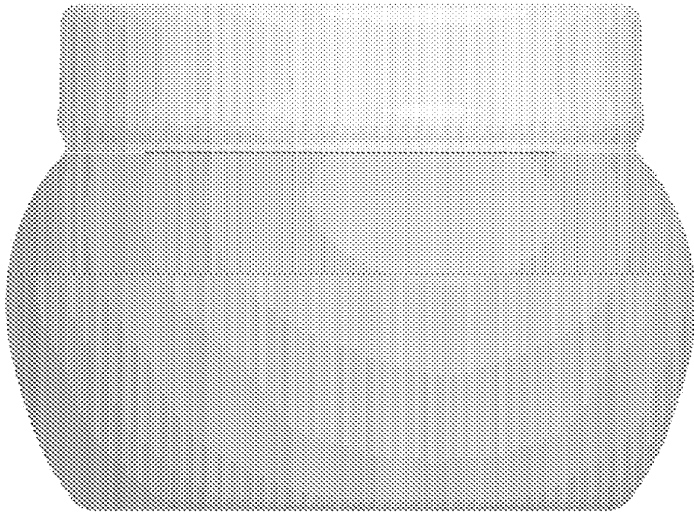
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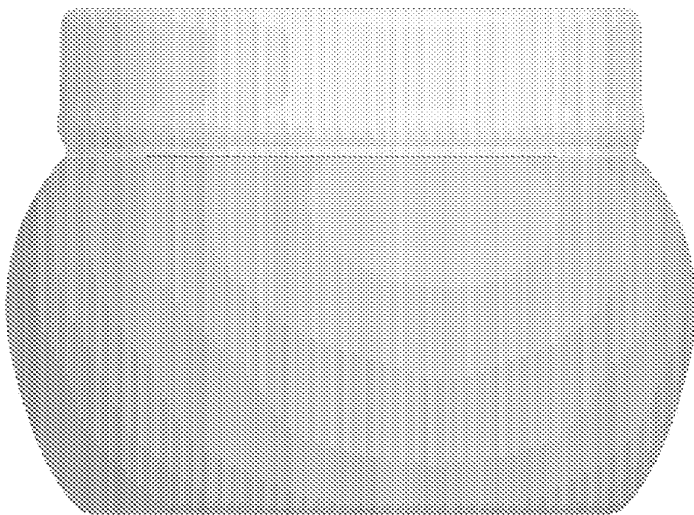
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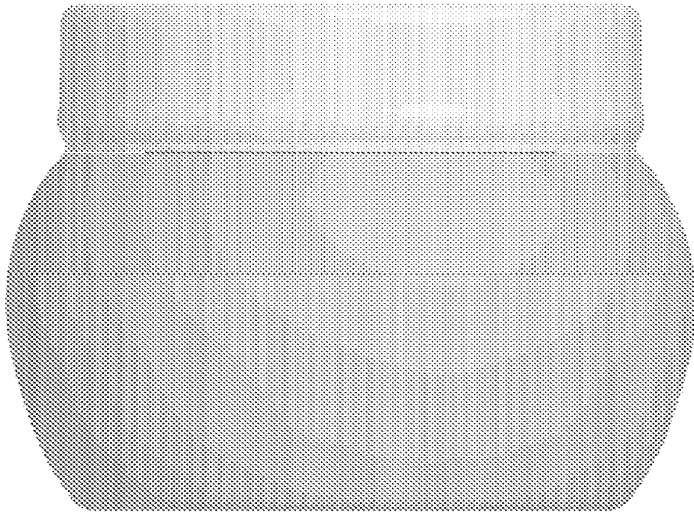
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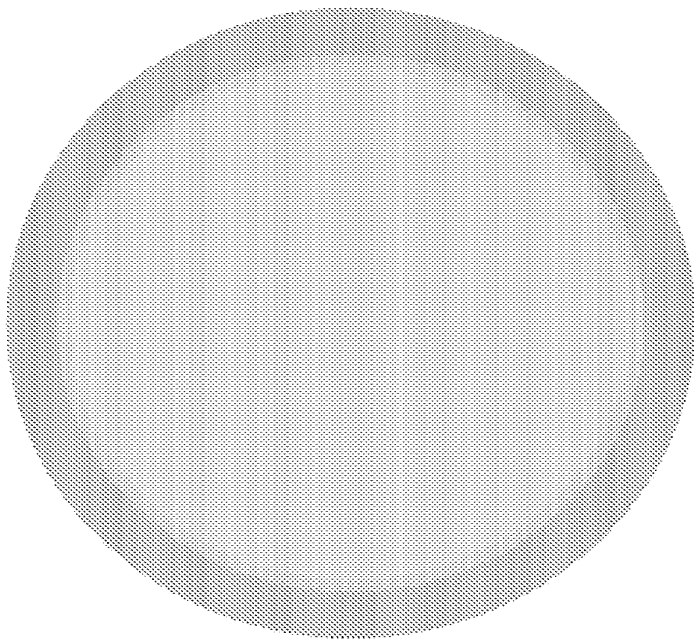
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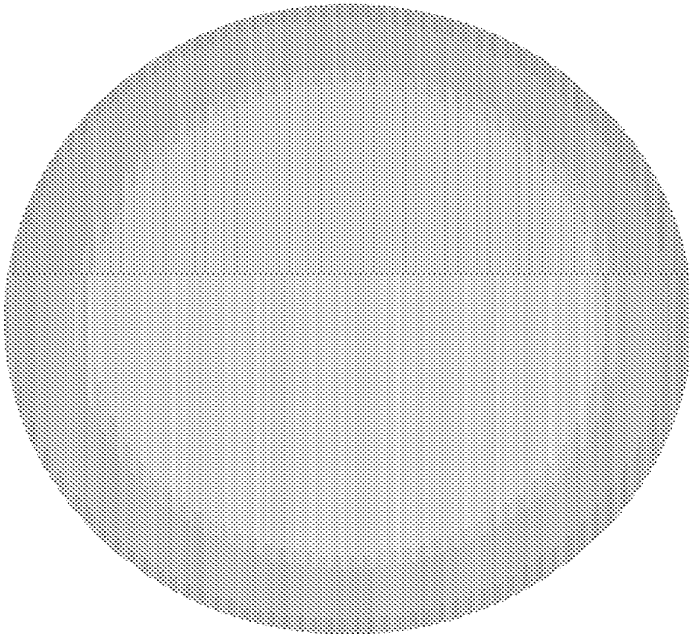
도면 1.5



도면 1.6



도면 1.7



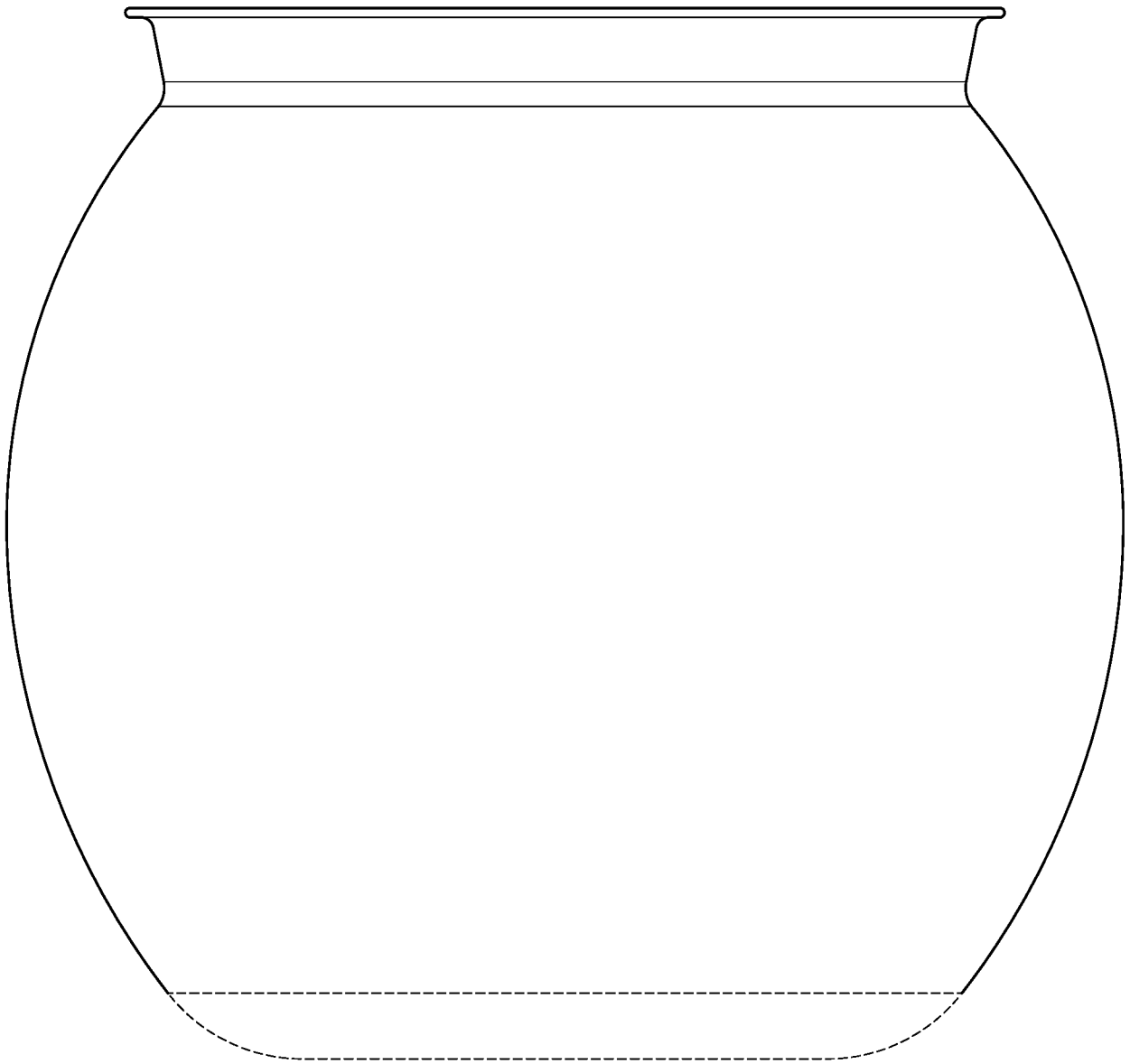


FIG. 1

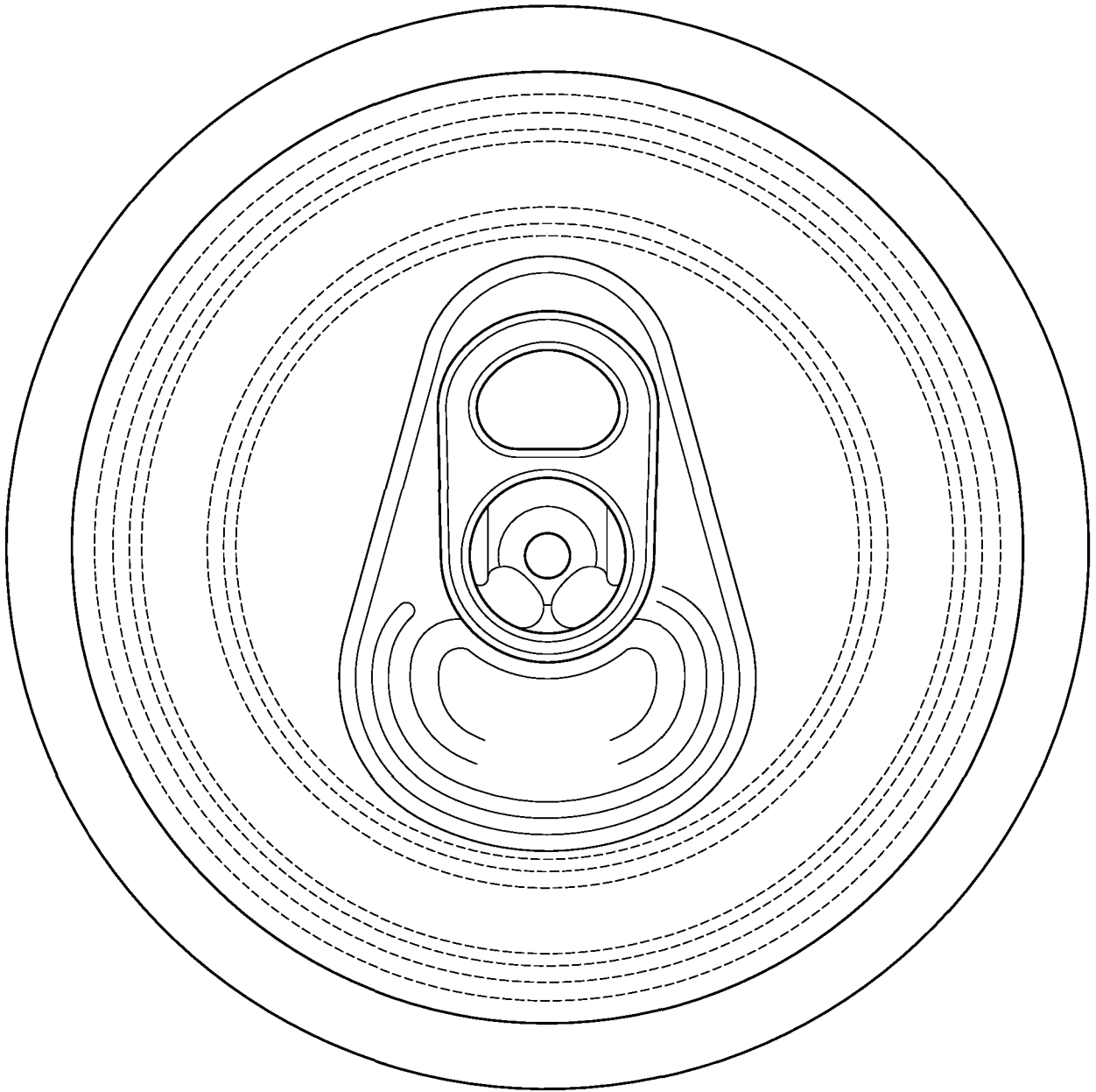


FIG. 2

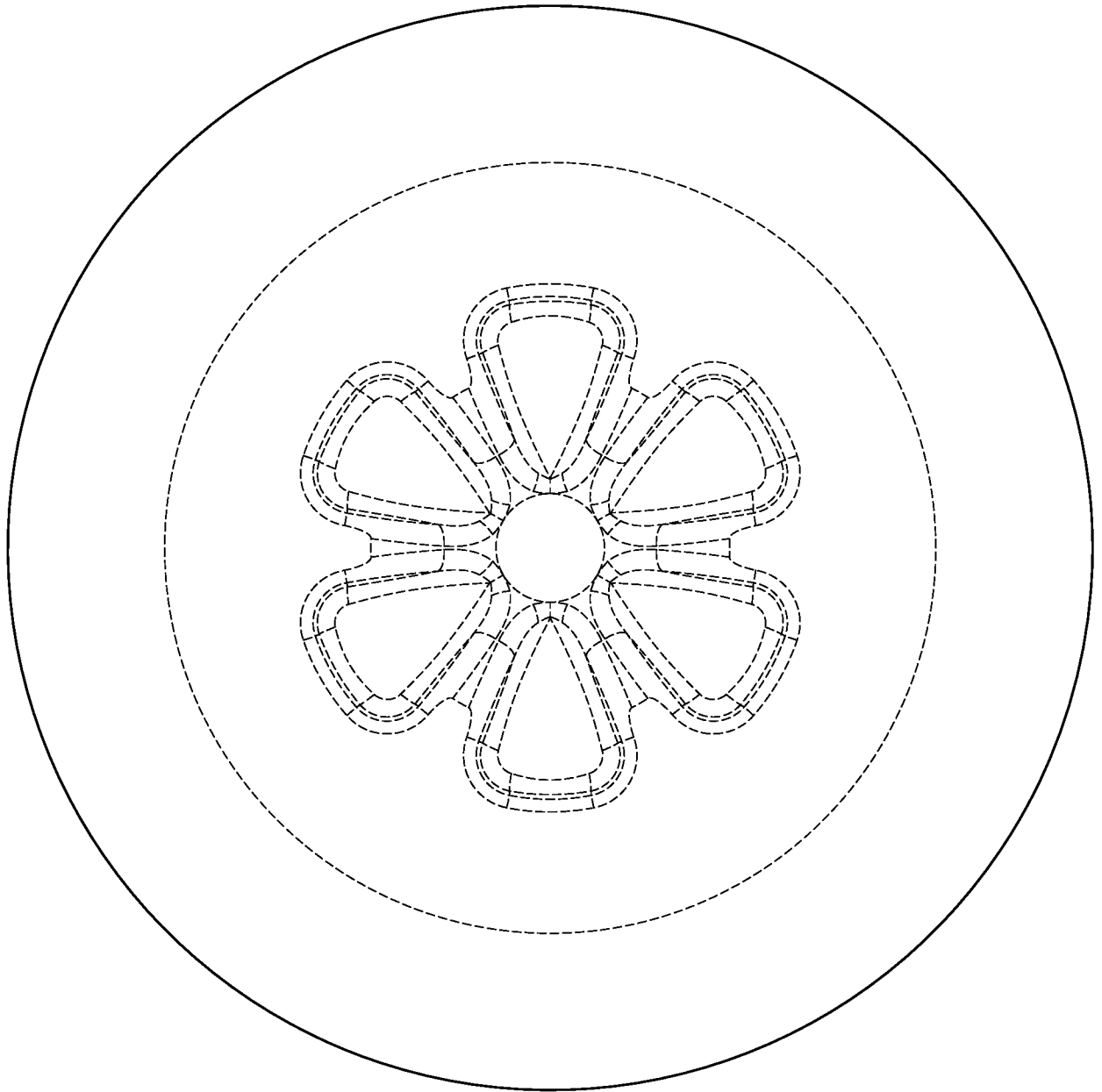


FIG. 3

## **SCORE Placeholder Sheet for IFW Content**

Application Number: 29824813

Document Date: 01/05/2023

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via DAV or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.



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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 29/824,813      | 01/27/2022  | Merrilee Kick        | 58822.US03          | 7973             |

27683 7590 10/06/2022  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue  
Suite 700  
Dallas, TX 75219

|          |
|----------|
| EXAMINER |
|----------|

HILL, KELI L.

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2922

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

10/06/2022

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocketing@haynesboone.com



*Notice of Pre-AIA or AIA Status*

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

**REJECTION(S)**

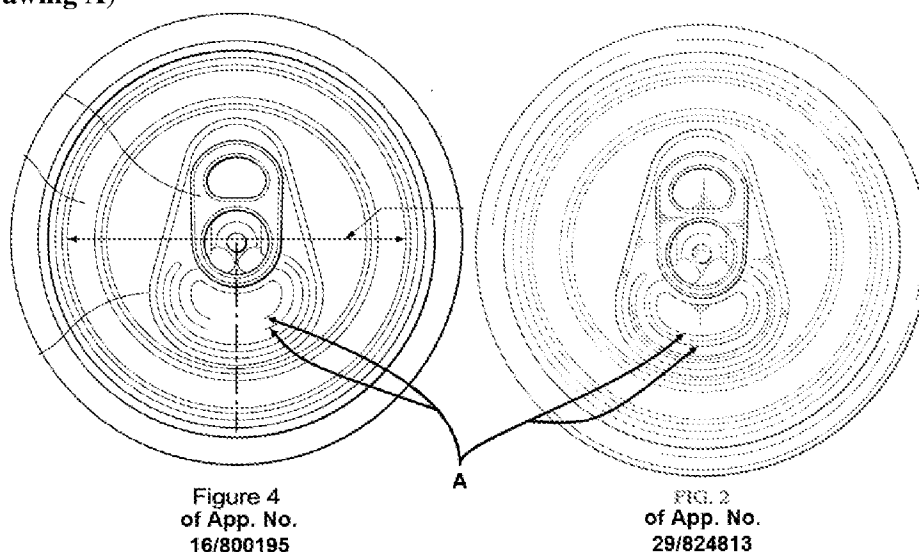
**1. Application Status Objection**

This application has been filed as a continuation of U.S. Application No. 16/800195. The later-filed application must be an application for a patent for an invention which is also described in the prior application (the parent or original nonprovisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed **16/800195** fails to provide adequate written description support in the manner provided by the first paragraph of 35 U.S.C. 112 for the claim of this application. The particular claim described in the present application could not have been recognizable as a design in the prior application's disclosure. Specifically, the following features are different from that of the originally filed earlier application:

- Shape of bottom contour of tear strip portion of pop top has been changed (**see Annotated**

**Drawing A)**



Without additional directions or guidance in the prior-filed application, a design that includes the above feature could not have been recognizable upon filing of the earlier application.

In order to overcome the objection, it is suggested that Applicant may choose:

- To keep the changed tear strip appearance – Change the status from “Continuation” to “Continuation-In-Part” by filing a corrected Application Data Sheet (ADS) in compliance with 37 CFR 1.76(c) and amending the specification language as appropriate; **OR**,
- To keep the Continuation status – Convert the tear strip appearance in Fig. 2 to that which was shown in the parent application.

To change the status from “Continuation” to “Continuation-In-Part”, the applicant must file a corrected Application Data Sheet (ADS) in compliance with 37 CFR 1.76(c). On the corrected ADS, under the heading Domestic Benefit/National Stage Information, strikethrough the Continuity Type “Continuation of” and fill in AND underline the words “Continuation-In-Part of”.

## **2. Incorporation by Reference**

This application incorporates by reference the following application(s):

- U.S. application serial number 16/800195 filed on February 25, 2020, now U.S. Patent No. 11338955
- U.S. application serial number 12/762934 filed on April 10, 2010, now U.S. Design Patent No. 10604296

All the material from the application(s) which is essential to the claimed design is included in this application. Amendments of the claim may be based on the content of the incorporated material.

However, with or without a specific amendment, it is understood that any material in the application(s) which is not present in this application forms no part of the claimed design.

**3. Rejection under 35 U.S.C. 112(a) and (b)**

The claim is rejected under 35 U.S.C. 112(a) and (b), as the claimed invention is not described in such full, clear, concise and exact terms to enable any person skilled in the art to make and use the same, and fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is indefinite and nonenabling because the disclosure is unclear, as the exact shape and appearance of the design cannot be determined due to the reasons set forth below:

The exact appearance, depth and contour of the popstop feature seen in Fig. 2 (and all details/features shown within it) cannot be fully understood (see **Annotated Drawing Letter A**). It is unclear how the various parts of the popstop relate to each other and what parts are higher or lower in depth than others. From this single view, the contour, thickness and planar relationship of the various parts of the popstop is open to multiple interpretations and cannot be determined without resorting to conjecture. The shading applied within this area implies that these surfaces are on a different plane than the surface surrounding it. Applicant is advised that shade lines that change direction or do not cross contour lines on adjacent surfaces indicate a change in plane and/or appearance that cannot be defined without additional views.

Additionally, the planar relationship of the popstop relative to the understood outer rim of the container neck is unclear, as there is no way to determine whether the popstop is on a surface that is even with or depressed (and at what depth) into the container body (see **Annotated Drawing Letter B**).

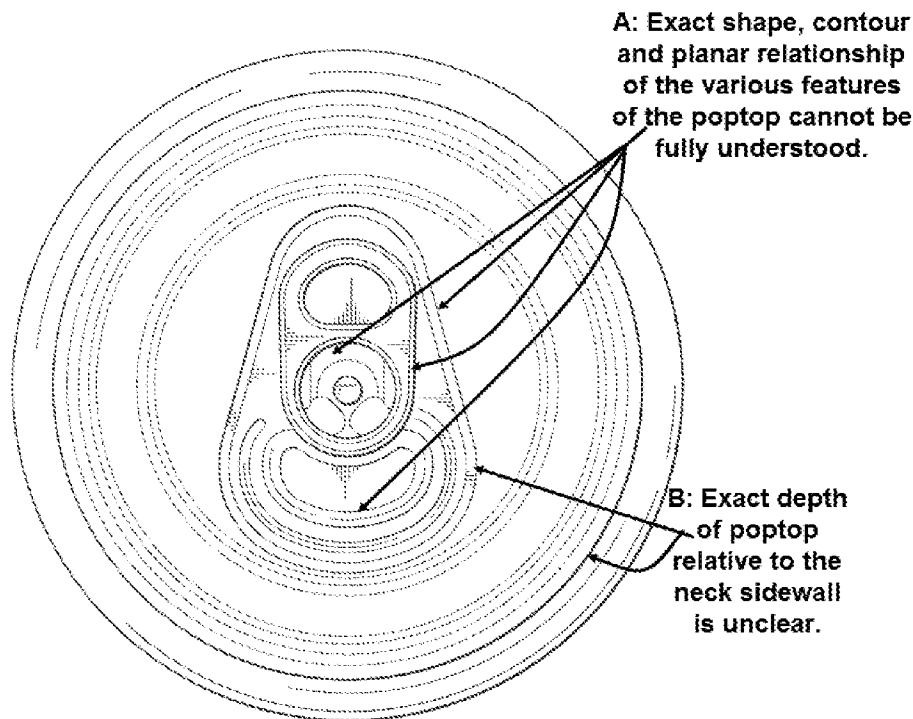


FIG. 2

In order to overcome the rejection under 35 U.S.C. 112(a) and (b), it is suggested that Applicant:

- Disclaim the pop-top feature seen in the Fig. 2 top view (and any/all details shown within it) which are considered indefinite and nonenabling by converting it to broken lines and removing any shading shown within the unclaimed area. A statement will need to be inserted into the specification noting that the broken lines shown in the drawings represent unclaimed portions of the Container and form no part of the claimed design.

It is suggested that Applicant submit large, clear drawings which show the details of the design clearly and accurately without the addition of new matter (35 U.S.C. 132, 37 CFR 1.121). Applicant is reminded that if the surface shape is not evident from the disclosure as filed, the addition of surface shading or additional views after filing may constitute new matter (37 CFR 1.152(II)).

#### **5. Conclusion**

The claimed design is patentable over the references cited. However, a final determination of patentability will be made upon resolution of the above rejection.

**The claim stands rejected under 35 U.S.C. 112(a) and (b).**

#### **6. Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELI L. HILL whose telephone number is (571)272-4375. The examiner can normally be reached on M-Th: 6a-5p. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manny Matharu can be reached on 571.272.2658. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

**General questions regarding patent examining policy, assistance with filling out forms, or general information concerning rules, procedures and fees, should be directed to the Inventors**

Art Unit: 2922

**Assistance Center (IAC).** The IAC is staffed by former Supervisory Patent Examiners and experienced Primary Examiners who answer general questions concerning patent examining policy and procedure.

**Assistance is available at the IAC Monday – Friday, 8:30am - 5:00pm (EST) at (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/KELI L HILL/

Primary Examiner, Art Unit 2922

|                                   |                                       |  |                                                              |             |
|-----------------------------------|---------------------------------------|--|--------------------------------------------------------------|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>29/824,813 |  | Applicant(s)/Patent Under<br>Reexamination<br>Kick, Merrilee |             |
|                                   | Examiner<br>KELI L HILL               |  | Art Unit<br>2922                                             | Page 1 of 1 |

U.S. PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name             | CPC Classification | US Classification |
|---|---|--------------------------------------------------|-----------------|------------------|--------------------|-------------------|
| * | A | US-D049555-S                                     | 08-1916         | Vivaudou, Victor |                    | D9/519            |
| * | B | US-D223898-S                                     | 06-1972         | Edwards, Bryant  |                    | D9/500            |
| * | C | US-D235193-S                                     | 05-1975         | Edwards, Bryant  |                    | D9/500            |
| * | D | US-D739267-S                                     | 09-2015         | Kick, Merrilee   |                    | D9/776            |
| * | E | US-D803376-S                                     | 11-2017         | Gobber, Cedric   |                    | D23/366           |
| * | F | US-10336496-B2                                   | 07-2019         | Zimmer, Matt     | B65D21/0231        | 1/1               |
| * | G | US-D889266-S                                     | 07-2020         | Pun, Wai Lun     | B65D21/0231        | D9/516            |
|   | H |                                                  |                 |                  |                    |                   |
|   | I |                                                  |                 |                  |                    |                   |
|   | J |                                                  |                 |                  |                    |                   |
|   | K |                                                  |                 |                  |                    |                   |
|   | L |                                                  |                 |                  |                    |                   |
|   | M |                                                  |                 |                  |                    |                   |

FOREIGN PATENT DOCUMENTS

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | CPC Classification |
|---|---|--------------------------------------------------|-----------------|---------|------|--------------------|
|   | N |                                                  |                 |         |      |                    |
|   | O |                                                  |                 |         |      |                    |
|   | P |                                                  |                 |         |      |                    |
|   | Q |                                                  |                 |         |      |                    |
|   | R |                                                  |                 |         |      |                    |
|   | S |                                                  |                 |         |      |                    |
|   | T |                                                  |                 |         |      |                    |

NON-PATENT DOCUMENTS

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|-------------------------------------------------------------------------------------------|
|   | U |                                                                                           |
|   | V |                                                                                           |
|   | W |                                                                                           |
|   | X |                                                                                           |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

|                                                                                                                 |                                              |                                                                  |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                 | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

|                        |             |                 |
|------------------------|-------------|-----------------|
| <b>CPC - Searched*</b> |             |                 |
| <b>Symbol</b>          | <b>Date</b> | <b>Examiner</b> |
|                        |             |                 |

|                                         |             |                 |
|-----------------------------------------|-------------|-----------------|
| <b>CPC Combination Sets - Searched*</b> |             |                 |
| <b>Symbol</b>                           | <b>Date</b> | <b>Examiner</b> |
|                                         |             |                 |

|                                      |                                     |             |                 |
|--------------------------------------|-------------------------------------|-------------|-----------------|
| <b>US Classification - Searched*</b> |                                     |             |                 |
| <b>Class</b>                         | <b>Subclass</b>                     | <b>Date</b> | <b>Examiner</b> |
| D9                                   | 500,503,516,519,520,549,574,763-783 | 11/29/14    | /KLH/           |
| 215                                  | 381-385                             |             |                 |
| 220                                  | 660,662,669                         |             |                 |
|                                      |                                     |             |                 |

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

|                                                                                               |             |                 |
|-----------------------------------------------------------------------------------------------|-------------|-----------------|
| <b>Search Notes</b>                                                                           |             |                 |
| <b>Search Notes</b>                                                                           | <b>Date</b> | <b>Examiner</b> |
| Searched Inventor and Assignee Name in PALM and Pe2e SEARCH                                   | 11/29/14    | /KLH/           |
| SEARCH: word search/narrowing; backwards/forward search of patents (See SEARCH history sheet) |             |                 |
| NPL Search: Google Images: www.images.google.com – Bottle, container, can                     |             |                 |
| Buzzballz LLC: www.buzzballz.com                                                              |             |                 |
| Orbit: (CONTAINER OR BOTTLE)/TI AND (09-01)/CL AND (ALL COUNTRIES EXCEPT US)                  |             |                 |
| UPDATED ORIGINAL SEARCH                                                                       | 09/29/2022  | /KLH/           |

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|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------|
| <b><i>Search Notes</i></b><br><br> | <b>Application/Control No.</b><br>29/824,813 | <b>Applicant(s)/Patent Under Reexamination</b><br>Kick, Merrilee |
|                                                                                                                     | <b>Examiner</b><br>KELI L HILL               | <b>Art Unit</b><br>2922                                          |

| Interference Search |                       |          |          |
|---------------------|-----------------------|----------|----------|
| US Class/CPC Symbol | US Subclass/CPC Group | Date     | Examiner |
| D9                  | 776                   | 11/19/14 | /KLH/    |

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# PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query                                                                                                                                                                                                                                                                       | DBs                                         | Default Operator | Plurals | British Equivalents | Time Stamp          |
|-------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------|---------------------|---------------------|
| L328  | 1449 | (d9/500).CCLS.                                                                                                                                                                                                                                                                     | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:44 AM |
| L329  | 900  | (d9/516).CCLS.                                                                                                                                                                                                                                                                     | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:44 AM |
| L330  | 2653 | (d9/519-522).CCLS.                                                                                                                                                                                                                                                                 | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:44 AM |
| L331  | 358  | (d9/549).CCLS.                                                                                                                                                                                                                                                                     | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:45 AM |
| L332  | 1482 | (d9/574-575).CCLS.                                                                                                                                                                                                                                                                 | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:45 AM |
| L333  | 1612 | (d9/763-783).CCLS.                                                                                                                                                                                                                                                                 | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:45 AM |
| L334  | 858  | (d9/503).CCLS.                                                                                                                                                                                                                                                                     | (USPAT; USOCR)                              | OR               | ON      | ON                  | 2014/11/29 08:45 AM |
| L343  | 0    | /---refresh-5-for-similar-by-app-824813--/                                                                                                                                                                                                                                         | (US-PGPUB; USPAT; USOCR)                    | OR               | OFF     | OFF                 | 2022/09/29 02:28 PM |
| L344  | 15   | ((("KICK") near3 ("Merrilee"))).INV.                                                                                                                                                                                                                                               | (US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT) | OR               | OFF     | OFF                 | 2022/09/29 02:40 PM |
| L345  | 2486 | ((L328 OR L329 OR L330 OR L331 OR L332 OR L333 OR L334) AND @PD>="20141201")                                                                                                                                                                                                       | (US-PGPUB; USPAT)                           | OR               | ON      | ON                  | 2022/09/29 03:06 PM |
| L346  | 2041 | d9/434.ccls.                                                                                                                                                                                                                                                                       | (US-PGPUB; USPAT)                           | OR               | ON      | ON                  | 2022/09/29 03:18 PM |
| L347  | 1438 | d9/435.ccls.                                                                                                                                                                                                                                                                       | (US-PGPUB; USPAT)                           | OR               | ON      | ON                  | 2022/09/29 03:18 PM |
| L348  | 778  | d9/438.ccls.                                                                                                                                                                                                                                                                       | (US-PGPUB; USPAT)                           | OR               | ON      | ON                  | 2022/09/29 03:19 PM |
| L349  | 76   | d9/902-903.ccls.                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT)                           | OR               | ON      | ON                  | 2022/09/29 03:19 PM |
| L350  | 1    | d460693.pn.                                                                                                                                                                                                                                                                        | (US-PGPUB; USPAT; USOCR)                    | OR               | OFF     | OFF                 | 2022/09/29 03:19 PM |
| L351  | 89   | ("D202299"   "3624939"   "D223356"   "D243648"   "4164284"   "D253455"   "D271173"   "D279643"   "D284837"   "D291179"   "D298105"   "D304262"   "D308320"   "D319008"   "D323602"   "D341774"   "5294764"   "D348762"   "D350630"   "D354882"   "D359655"   "5503296"   "D370391" | (US-PGPUB; USPAT; USOCR)                    | OR               | OFF     | OFF                 | 2022/09/29 03:20 PM |

|      |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |    |    |    |                        |
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|      |       | "D371934"  <br>"D376730"   "D379023"<br>  "D382473"   "5662241"<br>  "D389734"  <br>"D391155"   "D391451"<br>  "D398188"  <br>"D399634"   "D402198"<br>  "D409904"  <br>"D411442"   "D415929"<br>  "D416770"  <br>"D416799"   "D419389"<br>  "D420861"   "6041918"<br>  "D424375"  <br>"D424928"   "D425757"<br>  "D441871").pn. OR<br>("D460693").urpn. AND<br>(PGPB   USPT  <br>USOC).dbnm.                                                                                                                                                                                                                                   |                   |    |    |    |                        |
| L352 | 16851 | B21D51/26,383.cpc.<br>OR B29C66/71.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:22 PM |
| L353 | 7469  | L352 AND<br>("TRIMETRIC<br>DRAWING" OR<br>"TRIMETRIC VIEW"<br>OR "PICTORAL<br>DRAWING" OR<br>"PICTORAL VIEW" OR<br>"PICTORIAL<br>DRAWING" OR<br>"PICTORIAL VIEW" OR<br>"AXONOMETRIC<br>DRAWING" OR<br>"AXONOMETRIC<br>VIEW" OR<br>"STEREOSCOPIC<br>DRAWING" OR<br>"STEREOSCOPIC<br>VIEW" OR "PICTORIAL<br>VIEW" OR "PICTORIAL<br>VIEW" OR<br>"ISOMETRIC VIEW"<br>OR "ISOMETRIC<br>DRAWING" OR<br>"OBLIQUE VIEW" OR<br>"OBLIQUE DRAWING"<br>OR "EXPLODED<br>DRAWING" OR<br>"EXPLODED VIEW"<br>OR "THREE<br>DIMENSIONAL<br>DRAWING" OR<br>"THREE<br>DIMENSIONAL VIEW"<br>OR "PERSPECTIVE<br>DRAWING" OR<br>"PERSPECTIVE<br>VIEW") | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:23 PM |

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| L354 | 3366 | B65D1/00,02,12,14,40,44,023.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:23 PM |
| L355 | 1746 | L354 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW") | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:23 PM |
| L356 | 7469 | L353 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:24 PM |

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|      |      | VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW")                                                                                                                                                                                                                                              |                   |    |    |    |                     |
| L357 | 1753 | B65D1/0223,165238,24 6,253.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:24 PM |
| L358 | 833  | L357 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:24 PM |

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|------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----|----|----|------------------------|
| L359 | 2174 | VIEW")<br>B65D7/04.cpc. OR<br>B65D21/0209,0233.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:25 PM |
| L360 | 1545 | L359 AND<br>("TRIMETRIC<br>DRAWING" OR<br>"TRIMETRIC VIEW"<br>OR "PICTORAL<br>DRAWING" OR<br>"PICTORAL VIEW" OR<br>"PICTORIAL<br>DRAWING" OR<br>"PICTORIAL VIEW" OR<br>"AXONOMETRIC<br>DRAWING" OR<br>"AXONOMETRIC<br>VIEW" OR<br>"STEREOSCOPIC<br>DRAWING" OR<br>"STEREOSCOPIC<br>VIEW" OR "PICTORIAL<br>VIEW" OR "PICTORIAL<br>VIEW" OR<br>"ISOMETRIC VIEW"<br>OR "ISOMETRIC<br>DRAWING" OR<br>"OBLIQUE VIEW" OR<br>"OBLIQUE DRAWING"<br>OR "EXPLODED<br>DRAWING" OR<br>"EXPLODED VIEW"<br>OR "THREE<br>DIMENSIONAL<br>DRAWING" OR<br>"THREE<br>DIMENSIONAL VIEW"<br>OR "PERSPECTIVE<br>DRAWING" OR<br>"PERSPECTIVE<br>VIEW") | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:25 PM |
| L361 | 1508 | B65D25/00,28.cpc. OR<br>B65D41/0457,17.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:25 PM |
| L362 | 863  | L361 AND<br>("TRIMETRIC<br>DRAWING" OR<br>"TRIMETRIC VIEW"<br>OR "PICTORAL<br>DRAWING" OR<br>"PICTORAL VIEW" OR<br>"PICTORIAL<br>DRAWING" OR<br>"PICTORIAL VIEW" OR<br>"AXONOMETRIC<br>DRAWING" OR<br>"AXONOMETRIC<br>VIEW" OR<br>"STEREOSCOPIC                                                                                                                                                                                                                                                                                                                                                                                 | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:25 PM |

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|      |      | DRAWING" OR<br>"STEREOSCOPIC<br>VIEW" OR "PICTORIAL<br>VIEW" OR "PICTORIAL<br>VIEW" OR<br>"ISOMETRIC VIEW"<br>OR "ISOMETRIC<br>DRAWING" OR<br>"OBLIQUE VIEW" OR<br>"OBLIQUE DRAWING"<br>OR "EXPLODED<br>DRAWING" OR<br>"EXPLODED VIEW"<br>OR "THREE<br>DIMENSIONAL<br>DRAWING" OR<br>"THREE<br>DIMENSIONAL VIEW"<br>OR "PERSPECTIVE<br>DRAWING" OR<br>"PERSPECTIVE<br>VIEW")                                                                                                                                                                     |                   |    |    |    |                        |
| L363 | 1535 | B65D53/06.cpc. OR<br>B65D75/56.cpc. OR<br>B65D2501/0036.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:25 PM |
| L364 | 757  | L363 AND<br>("TRIMETRIC<br>DRAWING" OR<br>"TRIMETRIC VIEW"<br>OR "PICTORIAL<br>DRAWING" OR<br>"PICTORIAL VIEW" OR<br>"PICTORIAL<br>DRAWING" OR<br>"PICTORIAL VIEW" OR<br>"AXONOMETRIC<br>DRAWING" OR<br>"AXONOMETRIC<br>VIEW" OR<br>"STEREOSCOPIC<br>DRAWING" OR<br>"STEREOSCOPIC<br>VIEW" OR "PICTORIAL<br>VIEW" OR "PICTORIAL<br>VIEW" OR<br>"ISOMETRIC VIEW"<br>OR "ISOMETRIC<br>DRAWING" OR<br>"OBLIQUE VIEW" OR<br>"OBLIQUE DRAWING"<br>OR "EXPLODED<br>DRAWING" OR<br>"EXPLODED VIEW"<br>OR "THREE<br>DIMENSIONAL<br>DRAWING" OR<br>"THREE | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29<br>03:26 PM |

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| L365 | 4977  | DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW")<br>B65D2543/0064,00074,00083,00092,00101,00111.cpc.                                                                                                                                                                                                                                                                                                                                                                                                                    | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:26 PM |
| L366 | 2891  | L365 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW")<br>Y10T29/49826.cpc. | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:26 PM |
| L367 | 44938 | L367 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW")<br>Y10T29/49826.cpc. | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:26 PM |
| L368 | 31003 | L367 AND ("TRIMETRIC DRAWING" OR "TRIMETRIC VIEW" OR "PICTORAL DRAWING" OR "PICTORAL VIEW" OR "PICTORIAL DRAWING" OR "PICTORIAL VIEW" OR "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW")<br>Y10T29/49826.cpc. | (US-PGPUB; USPAT) | OR | ON | ON | 2022/09/29 03:27 PM |

|      |      |                                                                                                                                                                                                                                                                                                                                                                            |                   |    |     |     |                     |
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|      |      | "AXONOMETRIC DRAWING" OR "AXONOMETRIC VIEW" OR "STEREOSCOPIC DRAWING" OR "STEREOSCOPIC VIEW" OR "PICTORIAL VIEW" OR "PICTORIAL VIEW" OR "ISOMETRIC VIEW" OR "ISOMETRIC DRAWING" OR "OBLIQUE VIEW" OR "OBLIQUE DRAWING" OR "EXPLODED DRAWING" OR "EXPLODED VIEW" OR "THREE DIMENSIONAL DRAWING" OR "THREE DIMENSIONAL VIEW" OR "PERSPECTIVE DRAWING" OR "PERSPECTIVE VIEW") |                   |    |     |     |                     |
| L369 | 14   | L368 AND (BOTTLE.TI. OR CONTAINER.TI.) AND BALL-SHAPED                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:27 PM |
| L370 | 0    | L366 AND (BOTTLE.TI. OR CONTAINER.TI.) AND BALL-SHAPED                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:28 PM |
| L371 | 1    | L360 AND (BOTTLE.TI. OR CONTAINER.TI.) AND BALL-SHAPED                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:28 PM |
| L373 | 838  | L357 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:35 PM |
| L374 | 662  | L359 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:36 PM |
| L375 | 322  | L361 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:36 PM |
| L376 | 529  | L363 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:36 PM |
| L377 | 1616 | L365 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:36 PM |
| L378 | 676  | L367 AND (BOTTLE.TI. OR CONTAINER.TI.) AND (BALL SHAPED)                                                                                                                                                                                                                                                                                                                   | (US-PGPUB; USPAT) | OR | ON  | ON  | 2022/09/29 03:36 PM |
| L380 | 9    | ("D824813"   "D889266"                                                                                                                                                                                                                                                                                                                                                     | (US-PGPUB; USPAT; | OR | OFF | OFF | 2022/09/29          |

|      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |              |               |               |                                                                  |
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| L381 | 2   | "D746156"  <br>"D880303"   "D653964"<br>"D043239"  <br>"D424445"   "106034"  <br>"D803376").PN.<br>("D106034").PN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | USOCR)<br><br>(US-PGPUB; USPAT;<br>USOCR)<br>(US-PGPUB; USPAT) | OR<br><br>OR | OFF<br><br>ON | OFF<br><br>ON | 03:45 PM<br><br>2022/09/29<br>03:47 PM<br>2022/09/29<br>05:12 PM |
| L382 | 37  | (US-10604296-\$   US-<br>2745642-\$   US-<br>20140061328-\$   US-<br>20150344177-\$   US-<br>20200262601-\$   US-<br>3179036-\$   US-<br>3314569-\$   US-<br>4936482-\$   US-<br>5407086-\$   US-<br>6574883-\$   US-<br>6793094-\$   US-<br>7051892-\$   US-<br>7731053-\$   US-<br>D106034-\$   US-<br>D224516-\$   US-<br>D254716-\$   US-<br>D352898-\$   US-<br>D383646-\$   US-<br>D448666-\$   US-<br>D512917-\$   US-<br>D562685-\$   US-<br>D565413-\$   US-<br>D596489-\$   US-<br>D606404-\$   US-<br>D606405-\$   US-<br>D612732-\$   US-<br>D614971-\$   US-<br>D634635-\$   US-<br>D650280-\$   US-<br>D663619-\$   US-<br>D675528-\$   US-<br>D699578-\$   US-<br>D701767-\$   US-<br>D703068-\$   US-<br>D704567-\$   US-<br>D711247-\$   US-<br>D732978-\$).DID. |                                                                |              |               |               |                                                                  |
| L383 | 122 | ("0D49555"   "D106034"<br>"D224516"  <br>"D352898"   "D383646"<br>"D448666"   "6574883"<br>"D562685"  <br>"D565413"   "D596489"<br>"D606404"  <br>"D606405"   "D612732"<br>"D614971"  <br>"D634635"   "0D49555"<br>"D106034"  <br>"D224516"   "D352898"<br>"D383646"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (US-PGPUB; USPAT;<br>USOCR)                                    | OR           | OFF           | OFF           | 2022/09/29<br>05:19 PM                                           |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |
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|  |  | "D448666"   "6574883"  <br>"D512917"   "D562685"  <br>  "D565413"  <br>"D596489"   "D606404"  <br>  "D606405"  <br>"D612732"   "D614971"  <br>  "D634635"  <br>"D650280"   "D663619"  <br>  "D675528"  <br>"D699578"   "D701767"  <br>  "D703068"  <br>"D704567"   "D711247"  <br>  "D49555"  <br>"D106034"   "D224516"  <br>  "D352898"  <br>"D383646"   "D448666"  <br>  "6574883"   "D512917"  <br>  "D562685"  <br>"D565413"   "D596489"  <br>  "D606404"  <br>"D606405"   "D612732"  <br>  "D614971"  <br>"D634635"   "D650280"  <br>  "D663619"  <br>"D675528"   "D699578"  <br>  "D701767"  <br>"D703068"   "D704567"  <br>  "D711247"  <br>"D168471"   "D325697"  <br>  "D435794"  <br>"D437226"   "D449990"  <br>  "D479995"  <br>"D562134"   "D658061"  <br>  "D321319"  <br>"D340077"   "D400400"  <br>  "D596489"  <br>"D648217"   "D704567"  <br>  "D705077"  <br>"D710153"   "D711247"  <br>  "D721585"  <br>"D49555"   "D106034"  <br>  "D168471"   "2745642"  <br>  "3179036"   "3281024"  <br>  "3314569"   "D208885"  <br>  "D223898"  <br>"D224516"   "D235193"  <br>  "D252445"  <br>"D254716"   "D284536"  <br>  "D298592"  <br>"D303761"   "4936482"  <br>"D312778"   "D321319"  <br>  "D325697"  <br>"D336855"   "D340077"  <br>  "D344214"  <br>"D352898"   "5407086"  <br>"5638982"   "D381561"  <br>"D383646"   "D400400"  <br>  "D423360" |  |  |  |  |  |
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|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
|  |  | "D435794"   "D437226"<br>  "D448666"  <br>"D449990"   "D474378"<br>  "6574883"   "D479995"<br>  "D483672"  <br>"D483673"   "D491288"<br>  "6793094"   "D512917"<br>  "7051892"   "D562134"<br>  "D562685"  <br>"D565413"   "D596489"<br>  "D603260"  <br>"D606404"   "D606405"<br>  "D607334"  <br>"D612732"   "D614971"<br>  "D616749"   "7731053"<br>  "D624419"  <br>"D634635"   "D648217"<br>  "D650280"  <br>"D658061"   "D663619"<br>  "D675528"  <br>"D699578"   "D701767"<br>  "D703068"  <br>"D704567"   "D705077"<br>  "D710153"  <br>"D711247"   "D721585"<br>  "D729593"  <br>"D732978"   "D739267"<br>  "D746389"  <br>"D749368"   "D755022"<br>  "D759438"  <br>"D772709"   "D772722"<br>  "9521929"   "D809880"<br>  "D813618"  <br>"D835509"   "D869290"<br>  "20110253720"  <br>"20140061328"  <br>"20150344177"  <br>"20180126386"  <br>"0D49555"   "D106034"<br>  "D168471"   "2745642"<br>  "3179036"   "3281024"<br>  "3314569"   "D208885"<br>  "D223898"  <br>"D224516"   "D235193"<br>  "D252445"  <br>"D254716"   "D284536"<br>  "D298592"  <br>"D303761"   "4936482"  <br>"D312778"   "D321319"<br>  "D325697"  <br>"D336855"   "D340077"<br>  "D344214"  <br>"D352898"   "5407086"  <br>"5638982"   "D381561"  <br>"D383646"   "D400400"<br>  "D423360"  <br>"D435794"   "D437226"<br>  "D448666" |  |  |  |  |  |
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|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
|  |  | "D449990"   "D474378"<br>  "6574883"   "D479995"<br>  "D483672"  <br>"D483673"   "D491288"<br>  "6793094"   "D512917"<br>  "7051892"   "D562134"<br>  "D562685"  <br>"D565413"   "D596489"<br>  "D603260"  <br>"D606404"   "D606405"<br>  "D607334"  <br>"D612732"   "D614971"<br>  "D616749"   "7731053"<br>  "D624419"  <br>"D634635"   "D648217"<br>  "D650280"  <br>"D658061"   "D663619"<br>  "D675528"  <br>"D699578"   "D701767"<br>  "D703068"  <br>"D704567"   "D705077"<br>  "D710153"  <br>"D711247"   "D721585"<br>  "D729593"  <br>"D732978"   "D739267"<br>  "D746389"  <br>"D749368"   "D755022"<br>  "D759438"  <br>"D772709"   "D772722"<br>  "9521929"   "D809880"<br>  "D813618"  <br>"D835509"   "D869290"<br>  "20110253720"  <br>"20140061328"  <br>"20150344177"  <br>"20180126386").pn. OR<br>("2011/0253720"  <br>"2015/0344177"  <br>"2021/0107111"  <br>"D703068"   "D732978"<br>  "D739267"  <br>"D772709"   "D772722"<br>  "D911179"  <br>"D911843").urpn. AND<br>(PGPB   USPT  <br>USOC).dbnm. |  |  |  |  |  |
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## PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

|                                                                                                      |   |                                                             |   |                        |                 |
|------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------|---|------------------------|-----------------|
| In place of<br>PTO-1449<br>Form                                                                      |   | U. S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |   | Complete if Known      |                 |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(use as many sheets as necessary)</i> |   |                                                             |   | Application Number     | TBD             |
|                                                                                                      |   |                                                             |   | Filing Date            | Herewith        |
|                                                                                                      |   |                                                             |   | Applicant(s)           | KICK, Merrilee  |
|                                                                                                      |   |                                                             |   | Art Unit               | TBD             |
|                                                                                                      |   |                                                             |   | Examiner Name          | TBD             |
| SHEET                                                                                                | 1 | OF                                                          | 2 | Attorney Docket Number | 58822.00005US03 |

| U. S. PATENT DOCUMENTS |             |                 |                                |                                                 |
|------------------------|-------------|-----------------|--------------------------------|-------------------------------------------------|
| Examiner's<br>Initials | Cite<br>No. | Document Number | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |
|                        | A1          | 10,604,296      | 03-31-2020                     | Kick                                            |
|                        | A2          | D703,068        | 04-22-2014                     | Kick                                            |
|                        | A3          | D732,978        | 06-30-2015                     | Kick                                            |
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|-----------------------|----------------|--------------------|------------|
| Examiner<br>Signature | /KELI L. HILL/ | Date<br>Considered | 09/29/2022 |
|-----------------------|----------------|--------------------|------------|

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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(use as many sheets as necessary)</i> |   |                                                             |   | Application Number       | TBD             |
|                                                                                                      |   |                                                             |   | Filing Date              | Herewith        |
|                                                                                                      |   |                                                             |   | Applicant(s)             | KICK, Merrilee  |
|                                                                                                      |   |                                                             |   | Art Unit                 | TBD             |
|                                                                                                      |   |                                                             |   | Examiner Name            | TBD             |
| SHEET                                                                                                | 2 | OF                                                          | 2 | Attorney Docket Number   | 58822.00005US03 |

| U. S. PATENT APPLICATION PUBLICATIONS |             |                                                                                                                                                                              |                                |                                                 |                    |
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| Examiner's<br>Initials                | Cite<br>No. | Document Number                                                                                                                                                              | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |                    |
|                                       | B1          | 20200262601                                                                                                                                                                  | 08-20-2020                     | Kick                                            |                    |
|                                       | B2          | 20150344177                                                                                                                                                                  | 12-03-2015                     | Kick                                            |                    |
|                                       | B3          | 20140061328                                                                                                                                                                  | 03-2014                        | Haymond                                         |                    |
| FOREIGN PATENT DOCUMENTS              |             |                                                                                                                                                                              |                                |                                                 |                    |
| Examiner's<br>Initials                | Cite<br>No. | Foreign Patent<br>Document<br>(Country Code - Number - Kind)                                                                                                                 | Publication Date<br>MM-DD-YYYY | Patentee or Applicant of Cited<br>Document      | Translation<br>Y/N |
|                                       | C1          | JP 02032248                                                                                                                                                                  | 02-1990                        | OGAWA et al.                                    |                    |
| NON-PATENT LITERATURE DOCUMENTS       |             |                                                                                                                                                                              |                                |                                                 |                    |
| Examiner's<br>Initials                | Cite<br>No. | Include name of the author (in CAPITAL LETTERS), title of the article, title of the item, date, page(s), volume-<br>issue number(s), publisher, city/country where published |                                |                                                 |                    |
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| Examiner<br>Signature | /KELI L HILL/ | Date<br>Considered | 09/29/2022 |
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# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** ( Not for submission under 37 CFR 1.99)

|                        |               |
|------------------------|---------------|
| Application Number     | 29824813      |
| Filing Date            | 2022-01-27    |
| First Named Inventor   | Merrilee Kick |
| Art Unit               | 2922          |
| Examiner Name          | Keli L. Hill  |
| Attorney Docket Number | 58822.5US03   |

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|                   | 1       | D460693       | S                      | 2002-07-23 | Flowers                                         |                                                                          |

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|-------------------|---------|--------------------------------------|----------------------------|------------------------|------------------|-------------------------------------------------|--------------------------------------------------------------------------|----------------|
|                   | 1       | D5032248                             | JP                         | A                      | 1993-02-09       | DAINIPPON PRINTING CO LTD                       |                                                                          |                |

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |               |
|------------------------|---------------|
| Application Number     | 29824813      |
| Filing Date            | 2022-01-27    |
| First Named Inventor   | Merrilee Kick |
| Art Unit               | 2922          |
| Examiner Name          | Keli L. Hill  |
| Attorney Docket Number | 58822.5US03   |

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

|                        |               |
|------------------------|---------------|
| Application Number     | 29824813      |
| Filing Date            | 2022-01-27    |
| First Named Inventor   | Merrilee Kick |
| Art Unit               | 2922          |
| Examiner Name          | Keli L. Hill  |
| Attorney Docket Number | 58822.5US03   |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

|            |                 |                     |            |
|------------|-----------------|---------------------|------------|
| Signature  | /Alan N. Herda/ | Date (YYYY-MM-DD)   | 2022-09-22 |
| Name/Print | Alan N. Herda   | Registration Number | 50,426     |

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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     | 29824813      |
|                                                                                                     | Filing Date            | 2022-01-27    |
|                                                                                                     | First Named Inventor   | Merrilee Kick |
|                                                                                                     | Art Unit               | 2922          |
|                                                                                                     | Examiner Name          | Keli L. Hill  |
|                                                                                                     | Attorney Docket Number | 58822.5US03   |

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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>( Not for submission under 37 CFR 1.99) | Application Number     |               | 29824813   |
|                                                                                                     | Filing Date            |               | 2022-01-27 |
|                                                                                                     | First Named Inventor   | Merrilee Kick |            |
|                                                                                                     | Art Unit               | 2922          |            |
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| Signature  | /Alan N. Herda/ | Date (YYYY-MM-DD)   | 2022-09-22 |
| Name/Print | Alan N. Herda   | Registration Number | 50,426     |

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### Title of Invention

Container

### Application Information

APPLICATION TYPE Design - Nonprovisional Application  
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PATENT # -

CONFIRMATION # 7973

FILED BY Q Dismuke

PATENT CENTER # 60995184

FILING DATE 01/27/2022

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FIRST NAMED INVENTOR Merrilee Kick

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Alan Herda

### Documents

**TOTAL DOCUMENTS: 2**

| DOCUMENT               | PAGES | DESCRIPTION                                        | SIZE (KB) |
|------------------------|-------|----------------------------------------------------|-----------|
| 58822.5US03 IDS.pdf    | 4     | Information Disclosure Statement (IDS) Form (SB08) | 1234 KB   |
| 58822.5US03 IDS C1.pdf | 23    | Foreign Reference                                  | 1274 KB   |

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1 / 1 [Please click here for details of Stored Data Information of \[DETAIL\], \[JAPANESE\], and \[LEGAL STATUS\].](#)

PATENT ABSTRACTS OF JAPAN

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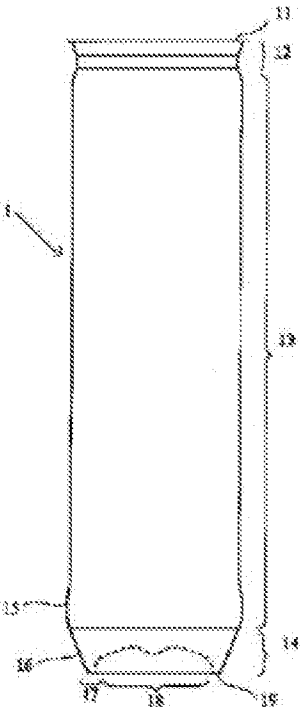
(21)Application number : 03-204895                      (71)Applicant : DAINIPPON PRINTING CO LTD  
  
(22)Date of filing : 19.07.1991                      (72)Inventor : YAMADA KANEO  
                                                                         MACHINAGA YOUJI  
                                                                         NANJO KATSUYA  
                                                                         NOSE HIROAKI

(54) PLASTIC BLOW-MOLDED CONTAINER

(57)Abstract:

PURPOSE: To provide a plastic blow-molded container the bottom part of which is not deformed, and which can maintain a favorable self-standing property even when the internal pressure of the container rises or even under a high temperature exceeding a normal temperature.

CONSTITUTION: The subject container substantially has a cylindrical body 13, bottom part 14, and flange 11 which constitutes an



opening, and the bottom part 14 consists of a central recessed part 18 and an annular heel part 17 which surrounds the central recessed part 18. On a container wall surface at the central recessed part 18, a plurality of polygonal pyramid shaped recessed parts, of which the vertexes face inward, are formed in such a manner that they are continuously arranged annularly such as surrounding the central part of the central recessed part while sharing a part of the ridges, and an outer wall surface 16 of the heel part is a conical curved surface of which the diameter becomes smaller as it becomes lower.

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Translated: 05:50:52 JST 02/01/2013

Dictionary: Last updated 01/18/2013 / Priority:

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**FULL CONTENTS**

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**[Claim(s)]**

**[Claim 1]**A substantially cylindrical drum section.

A bottom part.

A flange which constitutes an opening.

In a plastic blow molding container provided with the above,

The aforementioned bottom part consists of a center recessed part and an annular heel section which encloses the aforementioned center recessed part, and, [ a container wall surface in the aforementioned center recessed part ] A plastic blow molding container which arranges annularly continuously, is formed so that a concave part of two or more shape of a polygonal pyramid which turned a vertex to an inner direction may share a part of the ridge line and may surround the central part of the aforementioned center recessed part, and is characterized by an external wall surface of the aforementioned heel section being a conical shape curved surface whose diameter is reduced caudad.

**[Claim 2]**A plastic blow molding container, wherein a polygonal-pyramid concave part of the above consisted of a concave part of two kinds of pyramid form and a concave part of the two aforementioned kinds of pyramid form has arranged annularly alternately in the plastic blow molding container according to claim 1.

**[Claim 3]**A plastic blow molding container, wherein an internal surface of the aforementioned heel section which follows the aforementioned center recessed part is a concave curve from a lower end part of the aforementioned heel section used as a grounding part in the plastic blow molding container according to claim 1 or 2.

**[Claim 4]**A plastic blow molding container, wherein a diameter reduction part is formed in the lower part of the aforementioned flange in the plastic blow molding container according to any one of claims 1 to 3.

**[Claim 5]**A plastic blow molding container, wherein the aforementioned container consists of polyethylene terephthalate in the plastic blow molding container according to any one of claims 1 to 4.

**[Claim 6]**A plastic blow molding container characterized by the aforementioned container being what cuts off the regio-oralis side of a primary blow molding object which carries out biaxial stretching blow molding of the parison in the plastic blow molding container according to any one of claims 1 to 5.

---

**[Detailed Description of the Invention]**

**[0001]**

**[Industrial Application]**In the present invention, a lid which consists of aluminum etc. especially is

rolled and fastened to a flange provided to an opening about a plastic blow molding container which has a flange shape opening of the substantially same path as a drum section. Therefore, it can be preferably used as a resisting pressure container, even if it carries out container-internal-pressure power largely, the bottom configurations do not change, but it is related with a plastic blow molding container which maintains good independence nature.

[0002]

[Description of the Prior Art]In recent years, the can made from a plastic (container) attracts attention as a substitute of a metal can. As shown in Fig.7, the can made from a plastic generally The cylindrical drum section 71, It consists of the blow molding container 7 made from a plastic which has the bottom part 72, the flange 73 which constitutes an opening, and the lower region 74 of a flange, and the metal lids 76, and the lid 76 is wound around the aforementioned flange 73 by the double seam 75, and is fastened, and a can is sealed.

[0003]By the way, since high internal pressure is applied to a container when using as containers, such as a carbonated drink and a tennis ball, it is necessary to give strength to a container. Since the orientation effect by biaxial stretching blow molding cannot expect the bottom part in particular of a container so much, deformation does not arise with high internal pressure, but it needs to be taken as the shape which can secure independence nature.

[0004]As a bottom part of such a blow molding container made from a plastic, as previously shown also in Fig.7, let the central part of the bottom part be the so-called bottom part of the champagne container mold shape which makes the circumference of this center recessed part an annular heel section as a concave in the upper part in many cases. [ however only by considering it as such shape simply according to research of the inventors ] When exposed for a long time under the elevated temperature which is 60-70 degrees C, for example beyond as for ordinary temperature when container internal pressure is large, it turned out that the concave part of a bottom part may be reversed, and it is not reversed, a bottom part also deforms \*\*, and independence nature may be impaired.

[0005]Therefore, even if the object of this invention carries out internal pressure of a container largely, it is providing the plastic blow molding container which a bottom part's cannot deform but can maintain good independence nature also under the elevated temperature beyond ordinary temperature.

[0006]

[Means for solving problem]In view of an aforementioned problem, as a result of research, intensively, [ the inventors ] While making shape of the bottom part of a container into the structure which consists of a center recessed part and an annular heel section which encloses the center recessed part fundamentally and making the external wall surface part of the heel section into the curved surface of conical shape, It found out that it could be considered as the container excellent in independence nature, without deformation arising in a container bottom even if it carries out container internal pressure largely if two or more concave parts of a specific structure are formed in the container wall surface which forms a center recessed part, and thought out to the present invention.

[0007][ namely the plastic blow molding container of the present invention which has substantially a cylindrical drum section, a bottom part, and a flange that constitutes an opening ] The aforementioned bottom part consists of a center recessed part and an annular heel section which encloses the aforementioned center recessed part, and, [ the container wall surface in the aforementioned center recessed part ] It arranges annularly continuously and is formed so that the concave part of two or more shape of a polygonal pyramid which turned the vertex to the inner direction may share a part of the ridge line and may surround the central part of the aforementioned center recessed part, and the external wall surface of the aforementioned heel section is a conical shape curved surface whose diameter is reduced caudad.

[0008]

[Working example]The present invention is described in detail with reference to an accompanying drawing below.

[0009]Fig.1 is a side view showing the blow molding container by one working example of the present invention. The blow molding container 1 serves as substantially the flange 11 formed in the open end, and the diameter reduction part 12 formed in the lower region of the flange 11 from the cylindrical drum section 13 and the bottom part 14.

[0010]The flange 11 formed in the open end serves as a part to which a cover material is attached so that it may mention later, and it is substantially extended vertically to the axial direction of a container. Since it is preferable to attach a cover material by double winding up when carrying out container internal pressure largely, this flange 11 is formed so that it may have the suitable thickness for double winding up, strength, and rigidity. Specifically, it is good to make the draw ratio in the flange 11 into four to 6 times. In less than 4 times, strength of the flange 11 cannot be deteriorated and a draw ratio cannot perform good double winding up. Since it will be closing in and rigidity will become too much largely on the other hand if the flange 11 is made into the draw ratio which exceeds 6 times, it is difficult to perform too good winding up.

[0011]Since the lower region of the flange 11 produces neither a crack nor deformation when a flange is rolled and fastened, it needs to improve rigid nature. For this reason, in this example, the diameter reduction part 12 is formed in the lower part of the flange 11, and the rigid nature near an opening is improved. The draw ratio in the diameter reduction part 12 is good to take 3 or more times for less than 6 times. Rigid nature with a sufficient draw ratio which can prevent the deformation at the time of thickness becoming thin too much, and rolling and fastening a flange when thickness became too much largely, elasticity was deteriorated in less than 3 times, and it was easy to produce a crack and the draw ratio was made into 6 or more times, etc. is not obtained. It is good to mold this diameter reduction part 12 into thickness from the drum section 13. The rigid nature of this portion improves more by this, and a crease and deformation of the opening at the time of sealing as a can can be prevented. By the opening state before winding up, an opening, especially the flange cannot receive deformation from outside easily, and transportation thru/or the handling in line feed become easy.

[0012]The drum section 13 has become cylindrical substantially and has the expanding part 15 into the portion immediately on the bottom part 14. The draw ratio of the drum section 13 is good to consider it as 6 or more times. It does not become a container which has sufficient resistance to pressure as a draw ratio is less than 6 times. Improvement in the mechanical strength by an orientation effect is not obtained so much, either, and is not preferable. A weight saving is not made, either. Although the expanding part 15 provided into the portion immediately on the bottom part 14 is formed for reinforcement, the path of this expanding part 15 is good to suppose that it is substantially the same as the outer diameter of the flange 11 provided to the opening. If it does in this way, it will enable the expanding part 15 to arrange and display two or more containers, without becoming obstructive.

[0013]The bottom part 14 consists of the center recessed part 18 and the annular heel section 17 which encloses this center recessed part 18. The external wall surface 16 of the heel section 17 is a conical shape curved surface whose diameter is reduced caudad.

A lower end part of the heel section 17 turns into the annular grounding part 19.

On the other hand, although the center recessed part 18 is mentioned later in detail, it is formed inside the annular grounding part 19.

It is a concave fundamentally in an inner direction.

Thus, the external wall surface 16 of the heel section 17 is not made into the shape where it expanded on the radial-direction outside, but if it is a conical shape curved surface whose diameter is reduced caudad slimly, when displaying two or more containers, it can arrange efficiently.

[0014]Fig.2 is the plan view which looked at the bottom part 14 of the container shown in Fig.1 from

the lower part along the axial direction, and Fig.3 is an A-O-B cross sectional view in Fig.2.

[0015]Although the lower end part of the heel section 17 turns into the annular grounding part 19 as above-mentioned, the internal surface 20 of this heel section 17 serves as a concave, and is in the center recessed part 18 continuously smoothly. Thus, if the internal surface 20 of the heel section 17 is made into the concave, even if it carries out container internal pressure largely, a center recessed part will not be reversed.

[0016]The concave part of the shape of two or more polygonal pyramid is continuously formed in the container wall in the center recessed part 18. In this example, as shown in Fig.2, the concave part of two kinds of pyramid form is formed continuously. That is, a first concave part is concave part abcd-e (and joint concave part with this), and this is a concave part which consists of a side surface of the pyramid (the vertex e is placed at the method of the inside of a container) which uses the quadrangle abcd as a bottom surface and sets a vertex to e. In this first concave part, the surface abe, the surface ade, the surface bce, and the surface dce are a plane (namely, triangle) substantially, respectively, and the ridgeline bc and the ridgeline dc are the portions which have come out of the container caudad. The portion of the ridgeline bad is placed at the lateral part of the center recessed part 18 so that a round shape may be drawn substantially.

[0017]A second concave part is concave part fghi-j (and joint concave part with this), and this is a concave part which consists of a side surface of the pyramid (the vertex j is placed at the method of the inside of a container) which uses the quadrangle fghi as a bottom surface and sets a vertex to j. In this second concave part, the surface fgi, the surface fij, the surface ghj, and the surface ihj are a plane (namely, triangle) substantially, respectively, and the ridgeline fg and the ridgeline fi are portions which overlap the ridgeline bc of a previous first concave part, and the ridgeline dc.

[0018]In the container of this example, the above-mentioned first concave part and the second concave part arranged continuously alternately, and have surrounded the center portion 21 of the bottom part so that Fig.2 may show. In [ so that Fig.2 and Fig.3 may show ] these bottom configurations, Since the container is arranged alternately circumferentially and the portion (portion which hits the line aec) which serves as a convex most in a first concave part in an inner direction, and the portion (portion which hits the line fjh) which serves as a convex most in a second protruding part in an inner direction are extending the line radiately, a container bottom will be reinforced isotropic. Since all the concave parts provided by the wall surface of the center recessed part 18 are the concave parts of the pyramid form which turned the peak to the inner direction as mentioned above, it is not outside reversed even if internal pressure is large.

[0019]Therefore, if it is the bottom structure which was mentioned above, even if it carries out internal pressure of a container largely, under the elevated temperature beyond ordinary temperature, the center recessed part 18 being reversed and the grounding part 19 will be distorted, and independence nature will not be impaired.

[0020]The portion (portion which is equivalent to the vertex j of a pyramid) which is placed at an inner direction most in a second protruding part is placed up along the axial direction of a container rather than the center section 21 of the center recessed part 18 so that Fig.3 may show. Therefore, when this container is used as the container for tennis balls, as shown in Fig.3, it will be easy to be settled and the tennis ball 22 will be \*\*\* (ed) in two or more ridgeline parts (line h-j and the same portion as it) of the concave part of second pyramid form.

[0021]Although it has structure which arranged alternately every eight of the first pyramid form concave part mentioned above and a second pyramid form concave part, respectively in this example, the present invention may change suitably the size and number not only of this but pyramid form concave parts. It is good also as a concave part which does not have to consider it as pyramid form as the concave part furthermore provided to the container wall of the center recessed part of a bottom part was mentioned above, and consists of side surfaces, such as six-sided a pentagonal pyramid, a pyramid, etc. It is good also as composition which combined six-sided a pyramid, a pentagonal pyramid, a pyramid, etc. suitably.

[0022]Next, it describes about the manufacturing method of the plastic blow molding container 1 mentioned above.

[0023]Fig.4 is a cross sectional view showing an example of the parison which can manufacture the plastic blow molding container of the present invention. The parison 4 has the regio oralis 41 which has a support-ring part (a in a figure), the drum section 42, and the bottom part 43.

[0024]In the drum section 42 of a parison, the diameter is expanded so that the subsequent drum section top portion 44 may have the same path as the regio oralis 41 in the regio oralis 41, and the lower part is the letter drum section 45 of diameter reduction so that Fig.4 may show. The thickness of a parison is thinned a little with the regio oralis 41 and the letter drum section 44 of diameter expansion (comparing with the letter drum section 45 of diameter reduction). It has become. This letter drum section 44 of diameter expansion is a part used as the expanding part formed under the regio oralis in the primary blow molding object (middle molded body) mentioned later.

[0025]The parison 4 is formed so that the thickness of the bottom part 43 may become thin slightly from the thickness of the drum section 42. The bottom part 43 can be cooled to a temperature lower than the drum section 42 by doing in this way. Therefore, a drum section can be extended by the vertical extension with the rod at the time of extension, without breaking through the bottom part 43.

[0026]In manufacture of a container, the parison 4 of the shape shown in Fig.4 with injection molding is formed first. Injection molding can be performed with a conventional method using the injection molding mold which has a cavity of the shape corresponding to the parison 4. After ejecting resin in a cavity at this time, it is good by quickly cooling an injection molding mold for more than that glass-transition temperature to cool the resin which constitutes a parison to the temperature below solidification temperature. Slushing a refrigerant into the passage provided in the mold or other means can perform quick cooling of an injection molding mold.

[0027]The parison 4 is taken out from an injection molding mold, and before the temperature of each part of the parison 4 becomes lower than glass-transition temperature, biaxial stretching blow molding is performed in the place where the temperature of each part of the parison 4 became [ more than glass-transition temperature of the used resin ] below in solidification temperature.

[0028]Fig.5 is a side view showing an example of the primary blow molding object acquired by carrying out biaxial stretching blow molding of the parison of Fig.4.

[0029]The primary blow molding object 5 becomes order from the regio oralis 51, the expanding part 52, the diameter reduction part 53, the drum section 54, and the bottom part 55 from a top.

[0030]In 4 or more-time extension in less than 6 times, and the diameter reduction part 53, in such a primary blow molding object, 3 or more-time extension in less than 6 times and the cylindrical drum section 54 are [ the regio oralis 51 (grasping part) / un-extending and the expanding part 52 / the Takanobu growth of 6 times or more and the bottom part 55 of the draw ratio of each part ] low extensions of 6 or less times.

[0031]What is necessary is to install using the parison of shape as shown in Fig.4, in the stretch-blow-molding type which has the cavity which carried out shape of the primary blow molding object, where the regio oralis of this parison is grasped to a regio-oralis type, and just to perform stretch blow molding with a conventional method, in order to consider it as such a draw ratio.

[0032]The letter drum section 44 of diameter expansion of the parison shown in Fig.4 is extended by this stretch blow molding, and the expanding part 52 of a primary blow molding object is formed by it.

[0033]It comes to extend the upper part [ in / in the diameter reduction part 53 of a primary blow molding object / the letter drum section 45 of diameter reduction of the parison of Fig.4 ] 45a. Since this portion 45a has become thicker than the letter drum section 44 of diameter expansion of a parison and the path of the portion corresponding to the diameter reduction part 52 of a blow molding die is small, the diameter reduction part 53 of a primary blow molding object becomes thick.

[0034]The drum section 54 is extended largely, is thin walled and, moreover, has big strength

according to an orientation effect. Since the bottom part of the parison is adjusted by temperature lower than a drum section, the direction of a drum section is easy to be extended, a drum section is extended sufficiently by this, and, on the other hand, a bottom part is not extended highly. The heel section 56 and the center recessed part 57 of the container bottom are formed in the bottom part 55 of the shape of the mold. The concave part of two or more pyramid form of the shape shown in Fig.2 is annularly formed in the container wall surface in the center recessed part 57 continuously. Formation of the concave part of this pyramid form can be attained by forming in the rugged form which carries out complementary [ of the bottom part type surface of a blow molding die ] to the shape shown in Fig.2.

[0035]ridgeline b-a-d of the bottom configurations shown in Fig.2 in the bottom part type of a blow molding die — if the vent is provided to the part corresponding to ..., the uneven shape provided to the center recessed part of a bottom part will be acquired clearly.

[0036]If stretch blow molding is performed using the mold which has a cavity of the shape of a primary blow molding object as shown in Fig.5 using the parison of shape as shown in Fig.4 as described above, A diameter reduction part is thicker than a drum section (portion used as the body part of a container), and a drum section is extended sufficiently, and a bottom part can manufacture a thick primary blow molding object.

[0037]If a primary blow molding object (middle molded body) as shown in Fig.5 is acquired, the bottom wall part (for example, position of C in Fig.5) of the expanding part of this primary blow molding object will be cut, and the blow molding container of the present invention as shown in Fig.1 will be obtained.

[0038]Thus, the blow molding container 1 obtained can be carried out to Fig.7 having been shown previously with the can made from a plastic which was excellent in sealing nature by giving a double seam with metal lids in the form where the flange 11 is incorporated, similarly.

[0039]Although the above description described the manufacturing method using the parison of shape as shown in Fig.4, not only this but the thing to manufacture using the bottomed cylindrical parison 6 which has the drum section 62 which consists of a single path substantially as shown, for example in Fig.6 is possible for the plastic blow molding container of the present invention. If the portion (b portion in Fig.6) applied to the upper end part of the drum section 62 from the regio oralis 61 of the parison 6 is made to be pressing inside hard at this time, the middle molded body which has an expanding part can be easily formed in the upper part as shown in Fig.5.

[0040]In the present invention, if it is thermoplastics in which stretch blow molding is possible as a plastic used as the raw material of a container, there will be no restriction in particular, but the thing of a polyester system is preferable.

[0041]As polyester resin, the thermoplastics consisting of saturation dicarboxylic acid and saturated dihydric alcohol can be used. Especially preferable polyester is polyethylene terephthalate which consists of terephthalic acid and ethylene glycol.

[0042]The thing which mixed heat resistant resin, barrier nature resin, etc., or the multilayered thing can also be used for the above-mentioned polyester resin.

[0043]In addition to this, a proper quantity of additive agents, such as stabilizer, paints, an antioxidant, a heat deterioration inhibitor, an ultraviolet-ray-degradation inhibitor, a spray for preventing static electricity, and an antimicrobial agent, and other resin can be added to the polyester resin used by the present invention.

[0044]The present invention is described still in detail according to the following specific working examples.

The parison shown in Fig.4 was created with injection molding using working-example 1 polyethylene terephthalate resin (the Mitsui Petrochemical Industries, Ltd. make, Mitsui pet J125). The shape and weight of the parison were as follows.

[0045]overall-height: — 127-mm regio-oralis: — the outer diameter of 36.5 mm, the letter drum section:outer diameter of inner diameter 32.5mm support-ring part:outer diameter 39mm diameter

expansion of 36.3 mm, and letter drum section: outer diameter of inner diameter 31.9 mm diameter reduction 25.8–26.8 mm inner diameter 18.2–19.6 mm bottom part: thickness 2.0 mm weight: 46.9 g

[0046] Primary blow molding object (overall height 240.2 mm, 88 mm of the maximum shell diameters) of shape as shown in Fig.5 after molding the parison of the above-mentioned shape It created. As a bottom part type of the stretch-blow-molding mold used at this time, what has the unevenness which carries out complementary to the uneven shape shown in Fig.2 was used for that surface.

[0047] Thus, about 5 times and a drum section were about 14.5 times, and when the acquired primary blow molding object was cut to the longitudinal direction and the draw ratio of each part was measured, a 5.5 times as much abbreviation and a diameter reduction part was [ the regio oralis / the bottom part of un-extending and an expanding part ] one to 6 times. The thickness of the drum section was 0.25 mm and the thickness of the lower region of a flange was 0.5 mm. The wall surface of the molded body in the center recessed part of a bottom part had become the shape shown in Fig.2 and Fig.3.

[0048] Next, the position of C shown in the Fig.5 of this primary blow molding object was circularly pierced with the punching blade, it separated and the blow molding container as shown in Fig.1 was obtained.

[0049] Thus, after putting a tennis ball into the obtained container, as the flange was involved in under application of pressure, it sealed by the double seam with metal lids.

[0050] Thus, the obtained can is internal pressure 1.2 Kg/cm<sup>2</sup> (gage pressure) Even if carried out largely, a bottom part did not deform, and it had good independence nature. It had independence nature, even if it saved 60–70 degrees C of things to which internal pressure was applied at 0.9 kg / cm<sup>2</sup>, and a room temperature and which carried out the filling seal of the tennis ball of four balls for 1 to 2 hours. While having sufficient sealing performance, even if it gives a double seam, a crack, deformation, etc. are not produced and it has the shock resistance which can be equal to practical use, and internal pressure-proof nature.

[0051]

[Effect of the Invention] As explained in full detail above, a blow molding container of the present invention makes the bottom configurations shape which can bear big internal pressure.

Independence nature is not impaired as a can made from a plastic which carried out container internal pressure largely.

Even if it gives a double seam by the flange in an opening, neither a crack nor damage arises, and it can be considered as the good can made from a plastic.

[0052] The container of such the present invention can be preferably used as resisting pressure containers of business, such as a carbonated drink and a tennis ball, by having metal cover materials.

[Brief Description of the Drawings]

[Drawing 1] It is a side view showing the plastic blow molding container by one working example of the present invention.

[Drawing 2] It is a plan view showing the bottom configurations of the plastic blow molding container of Fig.1.

[Drawing 3] It is an A–O–B cross sectional view of Fig.1.

[Drawing 4] It is a cross sectional view showing an example of the parison which can manufacture the plastic blow molding container of the present invention.

[Drawing 5] It is a side view showing an example of the middle molded body (primary blow molding object) acquired at the process of manufacturing the plastic blow molding container of the present invention.

[Drawing 6] It is a cross sectional view showing another example of the parison which can manufacture the plastic blow molding container of the present invention.

[Drawing 7] It is a cross sectional view showing an example of the plastic can using the conventional plastic blow molding container.

[Explanations of letters or numerals]

1 Plastic blow molding container

4 and 6 Parison

5 Primary blow molding object

7 Plastic canning

11 Flange

12 Diameter reduction part

13 Drum section

14 Bottom part

15 Expanding part

16 Heel section external wall surface

17 Heel section

18 Center recessed part

19 Grounding part

20 Heel section internal surface

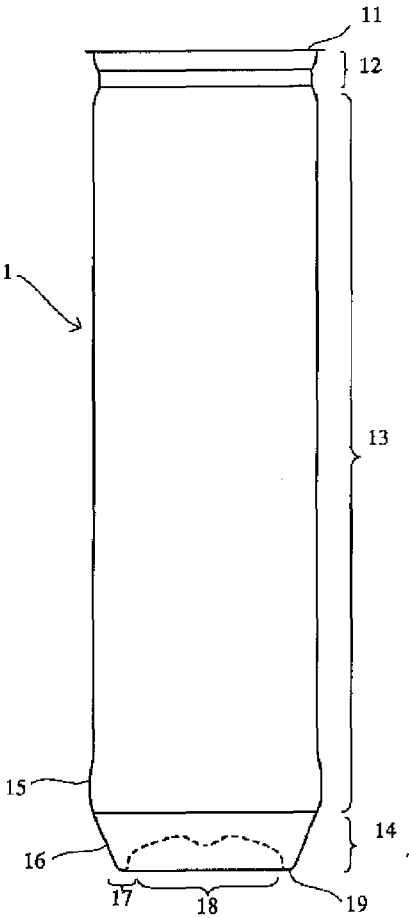
21 Bottom part center portion

75 Double seam

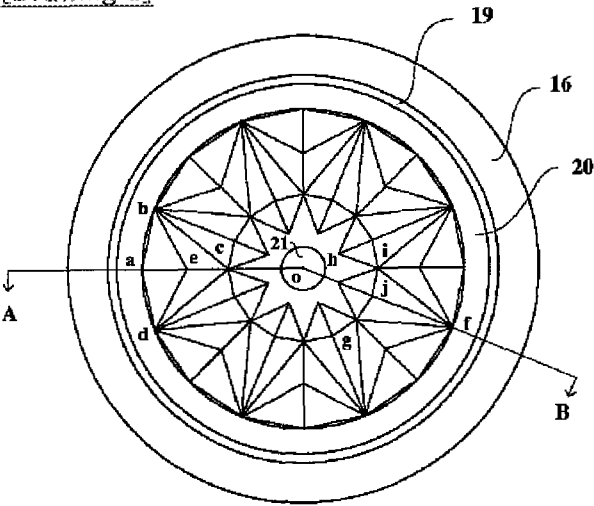
76 Metal lid

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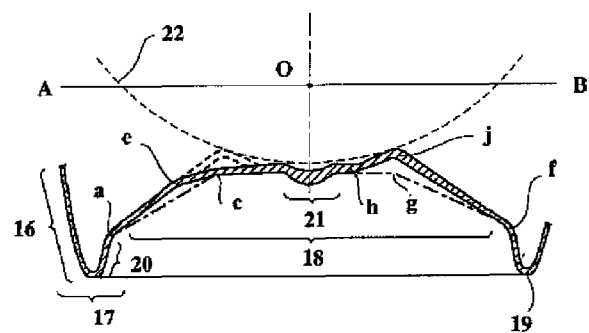
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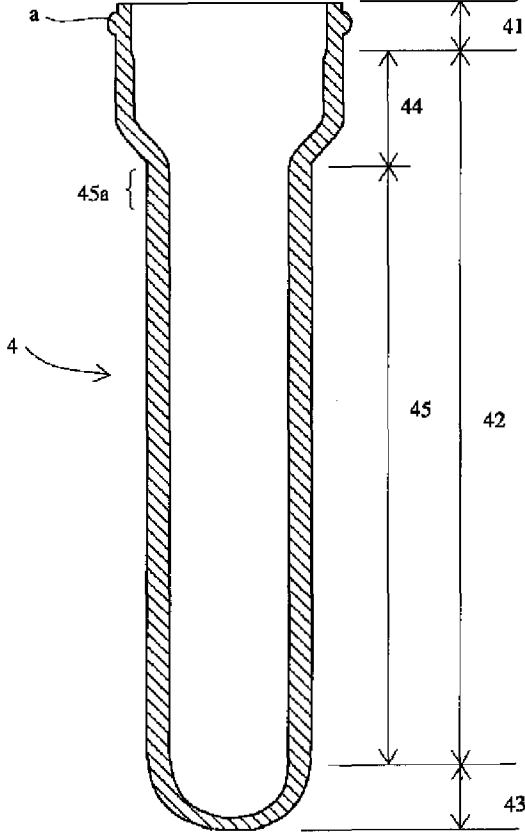
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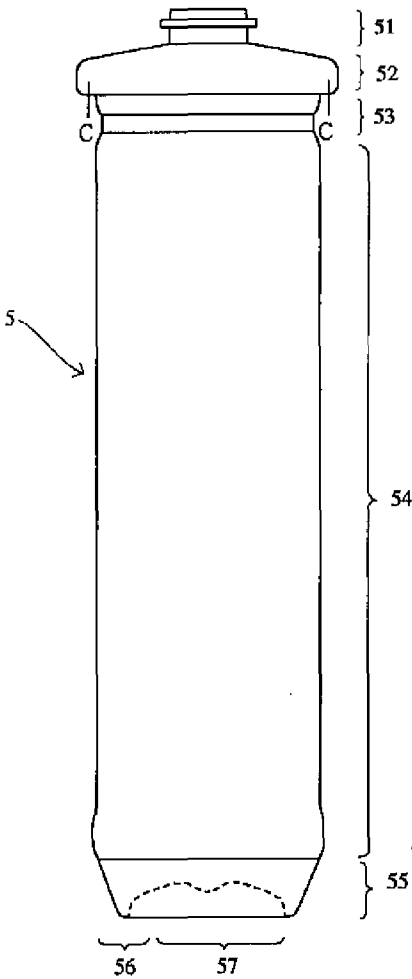
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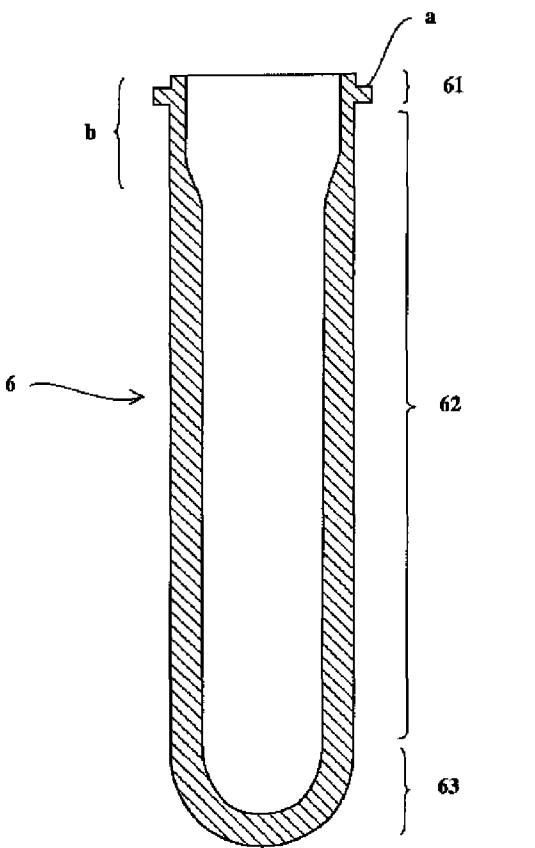
[Drawing 4]



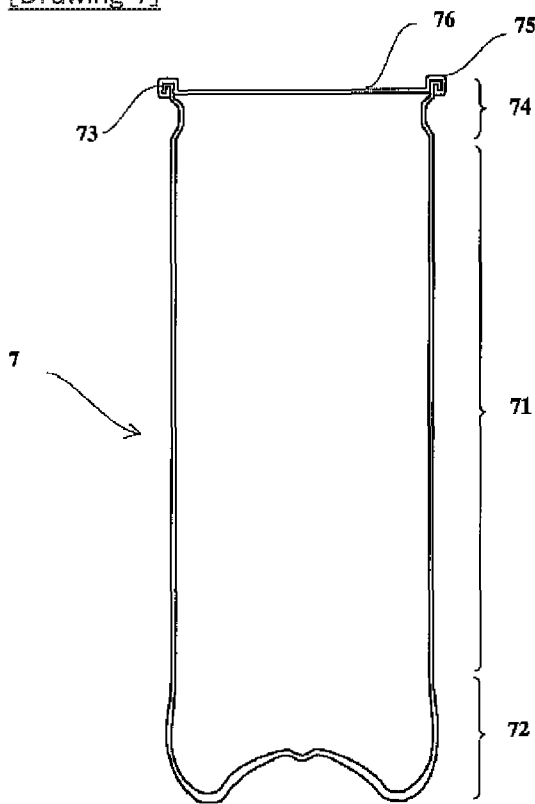
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]

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|----------|-----------------|---------|----------------------------------------------|
| (21)出願番号 | 特願平3-204895     | (71)出願人 | 000002897<br>大日本印刷株式会社<br>東京都新宿区市谷加賀町一丁目1番1号 |
| (22)出願日  | 平成3年(1991)7月19日 | (72)発明者 | 山田 務夫<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (72)発明者 | 待永 洋二<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (72)発明者 | 南條 克也<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (74)代理人 | 弁理士 高石 橋馬                                    |

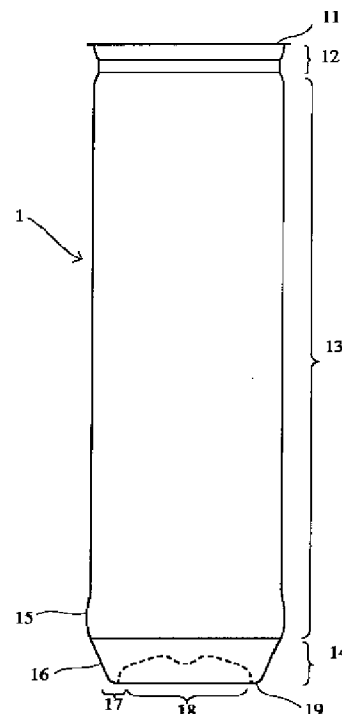
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(54)【発明の名称】 プラスチックブロー成形容器

(57)【要約】

【目的】 容器の内圧を大きくしても、また常温を超えた高温下でも、底部が変形せず、良好な自立性を維持することができるプラスチックブロー成形容器を提供する。

【構成】 実質的に円筒状の胴部13と、底部14と、開口部を構成するフランジ部11とを有し、底部14は中央凹部18と中央凹部18を取り囲む環状のヒール部17とからなり、中央凹部18における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して中央凹部の中心部を囲むように連続して環状に配列して形成されており、ヒール部の外壁面16は下方に縮径する円錐状曲面となっている。



## 【特許請求の範囲】

【請求項1】 実質的に円筒状の胴部と、底部と、開口部を構成するフランジ部とを有するプラスチックブロー成形容器において、前記底部は中央凹部と前記中央凹部を取り囲む環状のヒール部とからなり、前記中央凹部における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して前記中央凹部の中心部を囲むように連続して環状に配列して形成されており、前記ヒール部の外壁面は下方に縮径する円錐状曲面となっていることを特徴とするプラスチックブロー成形容器。

【請求項2】 請求項1に記載のプラスチックブロー成形容器において、前記多角錐状の凹部が二種類の四角錐状の凹部からなり、前記二種類の四角錐状の凹部が交互に環状に配列していることを特徴とするプラスチックブロー成形容器。

【請求項3】 請求項1又は2に記載のプラスチックブロー成形容器において、接地部となる前記ヒール部の下端部から前記中央凹部に連続する前記ヒール部の内壁面が、凹曲面となっていることを特徴とするプラスチックブロー成形容器。

【請求項4】 請求項1乃至3のいずれかに記載のプラスチックブロー成形容器において、前記フランジ部の下部に縮径部が形成されていることを特徴とするプラスチックブロー成形容器。

【請求項5】 請求項1乃至4のいずれかに記載のプラスチックブロー成形容器において、前記容器がポリエチレンテレフタレートからなることを特徴とするプラスチックブロー成形容器。

【請求項6】 請求項1乃至5のいずれかに記載のプラスチックブロー成形容器において、前記容器は、パリソンを二軸延伸ブロー成形してなる一次ブロー成形体の口部側を切り取ってなるものであることを特徴とするプラスチックブロー成形容器。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】本発明は、胴部とほぼ同じ径のフランジ状開口部を有するプラスチックブロー成形容器に関し、特に、アルミニウム等からなる蓋を開口部に設けたフランジに巻き締めることにより耐圧容器として好適に使用でき、容器内圧力を大きくしてもその底部形状が変化せず、良好な自立性を維持するプラスチックブロー成形容器に関する。

## 【0002】

【従来の技術及び発明が解決しようとする課題】近年、金属缶の代替品としてプラスチック製の缶（容器）が注目されている。プラスチック製の缶は、一般的には図7に示すように、円筒状の胴部71と、底部72と、開口部を構成するフランジ部73と、フランジの下部領域74とを有するプラスチック製ブロー成形容器7と、金属製の蓋76

とからなり、蓋76はダブルシーム75により前記フランジ部73に巻き締められ、缶は密封される。

【0003】ところで、炭酸飲料やテニスボール等の容器として用いる場合、容器には高い内部圧力がかかるので、容器に強度を付与する必要がある。特に、容器の底部は二軸延伸ブロー成形による延伸効果がそれほど期待できないので、高い内部圧力により変形が生じず、自立性を確保できる形状とする必要がある。

【0004】このようなプラスチック製ブロー成形容器の底部としては、先に図7にも示したように、底部の中央部を上方に凹状として、この中央凹部の周囲を環状のヒール部とするいわゆるシャンペン容器型形状の底部とすることが多い。ところが、本発明者らの研究によれば、単純にこのような形状とただけでは、容器内圧が大きい場合、常温以上、例えば60～70℃の高温下に長時間さらされた場合、底部の凹部が反転することがあったり、また反転せずとも底部が変形して自立性が損なわれたりすることがあることがわかった。

【0005】したがって、本発明の目的は、容器の内圧を大きくしても、また常温を超えた高温下でも、底部が変形せず、良好な自立性を維持することができるプラスチックブロー成形容器を提供することである。

## 【0006】

【課題を解決するための手段】上記課題に鑑み鋭意研究の結果、本発明者らは、基本的には容器の底部の形状を中央凹部とその中央凹部を取り囲む環状のヒール部とからなる構造とし、そのヒール部の外壁面を円錐状の曲面とするとともに、中央凹部を形成する容器壁面に特定の構造の複数の凹部を形成すれば、容器内圧を大きくしても容器底部に変形が生じることなく、自立性に優れた容器とすることができることを見出し、本発明に想到した。

【0007】すなわち、実質的に円筒状の胴部と、底部と、開口部を構成するフランジ部とを有する本発明のプラスチックブロー成形容器は、前記底部が中央凹部と前記中央凹部を取り囲む環状のヒール部とからなり、前記中央凹部における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して前記中央凹部の中心部を囲むように連続して環状に配列して形成されており、前記ヒール部の外壁面は下方に縮径する円錐状曲面となっていることを特徴とする。

## 【0008】

【実施例】以下本発明を添付図面を参照して詳細に説明する。

【0009】図1は本発明の一実施例によるブロー成形容器を示す側面図である。ブロー成形容器1は、開口端部に形成されたフランジ部11と、フランジ部11の下部領域に形成された縮径部12と、実質的に円筒状の胴部13と、底部14とからなる。

【0010】開口端部に形成されたフランジ部11は、

後述するように蓋材を取りつける部位となり、容器の軸線方向に対して実質的に垂直に延びている。容器内圧を大きくする場合には、蓋材の取付けを二重巻き締めにより行うのが好ましいので、このフランジ部11は二重巻き締めに適切な厚さ、強度、剛性を有するように形成される。具体的には、フランジ部11における延伸倍率を4〜6倍とするのがよい。延伸倍率が4倍未満ではフランジ部11の強度が低下し、良好な二重巻き締めを行うことができない。一方、フランジ部11を6倍を超す延伸倍率とすると、肉薄でかつ剛性が大きくなりすぎるので、やはり良好な巻き締めを行うことが難しい。

【0011】フランジ部11の下部領域は、フランジ部を巻き締めた際に、亀裂や変形等を生じないために、リジット性を向上させる必要がある。このため本実施例では、フランジ部11の下部に縮径部12を形成し、開口部付近のリジット性を向上させている。縮径部12における延伸倍率は3倍以上6倍未満とするのがよい。延伸倍率が3倍未満では、肉厚が大きくなり過ぎ、弾性が低下して亀裂が生じやすく、また延伸倍率を6倍以上とすると、肉厚が薄くなり過ぎてフランジ部を巻き締めた際の変形等を防止し得るだけの十分なリジット性が得られない。なお、この縮径部12を胴部13より肉厚に成形するのがよい。これによってこの部分のリジット性がより向上し、缶として密封する際の開口部の折れや変形が防止できる。また巻き締め前の開口状態で、開口部、特にフランジ部は、外部より変形を受けにくく、輸送、ないし、ライン送行中の取扱いが容易になる。

【0012】胴部13は実質的に円筒状となっており、底部14のすぐ上の部分に拡張部15を有する。胴部13の延伸倍率は6倍以上とするのがよい。延伸倍率が6倍未満であると、十分な耐圧性を有する容器とならない。また、延伸効果による機械的強度の向上もそれほど得られず好ましくない。更に軽量化もできない。なお、底部14のすぐ上の部分に設けた拡張部15は補強のために形成されているが、この拡張部15の径は開口部に設けたフランジ部11の外径とほぼ同じとするのがよい。このようにすると、拡張部15が邪魔にならずに複数の容器をそろえて陳列することが可能となる。

【0013】底部14は、中央凹部18と、この中央凹部18を取り囲む環状のヒール部17とからなる。ヒール部17の外壁面16は、下方に縮径する円錐状曲面となっており、ヒール部17の下端部が環状の接地部19となる。一方、中央凹部18は、詳しくは後述するが、環状の接地部19の内側に形成されており、基本的に内方に凹状となっている。このように、ヒール部17の外壁面16を径方向外側に膨張した形状とせず、スリムに下方に縮径する円錐状曲面とすると、複数の容器を陳列する際に効率よく並べることができる。

【0014】図2は図1に示す容器の底部14を軸線方向に沿って下方から眺めた平面図であり、図3は図2に

おけるA-O-B断面図である。

【0015】上述の通り、ヒール部17の下端部は環状の接地部19となるが、このヒール部17の内壁面20は凹状となっており、スムーズに中央凹部18に連続している。このようにヒール部17の内壁面20を凹状にしておくと、容器内圧を大きくしても中央凹部が反転するようなことはない。

【0016】中央凹部18における容器壁には、複数の多角錐状の凹部が連続して形成されている。本実施例においては、図2に示すように、二種類の四角錐状の凹部が連続して形成されている。すなわち、第一の凹部は凹部a b c d-e（及びこれと合同の凹部）であり、これは四角形a b c dを底面とし、頂点をeとする四角錐（頂点eが容器内方に位置する）の側面からなる凹部である。この第一の凹部において、面a b e、面a d e、面b c e、及び面d c eはそれぞれ実質的に平面（すなわち三角形）となっており、稜線b c、及び稜線d cが容器の下方に出ている部分である。なお稜線b a dの部分はほぼ円形を描くように中央凹部18の外側部に位置する。

【0017】また、第二の凹部は凹部f g h i-j（及びこれと合同の凹部）であり、これは四角形f g h iを底面とし、頂点をjとする四角錐（頂点jが容器内方に位置する）の側面からなる凹部である。この第二の凹部において、面f g j、面f i j、面g h j、及び面i h jはそれぞれ実質的に平面（すなわち三角形）となっており、稜線f g及び稜線f iは、先の第一の凹部の稜線b c及び稜線d cと重なり合う部分である。

【0018】図2からわかるように、本実施例の容器においては、上記した第一の凹部と第二の凹部とが交互に連続して配列し、底部の中央部分21を囲んでいる。また図2及び図3からわかるように、この底部形状においては、第一の凹部において最も内方に凸となる部分（線a e cに当たる部分）と、第二の凹部において最も内方に凸となる部分（線f j hに当たる部分）とが容器の周方向に交互に配列されており、かつ、その線は放射状に延びているので、容器底部を等方的に補強することになる。また、上述したように、中央凹部18の壁面に設けられる凹部はすべて頂点を内方に向けた四角錐状の凹部となっているので、内圧が大きくても外側に反転するようなことはない。

【0019】したがって、上述したような底部構造とすると、容器の内部圧力を大きくしても、また常温以上の高温下でも、中央凹部18が反転したりすることや接地部19が歪んで自立性が損なわれるようなことはない。

【0020】なお、図3からわかるように、第二の凹部において最も内方に位置する部分（四角錐の頂点jに当たる部分）は中央凹部18の中心部分21よりも容器の軸線方向に沿って上方に位置している。したがってこの容器をたとえばテニスボール用の容器とした場合、図3

に示すように、第二の四角錐状の凹部の複数の稜線部（線h-j及びそれと同一の部分）でテニスボール22を収まりよく承受することになる。

【0021】なお、本実施例では上述した第一の四角錐状凹部と第二の四角錐状凹部とをそれぞれ8個ずつ交互に配列した構造となっているが、本発明はこれに限らず四角錐状凹部の大きさ及び数を適宜変更してよい。さらに底部の中央凹部の容器壁に設ける凹部を上述したように四角錐状とする必要はなく、五角錐、六角錐等の側面からなるような凹部としてもよい。さらに、四角錐、五角錐、六角錐等を適宜組み合わせさせた構成としてもよい。

【0022】次に、上述したプラスチックブロー成形容器1の製造方法について説明する。

【0023】図4は本発明のプラスチックブロー成形容器を製造することができるパリソンの一例を示す断面図である。パリソン4はサポートリング部（図中のa）を有する口部41と、胴部42と、底部43とを有する。

【0024】図4からわかるように、パリソンの胴部42において、口部41に続く胴部上部分44は口部41と同様の径を有するように拡張しており、下部は縮径状胴部45となっている。また、パリソンの肉厚は口部41と拡張状胴部44では幾分薄め（縮径状胴部45に比して）となっている。この拡張状胴部44は、後述する一次ブロー成形体（中間成形体）において口部の下に形成される拡張部となる部位である。

【0025】またパリソン4は、その底部43の肉厚が胴部42の肉厚より、わずかに薄くなるように形成されている。このようにすることで底部43を胴部42より低い温度まで冷却することができる。したがって、延伸時のロッドによる縦延伸で、底部43を突き破ることなく胴部を延伸することができる。

【0026】容器の製造にあたっては、まず、射出成形により図4に示す形状のパリソン4を形成する。射出成形はパリソン4に対応する形状のキャビティを有する射出成形型を用いて常法により行なうことができる。このとき、樹脂をキャビティ内に射出した後に、射出成形型を急冷することによりパリソンを構成する樹脂をそのガラス転位温度以上固化温度以下の温度まで冷却するのがよい。なお射出成形型の急冷は、型内に設けられた通路に冷媒を流し込む等の手段により行なうことができる。

【0027】パリソン4の各部の温度が、用いた樹脂のガラス転位温度以上固化温度以下となったところで、パリソン4を射出成形型から取り出し、パリソン4の各部の温度がガラス転位温度より低くなる前に、二軸延伸ブロー成形を行なう。

【0028】図5は、図4のパリソンを二軸延伸ブロー成形することにより得られる一次ブロー成形体の一例を示す側面図である。

【0029】一次ブロー成形体5は、上から順に口部51と、拡張部52と、縮径部53と、胴部54と、底部55とから

なる。

【0030】このような一次ブロー成形体において、各部の延伸倍率は、口部（把持部）51が未延伸、拡張部52が4倍以上6倍未満の中延伸、縮径部53が3倍以上6倍未満の中延伸、円筒状の胴部54が6倍以上の高延伸、底部55が6倍以下の低延伸である。

【0031】このような延伸倍率とするためには、図4に示したような形状のパリソンを用い、一次ブロー成形体の形状をしたキャビティを有する延伸ブロー成形型内に、このパリソンの口部を口部型に把持した状態で設置し、常法により延伸ブロー成形を行えばよい。

【0032】この延伸ブロー成形により、図4に示すパリソンの拡張状胴部44が延伸されて一次ブロー成形体の拡張部52を形成する。

【0033】また一次ブロー成形体の縮径部53は、図4のパリソンの縮径状胴部45における上部分45aが延伸されてなる。この部分45aはパリソンの拡張状胴部44より肉厚となっており、またブロー成形金型の縮径部52に対応する部分の径が小さくなっているため、一次ブロー成形体の縮径部53は肉厚となる。

【0034】胴部54は大きく延伸されて薄肉で、しかも延伸効果により大きな強度を有するものとなる。なお、パリソンの底部は胴部よりも低い温度に調節されているため、胴部の方が延伸されやすく、これにより胴部は十分に延伸され、一方、底部は高度に延伸されない。なお、底部55には金型の形状によってヒール部56及び容器底部の中央凹部57が形成されている。また、中央凹部57における容器壁面には、図2に示す形状の複数の四角錐状の凹部が環状に連続して形成されている。この四角錐状の凹部の形成は、ブロー成形金型の底部型の表面を図2に示す形状に相補する凹凸状に形成しておくことで達成できる。

【0035】なお、ブロー成形金型の底部型において、図2に示す底部形状の稜線b-a-d・・・に対応する部位にエアイベントを設けておくと、底部の中央凹部に設ける凹凸形状がはっきりと得られる。

【0036】以上に説明したように、図4に示すような形状のパリソンを用い、図5に示すような一次ブロー成形体の形状のキャビティを有する金型を用いて延伸ブロー成形を行えば、縮径部が胴部（容器の本体部となる部分）より肉厚で、胴部が十分に延伸され、また底部が肉厚の一次ブロー成形体を製造することができる。

【0037】図5に示すような一次ブロー成形体（中間成形体）を得たならば、この一次ブロー成形体の拡張部の底壁部（例えば図5中のCの位置）を切断し、図1に示すような本発明のブロー成形容器を得る。

【0038】このようにして得られるブロー成形容器1は、さきに図7において示したと同様にして、フランジ部11を取り込むかたちで金属製の蓋によりダブルシームを施すことにより、密閉性の優れたプラスチック製の缶

とすることができる。

【0039】以上の説明では、図4に示すような形状のバリソンを用いた製造方法を述べたが、本発明のプラスチックブロー成形容器はこれに限らず、たとえば図6に示すような、実質的に単一の径からなる胴部62を有する有底円筒状のバリソン6を用いて製造することも可能である。このとき、バリソン6の口部61から胴部62の上端部にかけての部分(図6におけるb部分)を内側に肉薄となるようにしておけば、図5に示すような上部に拡張部を有する中間成形体を容易に形成することができる。

【0040】本発明において、容器の原料となるプラスチックとしては、延伸ブロー成形が可能な熱可塑性樹脂であれば特に制限はないが、ポリエステル系のものが好ましい。

【0041】ポリエステル樹脂としては、飽和ジカルボン酸と飽和二価アルコールとからなる熱可塑性樹脂が使用できる。特に好ましいポリエステルは、テレフタル酸とエチレングリコールとからなるポリエチレンテレフタレートである。

【0042】また上記ポリエステル樹脂に、耐熱性樹脂、バリアー性樹脂等を混合したもの、又は多層化したものも用いることができる。

【0043】なお本発明で使用するポリエステル樹脂には、その他、安定剤、顔料、酸化防止剤、熱劣化防止剤、紫外線劣化防止剤、帯電防止剤、抗菌剤等の添加剤やその他の樹脂を適量加えることができる。

【0044】本発明を以下の具体的実施例によりさらに詳細に説明する。

#### 実施例1

ポリエチレンテレフタレート樹脂(三井石油化学工業株式会社製、三井ペットJ125)を用い、図4に示すバリソンを射出成形により作成した。バリソンの形状及び重さは、以下の通りであった。

【0045】全高:127mm

口部:外径36.5mm、内径32.5mm

サポートリング部:外径39mm

拡張状胴部:外径36.3mm、内径31.9mm

縮径状胴部:外径25.8~26.8mm

内径18.2~19.6mm

底部:肉厚2.0mm

重量:46.9g

【0046】上記形状のバリソンを成形後、図5に示すような形状の一次ブロー成形体(全高240.2mm、最大胴径88mm)を作成した。なお、このとき使用した延伸ブロー成形金型の底部型としては、その表面に図2に示す凹凸形状に相補する凹凸を有するものを用いた。

【0047】このようにして得られた一次ブロー成形体を縦方向に切断して、その各部の延伸倍率を測定したところ、口部が未延伸、拡張部が約5.5倍、縮径部が約5

倍、胴部が約14.5倍、底部が1~6倍であった。また、胴部の厚みは0.25mmで、フランジの下部領域の厚みは0.5mmであった。さらに、底部の中央凹部における成形体の壁面は図2及び図3に示す形状となっていた。

【0048】次に、この一次ブロー成形体の図5に示すCの位置を打抜き刃で円形に打ち抜き、分離して、図1に示すようなブロー成形容器を得た。

【0049】このようにして得られた容器に、テニスボールを入れた後、加圧下において、フランジ部を巻き込むようにして金属製の蓋でダブルシームにより密閉した。

【0050】このようにして得られた缶は、内圧を1.2Kg/cm<sup>2</sup>(ゲージ圧)と大きくしても底部が変形することがなく、良好な自立性を有していた。また、0.9Kg/cm<sup>2</sup>、室温で内圧をかけ4球のテニスボールを充填シールしたものを60~70℃、1~2時間保存しても自立性を有していた。また、十分な密封性を有するとともに、ダブルシームを施しても、亀裂、変形等を生じることがなく、実用に耐えうる耐衝撃性、及び耐内圧性を有するものであった。

【0051】

【発明の効果】以上に詳述したように、本発明のブロー成形容器は、その底部形状を大きな内圧に耐えうる形状としており、容器内圧を大きくしたプラスチック製の缶としても自立性が損なわれない。また、開口部におけるフランジ部でダブルシームを施しても亀裂や破損が生じることなく、良好なプラスチック製の缶とすることができる。

【0052】このような本発明の容器は、金属製の蓋材を備えることにより炭酸飲料、テニスボール等用の耐圧容器として好適に使用することができる。

【図面の簡単な説明】

【図1】本発明の一実施例によるプラスチックブロー成形容器を示す側面図である。

【図2】図1のプラスチックブロー成形容器の底部形状を示す平面図である。

【図3】図1のA-O-B断面図である。

【図4】本発明のプラスチックブロー成形容器を製造することができるバリソンの一例を示す断面図である。

【図5】本発明のプラスチックブロー成形容器を製造する工程で得られる中間成形体(一次ブロー成形体)の一例を示す側面図である。

【図6】本発明のプラスチックブロー成形容器を製造することができるバリソンの別な例を示す断面図である。

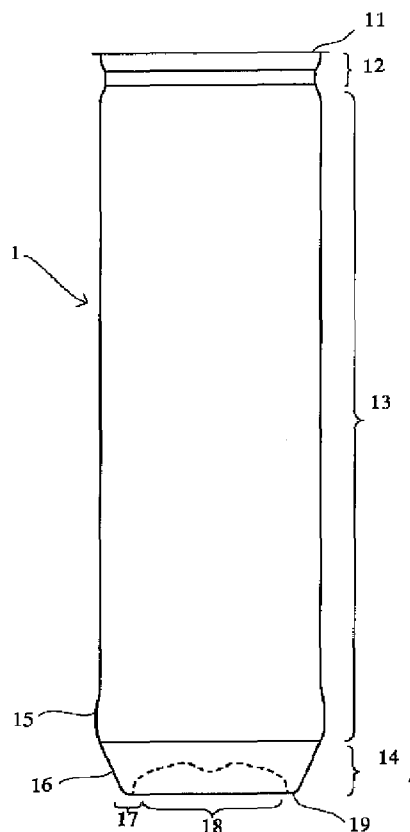
【図7】従来のプラスチックブロー成形容器を用いたプラスチック缶の一例を示す断面図である。

【符号の説明】

|     |               |
|-----|---------------|
| 1   | プラスチックブロー成形容器 |
| 4、6 | バリソン          |
| 5   | 一次ブロー成形体      |

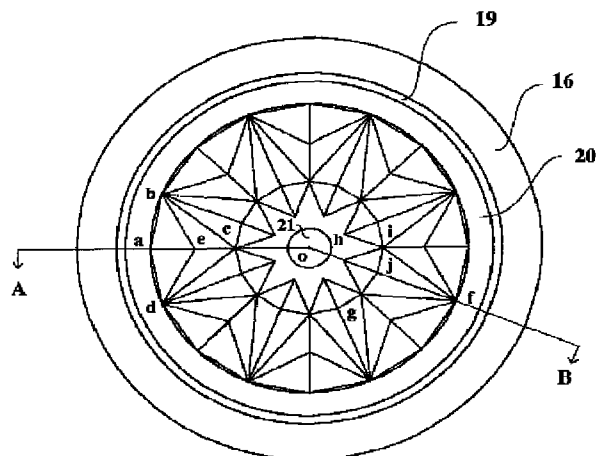
- 7 プラスチック製缶  
 11 フランジ部  
 12 縮径部  
 13 胴部  
 14 底部  
 15 拡径部  
 16 ヒール部外壁面

【図１】

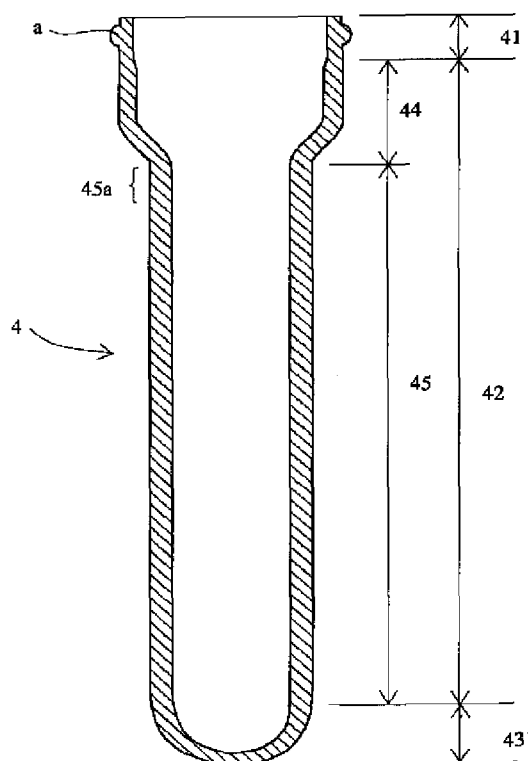


- 10 ヒール部  
 17 中央凹部  
 18 接地部  
 19 ヒール部内壁面  
 20 底部中央部分  
 21 ダブルシーム  
 75 金属製の蓋

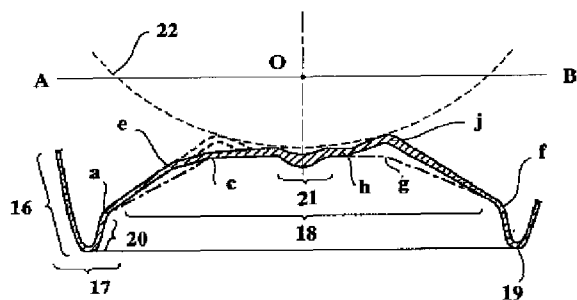
【図２】



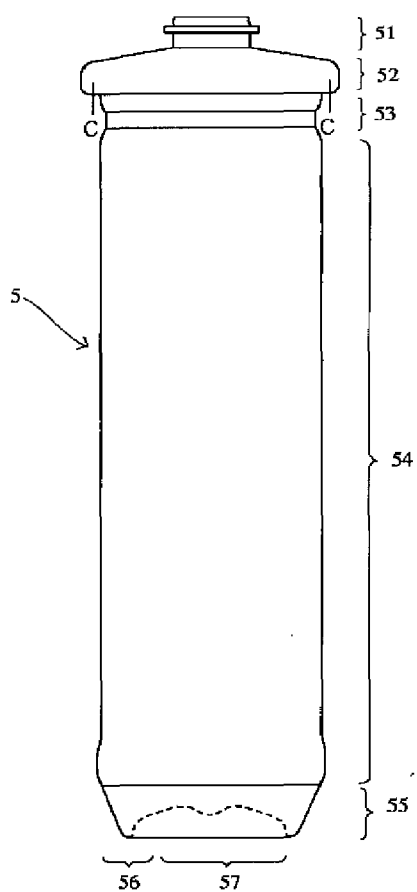
【図４】



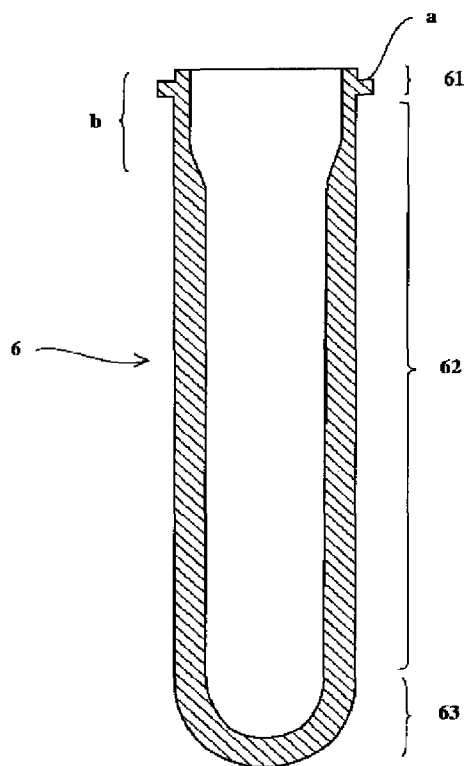
【図３】



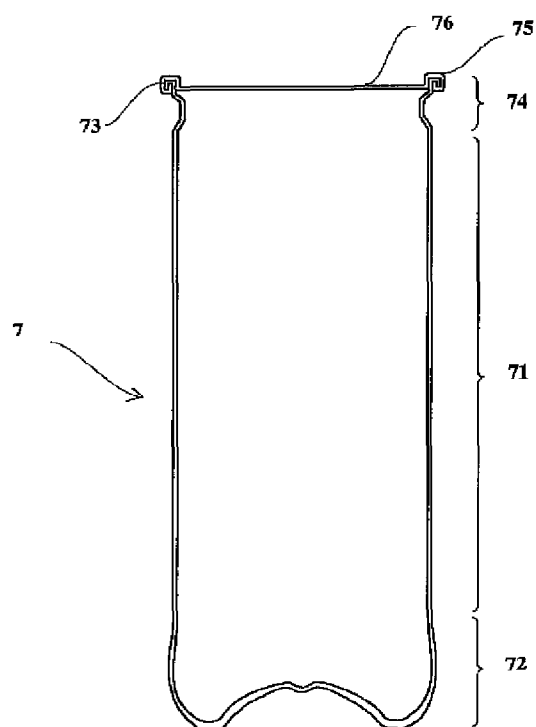
【図5】



【図6】



【図7】



フロントページの続き

(72)発明者 野瀬 宏明

東京都新宿区市谷加賀町一丁目1番1号

大日本印刷株式会社内



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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 29/824,813      | 01/27/2022  | Merrilee Kick        | 58822.US03          | 7973             |

27683 7590 07/06/2022  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue  
Suite 700  
Dallas, TX 75219

|          |
|----------|
| EXAMINER |
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STOUT, MICHAEL C

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2924

|                   |               |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

07/06/2022

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocketing@haynesboone.com

|                                                                              |                        |                     |                          |
|------------------------------------------------------------------------------|------------------------|---------------------|--------------------------|
| <b>Decision on Request for Expedited Examination of a Design Application</b> | <b>Application No.</b> | <b>Applicant(s)</b> |                          |
|                                                                              | 29/824,813             | Kick, Merrilee      |                          |
|                                                                              | <b>Examiner</b>        | <b>Art Unit</b>     | <b>AIA (FITF) Status</b> |
|                                                                              | BRANDON M ROSATI       | 2900                | No                       |

This decision is in response to the request for an expedited examination of Design Application filed 27 January 2022

☒ **Request GRANTED** - Your request under 37 CFR 1.155 has been considered and approved.

☐ **Other Comments:** \_\_\_\_\_

This decision is issued on behalf of and with authorization by the Director, Technology Center 2900. Any inquiry regarding this decision should be directed to the undersigned.

/Brandon M. Rosati/  
Management Quality Assurance Specialist  
*Supervisory Patent Examiner*  
*Technology Center 2900*  
Phone: (571)270-3536



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION<br>NUMBER | FILING or<br>371(c) DATE | GRP ART<br>UNIT | FIL FEE REC'D | ATTY. DOCKET NO | TOT CLAIMS | IND CLAIMS |
|-----------------------|--------------------------|-----------------|---------------|-----------------|------------|------------|
| 29/824,813            | 01/27/2022               | 2913            | 510           | 58822.5US03     | 1          | 1          |

CONFIRMATION NO. 7973

## FILING RECEIPT



0000000131505315

27683  
HAYNES AND BOONE, LLP  
IP Section  
2323 Victory Avenue  
Suite 700  
Dallas, TX 75219

Date Mailed: 02/01/2022

Receipt is acknowledged of this non-provisional design patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

**Please verify the accuracy of the data presented on this receipt.** If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

### Inventor(s)

Merrilee Kick, Plano, TX;

### Applicant(s)

Merrilee Kick, Plano, TX;

**Power of Attorney:** The patent practitioners associated with Customer Number 27683

### Domestic Priority data as claimed by applicant

This application is a CON of 16/800,195 02/25/2020  
which is a CON of 12/762,934 04/19/2010 PAT 10604296

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

**Permission to Access Application via Priority Document Exchange:** Yes

**Permission to Access Search Results:** Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

**If Required, Foreign Filing License Granted:** 01/31/2022

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 29/824,813**

**Projected Publication Date:** None, application is not eligible for pre-grant publication

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

Container

**Preliminary Class**

D09

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

**LICENSE FOR FOREIGN FILING UNDER**  
**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

## TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

|                        |               |
|------------------------|---------------|
| Application Number     | TBD           |
| Filing Date            | Herewith      |
| First Named Inventor   | Merrilee Kick |
| Title                  | CONTAINER     |
| Art Unit               | TBD           |
| Examiner Name          | TBD           |
| Attorney Docket Number | 58822.5US03   |

### SIGNATURE of Applicant or Patent Practitioner

|                                                    |                 |                     |                  |
|----------------------------------------------------|-----------------|---------------------|------------------|
| Signature                                          | /Alan N. Herda/ | Date (Optional)     | January 27, 2022 |
| Name                                               | Alan N. Herda   | Registration Number | 50,426           |
| Title (if Applicant is a juristic entity)          |                 |                     |                  |
| Applicant Name (if Applicant is a juristic entity) |                 |                     |                  |

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



\*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

**POWER OF ATTORNEY BY APPLICANT**

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number

Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

27683

OR



I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



The address associated with the above-mentioned Customer Number

OR



The address associated with Customer Number:

OR



Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):



Inventor or Joint Inventor (title not required below)



Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)



Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)



Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

**SIGNATURE of Applicant for Patent**

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Memlee Kick

Title

**NOTE:** Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.



Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

| Electronic Patent Application Fee Transmittal |          |                      |        |                      |
|-----------------------------------------------|----------|----------------------|--------|----------------------|
| Application Number:                           |          |                      |        |                      |
| Filing Date:                                  |          |                      |        |                      |
| Title of Invention:                           |          | CONTAINER            |        |                      |
| First Named Inventor/Applicant Name:          |          | Merrilee Kick        |        |                      |
| Filer:                                        |          | Alan Herda/Q Dismuke |        |                      |
| Attorney Docket Number:                       |          | 58822.5US03          |        |                      |
| Filed as Small Entity                         |          |                      |        |                      |
| Filing Fees for Design                        |          |                      |        |                      |
| Description                                   | Fee Code | Quantity             | Amount | Sub-Total in USD(\$) |
| Basic Filing:                                 |          |                      |        |                      |
| DESIGN APPLICATION FILING                     | 2012     | 1                    | 110    | 110                  |
| DESIGN OR DESIGN CPA SEARCH FEE               | 2112     | 1                    | 80     | 80                   |
| DESIGN OR DESIGN CPA EXAMINATION FEE          | 2312     | 1                    | 320    | 320                  |
| Pages:                                        |          |                      |        |                      |
| Claims:                                       |          |                      |        |                      |
| Miscellaneous-Filing:                         |          |                      |        |                      |
| REQUEST EXPEDITED EXAM OF DESIGN APPL         | 2802     | 1                    | 800    | 800                  |
| Petition:                                     |          |                      |        |                      |

| Description                       | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|-----------------------------------|----------|----------|--------|----------------------|
| Patent-Appeals-and-Interference:  |          |          |        |                      |
| Post-Allowance-and-Post-Issuance: |          |          |        |                      |
| Extension-of-Time:                |          |          |        |                      |
| Miscellaneous:                    |          |          |        |                      |
| Total in USD (\$)                 |          |          |        | 1310                 |

## Electronic Acknowledgement Receipt

|                                             |                      |
|---------------------------------------------|----------------------|
| <b>EFS ID:</b>                              | 44849322             |
| <b>Application Number:</b>                  | 29824813             |
| <b>International Application Number:</b>    |                      |
| <b>Confirmation Number:</b>                 | 7973                 |
| <b>Title of Invention:</b>                  | CONTAINER            |
| <b>First Named Inventor/Applicant Name:</b> | Merrilee Kick        |
| <b>Customer Number:</b>                     | 27683                |
| <b>Filer:</b>                               | Alan Herda/Q Dismuke |
| <b>Filer Authorized By:</b>                 | Alan Herda           |
| <b>Attorney Docket Number:</b>              | 58822.5US03          |
| <b>Receipt Date:</b>                        | 27-JAN-2022          |
| <b>Filing Date:</b>                         |                      |
| <b>Time Stamp:</b>                          | 11:59:01             |
| <b>Application Type:</b>                    | Design               |

### Payment information:

|                                          |                  |
|------------------------------------------|------------------|
| Submitted with Payment                   | yes              |
| Payment Type                             | CARD             |
| Payment was successfully received in RAM | \$ 1310          |
| RAM confirmation Number                  | E20221QC00210420 |
| Deposit Account                          | 081394           |
| Authorized User                          | Q Dismuke        |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

|                 |                                                     |                     |                                          |                  |                  |
|-----------------|-----------------------------------------------------|---------------------|------------------------------------------|------------------|------------------|
|                 |                                                     |                     |                                          |                  |                  |
| File Listing:   |                                                     |                     |                                          |                  |                  |
| Document Number | Document Description                                | File Name           | File Size(Bytes)/ Message Digest         | Multi Part /.zip | Pages (if appl.) |
| 1               | Req for Expedited Processing, Design Rocket Docket  | Request.pdf         | 1276673                                  | no               | 1                |
|                 |                                                     |                     | 7949c15dbbae0fea975f31bd86602c7ba8c8ea59 |                  |                  |
| Warnings:       |                                                     |                     |                                          |                  |                  |
| Information:    |                                                     |                     |                                          |                  |                  |
| 2               | Application Data Sheet                              | ADS.pdf             | 1255784                                  | no               | 8                |
|                 |                                                     |                     | e6cd95cc99f55aae390d15fbb6d00a5cb3e90b1b |                  |                  |
| Warnings:       |                                                     |                     |                                          |                  |                  |
| Information:    |                                                     |                     |                                          |                  |                  |
| 3               |                                                     | Application.pdf     | 93045                                    | yes              | 6                |
|                 |                                                     |                     | b064a9841575613e3a036ac847a490ff40f3b593 |                  |                  |
|                 | Multipart Description/PDF files in .zip description |                     |                                          |                  |                  |
|                 | Document Description                                |                     | Start                                    | End              |                  |
|                 | Specification                                       |                     | 1                                        | 2                |                  |
|                 | Claims                                              |                     | 3                                        | 3                |                  |
|                 | Drawings-other than black and white line drawings   |                     | 4                                        | 6                |                  |
| Warnings:       |                                                     |                     |                                          |                  |                  |
| Information:    |                                                     |                     |                                          |                  |                  |
| 4               | Oath or Declaration filed                           | Declaration.pdf     | 2606219                                  | no               | 1                |
|                 |                                                     |                     | 9e2d0a2f9bd302b2fd4da648fc14a1f75453d34b |                  |                  |
| Warnings:       |                                                     |                     |                                          |                  |                  |
| Information:    |                                                     |                     |                                          |                  |                  |
| 5               | Transmittal Letter                                  | IDS_Transmittal.pdf | 19195                                    | no               | 1                |
|                 |                                                     |                     | a6d85e3f0f4ac6475e75029564be26c5db5ae8d8 |                  |                  |

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| Warnings:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                   |                                          |    |    |
| Information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   |                                          |    |    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Information Disclosure Statement (IDS)<br>Form (SB08) | IDS.pdf           | 35135                                    | no | 2  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                   | 96905f3911181f4499d0edc064dfb3d14f8a25d4 |    |    |
| Warnings:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                   |                                          |    |    |
| Information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   |                                          |    |    |
| This is not an USPTO supplied IDS fillable form                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                   |                                          |    |    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Foreign Reference                                     | IDS_Reference.pdf | 2734869                                  | no | 23 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                   | 65581aa78d92d2da0e44df627f296ee7e8fe1a16 |    |    |
| Warnings:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                   |                                          |    |    |
| Information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   |                                          |    |    |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Power of Attorney                                     | POA.pdf           | 321039                                   | no | 2  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                   | b3451d0d6e1f2abb5243dcc7bd0096e1350c5067 |    |    |
| Warnings:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                   |                                          |    |    |
| Information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   |                                          |    |    |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Fee Worksheet (SB06)                                  | fee-info.pdf      | 45635                                    | no | 2  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |                   | 7975089cc083cb978274fef992ac541d96993cec |    |    |
| Warnings:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                       |                   |                                          |    |    |
| Information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   |                                          |    |    |
| Total Files Size (in bytes):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                   | 8387594                                  |    |    |
| <p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b><br/>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b><br/>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b><br/>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p> |                                                       |                   |                                          |    |    |

Doc Code: ROCKET

Document Description: Req for Expedited Processing, Design Rocket Docket

PTO/SB/27 (05-15)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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**REQUEST FOR EXPEDITED EXAMINATION  
OF A DESIGN APPLICATION  
(37 CFR 1.155)**

|                      |               |
|----------------------|---------------|
| Application Number   | TBD           |
| Filing Date          | Herewith      |
| First Named Inventor | Merrilee Kick |
| Title                | CONTAINER     |
| Atty Docket Number   | 58822.5US03   |

**ADDRESS TO:**

**MAIL STOP EXPEDITED DESIGN  
COMMISSIONER OF PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**This is a request for expedited examination of a design application under 37 CFR 1.155.**

NOTE: If the present form (PTO/SB/27) accompanies a new nonprovisional design application under 37 CFR 1.53(b), include form PTO/SB/18 "Design Patent Application Transmittal" or its equivalent. Do not include the present form (PTO/SB/27) on the date of filing a new international design application. For an international design application to qualify for expedited examination, 37 CFR 1.155(a)(1) provides that the international design application first must have been published by WIPO pursuant to Hague Agreement Article 10(3).

A preexamination search was conducted. The field of search was:

CPC: B65D 2501/00, 0009, 14, 24; B65D 1/10, 12, 14, 16, 165; B65D 17/28, 4012

US: 215/381-385; 220/269, 608, 660, 662, 669; D9/500, 503, 516, 518-520, 549, 574, 763-783

Locarno: 09/01

Related applications: 12/762,934; 16/800,195; 29/367,905; 29/479,398

The following items are required under 37 CFR 1.155:

- Drawings in compliance with 37 CFR 1.84, unless the design application is an international design application that designates the United States and was published by WIPO pursuant to Hague Agreement Article 10(3).
- The fee set forth in 37 CFR 1.17(k).
- An information disclosure statement in compliance with 37 CFR 1.98.

**Note:** The Office will not grant a request for expedited examination if all of the requirements of 37 CFR 1.155 are not satisfied. In addition, the Office will not examine an application that is not in a condition for examination (e.g., missing basic filing fee) even if the applicant files a request for expedited examination under 37 CFR 1.155.

/Alan N. Herda/

January 27, 2022

Signature

Date

Alan N. Herda

50,426

Typed or printed name

Registration Number, if applicable

214-651-5924

Telephone Number

**Warning: Information on this form may become public. Credit card information should not be included on this form.  
Provide credit card information and authorization on PTO-2038.**

This collection of information is required by 37 CFR 1.48. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                        |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           | Attorney Docket Number | 58822.5US03 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           | Application Number     |             |
| Title of Invention                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Container |                        |             |
| The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application. |           |                        |             |

**Secrecy Order 37 CFR 5.2:**

|                          |                                                                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.) |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Inventor Information:**

|                                                                                                                                      |            |                     |             |                      |
|--------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------|-------------|----------------------|
| Inventor                                                                                                                             | 1          | <div>Remove</div>   |             |                      |
| Legal Name                                                                                                                           |            |                     |             |                      |
| Prefix                                                                                                                               | Given Name | Middle Name         | Family Name | Suffix               |
|                                                                                                                                      | Merrilee   |                     | Kick        |                      |
| Residence Information (Select One) • US Residency Non US Residency Active US Military Service                                        |            |                     |             |                      |
| City                                                                                                                                 | Plano      | State/Province      | TX          | Country of Residence |
|                                                                                                                                      |            | US                  |             |                      |
| Mailing Address of Inventor:                                                                                                         |            |                     |             |                      |
| Address 1                                                                                                                            |            | 2114 McDaniel Drive |             |                      |
| Address 2                                                                                                                            |            |                     |             |                      |
| City                                                                                                                                 | Carrollton | State/Province      | TX          |                      |
| Postal Code                                                                                                                          | 75006      | Country             | US          |                      |
| All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. |            |                     |             |                      |
| <div>Add</div>                                                                                                                       |            |                     |             |                      |

**Correspondence Information:**

|                                                                                                                                       |                            |                      |                         |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------|-------------------------|
| Enter either Customer Number or complete the Correspondence Information section below.<br>For further information see 37 CFR 1.33(a). |                            |                      |                         |
| <input type="checkbox"/> An Address is being provided for the correspondence information of this application.                         |                            |                      |                         |
| Customer Number                                                                                                                       | 27683                      |                      |                         |
| Email Address                                                                                                                         | pdocketing@haynesboone.com | <div>Add Email</div> | <div>Remove Email</div> |

**Application Information:**

|                                         |                |                                           |                                     |
|-----------------------------------------|----------------|-------------------------------------------|-------------------------------------|
| Title of the Invention                  | Container      |                                           |                                     |
| Attorney Docket Number                  | 58822.5US03    | Small Entity Status Claimed               | <input checked="" type="checkbox"/> |
| Application Type                        | Nonprovisional |                                           |                                     |
| Subject Matter                          | Design         |                                           |                                     |
| Total Number of Drawing Sheets (if any) | 3              | Suggested Figure for Publication (if any) |                                     |

|                                           |           |                        |             |
|-------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |           | Attorney Docket Number | 58822.5US03 |
|                                           |           | Application Number     |             |
| Title of Invention                        | Container |                        |             |

## Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

|                                                        |                          |                                            |
|--------------------------------------------------------|--------------------------|--------------------------------------------|
| Application number of the previously filed application | Filing date (YYYY-MM-DD) | Intellectual Property Authority or Country |
|                                                        |                          |                                            |

## Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

## Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

|                    |                                                  |                                              |                                                         |
|--------------------|--------------------------------------------------|----------------------------------------------|---------------------------------------------------------|
| Please Select One: | <input checked="" type="radio"/> Customer Number | <input type="radio"/> US Patent Practitioner | <input type="radio"/> Limited Recognition (37 CFR 11.9) |
| Customer Number    | 27683                                            |                                              |                                                         |

## Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

|                          |                 |                          |                                    |
|--------------------------|-----------------|--------------------------|------------------------------------|
| Prior Application Status | Pending         | <a href="#">Remove</a>   |                                    |
| Application Number       | Continuity Type | Prior Application Number | Filing or 371(c) Date (YYYY-MM-DD) |
|                          | Continuation of | 16800195                 | 2020-02-25                         |

|                                                                                                                       |                 |                          |                          |               |                         |
|-----------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------|--------------------------|---------------|-------------------------|
| <b>Application Data Sheet 37 CFR 1.76</b>                                                                             |                 | Attorney Docket Number   |                          | 58822.5US03   |                         |
|                                                                                                                       |                 | Application Number       |                          |               |                         |
| Title of Invention                                                                                                    |                 | Container                |                          |               |                         |
| Prior Application Status                                                                                              |                 | Patented                 |                          | Remove        |                         |
| Application Number                                                                                                    | Continuity Type | Prior Application Number | Filing Date (YYYY-MM-DD) | Patent Number | Issue Date (YYYY-MM-DD) |
| 16800195                                                                                                              | Continuation of | 12762934                 | 2010-04-19               | 10604296      | 2020-03-31              |
| Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button. |                 |                          |                          |               | Add                     |

## Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>i</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

|                                                                                                        |                      |                          |                                          |
|--------------------------------------------------------------------------------------------------------|----------------------|--------------------------|------------------------------------------|
|                                                                                                        |                      |                          | Remove                                   |
| Application Number                                                                                     | Country <sup>i</sup> | Filing Date (YYYY-MM-DD) | Access Code <sup>i</sup> (if applicable) |
|                                                                                                        |                      |                          |                                          |
| Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button. |                      |                          | Add                                      |

## Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

- ☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
- NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

|                                           |           |                        |             |
|-------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |           | Attorney Docket Number | 58822.5US03 |
|                                           |           | Application Number     |             |
| Title of Invention                        | Container |                        |             |

## Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

**NOTE:** This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

### 1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

**A. Priority Document Exchange (PDX)** - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

**B. Search Results from U.S. Application to EPO** - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

### 2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

**NOTE:** Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

|                                           |           |                        |             |
|-------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |           | Attorney Docket Number | 58822.5US03 |
|                                           |           | Application Number     |             |
| Title of Invention                        | Container |                        |             |

## Applicant Information:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |                                                  |                |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------|----------------|------------------------|
| Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |                                                  |                |                        |
| <b>Applicant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1                                        |                                                  |                | <a href="#">Remove</a> |
| If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. |                                          |                                                  |                |                        |
| <a href="#">Clear</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                          |                                                  |                |                        |
| Assignee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Legal Representative under 35 U.S.C. 117 |                                                  | Joint Inventor |                        |
| Person to whom the inventor is obligated to assign.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          | Person who shows sufficient proprietary interest |                |                        |
| If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                                  |                |                        |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                          |                                                  |                |                        |
| Name of the Deceased or Legally Incapacitated Inventor: <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |                                                  |                |                        |
| If the Applicant is an Organization check here. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |                                                  |                |                        |
| Prefix                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Given Name                               | Middle Name                                      | Family Name    | Suffix                 |
| <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <div></div>                              |                                                  | <div></div>    | <div></div>            |
| <b>Mailing Address Information For Applicant:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                                  |                |                        |
| Address 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <div></div>                              |                                                  |                |                        |
| Address 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <div></div>                              |                                                  |                |                        |
| City                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <div></div>                              | State/Province                                   | <div></div>    |                        |
| Country                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <div></div>                              | Postal Code                                      | <div></div>    |                        |
| Phone Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <div></div>                              | Fax Number                                       | <div></div>    |                        |
| Email Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <div></div>                              |                                                  |                |                        |
| Additional Applicant Data may be generated within this form by selecting the Add button. <a href="#">Add</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                          |                                                  |                |                        |

## Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

|                                           |           |                        |             |
|-------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |           | Attorney Docket Number | 58822.5US03 |
|                                           |           | Application Number     |             |
| Title of Invention                        | Container |                        |             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                      |                      |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Assignee</b>   1                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |                      |                      |                      |
| Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication. |                      |                      |                      |                      |
| <input type="button" value="Remove"/>                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                      |                      |                      |
| If the Assignee or Non-Applicant Assignee is an Organization check here. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                      |                      |                      |                      |                      |
| Prefix                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Given Name           | Middle Name          | Family Name          | Suffix               |
| <input type="text"/>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <b>Mailing Address Information For Assignee including Non-Applicant Assignee:</b>                                                                                                                                                                                                                                                                                                                                                                      |                      |                      |                      |                      |
| Address 1                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <input type="text"/> |                      |                      |
| Address 2                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <input type="text"/> |                      |                      |
| City                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | State/Province       | <input type="text"/> |                      |
| Country <sup>i</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | Postal Code          | <input type="text"/> |                      |
| Phone Number                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="text"/> | Fax Number           | <input type="text"/> |                      |
| Email Address                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="text"/> |                      |                      |                      |
| Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. <input type="button" value="Add"/>                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |           |       |                     |                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|-------|---------------------|---------------------------------------|
| <b>Signature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |           |       |                     | <input type="button" value="Remove"/> |
| <b>NOTE:</b> This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the <b>INITIAL</b> filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).                                                                                             |                 |           |       |                     |                                       |
| This Application Data Sheet <b>must</b> be signed by a patent practitioner if one or more of the applicants is a <b>juristic entity</b> (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, <b>all</b> joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of <b>all</b> joint inventor-applicants. |                 |           |       |                     |                                       |
| See 37 CFR 1.4(d) for the manner of making signatures and certifications.                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |           |       |                     |                                       |
| Signature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | /Alan N. Herda/ |           |       | Date (YYYY-MM-DD)   | 2022-01-27                            |
| First Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Alan N.         | Last Name | Herda | Registration Number | 50426                                 |
| Additional Signature may be generated within this form by selecting the Add button. <input type="button" value="Add"/>                                                                                                                                                                                                                                                                                                                                                                                |                 |           |       |                     |                                       |

|                                           |           |                        |             |
|-------------------------------------------|-----------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |           | Attorney Docket Number | 58822.5US03 |
|                                           |           | Application Number     |             |
| Title of Invention                        | Container |                        |             |

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

Merrilee Kick requests that a Design Letters Patent be granted for the new and original design for a CONTAINER as set forth in the following specification.

**Specification**

I, Merrilee Kick, have invented a new, original design for a CONTAINER, of which the following is a specification, reference being made to the accompanying drawings forming a part hereof.

**Cross-Reference to Related Applications**

This application is a continuation of U.S. Application No. 16/800,195, filed February 25, 2020 bearing Attorney Docket No. 58822.5US02, which is a continuation of U.S. Application No. 12/762,934, filed April 19, 2010 bearing Attorney Docket No. 58822.5US01, the entire disclosures of which are hereby incorporated herein by reference.

**Description**

Figure 1 is a side view of a CONTAINER showing my new design;

Figure 2 is a top view thereof; and

Figure 3 is a bottom view thereof.

The broken lines in Figures 1-3 illustrate unclaimed portions of the CONTAINER and form no part of the design sought to be patented.

**What is claimed is:**

The ornamental design for a CONTAINER as shown and described.

*1/3*

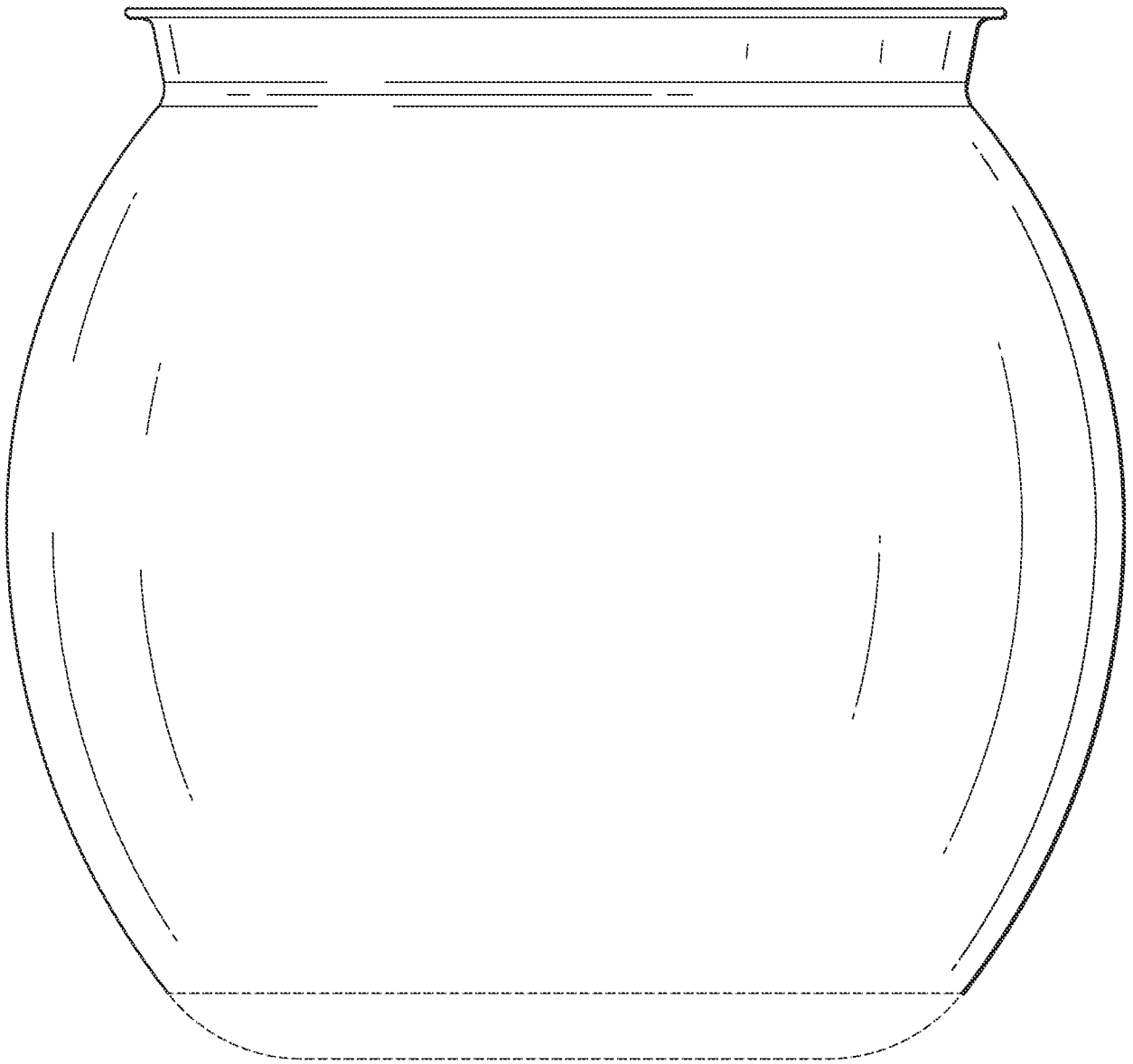


**FIG. 1**

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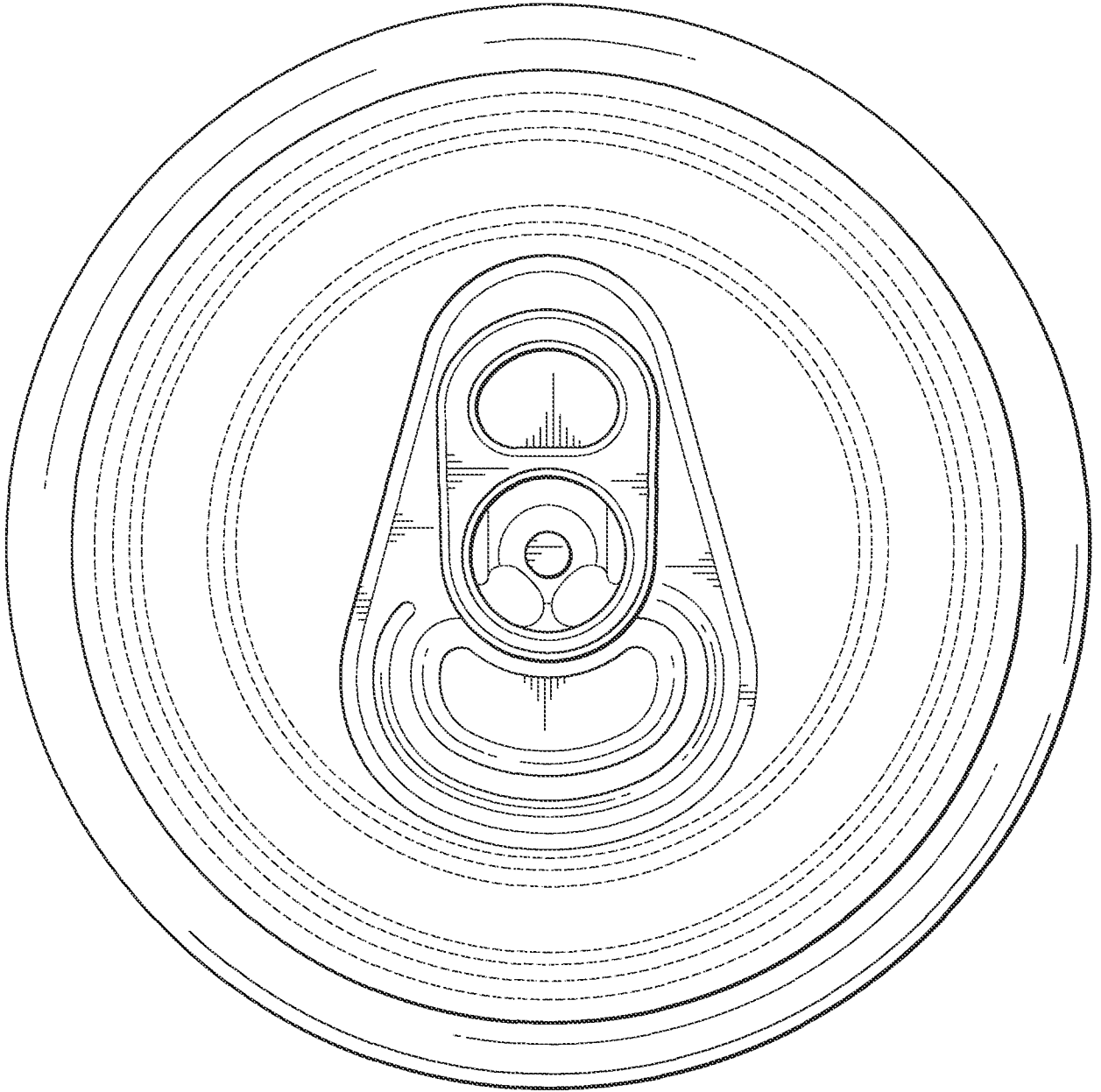


FIG. 2

3/3

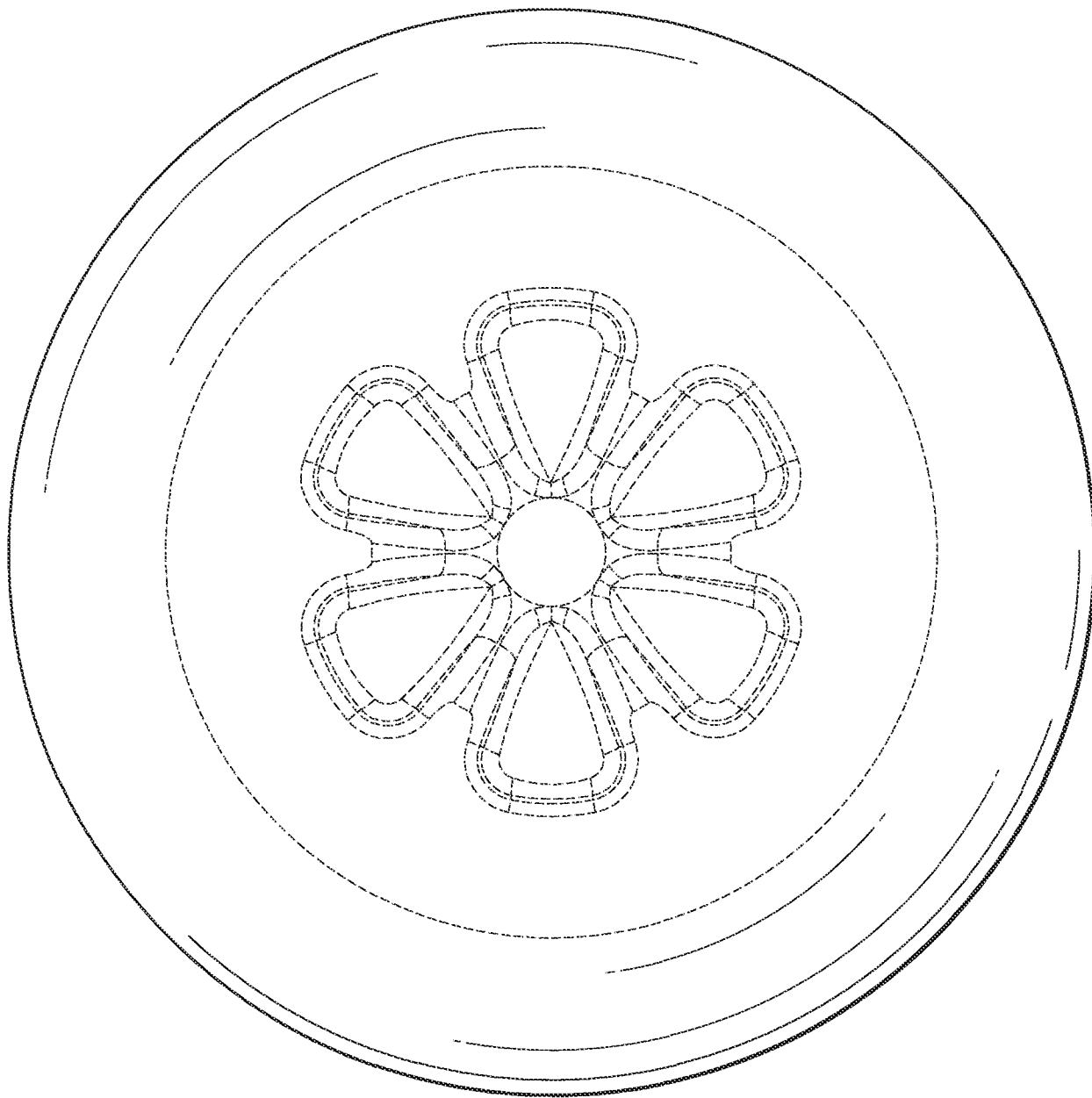


FIG. 3

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN  
APPLICATION DATA SHEET (37 CFR 1.76)**

|                       |           |
|-----------------------|-----------|
| Title of<br>Invention | Container |
|-----------------------|-----------|

As the below named inventor, I hereby declare that:

This declaration is directed to: ☐ The attached application, or  
☒ United States application or PCT international application number 16/800,195  
filed on February 25, 2020

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

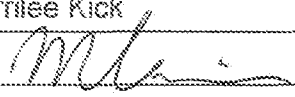
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

**LEGAL NAME OF INVENTOR**

Inventor: Merrilee Kick Date (Optional): \_\_\_\_\_

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

|                            |   |                                    |
|----------------------------|---|------------------------------------|
| In re application of:      | § |                                    |
| Merrilee Kick              | § | Confirmation No.: Not yet assigned |
|                            | § |                                    |
| Appl. No. Not yet assigned | § | Group Art Unit: Not yet assigned   |
|                            | § |                                    |
| Filed: Herewith            | § | Examiner: Not yet assigned         |
|                            | § |                                    |
| For: Container             | § |                                    |

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

In compliance with the duty of disclosure under 37 CFR §1.56, and in accordance with the practice under 37 CFR §1.97 and §1.98, the Examiner's attention is directed to the documents listed on the enclosed modified Form PTO-1449. No inference should be made that the cited references are in fact material, are in fact prior art, or that no better art exists. Pursuant to 37 CFR § 1.98(a)(2)(i), copies of the U.S. patent documents listed on the enclosed modified Form PTO-1449 are not attached.

This Information Disclosure Statement is being filed within three months of the United States filing date or before the mailing date of a first Office Action on the merits. No certification or fee is required (37 CFR 1.97(b)).

The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to Deposit Account No. 08-1394. It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed modified Form PTO-1449 be returned indicating that such information has been considered.

Respectfully submitted,

/Alan N. Herda/

Alan N. Herda  
Registration No. 50,426

Date: January 27, 2022  
HAYNES AND BOONE, LLP  
2323 Victory Ave., Suite 700  
Dallas, Texas 75219  
Telephone: 214-651-5924  
IP Facsimile: 214-200-0853

|                                                                                                                                             |   |                                                             |   |                                        |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------------|---|----------------------------------------|--|
| In place of<br>PTO-1449<br>Form<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(use as many sheets as necessary)</i> |   | U. S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |   | Complete if Known                      |  |
|                                                                                                                                             |   | Application Number                                          |   | TBD                                    |  |
|                                                                                                                                             |   | Filing Date                                                 |   | Herewith                               |  |
|                                                                                                                                             |   | Applicant(s)                                                |   | KICK, Merrilee                         |  |
|                                                                                                                                             |   | Art Unit                                                    |   | TBD                                    |  |
|                                                                                                                                             |   | Examiner Name                                               |   | TBD                                    |  |
| SHEET                                                                                                                                       | 1 | OF                                                          | 2 | Attorney Docket Number 58822.00005US03 |  |

| U. S. PATENT DOCUMENTS |          |                 |                                |                                                 |
|------------------------|----------|-----------------|--------------------------------|-------------------------------------------------|
| Examiner's Initials    | Cite No. | Document Number | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |
|                        | A1       | 10,604,296      | 03-31-2020                     | Kick                                            |
|                        | A2       | D703,068        | 04-22-2014                     | Kick                                            |
|                        | A3       | D732,978        | 06-30-2015                     | Kick                                            |
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|                        | A5       | D699,578        | 02-18-2014                     | Marina et al.                                   |
|                        | A6       | D701,767        | 04-01-2014                     | Marina et al.                                   |
|                        | A7       | D49,555         | 08-22-1916                     | Vivaudou                                        |
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|                        | A22      | 7,051,892       | 05-30-2006                     | O'Day                                           |
|                        | A23      | D565,413        | 04-01-2008                     | Honkawa et al.                                  |
|                        | A24      | D596,489        | 07-21-2009                     | Weiss                                           |
|                        | A25      | D606,404        | 12-22-2009                     | Diss                                            |
|                        | A27      | D606,405        | 12-22-2009                     | Takata et al.                                   |
|                        | A28      | D612,732        | 03-30-2010                     | Takata et al.                                   |
|                        | A29      | D614,971        | 05-04-2010                     | Millspaw et al.                                 |
|                        | A30      | 7,731,053       | 06-08-2010                     | Ivey                                            |
|                        | A31      | D634,635        | 03-22-2011                     | Araujo et al.                                   |
|                        | A32      | D650,280        | 12-13-2011                     | de Peyerimhoff et al.                           |
|                        | A33      | D663,619        | 07-17-2012                     | Pillet                                          |
|                        | A34      | D675,528        | 02-05-2013                     | Beaver                                          |
|                        | A35      | D703,068        | 04-22-2014                     | Kick                                            |
|                        | A36      | D704,567        | 05-13-2014                     | Sanders                                         |
|                        | A37      | D711,247        | 08-19-2014                     | Sanders                                         |
|                        |          |                 |                                |                                                 |
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| Examiner Signature | Date Considered |
|--------------------|-----------------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

|                                                                                                      |   |                                                             |   |                        |                 |
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| In place of<br>PTO-1449<br>Form                                                                      |   | U. S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |   | Complete if Known      |                 |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(use as many sheets as necessary)</i> |   |                                                             |   | Application Number     | TBD             |
|                                                                                                      |   |                                                             |   | Filing Date            | Herewith        |
|                                                                                                      |   |                                                             |   | Applicant(s)           | KICK, Merrilee  |
|                                                                                                      |   |                                                             |   | Art Unit               | TBD             |
|                                                                                                      |   |                                                             |   | Examiner Name          | TBD             |
| SHEET                                                                                                | 2 | OF                                                          | 2 | Attorney Docket Number | 58822.00005US03 |

| U. S. PATENT APPLICATION PUBLICATIONS |             |                                                                                                                                                                              |                                |                                                 |                    |
|---------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------|--------------------|
| Examiner's<br>Initials                | Cite<br>No. | Document Number                                                                                                                                                              | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |                    |
|                                       | B1          | 20200262601                                                                                                                                                                  | 08-20-2020                     | Kick                                            |                    |
|                                       | B2          | 20150344177                                                                                                                                                                  | 12-03-2015                     | Kick                                            |                    |
|                                       | B3          | 20140061328                                                                                                                                                                  | 03-2014                        | Haymond                                         |                    |
| FOREIGN PATENT DOCUMENTS              |             |                                                                                                                                                                              |                                |                                                 |                    |
| Examiner's<br>Initials                | Cite<br>No. | Foreign Patent<br>Document<br><small>(Country Code - Number - Kind)</small>                                                                                                  | Publication Date<br>MM-DD-YYYY | Patentee or Applicant of Cited<br>Document      | Translation<br>Y/N |
|                                       | C1          | JP 02032248                                                                                                                                                                  | 02-1990                        | OGAWA et al.                                    |                    |
|                                       |             |                                                                                                                                                                              |                                |                                                 |                    |
| NON-PATENT LITERATURE DOCUMENTS       |             |                                                                                                                                                                              |                                |                                                 |                    |
| Examiner's<br>Initials                | Cite<br>No. | Include name of the author (in CAPITAL LETTERS), title of the article, title of the item, date, page(s), volume-<br>issue number(s), publisher, city/country where published |                                |                                                 |                    |
|                                       |             |                                                                                                                                                                              |                                |                                                 |                    |
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|                       |                    |
|-----------------------|--------------------|
| Examiner<br>Signature | Date<br>Considered |
|-----------------------|--------------------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

(19)日本国特許庁 (J P)

(12) 公 開 特 許 公 報 (A)

(11)特許出願公開番号

特開平5-32248

(43)公開日 平成5年(1993)2月9日

| (51)Int.Cl. <sup>5</sup> | 識別記号 | 庁内整理番号  | F I | 技術表示箇所 |
|--------------------------|------|---------|-----|--------|
| B 6 5 D 1/02             | C    | 7445-3E |     |        |
| 1/16                     |      | 7445-3E |     |        |
| 81/20                    | Z    | 7191-3E |     |        |

審査請求 未請求 請求項の数6(全 8 頁)

|          |                 |         |                                              |
|----------|-----------------|---------|----------------------------------------------|
| (21)出願番号 | 特願平3-204895     | (71)出願人 | 000002897<br>大日本印刷株式会社<br>東京都新宿区市谷加賀町一丁目1番1号 |
| (22)出願日  | 平成3年(1991)7月19日 | (72)発明者 | 山田 務夫<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (72)発明者 | 待永 洋二<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (72)発明者 | 南條 克也<br>東京都新宿区市谷加賀町一丁目1番1号<br>大日本印刷株式会社内    |
|          |                 | (74)代理人 | 弁理士 高石 橋馬                                    |

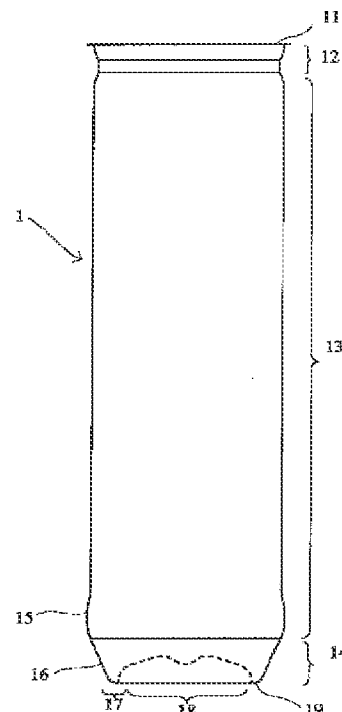
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(54)【発明の名称】 プラスチックブロー成形容器

(57)【要約】

【目的】 容器の内圧を大きくしても、また常温を超えた高温下でも、底部が変形せず、良好な自立性を維持することができるプラスチックブロー成形容器を提供する。

【構成】 実質的に円筒状の胴部13と、底部14と、開口部を構成するフランジ部11とを有し、底部14は中央凹部18と中央凹部18を取り囲む環状のヒール部17とからなり、中央凹部18における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して中央凹部の中心部を囲むように連続して環状に配列して形成されており、ヒール部の外壁面16は下方に縮径する円錐状曲面となっている。



## 【特許請求の範囲】

【請求項1】 実質的に円筒状の胴部と、底部と、開口部を構成するフランジ部とを有するプラスチックブロー成形容器において、前記底部は中央凹部と前記中央凹部を取り囲む環状のヒール部とからなり、前記中央凹部における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して前記中央凹部の中心部を囲むように連続して環状に配列して形成されており、前記ヒール部の外壁面は下方に縮径する円錐状曲面となっていることを特徴とするプラスチックブロー成形容器。

【請求項2】 請求項1に記載のプラスチックブロー成形容器において、前記多角錐状の凹部が二種類の四角錐状の凹部からなり、前記二種類の四角錐状の凹部が交互に環状に配列していることを特徴とするプラスチックブロー成形容器。

【請求項3】 請求項1又は2に記載のプラスチックブロー成形容器において、接地部となる前記ヒール部の下端部から前記中央凹部に連続する前記ヒール部の内壁面が、凹曲面となっていることを特徴とするプラスチックブロー成形容器。

【請求項4】 請求項1乃至3のいずれかに記載のプラスチックブロー成形容器において、前記フランジ部の下部に縮径部が形成されていることを特徴とするプラスチックブロー成形容器。

【請求項5】 請求項1乃至4のいずれかに記載のプラスチックブロー成形容器において、前記容器がポリエチレンテレフタレートからなることを特徴とするプラスチックブロー成形容器。

【請求項6】 請求項1乃至5のいずれかに記載のプラスチックブロー成形容器において、前記容器は、バリソンを二軸延伸ブロー成形してなる一次ブロー成形体の口部側を切り取ってなるものであることを特徴とするプラスチックブロー成形容器。

## 【発明の詳細な説明】

## 【0001】

【産業上の利用分野】本発明は、胴部とほぼ同じ径のフランジ状開口部を有するプラスチックブロー成形容器に関し、特に、アルミニウム等からなる蓋を開口部に設けたフランジに巻き締めることにより耐圧容器として好適に使用でき、容器内圧力を大きくしてもその底部形状が変化せず、良好な自立性を維持するプラスチックブロー成形容器に関する。

## 【0002】

【従来の技術及び発明が解決しようとする課題】近年、金属缶の代替品としてプラスチック製の缶（容器）が注目されている。プラスチック製の缶は、一般的には図7に示すように、円筒状の胴部71と、底部72と、開口部を構成するフランジ部73と、フランジの下部領域74とを有するプラスチック製ブロー成形容器7と、金属製の蓋76

とからなり、蓋76はダブルシーム75により前記フランジ部73に巻き締められ、缶は密封される。

【0003】ところで、炭酸飲料やテニスボール等の容器として用いる場合、容器には高い内部圧力がかかるので、容器に強度を付与する必要がある。特に、容器の底部は二軸延伸ブロー成形による延伸効果がそれほど期待できないので、高い内部圧力により変形が生じず、自立性を確保できる形状とする必要がある。

【0004】このようなプラスチック製ブロー成形容器の底部としては、先に図7にも示したように、底部の中央部を上方に凹状として、この中央凹部の周囲を環状のヒール部とするいわゆるシャンペン容器型形状の底部とすることが多い。ところが、本発明者らの研究によれば、単純にこのような形状としただけでは、容器内圧が大きい場合、常温以上、例えば60～70℃の高温下に長時間さらされた場合、底部の凹部が反転することがあったり、また反転せずとも底部が変形して自立性が損なわれたりすることがあることがわかった。

【0005】したがって、本発明の目的は、容器の内圧を大きくしても、また常温を超えた高温下でも、底部が変形せず、良好な自立性を維持することができるプラスチックブロー成形容器を提供することである。

## 【0006】

【課題を解決するための手段】上記課題に鑑み鋭意研究の結果、本発明者らは、基本的には容器の底部の形状を中央凹部とその中央凹部を取り囲む環状のヒール部とからなる構造とし、そのヒール部の外壁面を円錐状の曲面とするとともに、中央凹部を形成する容器壁面に特定の構造の複数の凹部を形成すれば、容器内圧を大きくしても容器底部に変形が生じることなく、自立性に優れた容器とすることができることを見出し、本発明に想到した。

【0007】すなわち、実質的に円筒状の胴部と、底部と、開口部を構成するフランジ部とを有する本発明のプラスチックブロー成形容器は、前記底部が中央凹部と前記中央凹部を取り囲む環状のヒール部とからなり、前記中央凹部における容器壁面には、頂点を内方に向けた複数の多角錐状の凹部が、その稜辺の一部を共有して前記中央凹部の中心部を囲むように連続して環状に配列して形成されており、前記ヒール部の外壁面は下方に縮径する円錐状曲面となっていることを特徴とする。

## 【0008】

【実施例】以下本発明を添付図面を参照して詳細に説明する。

【0009】図1は本発明の一実施例によるブロー成形容器を示す側面図である。ブロー成形容器1は、開口端部に形成されたフランジ部11と、フランジ部11の下部領域に形成された縮径部12と、実質的に円筒状の胴部13と、底部14とからなる。

【0010】開口端部に形成されたフランジ部11は、

後述するように蓋材を取りつける部位となり、容器の軸線方向に対して実質的に垂直に延びている。容器内圧を大きくする場合には、蓋材の取付けを二重巻き締めにより行うのが好ましいので、このフランジ部11は二重巻き締めに適切な厚さ、強度、剛性を有するように形成される。具体的には、フランジ部11における延伸倍率を4〜6倍とするのがよい。延伸倍率が4倍未満ではフランジ部11の強度が低下し、良好な二重巻き締めを行うことができない。一方、フランジ部11を6倍を超す延伸倍率とすると、肉薄でかつ剛性が大きくなりすぎるので、やはり良好な巻き締めを行うことが難しい。

【0011】フランジ部11の下部領域は、フランジ部を巻き締めの際に、亀裂や変形等を生じないために、リジット性を向上させる必要がある。このため本実施例では、フランジ部11の下部に縮径部12を形成し、開口部付近のリジット性を向上させている。縮径部12における延伸倍率は3倍以上6倍未満とするのがよい。延伸倍率が3倍未満では、肉厚が大きくなり過ぎ、弾性が低下して亀裂が生じやすく、また延伸倍率を6倍以上とすると、肉厚が薄くなり過ぎてフランジ部を巻き締めの際の変形等を防止し得るだけの十分なリジット性が得られない。なお、この縮径部12を胴部13より肉厚に成形するのがよい。これによってこの部分のリジット性がより向上し、缶として密封する際の開口部の折れや変形が防止できる。また巻き締め前の開口状態で、開口部、特にフランジ部は、外部より変形を受けにくく、輸送、ないし、ライン送行中の取扱いが容易になる。

【0012】胴部13は実質的に円筒状となっており、底部14のすぐ上の部分に拡張部15を有する。胴部13の延伸倍率は6倍以上とするのがよい。延伸倍率が6倍未満であると、十分な耐圧性を有する容器とならない。また、延伸効果による機械的強度の向上もそれほど得られず好ましくない。更に軽量化もできない。なお、底部14のすぐ上の部分に設けた拡張部15は補強のために形成されているが、この拡張部15の径は開口部に設けたフランジ部11の外径とほぼ同じとするのがよい。このようにすると、拡張部15が邪魔にならずに複数の容器をそろえて陳列することが可能となる。

【0013】底部14は、中央凹部18と、この中央凹部18を取り囲む環状のヒール部17とからなる。ヒール部17の外壁面16は、下方に縮径する円錐状曲面となっており、ヒール部17の下端部が環状の接地部19となる。一方、中央凹部18は、詳しくは後述するが、環状の接地部19の内側に形成されており、基本的に内方に凹状となっている。このように、ヒール部17の外壁面16を径方向外側に膨張した形状とせず、スリムに下方に縮径する円錐状曲面とすると、複数の容器を陳列する際に効率よく並べることができる。

【0014】図2は図1に示す容器の底部14を軸線方向に沿って下方から眺めた平面図であり、図3は図2に

おけるA-O-B断面図である。

【0015】上述の通り、ヒール部17の下端部は環状の接地部19となるが、このヒール部17の内壁面20は凹状となっており、スムーズに中央凹部18に連続している。このようにヒール部17の内壁面20を凹状にしておくと、容器内圧を大きくしても中央凹部が反転するようなことはない。

【0016】中央凹部18における容器壁には、複数の多角錐状の凹部が連続して形成されている。本実施例においては、図2に示すように、二種類の四角錐状の凹部が連続して形成されている。すなわち、第一の凹部は凹部abcd-e（及びこれと合同の凹部）であり、これは四角形abcdを底面とし、頂点をeとする四角錐（頂点eが容器内方に位置する）の側面からなる凹部である。この第一の凹部において、面abe、面ade、面bce、及び面dceはそれぞれ実質的に平面（すなわち三角形）となっており、稜線bc、及び稜線dcが容器の下方に出ている部分である。なお稜線badの部分はほぼ円形を描くように中央凹部18の外側部に位置する。

【0017】また、第二の凹部は凹部fghi-j（及びこれと合同の凹部）であり、これは四角形fghiを底面とし、頂点をjとする四角錐（頂点jが容器内方に位置する）の側面からなる凹部である。この第二の凹部において、面fgj、面fij、面ghj、及び面ihjはそれぞれ実質的に平面（すなわち三角形）となっており、稜線fg及び稜線fiは、先の第一の凹部の稜線bc及び稜線dcと重なり合う部分である。

【0018】図2からわかるように、本実施例の容器においては、上記した第一の凹部と第二の凹部とが交互に連続して配列し、底部の中央部分21を囲んでいる。また図2及び図3からわかるように、この底部形状においては、第一の凹部において最も内方に凸となる部分（線aecに当たる部分）と、第二の凹部において最も内方に凸となる部分（線fjhに当たる部分）とが容器の周方向に交互に配列されており、かつ、その線は放射状に延びているので、容器底部を等方的に補強することになる。また、上述したように、中央凹部18の壁面に設けられる凹部はすべて頂点を内方に向けた四角錐状の凹部となっているので、内圧が大きくても外側に反転するようなことはない。

【0019】したがって、上述したような底部構造とすると、容器の内部圧力を大きくしても、また常温以上の高温下でも、中央凹部18が反転したりすることや接地部19が歪んで自立性が損なわれるようなことはない。

【0020】なお、図3からわかるように、第二の凹部において最も内方に位置する部分（四角錐の頂点jに当たる部分）は中央凹部18の中心部分21よりも容器の軸線方向に沿って上方に位置している。したがってこの容器をたとえばテニスボール用の容器とした場合、図3

に示すように、第二の四角錐状の凹部の複数の稜線部（線h-j及びそれと同一の部分）でテニスボール22を収まりよく承受することになる。

【0021】なお、本実施例では上述した第一の四角錐状凹部と第二の四角錐状凹部とをそれぞれ8個ずつ交互に配列した構造となっているが、本発明はこれに限らず四角錐状凹部の大きさ及び数を適宜変更してよい。さらに底部の中央凹部の容器壁に設ける凹部を上述したように四角錐状とする必要はなく、五角錐、六角錐等の側面からなるような凹部としてもよい。さらに、四角錐、五角錐、六角錐等を適宜組み合わせさせた構成としてもよい。

【0022】次に、上述したプラスチックブロー成形容器1の製造方法について説明する。

【0023】図4は本発明のプラスチックブロー成形容器を製造することができるバリソンの一例を示す断面図である。バリソン4はサポートリング部（図中のa）を有する口部41と、胴部42と、底部43とを有する。

【0024】図4からわかるように、バリソンの胴部42において、口部41に続く胴部上部分44は口部41と同様の径を有するように拡張しており、下部は縮径状胴部45となっている。また、バリソンの肉厚は口部41と拡張状胴部44では幾分薄め（縮径状胴部45に比して）となっている。この拡張状胴部44は、後述する一次ブロー成形体（中間成形体）において口部の下に形成される拡張部となる部位である。

【0025】またバリソン4は、その底部43の肉厚が胴部42の肉厚より、わずかに薄くなるように形成されている。このようにすることで底部43を胴部42より低い温度まで冷却することができる。したがって、延伸時のロッドによる縦延伸で、底部43を突き破ることなく胴部を延伸することができる。

【0026】容器の製造にあたっては、まず、射出成形により図4に示す形状のバリソン4を形成する。射出成形はバリソン4に対応する形状のキャビティを有する射出成形型を用いて常法により行なうことができる。このとき、樹脂をキャビティ内に射出した後に、射出成形型を急冷することによりバリソンを構成する樹脂をそのガラス転位温度以上固化温度以下の温度まで冷却するのがよい。なお射出成形型の急冷は、型内に設けられた通路に冷媒を流し込む等の手段により行なうことができる。

【0027】バリソン4の各部の温度が、用いた樹脂のガラス転位温度以上固化温度以下となったところで、バリソン4を射出成形型から取り出し、バリソン4の各部の温度がガラス転位温度より低くなる前に、二軸延伸ブロー成形を行なう。

【0028】図5は、図4のバリソンを二軸延伸ブロー成形することにより得られる一次ブロー成形体の一例を示す側面図である。

【0029】一次ブロー成形体5は、上から順に口部51と、拡張部52と、縮径部53と、胴部54と、底部55とから

なる。

【0030】このような一次ブロー成形体において、各部の延伸倍率は、口部（把持部）51が未延伸、拡張部52が4倍以上6倍未満の中延伸、縮径部53が3倍以上6倍未満の中延伸、円筒状の胴部54が6倍以上の高延伸、底部55が6倍以下の低延伸である。

【0031】このような延伸倍率とするためには、図4に示したような形状のバリソンを用い、一次ブロー成形体の形状をしたキャビティを有する延伸ブロー成形型内に、このバリソンの口部を口部型に把持した状態で設置し、常法により延伸ブロー成形を行えばよい。

【0032】この延伸ブロー成形により、図4に示すバリソンの拡張状胴部44が延伸されて一次ブロー成形体の拡張部52を形成する。

【0033】また一次ブロー成形体の縮径部53は、図4のバリソンの縮径状胴部45における上部分45aが延伸されてなる。この部分45aはバリソンの拡張状胴部44より肉厚となっており、またブロー成形金型の縮径部52に対応する部分の径が小さくなっているため、一次ブロー成形体の縮径部53は肉厚となる。

【0034】胴部54は大きく延伸されて薄肉で、しかも延伸効果により大きな強度を有するものとなる。なお、バリソンの底部は胴部よりも低い温度に調節されているため、胴部の方が延伸されやすく、これにより胴部は十分に延伸され、一方、底部は高度に延伸されない。なお、底部55には金型の形状によってヒール部56及び容器底部の中央凹部57が形成されている。また、中央凹部57における容器壁面には、図2に示す形状の複数の四角錐状の凹部が環状に連続して形成されている。この四角錐状の凹部の形成は、ブロー成形金型の底部型の表面を図2に示す形状に相補する凹凸状に形成しておくことで達成できる。

【0035】なお、ブロー成形金型の底部型において、図2に示す底部形状の稜線b-a-d・・・に対応する部位にエアイベントを設けておくと、底部の中央凹部に設ける凹凸形状がはっきりと得られる。

【0036】以上に説明したように、図4に示すような形状のバリソンを用い、図5に示すような一次ブロー成形体の形状のキャビティを有する金型を用いて延伸ブロー成形を行えば、縮径部が胴部（容器の本体部となる部分）より肉厚で、胴部が十分に延伸され、また底部が肉厚の一次ブロー成形体を製造することができる。

【0037】図5に示すような一次ブロー成形体（中間成形体）を得たならば、この一次ブロー成形体の拡張部の底壁部（例えば図5中のCの位置）を切断し、図1に示すような本発明のブロー成形容器を得る。

【0038】このようにして得られるブロー成形容器1は、さきに図7において示したと同様にして、フランジ部11を取り込むかたちで金属製の蓋によりダブルシームを施すことにより、密閉性の優れたプラスチック製の缶

とすることができる。

【0039】以上の説明では、図4に示すような形状のバリソンを用いた製造方法を述べたが、本発明のプラスチックブロー成形容器はこれに限らず、たとえば図6に示すような、実質的に単一の径からなる胴部62を有する有底円筒状のバリソン6を用いて製造することも可能である。このとき、バリソン6の口部61から胴部62の上端部にかけての部分(図6におけるb部分)を内側に肉薄となるようにしておけば、図5に示すような上部に拡張部を有する中間成形体を容易に形成することができ

る。

【0040】本発明において、容器の原料となるプラスチックとしては、延伸ブロー成形が可能な熱可塑性樹脂であれば特に制限はないが、ポリエステル系のものが好ましい。

【0041】ポリエステル樹脂としては、飽和ジカルボン酸と飽和二価アルコールとからなる熱可塑性樹脂が使用できる。特に好ましいポリエステルは、テレフタル酸とエチレングリコールとからなるポリエチレンテレフレートである。

【0042】また上記ポリエステル樹脂に、耐熱性樹脂、バリアー性樹脂等を混合したもの、又は多層化したものも用いることができる。

【0043】なお本発明で使用するポリエステル樹脂には、その他、安定剤、顔料、酸化防止剤、熱劣化防止剤、紫外線劣化防止剤、帯電防止剤、抗菌剤等の添加剤やその他の樹脂を適量加えることができる。

【0044】本発明を以下の具体的実施例によりさらに詳細に説明する。

#### 実施例 1

ポリエチレンテレフレート樹脂(三井石油化学工業株式会社製、三井ペットJ125)を用い、図4に示すバリソンを射出成形により作成した。バリソンの形状及び重さは、以下の通りであった。

【0045】全高:127mm

口部:外径36.5mm、内径32.5mm

サポートリング部:外径39mm

拡張状胴部:外径36.3mm、内径31.9mm

縮径状胴部:外径25.8~26.8mm

内径18.2~19.6mm

底部:肉厚2.0mm

重量:46.9g

【0046】上記形状のバリソンを成形後、図5に示すような形状の一次ブロー成形体(全高240.2mm、最大胴径88mm)を作成した。なお、このとき使用した延伸ブロー成形金型の底部型としては、その表面に図2に示す凹凸形状に相補する凹凸を有するものを用いた。

【0047】このようにして得られた一次ブロー成形体を縦方向に切断して、その各部の延伸倍率を測定したところ、口部が未延伸、拡張部が約5.5倍、縮径部が約5

倍、胴部が約14.5倍、底部が1~6倍であった。また、胴部の厚みは0.25mmで、フランジの下部領域の厚みは0.5mmであった。さらに、底部の中央凹部における成形体の壁面は図2及び図3に示す形状となっていた。

【0048】次に、この一次ブロー成形体の図5に示すCの位置を打抜き刃で円形に打ち抜き、分離して、図1に示すようなブロー成形容器を得た。

【0049】このようにして得られた容器に、テニスボールを入れた後、加圧下において、フランジ部を巻き込むようにして金属製の蓋でダブルシームにより密閉した。

【0050】このようにして得られた缶は、内圧を1.2Kg/cm<sup>2</sup>(ゲージ圧)と大きくしても底部が変形することがなく、良好な自立性を有していた。また、0.9Kg/cm<sup>2</sup>、室温で内圧をかけ4球のテニスボールを充填シールしたものを60~70℃、1~2時間保存しても自立性を有していた。また、十分な密封性を有するとともに、ダブルシームを施しても、亀裂、変形等を生じることがなく、実用に耐えうる耐衝撃性、及び耐内圧性を有するものであった。

【0051】

【発明の効果】以上に詳述したように、本発明のブロー成形容器は、その底部形状を大きな内圧に耐えうる形状としており、容器内圧を大きくしたプラスチック製の缶としても自立性が損なわれない。また、開口部におけるフランジ部でダブルシームを施しても亀裂や破損が生じることなく、良好なプラスチック製の缶とすることができる。

【0052】このような本発明の容器は、金属製の蓋材を備えることにより炭酸飲料、テニスボール等用の耐圧容器として好適に使用することができる。

【図面の簡単な説明】

【図1】本発明の一実施例によるプラスチックブロー成形容器を示す側面図である。

【図2】図1のプラスチックブロー成形容器の底部形状を示す平面図である。

【図3】図1のA-O-B断面図である。

【図4】本発明のプラスチックブロー成形容器を製造することができるバリソンの一例を示す断面図である。

【図5】本発明のプラスチックブロー成形容器を製造する工程で得られる中間成形体(一次ブロー成形体)の一例を示す側面図である。

【図6】本発明のプラスチックブロー成形容器を製造することができるバリソンの別な例を示す断面図である。

【図7】従来のプラスチックブロー成形容器を用いたプラスチック缶の一例を示す断面図である。

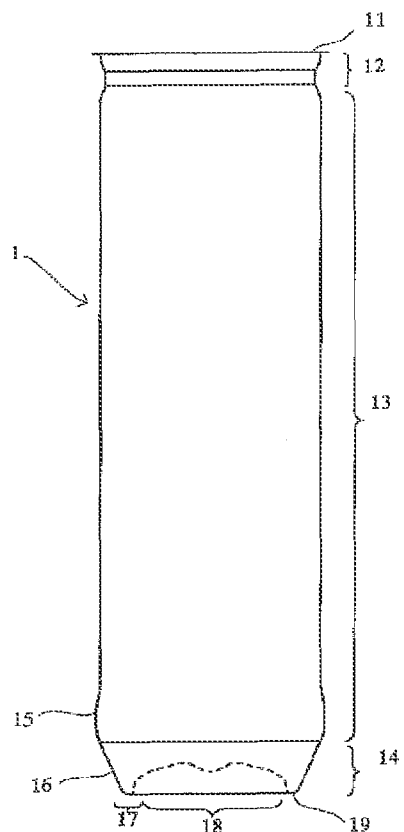
【符号の説明】

|     |               |
|-----|---------------|
| 1   | プラスチックブロー成形容器 |
| 4、6 | バリソン          |
| 5   | 一次ブロー成形体      |

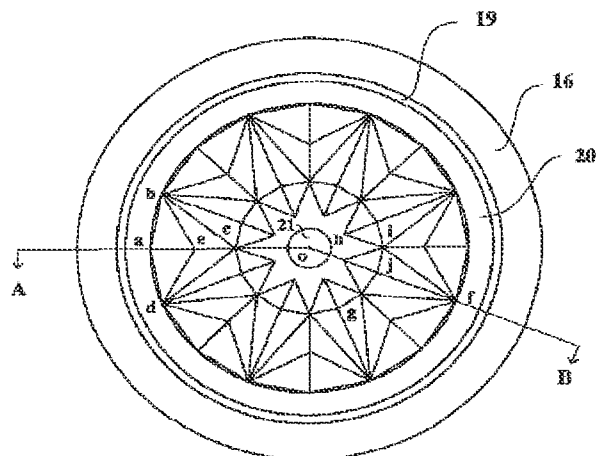
- 9  
7 プラスチック製缶  
11 フランジ部  
12 縮径部  
13 胴部  
14 底部  
15 拡径部  
16 ヒール部外壁面

- 10  
17 ヒール部  
18 中央凹部  
19 接地部  
20 ヒール部内壁面  
21 底部中央部分  
75 ダブルシーム  
76 金属製の蓋

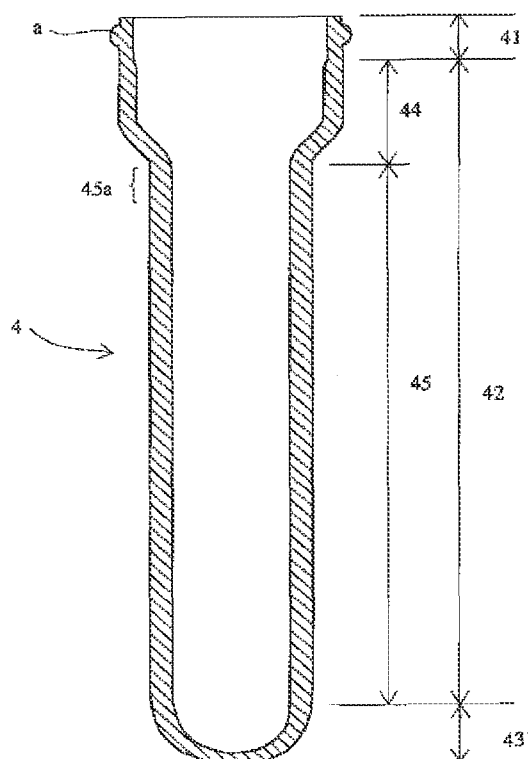
【図1】



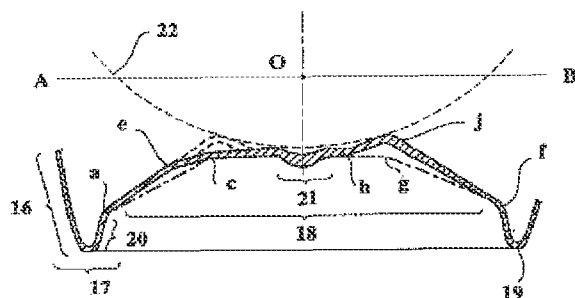
【図2】



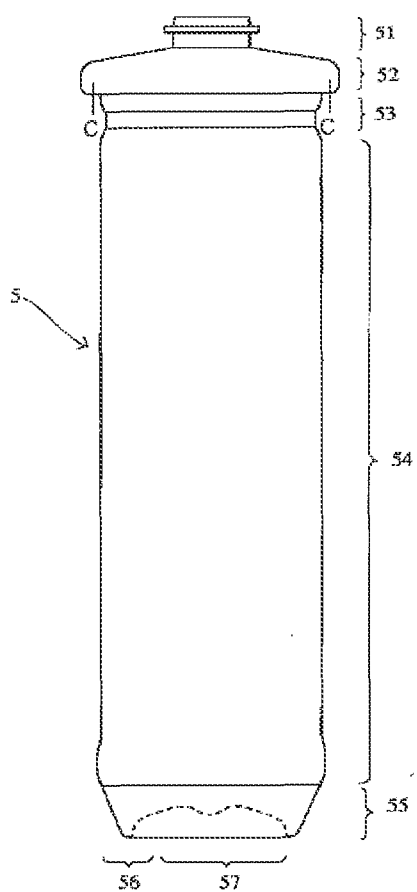
【図4】



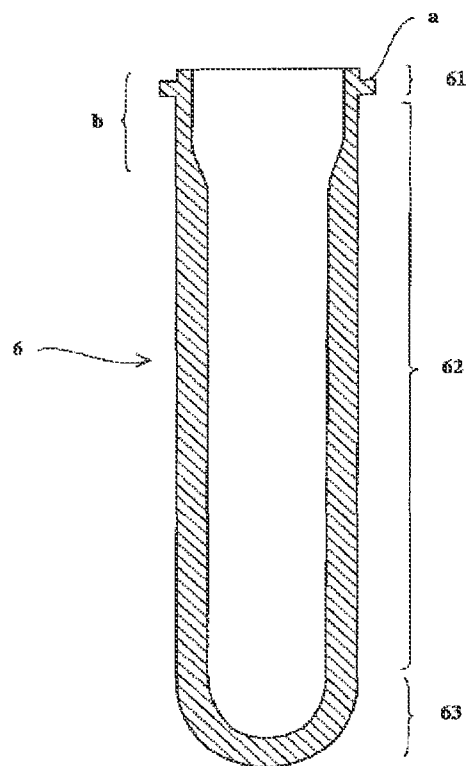
【図3】



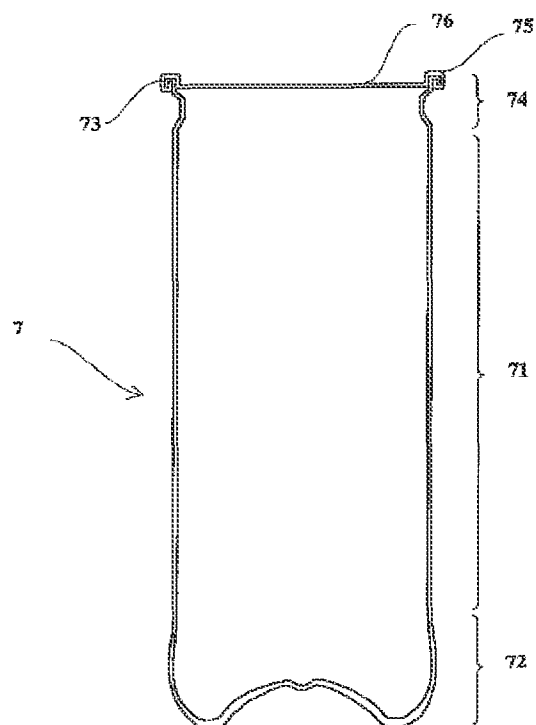
【図5】



【図6】



【図7】



フロントページの続き

(72)発明者 野瀬 宏明

東京都新宿区市谷加賀町一丁目1番1号

大日本印刷株式会社内

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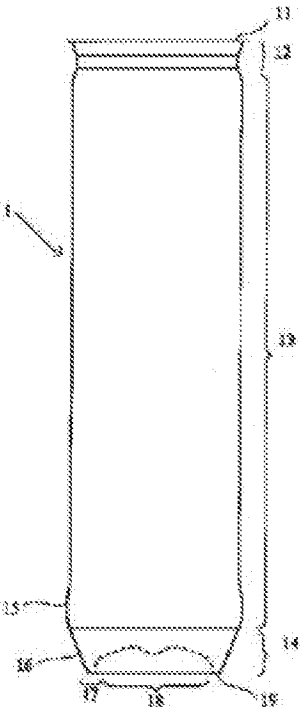
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| (22)Date of filing : 19.07.1991    | (72)Inventor : YAMADA KANEO               |
|                                    | MACHINAGA YOUJI                           |
|                                    | NANJO KATSUYA                             |
|                                    | NOSE HIROAKI                              |

(54) PLASTIC BLOW-MOLDED CONTAINER

(57)Abstract:

PURPOSE: To provide a plastic blow-molded container the bottom part of which is not deformed, and which can maintain a favorable self-standing property even when the internal pressure of the container rises or even under a high temperature exceeding a normal temperature.

CONSTITUTION: The subject container substantially has a cylindrical body 13, bottom part 14, and flange 11 which constitutes an



opening, and the bottom part 14 consists of a central recessed part 18 and an annular heel part 17 which surrounds the central recessed part 18. On a container wall surface at the central recessed part 18, a plurality of polygonal pyramid shaped recessed parts, of which the vertexes face inward, are formed in such a manner that they are continuously arranged annularly such as surrounding the central part of the central recessed part while sharing a part of the ridges, and an outer wall surface 16 of the heel part is a conical curved surface of which the diameter becomes smaller as it becomes lower.

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**Notes:**

1. Untranslatable words are replaced with asterisks (\*\*\*).
2. Texts in the figures are not translated and shown as it is.

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**FULL CONTENTS**

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**[Claim(s)]**

**[Claim 1]**A substantially cylindrical drum section.

A bottom part.

A flange which constitutes an opening.

In a plastic blow molding container provided with the above,

The aforementioned bottom part consists of a center recessed part and an annular heel section which encloses the aforementioned center recessed part, and, [ a container wall surface in the aforementioned center recessed part ] A plastic blow molding container which arranges annularly continuously, is formed so that a concave part of two or more shape of a polygonal pyramid which turned a vertex to an inner direction may share a part of the ridge line and may surround the central part of the aforementioned center recessed part, and is characterized by an external wall surface of the aforementioned heel section being a conical shape curved surface whose diameter is reduced caudad.

**[Claim 2]**A plastic blow molding container, wherein a polygonal-pyramid concave part of the above consisted of a concave part of two kinds of pyramid form and a concave part of the two aforementioned kinds of pyramid form has arranged annularly alternately in the plastic blow molding container according to claim 1.

**[Claim 3]**A plastic blow molding container, wherein an internal surface of the aforementioned heel section which follows the aforementioned center recessed part is a concave curve from a lower end part of the aforementioned heel section used as a grounding part in the plastic blow molding container according to claim 1 or 2.

**[Claim 4]**A plastic blow molding container, wherein a diameter reduction part is formed in the lower part of the aforementioned flange in the plastic blow molding container according to any one of claims 1 to 3.

**[Claim 5]**A plastic blow molding container, wherein the aforementioned container consists of polyethylene terephthalate in the plastic blow molding container according to any one of claims 1 to 4.

**[Claim 6]**A plastic blow molding container characterized by the aforementioned container being what cuts off the regio-oralis side of a primary blow molding object which carries out biaxial stretching blow molding of the parison in the plastic blow molding container according to any one of claims 1 to 5.

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**[Detailed Description of the Invention]**

**[0001]**

**[Industrial Application]**In the present invention, a lid which consists of aluminum etc. especially is

rolled and fastened to a flange provided to an opening about a plastic blow molding container which has a flange shape opening of the substantially same path as a drum section. Therefore, it can be preferably used as a resisting pressure container, even if it carries out container-internal-pressure power largely, the bottom configurations do not change, but it is related with a plastic blow molding container which maintains good independence nature.

[0002]

[Description of the Prior Art]In recent years, the can made from a plastic (container) attracts attention as a substitute of a metal can. As shown in Fig.7, the can made from a plastic generally The cylindrical drum section 71, It consists of the blow molding container 7 made from a plastic which has the bottom part 72, the flange 73 which constitutes an opening, and the lower region 74 of a flange, and the metal lids 76, and the lid 76 is wound around the aforementioned flange 73 by the double seam 75, and is fastened, and a can is sealed.

[0003]By the way, since high internal pressure is applied to a container when using as containers, such as a carbonated drink and a tennis ball, it is necessary to give strength to a container. Since the orientation effect by biaxial stretching blow molding cannot expect the bottom part in particular of a container so much, deformation does not arise with high internal pressure, but it needs to be taken as the shape which can secure independence nature.

[0004]As a bottom part of such a blow molding container made from a plastic, as previously shown also in Fig.7, let the central part of the bottom part be the so-called bottom part of the champagne container mold shape which makes the circumference of this center recessed part an annular heel section as a concave in the upper part in many cases. [ however only by considering it as such shape simply according to research of the inventors ] When exposed for a long time under the elevated temperature which is 60-70 degrees C, for example beyond as for ordinary temperature when container internal pressure is large, it turned out that the concave part of a bottom part may be reversed, and it is not reversed, a bottom part also deforms \*\*, and independence nature may be impaired.

[0005]Therefore, even if the object of this invention carries out internal pressure of a container largely, it is providing the plastic blow molding container which a bottom part's cannot deform but can maintain good independence nature also under the elevated temperature beyond ordinary temperature.

[0006]

[Means for solving problem]In view of an aforementioned problem, as a result of research, intensively, [ the inventors ] While making shape of the bottom part of a container into the structure which consists of a center recessed part and an annular heel section which encloses the center recessed part fundamentally and making the external wall surface part of the heel section into the curved surface of conical shape, It found out that it could be considered as the container excellent in independence nature, without deformation arising in a container bottom even if it carries out container internal pressure largely if two or more concave parts of a specific structure are formed in the container wall surface which forms a center recessed part, and thought out to the present invention.

[0007][ namely the plastic blow molding container of the present invention which has substantially a cylindrical drum section, a bottom part, and a flange that constitutes an opening ] The aforementioned bottom part consists of a center recessed part and an annular heel section which encloses the aforementioned center recessed part, and, [ the container wall surface in the aforementioned center recessed part ] It arranges annularly continuously and is formed so that the concave part of two or more shape of a polygonal pyramid which turned the vertex to the inner direction may share a part of the ridge line and may surround the central part of the aforementioned center recessed part, and the external wall surface of the aforementioned heel section is a conical shape curved surface whose diameter is reduced caudad.

[0008]

[Working example]The present invention is described in detail with reference to an accompanying drawing below.

[0009]Fig.1 is a side view showing the blow molding container by one working example of the present invention. The blow molding container 1 serves as substantially the flange 11 formed in the open end, and the diameter reduction part 12 formed in the lower region of the flange 11 from the cylindrical drum section 13 and the bottom part 14.

[0010]The flange 11 formed in the open end serves as a part to which a cover material is attached so that it may mention later, and it is substantially extended vertically to the axial direction of a container. Since it is preferable to attach a cover material by double winding up when carrying out container internal pressure largely, this flange 11 is formed so that it may have the suitable thickness for double winding up, strength, and rigidity. Specifically, it is good to make the draw ratio in the flange 11 into four to 6 times. In less than 4 times, strength of the flange 11 cannot be deteriorated and a draw ratio cannot perform good double winding up. Since it will be closing in and rigidity will become too much largely on the other hand if the flange 11 is made into the draw ratio which exceeds 6 times, it is difficult to perform too good winding up.

[0011]Since the lower region of the flange 11 produces neither a crack nor deformation when a flange is rolled and fastened, it needs to improve rigid nature. For this reason, in this example, the diameter reduction part 12 is formed in the lower part of the flange 11, and the rigid nature near an opening is improved. The draw ratio in the diameter reduction part 12 is good to take 3 or more times for less than 6 times. Rigid nature with a sufficient draw ratio which can prevent the deformation at the time of thickness becoming thin too much, and rolling and fastening a flange when thickness became too much largely, elasticity was deteriorated in less than 3 times, and it was easy to produce a crack and the draw ratio was made into 6 or more times, etc. is not obtained. It is good to mold this diameter reduction part 12 into thickness from the drum section 13. The rigid nature of this portion improves more by this, and a crease and deformation of the opening at the time of sealing as a can can be prevented. By the opening state before winding up, an opening, especially the flange cannot receive deformation from outside easily, and transportation thru/or the handling in line feed become easy.

[0012]The drum section 13 has become cylindrical substantially and has the expanding part 15 into the portion immediately on the bottom part 14. The draw ratio of the drum section 13 is good to consider it as 6 or more times. It does not become a container which has sufficient resistance to pressure as a draw ratio is less than 6 times. Improvement in the mechanical strength by an orientation effect is not obtained so much, either, and is not preferable. A weight saving is not made, either. Although the expanding part 15 provided into the portion immediately on the bottom part 14 is formed for reinforcement, the path of this expanding part 15 is good to suppose that it is substantially the same as the outer diameter of the flange 11 provided to the opening. If it does in this way, it will enable the expanding part 15 to arrange and display two or more containers, without becoming obstructive.

[0013]The bottom part 14 consists of the center recessed part 18 and the annular heel section 17 which encloses this center recessed part 18. The external wall surface 16 of the heel section 17 is a conical shape curved surface whose diameter is reduced caudad.

A lower end part of the heel section 17 turns into the annular grounding part 19.

On the other hand, although the center recessed part 18 is mentioned later in detail, it is formed inside the annular grounding part 19.

It is a concave fundamentally in an inner direction.

Thus, the external wall surface 16 of the heel section 17 is not made into the shape where it expanded on the radial-direction outside, but if it is a conical shape curved surface whose diameter is reduced caudad slimly, when displaying two or more containers, it can arrange efficiently.

[0014]Fig.2 is the plan view which looked at the bottom part 14 of the container shown in Fig.1 from

the lower part along the axial direction, and Fig.3 is an A-O-B cross sectional view in Fig.2.

[0015]Although the lower end part of the heel section 17 turns into the annular grounding part 19 as above-mentioned, the internal surface 20 of this heel section 17 serves as a concave, and is in the center recessed part 18 continuously smoothly. Thus, if the internal surface 20 of the heel section 17 is made into the concave, even if it carries out container internal pressure largely, a center recessed part will not be reversed.

[0016]The concave part of the shape of two or more polygonal pyramid is continuously formed in the container wall in the center recessed part 18. In this example, as shown in Fig.2, the concave part of two kinds of pyramid form is formed continuously. That is, a first concave part is concave part abcd-e (and joint concave part with this), and this is a concave part which consists of a side surface of the pyramid (the vertex e is placed at the method of the inside of a container) which uses the quadrangle abcd as a bottom surface and sets a vertex to e. In this first concave part, the surface abe, the surface ade, the surface bce, and the surface dce are a plane (namely, triangle) substantially, respectively, and the ridgeline bc and the ridgeline dc are the portions which have come out of the container caudad. The portion of the ridgeline bad is placed at the lateral part of the center recessed part 18 so that a round shape may be drawn substantially.

[0017]A second concave part is concave part fghi-j (and joint concave part with this), and this is a concave part which consists of a side surface of the pyramid (the vertex j is placed at the method of the inside of a container) which uses the quadrangle fghi as a bottom surface and sets a vertex to j. In this second concave part, the surface fgi, the surface fij, the surface ghj, and the surface ihj are a plane (namely, triangle) substantially, respectively, and the ridgeline fg and the ridgeline fi are portions which overlap the ridgeline bc of a previous first concave part, and the ridgeline dc.

[0018]In the container of this example, the above-mentioned first concave part and the second concave part arranged continuously alternately, and have surrounded the center portion 21 of the bottom part so that Fig.2 may show. In [ so that Fig.2 and Fig.3 may show ] these bottom configurations, Since the container is arranged alternately circumferentially and the portion (portion which hits the line aec) which serves as a convex most in a first concave part in an inner direction, and the portion (portion which hits the line fjh) which serves as a convex most in a second protruding part in an inner direction are extending the line radiately, a container bottom will be reinforced isotropic. Since all the concave parts provided by the wall surface of the center recessed part 18 are the concave parts of the pyramid form which turned the peak to the inner direction as mentioned above, it is not outside reversed even if internal pressure is large.

[0019]Therefore, if it is the bottom structure which was mentioned above, even if it carries out internal pressure of a container largely, under the elevated temperature beyond ordinary temperature, the center recessed part 18 being reversed and the grounding part 19 will be distorted, and independence nature will not be impaired.

[0020]The portion (portion which is equivalent to the vertex j of a pyramid) which is placed at an inner direction most in a second protruding part is placed up along the axial direction of a container rather than the center section 21 of the center recessed part 18 so that Fig.3 may show. Therefore, when this container is used as the container for tennis balls, as shown in Fig.3, it will be easy to be settled and the tennis ball 22 will be \*\*\* (ed) in two or more ridgeline parts (line h-j and the same portion as it) of the concave part of second pyramid form.

[0021]Although it has structure which arranged alternately every eight of the first pyramid form concave part mentioned above and a second pyramid form concave part, respectively in this example, the present invention may change suitably the size and number not only of this but pyramid form concave parts. It is good also as a concave part which does not have to consider it as pyramid form as the concave part furthermore provided to the container wall of the center recessed part of a bottom part was mentioned above, and consists of side surfaces, such as six-sided a pentagonal pyramid, a pyramid, etc. It is good also as composition which combined six-sided a pyramid, a pentagonal pyramid, a pyramid, etc. suitably.

[0022]Next, it describes about the manufacturing method of the plastic blow molding container 1 mentioned above.

[0023]Fig.4 is a cross sectional view showing an example of the parison which can manufacture the plastic blow molding container of the present invention. The parison 4 has the regio oralis 41 which has a support-ring part (a in a figure), the drum section 42, and the bottom part 43.

[0024]In the drum section 42 of a parison, the diameter is expanded so that the subsequent drum section top portion 44 may have the same path as the regio oralis 41 in the regio oralis 41, and the lower part is the letter drum section 45 of diameter reduction so that Fig.4 may show. The thickness of a parison is thinned a little with the regio oralis 41 and the letter drum section 44 of diameter expansion (comparing with the letter drum section 45 of diameter reduction). It has become. This letter drum section 44 of diameter expansion is a part used as the expanding part formed under the regio oralis in the primary blow molding object (middle molded body) mentioned later.

[0025]The parison 4 is formed so that the thickness of the bottom part 43 may become thin slightly from the thickness of the drum section 42. The bottom part 43 can be cooled to a temperature lower than the drum section 42 by doing in this way. Therefore, a drum section can be extended by the vertical extension with the rod at the time of extension, without breaking through the bottom part 43.

[0026]In manufacture of a container, the parison 4 of the shape shown in Fig.4 with injection molding is formed first. Injection molding can be performed with a conventional method using the injection molding mold which has a cavity of the shape corresponding to the parison 4. After ejecting resin in a cavity at this time, it is good by quickly cooling an injection molding mold for more than that glass-transition temperature to cool the resin which constitutes a parison to the temperature below solidification temperature. Slushing a refrigerant into the passage provided in the mold or other means can perform quick cooling of an injection molding mold.

[0027]The parison 4 is taken out from an injection molding mold, and before the temperature of each part of the parison 4 becomes lower than glass-transition temperature, biaxial stretching blow molding is performed in the place where the temperature of each part of the parison 4 became [ more than glass-transition temperature of the used resin ] below in solidification temperature.

[0028]Fig.5 is a side view showing an example of the primary blow molding object acquired by carrying out biaxial stretching blow molding of the parison of Fig.4.

[0029]The primary blow molding object 5 becomes order from the regio oralis 51, the expanding part 52, the diameter reduction part 53, the drum section 54, and the bottom part 55 from a top.

[0030]In 4 or more-time extension in less than 6 times, and the diameter reduction part 53, in such a primary blow molding object, 3 or more-time extension in less than 6 times and the cylindrical drum section 54 are [ the regio oralis 51 (grasping part) / un-extending and the expanding part 52 / the Takanobu growth of 6 times or more and the bottom part 55 of the draw ratio of each part ] low extensions of 6 or less times.

[0031]What is necessary is to install using the parison of shape as shown in Fig.4, in the stretch-blow-molding type which has the cavity which carried out shape of the primary blow molding object, where the regio oralis of this parison is grasped to a regio-oralis type, and just to perform stretch blow molding with a conventional method, in order to consider it as such a draw ratio.

[0032]The letter drum section 44 of diameter expansion of the parison shown in Fig.4 is extended by this stretch blow molding, and the expanding part 52 of a primary blow molding object is formed by it.

[0033]It comes to extend the upper part [ in / in the diameter reduction part 53 of a primary blow molding object / the letter drum section 45 of diameter reduction of the parison of Fig.4 ] 45a. Since this portion 45a has become thicker than the letter drum section 44 of diameter expansion of a parison and the path of the portion corresponding to the diameter reduction part 52 of a blow molding die is small, the diameter reduction part 53 of a primary blow molding object becomes thick.

[0034]The drum section 54 is extended largely, is thin walled and, moreover, has big strength

according to an orientation effect. Since the bottom part of the parison is adjusted by temperature lower than a drum section, the direction of a drum section is easy to be extended, a drum section is extended sufficiently by this, and, on the other hand, a bottom part is not extended highly. The heel section 56 and the center recessed part 57 of the container bottom are formed in the bottom part 55 of the shape of the mold. The concave part of two or more pyramid form of the shape shown in Fig.2 is annularly formed in the container wall surface in the center recessed part 57 continuously. Formation of the concave part of this pyramid form can be attained by forming in the rugged form which carries out complementary [ of the bottom part type surface of a blow molding die ] to the shape shown in Fig.2.

[0035]ridgeline b-a-d of the bottom configurations shown in Fig.2 in the bottom part type of a blow molding die — if the vent is provided to the part corresponding to ..., the uneven shape provided to the center recessed part of a bottom part will be acquired clearly.

[0036]If stretch blow molding is performed using the mold which has a cavity of the shape of a primary blow molding object as shown in Fig.5 using the parison of shape as shown in Fig.4 as described above, A diameter reduction part is thicker than a drum section (portion used as the body part of a container), and a drum section is extended sufficiently, and a bottom part can manufacture a thick primary blow molding object.

[0037]If a primary blow molding object (middle molded body) as shown in Fig.5 is acquired, the bottom wall part (for example, position of C in Fig.5) of the expanding part of this primary blow molding object will be cut, and the blow molding container of the present invention as shown in Fig.1 will be obtained.

[0038]Thus, the blow molding container 1 obtained can be carried out to Fig.7 having been shown previously with the can made from a plastic which was excellent in sealing nature by giving a double seam with metal lids in the form where the flange 11 is incorporated, similarly.

[0039]Although the above description described the manufacturing method using the parison of shape as shown in Fig.4, not only this but the thing to manufacture using the bottomed cylindrical parison 6 which has the drum section 62 which consists of a single path substantially as shown, for example in Fig.6 is possible for the plastic blow molding container of the present invention. If the portion (b portion in Fig.6) applied to the upper end part of the drum section 62 from the regio oralis 61 of the parison 6 is made to be pressing inside hard at this time, the middle molded body which has an expanding part can be easily formed in the upper part as shown in Fig.5.

[0040]In the present invention, if it is thermoplastics in which stretch blow molding is possible as a plastic used as the raw material of a container, there will be no restriction in particular, but the thing of a polyester system is preferable.

[0041]As polyester resin, the thermoplastics consisting of saturation dicarboxylic acid and saturated dihydric alcohol can be used. Especially preferable polyester is polyethylene terephthalate which consists of terephthalic acid and ethylene glycol.

[0042]The thing which mixed heat resistant resin, barrier nature resin, etc., or the multilayered thing can also be used for the above-mentioned polyester resin.

[0043]In addition to this, a proper quantity of additive agents, such as stabilizer, paints, an antioxidant, a heat deterioration inhibitor, an ultraviolet-ray-degradation inhibitor, a spray for preventing static electricity, and an antimicrobial agent, and other resin can be added to the polyester resin used by the present invention.

[0044]The present invention is described still in detail according to the following specific working examples.

The parison shown in Fig.4 was created with injection molding using working-example 1 polyethylene terephthalate resin (the Mitsui Petrochemical Industries, Ltd. make, Mitsui pet J125). The shape and weight of the parison were as follows.

[0045]overall-height: — 127-mm regio-oralis: — the outer diameter of 36.5 mm, the letter drum section:outer diameter of inner diameter 32.5mm support-ring part:outer diameter 39mm diameter

expansion of 36.3 mm, and letter drum section: outer diameter of inner diameter 31.9 mm diameter reduction 25.8–26.8mm inner diameter 18.2–19.6mm bottom part: thickness 2.0mm weight: 46.9g

[0046] Primary blow molding object (overall-height 240.2 mm, 88 mm of the maximum shell diameters) of shape as shown in Fig.5 after molding the parison of the above-mentioned shape It created. As a bottom part type of the stretch-blow-molding mold used at this time, what has the unevenness which carries out complementary to the uneven shape shown in Fig.2 was used for that surface.

[0047] Thus, about 5 times and a drum section were about 14.5 times, and when the acquired primary blow molding object was cut to the longitudinal direction and the draw ratio of each part was measured, a 5.5 times as much abbreviation and a diameter reduction part was [ the regio oralis / the bottom part of un-extending and an expanding part ] one to 6 times. The thickness of the drum section was 0.25 mm and the thickness of the lower region of a flange was 0.5 mm. The wall surface of the molded body in the center recessed part of a bottom part had become the shape shown in Fig.2 and Fig.3.

[0048] Next, the position of C shown in the Fig.5 of this primary blow molding object was circularly pierced with the punching blade, it separated and the blow molding container as shown in Fig.1 was obtained.

[0049] Thus, after putting a tennis ball into the obtained container, as the flange was involved in under application of pressure, it sealed by the double seam with metal lids.

[0050] Thus, the obtained can is internal pressure 1.2 Kg/cm<sup>2</sup> (gage pressure) Even if carried out largely, a bottom part did not deform, and it had good independence nature. It had independence nature, even if it saved 60–70 degrees C of things to which internal pressure was applied at 0.9 kg / cm<sup>2</sup>, and a room temperature and which carried out the filling seal of the tennis ball of four balls for 1 to 2 hours. While having sufficient sealing performance, even if it gives a double seam, a crack, deformation, etc. are not produced and it has the shock resistance which can be equal to practical use, and internal pressure-proof nature.

[0051]

[Effect of the Invention] As explained in full detail above, a blow molding container of the present invention makes the bottom configurations shape which can bear big internal pressure.

Independence nature is not impaired as a can made from a plastic which carried out container internal pressure largely.

Even if it gives a double seam by the flange in an opening, neither a crack nor damage arises, and it can be considered as the good can made from a plastic.

[0052] The container of such the present invention can be preferably used as resisting pressure containers of business, such as a carbonated drink and a tennis ball, by having metal cover materials.

[Brief Description of the Drawings]

[Drawing 1] It is a side view showing the plastic blow molding container by one working example of the present invention.

[Drawing 2] It is a plan view showing the bottom configurations of the plastic blow molding container of Fig.1.

[Drawing 3] It is an A–O–B cross sectional view of Fig.1.

[Drawing 4] It is a cross sectional view showing an example of the parison which can manufacture the plastic blow molding container of the present invention.

[Drawing 5] It is a side view showing an example of the middle molded body (primary blow molding object) acquired at the process of manufacturing the plastic blow molding container of the present invention.

[Drawing 6]It is a cross sectional view showing another example of the parison which can manufacture the plastic blow molding container of the present invention.

[Drawing 7]It is a cross sectional view showing an example of the plastic can using the conventional plastic blow molding container.

[Explanations of letters or numerals]

1 Plastic blow molding container

4 and 6 Parison

5 Primary blow molding object

7 Plastic canning

11 Flange

12 Diameter reduction part

13 Drum section

14 Bottom part

15 Expanding part

16 Heel section external wall surface

17 Heel section

18 Center recessed part

19 Grounding part

20 Heel section internal surface

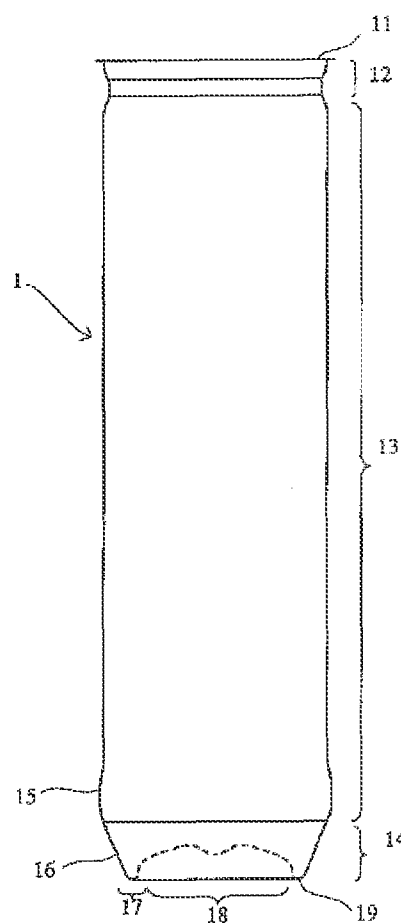
21 Bottom part center portion

75 Double seam

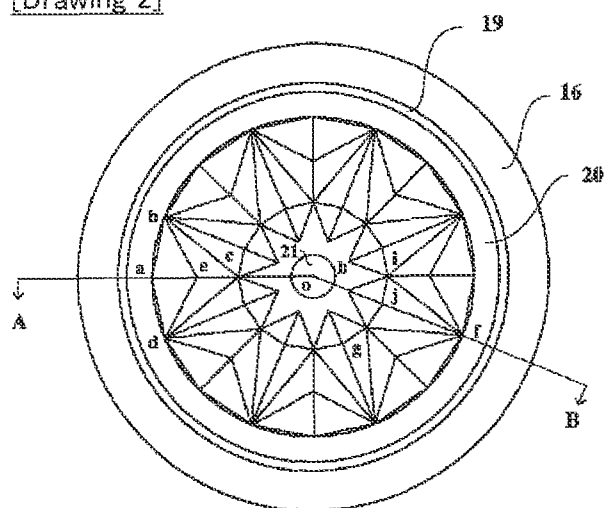
76 Metal lid

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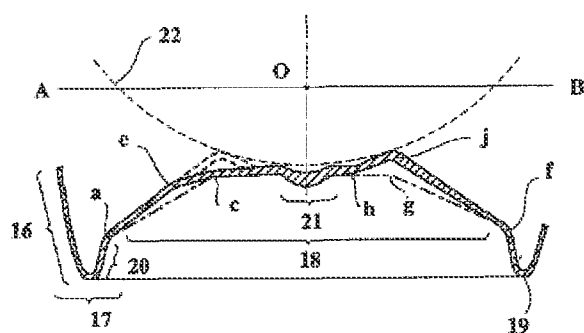
[Drawing 1]



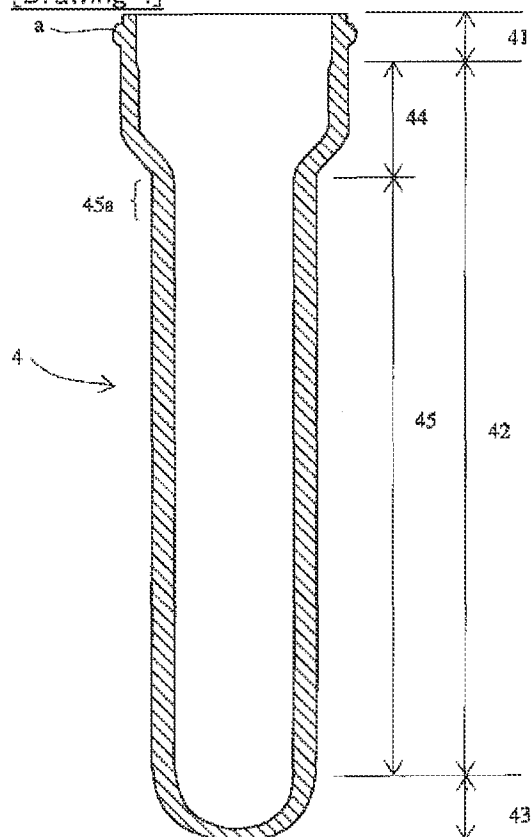
[Drawing 2]



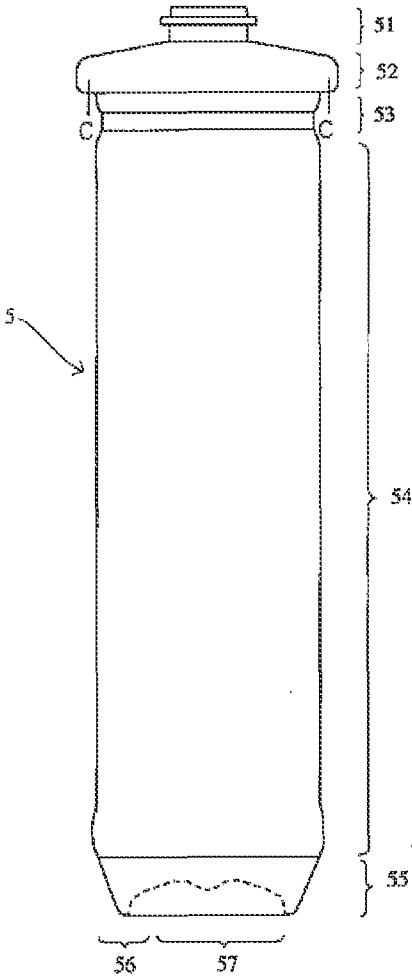
[Drawing 3]



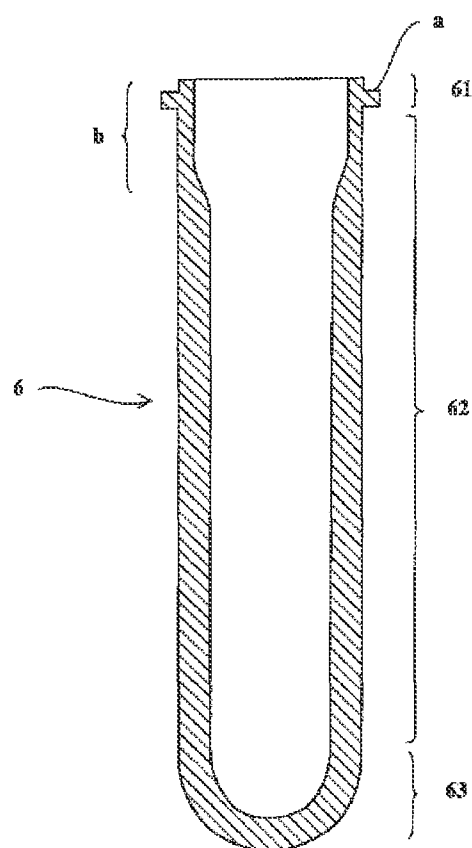
[Drawing 4]



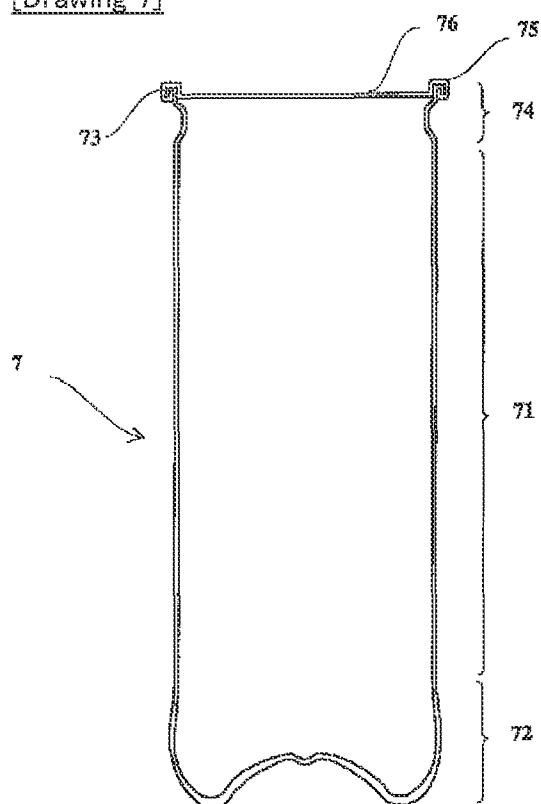
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]

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